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Subjective Versus Normative Evaluation of Housing Quality

Abstract

The decision to rent or buy a certain apartment is one of the most momentous choices a typical consumer can make. Both he and the architect who designed the dwelling would thus be helped a great deal if we could objectively measure housing quality. But apartments are highly complex products, too, and individual preferences may vary considerably, precluding any uniform evaluation.

This study compared evaluations of apartment floor plans by three published normative systems with subjective preference rankings given by a sample of interviewees. Results showed respondents' rankings to be remarkably stable even over a 1-year interval. Inter-rater-agreement was slight. Mean agreement with even the best of the systems was rather modest. In addition, the three systems achieved less than perfect or even zero agreement among themselves.

It is tentatively concluded that normative evaluation of housing quality is a more or less futile endeavour. Alternative approaches are briefly discussed.

PROBLEM

Whenever the Mollers pay a visit to the Ehrhardts, their former neighbours, their respective dwelling situation is invariably a point of discussion. The Mollers have recently moved to a fully equipped 4-room apartment of 80 m² in a brand-new suburb. They fled a once well-to-do, now somewhat deteriorated, downtown neighbourhood built around the turn of the century, leaky windows, a long, dark corridor, creaking parquet, and frequent water-pipe bursts. The Ehrhardts would never want to leave their 5-room home occupying 120 m² for what they perceive as just four small cells located amidst a sterile collage of identical square structures, lacking all but the most rudimentary green, almost inaccessible during rush hours, but deserted after 6 p.m. They love the spaciousness of their rooms, the large, if old-fashioned, kitchen, the stucco ornaments on their ceilings, and the view of old chestnut trees from the balcony. Both families pay the same rent. Which apartment is the better one?

This journal's reader will easily recognize the analogy to more familiar "products." What constitutes a "good" car? Which washing machine is "best"? That which distinguishes products such as these from dwelling units is more quantitative than qualitative in nature. Apartments and houses are probably more complex and more "important," both subjectively and economically, than any other single commodity a typical consumer in the industrialized nations of the West will ever rent or buy. As to complexity, Hensch (1972) refers to a check list comprising no less than 525 attributes influencing the quality of an apartment. This list could certainly be supplemented if one would take into account the many factors contingent on the choice of a home, e.g., the characteristics of one's neighbours. As to importance, one American survey (Campbell, Converse, & Rodgers, 1976) found "housing" ranking

fourth among 12 domains of life satisfaction. Only "family life," "marriage," and "financial situation" were considered more important for their personal well-being by the respondents. The amount of money spent on satisfying housing needs, by individuals as well as national economies, is also considerable in many countries.

So the question *Which?* will be more pressing but also more difficult to answer when it comes to apartments rather than ballpens or shoe laces. This paper addresses itself mainly to the problem of whether it is in itself a feasible question.

Before dealing with that issue, which is partly at the conceptual and partly at the empirical level, let us look more specifically at the reasons why anyone might want to compare or "measure" the quality of the Mollers' and the Ehrhardts' living places.

Why Evaluate Housing Quality?

If we knew which factors contribute most to the quality of a dwelling unit, such information would be of great relevance particularly in countries with a booming construction sector. Approaches to the problem have usually been proposed for one or more of the following purposes:

1. To guide tenants or buyers in their choice of suitable lodgings.
2. To permit assessment of projects submitted for public financing.
3. To help architects and proprietors select the best of several design alternatives at the preconstruction stage.
4. To determine "fair," quality-dependent rent levels in public housing.

A fifth, related purpose is to set up intervention points when housing quality in a district is deteriorating beyond a certain threshold (see Duncan, 1971).

Subjective vs. Normative Evaluation or: What Is Housing Quality?

How to conceptualize the "value" (or utility) and the "price" of a commodity has been debated by economists and philosophers for a long time. However, it seems neither possible nor necessary here to deal at length with the various schools of thought that have emerged. At least the first three purposes above have one implicit goal in common: to maximize the goodness of fit between the inhabitant's needs and his dwelling, i.e., the individual's well-being in so far as it is dependent on his physical habitat. The trading off of this capricious quantity against construction cost (certainly not a constant factor itself) is at the core of purpose 4 and also involved in the first three cases. It is, however, a separate process and cannot be treated here.

