

Erik Lindberg* and Tommy Gärling, University of Umeå, Department of Psychology, S-901 87 Umeå, Sweden
Henry Montgomery, University of Göteborg, Department of Psychology, Box 14158, S-400 20, Göteborg, Sweden

A STUDY OF RESIDENTIAL PREFERENCES AND CHOICES

A model assuming that a person's evaluation of a given housing attribute is determined by a weighted sum of his/her evaluations of its perceived consequences for activities and life values, and that the evaluation of a particular housing alternative is obtained by summing this value-fulfillment across all attributes, was applied to data obtained by interviewing the adult members of 43 Swedish households searching for a new dwelling. The model was quite successful in predicting preferences for housing alternatives. When predicting evaluations of the households' present dwellings and choices among housing alternatives, however, the model was considerably less successful. A number of possible explanations were offered for the latter finding.

INTRODUCTION

A recent review of literature on residential mobility (Clark, 1986) suggests that dissatisfaction with housing attributes is the major reason for moves within a city. Although such dissatisfaction may in many cases be motivated by life-cycle changes, the latter alone are often found to be insufficient for explaining specific moves (cf. Michelson, 1977). It also seems to be widely accepted that subjective evaluations of housing attributes are a major determinant of residential preferences and satisfaction (Hartman, 1963; Hempel & Tucker, 1979; Lindberg, Gärling, & Montgomery, 1986, 1987a; Lindberg, Gärling, Montgomery, & Waara, 1987b; Louviere, 1979; Weidemann, Anderson, Butterfield, & O'Donnell, 1982).

The research reported by Lindberg et al. (1986, 1987a, 1987b) investigated whether preferences for and choices between housing alternatives could be predicted from subjective beliefs about the consequences of different housing attributes and by the subject's evaluation of those consequences. The consequences of primary interest were different life values, defined as goals or desirable end-states which the individual strives to attain in his/her life (e.g. freedom, happiness, or security), which could be attained either directly or via the performance of various everyday activities. The attempts to predict residential preferences and choices were based on two assumptions. The first assumption, derived from Multi-Attribute Utility Theory (e.g., Keeney & Raiffa, 1976), was that the evaluation of a housing alternative is determined by the sum of the evaluations of its different attributes. The second assumption was that the evaluation of each housing attribute is determined by the subject's beliefs concerning its effects on his/her possibilities to attain various life values, and by his/her evaluations of those values. The

latter assumption is an instance of the expectancy-value model used in studies of motivation, attitudes, and actions (Ajzen & Fishbein, 1980; Atkinson & Birch, 1970, 1974; Feather, 1982).

The two assumptions were formalized by Lindberg et al. (1986) in the following model:

$$E_{Hi} = b \sum_{jk} p_{A_{jk}} E_{V_k} / \sum E_{V_k} + a \quad (1).$$

E_{Hi} represents the evaluation of housing alternative i ; $p_{A_{jk}}$ is the strength of the belief that the particular level of housing attribute j for that alternative will lead to the desirable consequence k (or counteract it, in which case p assumes a negative value); E_{V_k} is the evaluation of consequence k ; b and a are arbitrary scale constants.

Empirical support for Equation 1 was obtained by Lindberg et al. (1986, 1987a) in the case of preferences for housing alternatives. In addition, they also found strong support for the assumption that beliefs about how life values may be attained (directly or via the performance of various everyday activities) are important determinants of people's evaluations of housing attributes. The latter assumption is also supported by the results of Lindberg et al. (1987b). In the case of choices among housing alternatives, however, Lindberg et al. (1986, 1987a) found somewhat weaker support for Equation 1, especially for the assumption about additivity across attributes. The explanation offered for the latter finding was that a choice is a more complex task in terms of information processing demands than a preference rating, and that it therefore may be difficult to choose in such a way that value-fulfillment is maximized.

Although Equation 1 thus has received support from previous research, it should be recognized that this support comes from studies carried out under laboratory or laboratory-like conditions with the respondents sampled from an adult student population. The primary aim of the present study was to investigate whether the results obtained under those conditions may be generalized to a population of respondents who are actually searching for a new dwelling. It is for instance possible that the finding that choices appear to be more difficult to predict than preferences could be due to the respondents being poorly motivated to invest the effort necessary in order to make the best possible choices. This should not be the case, however, when the choice is a real one with important consequences for the respondent's household.

