

# Qualitative Correlates of Private Outside Space Satisfaction

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The purpose of the study was to identify the predictors of satisfaction with private outside space surrounding a single family detached dwelling. A sample of 198 households were randomly selected from residential communities in Bryan-College Station, Texas. Relevant data related to the qualitative attributes of private outside space were collected through both face-to-face interview and observations. The data was analyzed using stepwise, response surface, and multiple regression analyses. Results of the analyses suggested that private outside space satisfaction is indeed affected by privacy, perceived level of yard maintenance, and territorial personalization.

**Key Words:** Maintenance, Private Outside Space Satisfaction, Privacy, Residential Design, Single-Family Detached Dwellings, Territorial Personalization

## Statement of the Problem

Residential satisfaction is a measure of the adequacy of the living environment as evaluated by the resident. The literature shows that a dwelling unit by itself is not the only determinant of residential satisfaction. It is only a part or sub-system of the whole system that constitutes residential habitability (Onibokun, 1974; Amerigo and Aragonés, 1990). Residents, through the process of interaction, come into contact with various components of this environment that affect their satisfaction. Private outside space, defined here to include all the spaces between the doorsteps and property limits, is an important component of this system.

A vast majority of American housing consists of single-family, detached dwellings on private plots of land (Moudon, 1986). The private outside space of these dwellings is a tool in the hands of residents for maintaining, adapting, and modifying the immediate surroundings in ways that are personally satisfying to them. Behaviors such as gardening and landscaping are considered to be traditional American vehicles for achieving individuality and uniqueness, on one hand, and for reflection of community identity, on the other (Ahman and Cheaters, 1989).

In order to have a better understanding of private outside space and incorporate it meaningfully within the residential environment, it is necessary to identify the predictors of satisfaction related to this important component of a single-family dwelling. It is hypothesized that satisfaction with private outside space is affected by the qualitative attributes such as perceived privacy, level of maintenance, and territorial personalization of the space.

## **Delimitations of the Study**

The study was limited to a sample population of randomly selected households in Bryan-College Station, Texas.

It was treated as a pilot study without my attempt to generalize the results beyond Bryan-College Station, Texas.

The random samples of households were confined only to Afro-Americans, Anglo-Americans, and Hispanic Americans living in single-family detached dwellings.

## **Methodology**

### *Study Population*

The study population consists of a sample of 198 households living in single-family detached dwellings, either owned or rented, in randomly selected residential communities in Bryan-College Station, Texas. The entities under study are individual households in these communities. The unit of analysis is the head of a household.

### *Data Collection Procedure*

Face-to-face interview procedures were adopted to collect data relating to: 1) private outside space satisfaction, 2) privacy of private outside space, and 3) maintenance of private outside space. The literature indicates that this procedure elicits a higher response than mail surveys (Bobbie, 1979). An interview instrument was developed for the purpose. It was pre-tested for validity using 20 randomly selected households from the sample population. Some minor readjustments were done in the final instrument based on the results of the pretest.

Uses of various territorial markers were then observed and recorded to measure the degree of territorial personalization. Photographs of the private outside spaces were also taken in order to supplement the personal observations.

### *Variables and their Operationalization*

#### *Private Outside Space Satisfaction (PSAT)*

Private outside space is the reported satisfaction of the head of household with private outside space including front and back yards. It was operationalized in the same manner as overall residential satisfaction.

### *Maintenance of Front Yard (MFYRD)*

This is the reported state of maintenance of the front yard. It was operationalized by measuring the reported level of maintenance on a seven-point scale ranging from 1 (very poorly kept) to 7 (very well kept).

### *Maintenance of Back Yard (MBYRD)*

This is the reported state of maintenance of back yard. It was operationalized by measuring the reported level of maintenance on a seven-point scale ranging from 1 (very poorly kept) to 7 (very well kept).

### *Privacy of Front Yard (PFYRDX)*

This is the reported degree of freedom from visual and acoustical intrusion of the front yard by people other than members of the household. It was operationalized using a summary index oversteering the following items:

- Visual privacy from neighbors
- Visual privacy from passers-by
- Acoustical privacy from neighbors
- Acoustical privacy from passers-by

The items were measured on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Privacy of front yard was the sum score of these items.

### *Privacy of Back Yard (PBYRDX)*

This is the reported degree of freedom from visual and acoustical intrusion of the back yard by people other than members of the household. It was operationalized in the same manner as privacy in front yard.