Even the admittedly non-operational definition above runs into trouble soon. If tailoring one's kitchen or office desk like an airplane cockpit reduces the necessary body movements to a sheer minimum, that may enhance subjective satisfaction. But it may also enhance the risk of circulatory disorder. Hence, is it reasonable to do so? This simple example boils down to the question: Do people know what is good for them? I shall take up this point again in the section entitled conclusions. There are more problems with this approach as soon as we try to put it to practical use.

(a) Even if people know best for themselves, how can we learn from them? I have argued elsewhere (Burisch, 1977) that straightforward questioning is not a very promising method. Asking subjects to make an overall comparison of different

multidimensional alternatives, another method, is also known to overtax their information-processing capacity as soon as the number of attributes exceeds a handful. Under these circumstances, people tend to resort to information-reducing strategies which may be suboptimal (Montgomery & Svenson, 1976).

(b) Suppose we have suitable methods at hand and have thus solved problem (a): Are people's preferences sufficiently stable over time to serve as guidelines for design (cf. Joedicke, 1977)? Fads and fashions come and go, but buildings (usually) outlive their creators. To take an obvious "biological" example, a playground in front of the kitchen window will be an amenity to the mother of an eight-year-old but may be considered a nuisance only a few years later.

(c) As architects report, clients have a tendency to prefer what they already know. A total reliance on tenant opinion might therefore serve to block innovation in architecture (Götz, 1977).

(d) Even if we could let everybody have his way, the eventual effect could be disastrous. It is well known that in West Germany – and possibly in most other western countries, too – the vast majority's perennial dream is the single-family detached house (e.g., Dittrich, 1974, p. 135). But is suburbia, Los Angeles style, really a goal to strive for (see Mitscherlich, 1969)?

(e) At least in the case of public housing projects, the architect does not normally know the persons who will later inhabit the building he is planning; nor will he ever meet them. How can he anticipate their wishes?

If we term the first approach *subjective* evaluation, then the obvious answer to its faults is *normative* evaluation, based on "expert opinion." In recent years, several countries have witnessed the advent of normative evaluation systems, notably Austria, the Netherlands, Sweden, Switzerland, and West Germany. Such systems do away with the above problems at one stroke. It is my opinion, however, that they face one central dilemma: In order to be feasible in practice, they cannot cater for everybody's taste. They must apply uniform criteria and have to yield just one standard evaluation. (In the systems to be described, family size is the only user-specific component entering into the assessment process.) But how much should we trust such normative evaluations when it is very plausible that "one man's meat is another's poison" (see also Eriksson, 1974)?

There are, of course, other problems associated with the normative approach. Who is to select the experts? What if they do not agree among themselves? After all, who is an expert today? (There seems to be no safeguards against prize-winning projects which turn into eyesores only two decades later.) But these are mostly beyond the scope of the present paper.

Plan of the Empirical Study

The small-scale investigation to be reported was undertaken to shed some light on the following main questions:

1. How much agreement can be expected among different people's preferences when it comes to apartments? Is quality judged in standard fashion or are there highly individualistic tastes?
2. How stable are individual preferences over time? Do people stick to their opinions or do they fluctuate from day to day?

3. How far do subjective evaluation by individuals and normative evaluation by existing systems converge? This question is obviously linked with question 1, since if people disagree, it is impossible to agree with all of them.

4. To what extent do different evaluation systems converge? In other words, how much consensus is there among experts?

To this end, 76 subjects (Ss), including 14 building professions, were asked to rank 8 apartment floor plans in order of subjective preference. The procedure was repeated after one month and, for 58 of the original sample, after one year. In the (third) follow-up session, a set of 8 additional floor plans was also ranked. All floor plans were normatively evaluated by three published evaluation systems, taking in account the same information that was presented on the Ss. The three rank orders thus produced could then be compared. Convergence of one of them with respondents' individual rankings was also determined.