METHOD

Questionnaires and procedure

Three different questionnaires were administered to the respondents in their homes. In the first one, they were required to rate on 13-point scales ranging from -6 to +6, how good or bad they perceived each of twelve different housing attributes to be. The housing attributes, which are listed in Table I below, were

the same as those used by Lindberg et al. (1986) (cf also Clark, 1986; Hempel & Tucker, 1979). Each attribute was given a formulation corresponding to the desirable end of the underlying continuum (low cost, large space, short distance to work, etc). Thereafter the respondents rated, on the same type of scales, seven everyday activities and four life values (see Table I below). These items were selected among those used by Lindberg et al. (1986, 1987a, 1987b). The basis for the selection was that each item should be highly evaluated by a majority of the subjects in the previous studies and also that only activities and values which could be expected to be affected by one's housing conditions should be included. In the remainder of the first questionnaire, the respondents rated on a similar type of 13-point scales how strongly they believed that each of the twelve housing attributes facilitated (or counteracted) the performance of the seven activities and the attainment of the four life values.

In the second questionnaire, the respondents rated the extent to which their present dwelling possessed the twelve housing attributes on 13-point scales ranging from 0 to 12, and were then asked to rate how good or bad they thought the present dwelling was with respect to the different attributes and to give a preference rating for the dwelling as a whole. Both adult members of each household filled out a copy each of the first two questionnaires. An interviewer was present whilst they did this in order to answer any questions which they might have.

The third questionnaire contained the same questions as the second one, but in this case they referred to a housing alternative which the respondents had come across in their search for a new dwelling. The respondents were also asked whether they had decided to accept or reject the alternative, what their reasons for that decision were, and how satisfied they were with the decision. If the respondents had already inspected one or more housing alternatives, each of them filled out a copy of the third questionnaire for each alternative whilst the interviewer was present. Only alternatives which had been seriously considered were to be reported. Before leaving, the interviewer left 10 copies of the third questionnaire (sufficient for five housing alternatives) and a number of addressed envelopes. The respondents were instructed to fill out a copy each for every alternative that they found worthy of serious consideration and to mail it after they had decided to accept or reject the alternative. During the period of study, which was between four and six months, the interviewer phoned each household about once a month in order to encourage continued participation in the study.

Respondents

Eighty-six respondents (43 men and 43 women, i.e. the adult members of 43 family households) who were actively searching for a new dwelling were paid the equivalent of \$15 each for their participation in the study. Their ages varied between 22 and 56 years ($M = 33.28$, $SD = 6.49$). Thirty-three of the households had children under eighteen years.

RESULTS AND DISCUSSION

Beliefs about Effects of Housing Attributes on Activities and Life Values

The mean estimated strengths of the effects of each housing attribute on the possibility to perform the different activities and to attain the various life values are given in Table I. The housing attributes believed to have the strongest mean impact on performance of activities and value fulfillment were cost, transportation facilities, distance to friends, and distance to recreation. The housing attributes were believed to have the largest effects on comfort, well-being, relaxing and family. Cost was perceived to be very important for economy, whereas size, standard and distance to downtown were believed to have negative effects on the attainment of this value. Distance to downtown, distance to friends, and distance to recreation were seen as quite important for shopping, being with friends, and exercise, respectively.