### *Territorial Personalization (TPX)*

Territorial personalization is the observed modification, demarcation, and/or adornment of private outside space by a household. It was operationalized through identification of both explicit and symbolic territorial markets used by the household in the private outside space. The presence or absence of the following items in the front/back yard was observed:

1. Well-trimmed grass,
2. Flowerbeds against home,
3. Potted plants on yard,
4. Shrubs on yard,
5. Hedges against home,
6. Hedge along approach path,
7. Flowers along path,

8. Vegetable garden,
9. Immune,
10. Water fountain,
11. Birdbath,
12. Figurines/garden elves,
13. Pet house,
14. Barbecue grill,
15. Deck,
16. Flowerbed at boundary,
17. Hedge at boundary,
18. Decorated mailbox,
19. Family time on mailbox,
20. Decorated gate, and
21. Family name on gate.

A "yes" was assigned if an item was observed to be present and a "no" was assigned if was not present. A total count of 'yes's" measured the degree of territorial personalization.

### **Analysis and Interpretation**

#### *Results*

A stepwise regression was first performed to determine the relative importance of the qualitative attributes with respect to their contribution in explaining variance of PSAT. It was performed using a forward-selection procedure setting the significance level of entry at 1. The following model was used for the analysis:

$$PSAT = b_0 + b_1 TPX + b_2 MFYRD + b_3 MBYRD + b_4 PFYRDX + b_5 PBYRDX + e$$

where PSAT= private outside space satisfaction,

b<sub>0</sub>= intercept,

b<sub>1</sub>, b<sub>2</sub>, etc.= regression coefficients,

TPX = index of territorial personalization of private outside space,

MFYRD= maintenance of front yard,

MBYRD = maintenance of back yard,

PFYRDX= index of privacy of front yard,

PBYRDX= index of privacy of back yard, and

e = error term.

Results of the analysis are shown in Table 1.

Table 1

*Summary of forward selection procedure for PSAT using qualitative attributes of private outside space*

Variable	Step	Partial R <sup>2</sup>	Model R <sup>2</sup>	Model F	p>F	Critical value of F
MBYRD	1	0.38	.38	120.13	.0001	2.74
TPX	2	.13	.51	49.35	.0001	2.74
MFYRD	3	.02	.52	6.98	.0089	2.74
PFYRD	4	.01	.53	4.54	.0344	2.74
PBYRD	5	.00	.54	1.43	.2333	2.74

After determining the sequence of the independent variables in order of their strength, a response-surface regression was performed. This analysis was done to find out whether regression equations using quadratic and cross product terms were significant. The results of the analysis are shown in Table 2.

Table 2

*Regression analysis for PSAT using linear, quadratic, and cross-product terms of qualitative attributes of private outside space*

Regression	duff.	Model R <sup>2</sup>	Model F	p>f	Critical value of F
Linear	5	.54	45.13	.0000	1.89
Quadratic	5	.02	1.34	.2478	1.89
Cross product	10	.03	1.10	.3648	1.64

The results indicated that a regression analysis using only linear terms was statistically significant at the .10 level. Based on these results, it was decided to retain only linear terms in the model.

A multiple regression was then performed entering the independent variables in the order obtained earlier through forward selection procedure. Results of the analysis are shown in Table 3.

Table 3

*Multiple regression analysis for PSAT using qualitative attributes of private outside space*

Variable	Intercept	Regression coefficient	T	p>?T?	Critical value of ?T?
Intercept	0.70	-	1.97	.0506	1.65
MBYRD	-	0.30	4.11	.0001	1.65
TPX	-	0.18	5.88	.0001	1.65
MFYRD	-	0.19	2.52	0.0125	1.65
PFYRD	-	0.04	1.82	.0628	1.65
PBYRD	-	0.02	1.20	.2333	1.65

Model F(5,192)=44.50 p>F.001 Critical value of F = 1.88

Model R<sup>2</sup> = 0.54 Adjusted model R<sup>2</sup> = 0.52

Based on the results of the analysis the regression equation can be written as follows:

$$PSAT = 0.70 + .30*MBYRD + 0.18*TPX + 0.19*MFYRD + 0.04*PFYRD + 0.02*PBYRD \quad (1)$$

## Interpretation of Results

The F-value of the model used for multiple regression analysis was found to be statistically significant. This provides evidence that a relationship exists between PSAT and the qualitative attributes of private outside space used in the model. The predictive efficacy of the model was found to be quite satisfactory with an  $R^2$  of 0.54 and an adjusted  $R^2$  value of 0.52.