METHOD

Three Normative Evaluation Systems

The three systems (two Swiss and one Austrian) to be discussed briefly were selected for investigation from a larger number for several reasons. Compared to other more ad hoc instruments, a lot of work and wisdom has gone into their construction. All three are commercially available in book form. They are sufficiently developed to be – and have been – applied in practice. They are therefore, at least in German-speaking countries, the most likely candidates for implementation at the political level.

All three systems imply a linear Multiattribute Utility Analysis. That is, they decompose the global "utility" (or "value") of an apartment into several dozen specific criteria, organized hierarchically, which can be measured or rated more or less objectively. Utility functions are specified which may determine, e.g., that a bathroom must be at least 1.80 m wide to earn the maximum of 4 points, while for 1.60 m it will get only 2 points. The raw points for each criterion are then multiplied by importance weights. The sum of these products corresponds to the global evaluation of the apartment.

As these systems were mainly intended for preconstruction use, all pertinent information can be read from floor and site plans. (The Austrian system, which also provides for the case of completed buildings, has a few criteria that must be assessed *post mortem* or can only roughly be estimated before.)

The System of Aellen, Keller, and Wiegand (1975). The "Wohnungsbewertungssystem" ("Apartment Evaluation System"; abbreviated WBS) was developed for a Swiss housing authority. Its principal purpose is to direct public finance to projects with a good cost-benefit ratio. It is said to have been used in that context on a trial basis and to be currently under revision. Since the WBS is the most comprehensive, operational, and sound system known to me, data analyses are mainly focussed on it.

The WBS comprises a total of 75 criteria, 44 of which pertain to the apartment itself (e.g., direct connection of kitchen and dining-table), 15 to the building and its immediate surroundings (e.g., playground near the house), and 16 to the location within the larger environment (e.g., distance to schools). All of the 75 criteria are first

scored on 5-point scales (0 to 4). The transformation functions used to map physical characteristics on a quality scale were set up by the authors themselves. On a number of criteria there are certain minimum cut off points. Apartments falling below these are regarded as substandard and excluded from further evaluation.

The weighting of the criteria was delegated to a group of 7 laymen who were given several days of training prior to their task. The final, uniform set of importance weights was derived from this group's averages, rounded to integer values.

The system of Frey, Arnold, Iblher, and Keller (1974). The monograph "Wohnungsbewertung" by Frey et al. (abbreviated WBF) contains a precursor of the WBS. Developed for a Swiss pharmaceutical firm to guide design of their company-owned tenements, it comprises 70 criteria related exclusively to the apartment itself. Although many criteria overlap with those of the WBS, most of the transformation functions differ, as do the importance weights which were contributed by a different group of 6 laymen.

The system of Riccabona and Wachberger (1971, 1974). The third system was commissioned by an Austrian building research organization and published in two volumes under the title "Methode der Bewertung geplanter/bestehender Wohnungstypen" ("Method of Evaluation for Planned/Completed Types of Apartments"; abbreviated MBW). As with the WBS, the MBW system includes criteria referring to the apartment, the whole building, and the environment, 41 in total. The conceptualization and grouping of these, however, differ markedly from the two Swiss systems. In this case, the authors determined the weights themselves.

Technical Criticisms of the Systems

When using the systems in practice, a number of weak points surface which should be mentioned in passing. Some of them were already pointed out by Diebschlag and Leicht (1978).

(a) Apart from printing and computational errors, and the unnecessary use of diagrams which makes interpolation difficult (tables would be preferred), quite a few of the criteria need more precise definitions. At present, scoring objectivity of all three systems may be surmised to be far from perfect.

(b) The application range of both the WBS and the WBF is restricted in so far as dwellings for special groups (e.g., the aged, the handicapped, communes), but also as important a category as single-room apartments are explicitly excluded. The MBW system is not recommended by its authors for single-family houses and for buildings older than a few years. Probably all the above restrictions apply to all the systems.