Table I
Perceived Effects of Housing Attributes

Housing attributes	Activities							Life values				
	Amusement	Culture	Exercise	Friends	Outings	Relaxing	Shopping	Comfort	Economy	Family	Well-being	M
<i>Intrinsic</i>												
Cost	3.21	2.69	0.29	0.73	2.00	1.63	2.80	2.69	4.86	2.50	2.86	2.39
Size	-0.01	0.45	0.45	2.69	0.00	2.97	0.06	3.99	-0.56	3.40	3.43	1.53
Standard	-0.14	0.09	0.21	0.93	-0.03	2.45	-0.14	3.79	-0.79	2.16	2.59	1.01
<i>Location</i>												
Downtown	3.90	3.69	-1.58	0.76	-0.64	-0.48	4.10	0.73	-0.83	-0.20	-0.01	0.86
Friends	1.49	1.08	0.86	4.42	1.31	2.03	0.45	2.05	0.45	2.31	2.38	1.71
Recreation	-0.59	0.10	4.13	0.26	3.55	3.20	-0.76	2.22	0.45	2.10	3.06	1.61
Schools	0.70	0.92	0.83	0.92	1.10	1.95	0.66	3.30	0.90	2.93	2.50	1.52
Work	0.97	1.19	1.22	0.78	1.01	1.30	1.12	2.77	1.37	1.70	1.60	1.37
<i>Neighborhood</i>												
Facilities	1.01	1.13	0.47	0.42	0.48	1.92	3.34	3.58	0.44	1.60	2.14	1.50
Noise	0.09	0.21	0.52	0.64	0.57	3.56	0.06	2.88	0.07	1.98	3.36	1.27
Reputation	0.35	0.38	0.23	0.50	0.35	1.27	0.28	0.92	-0.07	1.27	2.26	0.70
Transport	3.06	2.84	1.31	2.77	2.31	1.74	2.67	3.07	1.45	1.62	1.92	2.25
M	1.17	1.23	0.75	1.32	1.00	1.96	1.22	2.67	0.65	1.95	2.34	1.48

Evaluations of Housing Attributes, Activities and Life Values

The mean evaluations of the housing attributes, activities and life values are given in Table II. As shown in the table, cost, distance to schools and size were the most highly evaluated attributes, whereas distance to downtown and reputation were given the lowest evaluations. Among the consequences, family and well-being were given the highest evaluations, and shopping and amusement the lowest ones. It should also be noted that except for relaxing and being with friends and relatives, all activities

were given lower evaluations than any of the life values. The possibility to predict the evaluations of the different housing attributes from the respondents' beliefs about their consequences for activities and life values was investigated by computing, for each subject, predicted evaluations according to Equation 1 but without summing across the different attributes. The mean correlation between the predicted and observed evaluations of the attributes was .453, which was reliably larger than zero, $p < .001$. This correlation compares quite favorably to the result obtained by Lindberg et al. (1987b), despite the fact that considerably fewer activities and values were used in the present study.

Table II
Evaluations of Housing Attributes, Activities and Life Values

Housing attributes	M	Activities and life values	M
Cost	5.03	Amusement	2.79
Size	4.77	Culture	3.63
Standard	3.52	Exercise	3.88
Downtown	1.78	Friends	4.73
Friends	3.48	Outings	3.88
Recreation	4.14	Relaxing	5.12
Schools	4.98	Shopping	1.40
Work	3.74		
Facilities	4.28	Comfort	4.29
Noise	4.56	Economy	4.86
Reputation	2.93	Family	5.92
Transport	4.58	Well-being	5.12
M	3.98		4.22

Evaluations of the Attributes of Present Dwellings and Housing Alternatives

The mean evaluations of the attributes of the respondents' present dwellings and those of the 80 housing alternatives encountered during the period of study are given in Table III. For the present dwellings, transportation and neighborhood facilities were given the highest evaluations, and size was given the lowest ones, whereas for the housing alternatives reputation and distance to schools and recreation were given the highest ratings and cost was given the lowest ones.

The possibility to predict the evaluations of the different attributes of the present dwellings and of the housing alternatives from the respondents' beliefs about their consequences for the activities and life values was investigated by computing, for each subject, predicted evaluations according to Equation 1 (without summing across attributes). The mean correlations between the predicted and observed evaluations of the attributes were .404 and .440, respectively, for the attributes of the present dwelling and those of the alternatives. In both cases was the correlation reliably larger than zero, $p < .001$. These correlations are somewhat lower than those obtained previously when predicting the evaluations of housing attributes without

reference to any particular housing alternative, especially in the case of the present dwellings. A possible explanation might be that the attributes of the present dwelling, being very well-known by the respondents, may bring to mind a number of additional activities and life values besides those included in the present study.