Four qualitative attributes of private outside space--*MBYRD*, *TPX*, *AIFYRD*, and *PFYRDX*--were found to have statistically significant effects on PSAT at the .10 level. *PBYRDX* did not seem to have any statistically significant effect on PSAT.

PSAT seemed to have a positive relationship with the qualitative attributes. Satisfaction with private outside space increased by 0.30 unit for every unit increase in *AATYRD*, by 0.18 unit for every increase in *TPX*, by 0.19 unit for every unit increase in *MFYRD*, and by 0.04 unit for every unit increase in *PFYRDX*.

It is apparent from the results that perceived level of maintenance of private outside space had a significant effect on satisfaction. Jackson (1951) suggests that private outside space is a national institution in American society; it not only provides a place for outdoor enjoyment, but also indicates social standing. People feel a sense of accomplishment when their yards look equal to or better than their neighbors' (Altman and Chomers, 1989). It, therefore, seems likely that a positive correlation would exist between PSAT and both *MFYRD* and *MBYRD*.

Territorial personalization using physical and symbolic markers have psychological consequences of stress reduction and individuation (Taylor, 1988). Personalization of immediate outdoor environments also serves to express identity and solidarity with one's community and neighborhood (Taylor, 1988). General modification of one's immediate outdoor environment enhances the levels of pride and, consequently, satisfaction with one's residential environment. The positive relationship between PSAT and *TPX* was, therefore, not unexpected.

The positive relationship PSAT and *PFYRDX* may apparently seem to be contradictory to the American attitude of making the front yard readily visible, reflecting an open display of the family to outsiders (Altman and Chemers, 1989). This attitude, however, does not preclude a resident's desire to have mechanisms and devices in order to maintain a desired level of interaction. If the social interaction exceeds an optimal level, the condition may be regarded as an intrusion of privacy (Altman, 1975). Attaining a desired level of aural and visual privacy of yards results in producing a higher level of satisfaction (Francescato et al., 1979).

## Summary and Discussion

Results of the study suggest that qualitative attributes of private outside space have an effect on satisfaction with private outside space. The attributes which were indicated to be important predictors of satisfaction with private outside space included territorial personalization of the

immediate outdoor environment (TPX), maintenance of both front (*MFYRD*) and back yards (*MBYRD*), and the privacy of the front yard (*PFYRDT*).

The findings related to the effects of qualitative attributes of private outside space on satisfaction will have significant implications for architects, planners, residential developers, and other professionals engaged in the design and delivery of housing. If the important predictors of satisfaction with private outside space are identified, then it becomes easier to formulate a general guideline for the design of single-family, detached dwellings that meet the socio-cultural and functional needs of the residents.

Territorial personalization (TPX) is an important predictor of satisfaction with private outside space. It implies that the immediate outdoor environment should be organized in such a manner that offers opportunities to residents for alteration and modification of this environment to reflect their personal tastes. It should be possible for residents to provide territorial definition to this environment.

Maintenance of yards (*MFYPD* and *MBYRD*) is directly related to satisfaction with private outside space. Both front and back yards, therefore, need to be designed so that they can be maintained properly. Marcus and Sarkissian (1986) indicate that people with smaller yards are more likely to maintain them more attractively than those with larger yards. They also suggest that long and narrow yards be avoided from the point of view of maintenance. It is, however, difficult to specify optimum yard sizes, particularly in view of the finding that no relationship exists between quantity of private outside space and satisfaction.

Privacy of front yard (*PFYRDX*) is another predictor of private outside space satisfaction. Privacy of this space, therefore, should be reasonably assured. This may, however, be difficult to achieve due to the dialectic interplays between closed and open characteristics of the front yard (Altman and Charters, 1989). This space, on one hand, is a public display area of the family to the outsiders and, on the other hand, a buffer between "public" outside world and "private" interior residential settings. It is, therefore, advisable not to fence the front yard, but to provide opportunities for the residents to achieve the degree of privacy they require either by adding symbolic fencing or planting.

Satisfaction with private outside space was measured in the study without making any distinction between front and back yards. Use of territorial markets, generally, was found to be higher on the front of the dwelling than on the back. It may, thus, be possible that territorial personalization is a more important predictor of satisfaction with the front yard than satisfaction with the back yard. A logical extension of this research may, therefore, be to conduct studies on satisfaction with front and back yard separately.

People attach importance to various attributes of a residential environment based on their goals, needs, expectations, and aspirations (Cutter, 1981). It may, therefore, be beneficial to introduce a dimension of importance of various attributes of private outside space for conducting further studies on private outside space satisfaction.

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