(c) Somewhat more central, though admittedly speculative, are criticisms concerning selection and weighting of criteria. None of the systems take factors such as the building's outlook or the view from its rooms into consideration. These would be hard to quantify, to be sure (but see Hershberger & Cass, 1974; Joedicke, Dirlewanger, Geisler, & Magnago, 1975). But limitations such as these certainly nourish doubts as to the predictive accuracy normative systems can achieve. Another detail: Both the WBS and the MBW give credit to a building close to playgrounds, schools, etc., without regard to whether the tenants have children at all and at what age. And a last example: All three systems put a high premium on what is called "flexibility." If, for instance, the wall between two bedrooms is built in a way that makes it cheap and

easy to take out later, to create one large room, the WBS honors that with 152 extra credit points. To receive the same bonus via room sizes, one would have to add some 12 m² to the whole apartment!

Floor Plans

For interviews 1 and 2 a set of 8 3- and 4-room apartments, each with kitchen, bathroom, and at least one balcony were selected from available sources. Net sizes (excluding balconies) varied from 72 to 86 m². The apartments chosen were fairly representative, probably slightly above average, of contemporary West German public housing. The floor plans, on a 1 : 100 scale, indicated built-in cupboards and kitchen equipment, but no other furniture was shown nor were room functions (such as living-room or bedroom) suggested. Room sizes, various subtotals, and total size were given at the bottom of the plans.

To restrict the intended comparison of subjective vs. normative evaluation to more or less "technical" aspects and to eliminate idiosyncratic preferences for certain locations, orientations, external facilities, and the like, all information as to these was omitted. In fact, only 37 apartment criteria of the WBS, 18 of the MBW (but all 70 of the WBF) could be used. Consequently, details not taken into account by the systems were not given on the plans.

The apartments were intentionally picked to make up a "quality-heterogeneous" sample. That is, an effort was made to space them as widely and evenly as possible on the WBS scale. More or less by accident the rank order of net size was identical to that of WBS points.

As many interviewees had exhibited but limited enthusiasm about the apartments, for the third wave an additional set of 8 plans was produced. The chief difference was that these units were somewhat more spacious. Also, within this set, the rank-order correlation (Spearman's rho) of size and WBS total was only .48 (for 4-person households) and .19 (for 3-person households).

The Interview Sample

Respondents were 38 couples each having one or two children, making a total of 76 interviewees. Most were 25 to 40 years old and all could be termed "middle class" according to professional and income status. The sample included 14 building professionals (architects, engineers, and the like), among them 1 couple, the professionals' 12 wives, and 50 male and female "laymen."

For the third round of interviews, 11 professionals, 9 wives, and 38 male and female laymen could be followed up.

Data Collection

Husbands and wives were interviewed separately but concurrently by two interviewers. Interviewees were briefed vaguely about the purpose of the investigation. They were then shown the floor plans one by one, details being pointed out in a non-evaluative manner. After that, they were asked to imagine they had to move out of their present homes and only the 8 apartments on the plans were available. These they had to imagine with identical frame conditions such as location, age, and rent.

They then pre-sorted the plans into 4 categories ("very good" to "bad") and subsequently set up a full rank order.

The second round of interviews took place 4 weeks later in January 1977. The procedure was nearly identical except that after the separate interviews were over, each couple was asked to agree on a common ranking of the plans. In some cases this took considerable time.

The follow-up study was conducted in December 1977, one year after the first interviews. Individual rank orders were obtained for both the first and the second set of floor plans. As in session two, the couples were asked for a consensus ranking, but, to save time, only for the first set.

Interviews lasted 50 to 90 minutes.

RESULTS

Unless noted otherwise, Spearman's rho was used as the measure of correlation between any two variables. Kendall's coefficient of concordance W furnished an index of intragroup agreement (see Hays, 1963).