Table III
Evaluations of Attributes of Present Dwellings and Alternatives

Housing attributes	Present dwelling	Housing alternatives
Cost	1.79	-0.66
Size	-0.51	2.83
Standard	2.47	1.61
Downtown	2.83	1.34
Friends	1.71	1.49
Recreation	1.90	3.67
Schools	2.95	3.43
Work	2.13	-0.02
Facilities	3.71	2.35
Noise	1.15	2.20
Reputation	2.74	3.32
Transport	3.55	2.11
M	2.20	1.97

Preferences, Choices and Satisfaction

That familiarity may make predictions by means of Equation 1 more difficult was also suggested by the results for the preference ratings. In the case of the respondents' present dwellings, a correlation of only .195 was obtained between observed and predicted preference, whereas the corresponding correlation for the alternatives was .396.

The previous finding that choices are more difficult to predict by means of Equation 1 than are preferences for housing alternatives (Lindberg et al. 1986, 1987a) was replicated in the present study, the biserial correlation between the predicted evaluation of each alternative and whether it was chosen or not (coded as one and zero, respectively) being only .148. This finding suggests that the choice of a particular housing alternative is less dependent on one's beliefs about the value fulfillment which it may lead to than are the preferences for different alternatives. A possible reason for this, suggested by some of the respondents, may be that factors beyond one's control (e.g. financial constraints) prevent the selection of some very attractive alternatives.

For each respondent, alternatives given higher and lower preference ratings than the present dwelling were compared with respect to whether they were predicted (by means of Equation 1) to be better or worse than the latter. Rejected and accepted alternatives were also compared in the same way. As shown in Table IV, which also gives the respondents' mean satisfaction with their decisions to accept or reject alternatives, the relationship

between predicted and observed choices was much weaker than the corresponding relationship for the preferences. Due to the violation of the assumption about independent observations (many respondents inspected more than one alternative), the significance tests of the degree of association in the four-fold tables are given for purely descriptive reasons.

Table IV
Preferences, Choices, and Satisfaction

Predicted evaluation of alternative as compared to present dwelling	Preference for alternative as compared to present dwelling		Decision to reject or accept alternative		Satisfaction with decision to reject or accept alternative	
	Lower	Higher	Reject	Accept	Reject	Accept
Worse	47	25	70	17	2.78	4.00
Better	17	48	54	19	0.74	5.05
$\chi^2_{(1)}$	21.31		2.09			
p	< .001		n.s.			

As could be expected, satisfaction with the decision to reject or accept an alternative was highest when alternatives which were predicted to lead to greater value fulfillment than the present dwelling were accepted and lowest when such alternatives were rejected. Satisfaction was however also very high when alternatives which were predicted to lead to less value fulfillment than the present dwelling were accepted. One possible reason for this finding could be that, since the acceptance of a housing alternative is a joint decision, the opinion of one's spouse may carry a certain weight for one's satisfaction with the choice. This is suggested by the fact that for the 12 decisions for which the predicted value fulfillment of the accepted alternative was lower than that of the present dwelling for both spouses, the average satisfaction was only 3.42 as compared to 4.00 for all 17 decisions in this category.

The finding that decisions involving the acceptance of an alternative were generally rated as very satisfactory, almost regardless of whether that alternative was predicted to lead to more or less value fulfillment than the present dwelling, is also consonant with the idea of dominance structuring (e.g. Montgomery, 1983). Thus, in order to be able to justify their decisions, the respondents may have re-evaluated some activities and/or life values and may also have reconsidered their beliefs about the effects of the housing attributes on the activities and values in such a way that the alternative chosen actually is believed to lead to more value fulfillment than the present dwelling.

CONCLUSION

The present results largely confirmed those obtained by Lindberg et al. (1986, 1987a) for evaluations of and choices among hypothetical housing alternatives. Thus, the assumptions underlying Equation 1 seem to be well founded in the case of evaluations of housing attributes and housing alternatives. Also in line with previous results, actual choices were found to be more difficult to predict by means of Equation 1 than were the preference ratings of the alternatives. Whether this is due to the present dwelling carrying a special significance to the resident which makes the evaluation of it more difficult to predict, to an inability on the part of the respondents' to carry out the information processing required in order to choose in a consistent manner, to external constraints preventing them from choosing in accordance with their preferences, or to changes in subjective beliefs and value structures taking place during the process of search are questions to be answered by future research.

ACKNOWLEDGEMENTS

The present study was financially supported by a grant from the Swedish Council for Building Research. The authors thank Jörgen Garvill for helpful comments and Ms. Ulla-Stina Johansson and Ms. Helena Willén for assistance in collecting the data.

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