Agreement of Respondents with Each Other

Table 1 shows coefficients of concordance for the rankings of the first and last interviews, respectively. Analyses were done separately for the whole sample and the subsample that could be followed up through the 1-year interval. The same holds for couples.

TABLE 1
Concordance Coefficients W , Separately for Subgroups, Sessions, and Plan Sets

	Session 1	Session 2	Session 3	
			1st Plan Set	2nd Plan Set
All 76 Ss	.29	.32	—	—
58 Ss of 3rd Session	.31	.33	.42	.32
All 38 Couples	—	.42	—	—
29 Couples of 3rd Session	—	.47	.53	—

All coefficients in Table 1 are highly significant statistically, but not very high in numerical value. In addition, for all but the smallest apartment (which was given rank 2 by 5 Ss), there was at least one person who liked it best and least, respectively!

Stability over Time

Table 2 presents average re-test rho's, arranged similarly as in Table 1. Individual rho's over the 1-month interval ranged from a low of $-.19$ to a high of $.98$. However, 59% of them reached the 5% critical value which because of the small number of floor plans is as high as $.64$. There seems to be some stability in stability: In the sample of 58 Ss for whom complete data were available, the 1-month and the 1-year coefficients correlated at $r = .41$ (product-moment-correlation).

TABLE 2
Average Re-Test Rho's, Separately for Subgroups and Time Intervals

	1 Month	1 Year
All 76 Ss	.77	—
58 Ss of 3rd Session	.78	.68
29 Couples of 3rd Session	—	.88*

* This figure represents actually a median (since there was one value of 1.00, Fisher's z-transformation was not applicable); the interval here is 11 months.

Convergence of Subjective and Normative Evaluations

Table 3 exhibits mean correlations of individual (or couples') rankings with the ranking provided by the WBS. For the first set of plans the WBS order, and therefore all correlations with it, are identical with the order regarding size. For the second set the average correlation with size was .57, somewhat higher than the figure of .45 achieved by the WBS.

TABLE 3
Mean Correlations with WBS Ranking, Separately for Subgroups and Sessions

	Session 1	Session 3	
		1st Plan Set	2nd Plan Set
All 76 Ss	.58	—	—
58 Ss of 3rd Session	.59	.59	.45
All 38 Couples	.64	—	—
29 Couples of 3rd Session	.65	.70	—

As with time stabilities and intragroup agreement, the coefficients for couples are generally higher. This should come as no surprise since the consensus ranking of a couple will already represent a middle-of-the-road compromise of individual wishes that must leave something to be desired for one or both partners – unless their tastes happen to coincide. By forming larger decision-making groups, all these coefficients could without doubt be raised even further.

A somewhat different way of looking at the data produced the "preference matrix" in Table 4. It lists the percentages of cases where a "worse" apartment (according to WBS) was preferred to a "better" one. E.g., the figure 24 in the upper left corner of Table 4 shows that in 24% of the cases floor plan 1 (the "worst") was preferred to floor plan 2 (the "second worst"). The table refers to couples' rankings, second interview.

Had everybody agreed with the WBS ranking, all the percentages in Table 4 would have been zero. But an apartment as "inferior" as No. 2 was preferred to No. 8 (the "best" one) by 13% of our Ss, and 63% of them preferred No. 2 to No. 3.

TABLE 4
*Percentages of Cases in Which Row Apartment Was Preferred to Column Apartment**

	2	3	4	5	6	7	8
1	24	42	21	13	13	11	00
2		63	45	18	16	29	13
3			29	18	21	21	08
4				26	18	37	13
5					24	61	21
6						76	50
7							24

* For explanations see text.

Convergence of the Three Systems

Table 5 gives the correlations among the three systems (assuming a 4-person-family), for the first and second set of floor plans, respectively. As can be seen, even the two closely related Swiss systems are in less than perfect agreement with each other. The MBW system seems to have very little in common with the other two.

TABLE 5
Correlations Among the Three Systems

	1st Plan Set		2nd Plan Set	
	WBF	MBW	WBF	MBW
WBS	.86	.26	.40	-.10
WBF		.02		-.26

DISCUSSION

What do all these results mean? Before we turn to a tentative interpretation let us examine certain marginal conditions of the study that limit generalisations from its findings.

First, if interviewee X ranks apartment A higher than apartment B, can we conclude that he would be happier in A than in B? This sounds like a perfectly reasonable question. Unfortunately, however, I know of no way, even in principle, to test it empirically. Even if we had the necessary funds to have people inhabit a series of apartments for, say, six months each, these people would change, if only by the experience, and so would their standards of evaluation. You can't put your foot into the same river twice. The obvious alternative, still popular in sociology, namely to interview people in their self-selected homes and correlate satisfaction ratings with objective criteria (or some such), runs into so many methodological difficulties that I feel it is not worth the money any more.

Anyway, we cannot but admit that what we termed subjective ratings of "value" is really ratings of "attractiveness."

Second, how realistic a "simulation" of an apartment is a floor plan? Undoubtedly it is one of the cheapest but also one of the most remote ones. Replications with scale

models or real dwellings should be undertaken. We may speculate what effect the use of real objects would have had. It is my hunch that if raters would have had a chance to look at and feel the apartments, and know their locations, time stability would have increased, while inter-rater agreement and convergence with normative systems would have decreased. Clearly this is an empirical question, however.

As this small study was done mainly for demonstration purposes and we had to rely on our respondents' good will to sacrifice their free time, only very small samples of floor plans could be used. This evidently introduced a heavy chance factor into all correlations. It also precluded any systematic probing into the reasons just *why* people liked the apartments they liked.

In summary, however, it seems that our procedure gave the normative systems a "fair" chance. Not only were the apartments heterogeneous, but the interview sample was certainly more homogeneous than is the general population. A more crucial test would have each respondent pre-select from a larger number a few floor plans he would seriously consider – just as is the case when looking for a new dwelling (at least for those who have some choice). I would expect even less predictive accuracy under such circumstances.

What, then, can we conclude from our results? It seems to me that people's preferences, if obtained under realistic choice conditions, should no longer be dismissed as a will-o'-the-wisp. True, there were some extremely fickle subjects, but the majority was remarkably stable even over a 1-year interval. At the same time, the humble floor plan, though far from being optimal, should probably get some credit as a simulation device.

Secondly, I would read the findings as supporting the notion that "one man's meat is another's poison." There is agreement, particularly as to the importance of space. There are some figures, not reported here, showing that this factor becomes dramatically more central when a family has a second child. But we would not need evaluation systems to tell us that. Apart from that, individualism seems to prevail. This sets a slim margin for the benefit any such system can offer. It is certainly possible to revise the systems to better meet the "average" taste. But the amount of variation around that average will remain substantial, I would suspect.

One suggestive finding from the interviews was that respondents did not honour "flexibility" nearly as much as the systems do. People are probably more willing to move when an apartment becomes too non-functional. The money for fancy partitions might better be spent on other amenities. There are rumours that in experimental housing projects possibilities of shifting walls at little cost are very rarely made use of.

Finally, the lack of convergence between different experts' systems would seem to point to the inevitable arbitrariness of even *their* standards. It should be mentioned, for instance, that while the two Swiss systems honour a high percentage of corridor space, the MBW system weighs it inversely!

CONCLUSIONS

If there is no reliable way to predict "housing quality" before a building is inhabited, do we have to live with a situation where dissatisfaction with lodgings is

so widespread (assuming this is not a problem only of "published opinion")? Do we have to tolerate buildings so unattractive that even an otherwise heavy demand rejects them on the market? Being a researcher, my answer is, not surprisingly, a plea for more research. But this will have to be research of a somewhat different kind than the usual easy-to-publish study (like this one). For one thing, it seems clear to me that "housing needs" cannot be extracted from people in the usual straightforward manner. They rather must be developed in a possibly long process. There should be a place for both the designer and the psychologist in that process. Informal discussion and self-help groups would seem to be an ideal medium (see Dienel, 1978). The consequences of each design decision in terms of cost, esthetics, influences on the life style, and so on, must be made clear. It certainly is plausible that laymen need expert advice to make sound choices (e.g., Waterhouse & Hitchcock, 1974). Surfeit of information is also a possible source of confusion (e.g., Montgomery & Svenson, 1976), when no help is offered.

The problem is reminiscent of a similar one in consumer research (cf. Ölander, 1977; Pfaff, 1977; Burisch, 1977) and indeed it is one of two fundamental questions in the politics of self-government: How can people be made competent to handle their own affairs? It is for this purpose that expert advisors are needed.

But there should also be no doubt that well-informed, self-aware people have to decide for themselves what is best for them in the end. Here we encounter the second problem: How can we reconcile views and needs as divergent as may be expected with respect to housing? A possibility that should be explored systematically is that once we know more about people's preferences we can distinguish a limited number of "types" of evaluators. Apart from a distinction between parents with few vs. many children there may be the "space people," the "privacy people", the "communal-living people," and so on. Rather than trying to make each apartment as adaptable as possible, we might then provide very diverse dwellings, tailored to optimally satisfy these groups' needs. This approach to the problem may be termed the "consumer research" paradigm.

I am aware that the program of research advocated here will cost huge investments of time, money, and effort. Needless to say, I believe it would be worthwhile.

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Zusammenfassung

Subjektive vs. normative Bestimmung des Wohnwertes von Häusern und Wohnungen. Wer sich entschließt, eine Wohnung zu mieten oder zu kaufen, trifft damit eine folgenschwere Entscheidung. Ebenso geht es dem Architekten oder Bauherrn, der im Planungsstadium eines Wohngebäudes einem bestimmten Entwurf den Vorzug gibt. Könnte man den »Wohnwert« einer Wohnung objektiv meßbar und damit prognostizierbar machen, wäre allen Beteiligten geholfen. Aber Wohnungen sind überaus komplexe Produkte; vieles spricht dafür, daß Bedürfnisse und Geschmäcker verschieden sind. Eine allgemeinverbindliche normative Bewertung hätte dann wenig Chancen, individuelle Wohnwünsche widerzuspiegeln.

In der vorliegenden Untersuchung wurden Sätze von Wohnungsgrundrissen einer Gruppe von Befragten mehrmals mit der Bitte vorgelegt, diese nach dem Grad der persönlichen Bevorzugung in eine Rangreihe zu bringen. Dieselben Grundrisse wurden auch mit Hilfe von drei publizierten Bewertungssystemen evaluiert. Es zeigte sich, daß die subjektiven Beurteilungen sowohl über einen Monat ($\rho = .77$) als auch über ein Jahr ($\rho = .68$) bemerkenswert stabil blieben. Wie erwartet, war die Übereinstimmung zwischen individuellen Befragten gering (maximaler Konkordanzkoeffizient $W = .42$). Die mittlere Übereinstimmung selbst mit dem besten der drei Systeme war nur mäßig (maximales $\rho = .59$). Darüber hinaus kamen auch die Systeme ihrerseits zu widersprüchlichen Bewertungen: zwei schweizerische Systeme, von denen eines der Vorläufer des anderen ist, erzielten bei einem Satz von 8 Grundrissen eine Übereinstimmung von $\rho = .86$, bei einem zweiten gar nur $\rho = .40$. Das dritte (österreichische) System zeigte praktisch gar keine Konvergenz mit den beiden anderen.

Obwohl die Datenbasis schmal ist und die Studie somit nur Demonstrationscharakter beanspruchen kann, werden die Aussichten einer normativen Wohnungsbewertung pessimistisch beurteilt. Gewisse Details des Untersuchungsvorgehens machen es unwahrscheinlich, daß unter realistischeren Bedingungen und mit größerem Aufwand günstigere Resultate zustande kommen würden. Mögliche alternative Ansätze der Wohnwertforschung werden kurz diskutiert.

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