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MICHIGAN STATE UNIVERSITY
TEXTILES, CLOTHING AND RELATED ARTS
COLLEGE OF HOME ECONOMICS

AN APPROACH TO IDENTIFYING BASIC TYPES OF HOUSING FLOOR PLANS

By

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A PROBLEM

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CHAPTER I

INTRODUCTION

Housing in today's world must attempt to fulfill many and varied exigencies. In a complex and changing society, man's once simple shelter requirements have grown and evolved into a diversified combination of needs. Not only must a structure protect modern man from the elements, but it also must meet certain economic, social, and psychological needs as well.

Because of these developments, the role of housing education has correspondingly grown more important. It is essential that the functions of housing be explored and that definitive findings be conveyed to those who can and will act on them. Potential housing professionals must be educated for their part in building for society; the public must be educated to be knowledgeable and effective housing consumers. Thus, educators in the environmental fields can help define the bases for decisions leading to satisfying patterns of living.

Statement of the Problem

House plans have often been differentiated according to their exterior form by descriptive terms such

as box, L, T, H, U, and atrium house. Such divisions, however, do not always suggest the relationship of spaces within the interior and, therefore, leave a major element of the plan undescribed. A more meaningful division for family activity would seem to include the location of entrance, egress, and traffic routes to the living areas within the house.

Six floor plans have been suggested as basic types, classified according to the location of the areas mentioned above. Of these types, three are two-story plans: Front Hall, Open Center Hall, and Side Hall; and three are one story plans: T-Plan, Core, and Closed Center Hall.

No published material has been located which accepts the existence of these six so-called basic plans. The author has only encountered verbal references and, therefore, there is no known source from which to gain verification.

The present study is exploratory and descriptive. It is an attempt to determine whether six mutually exclusive house floor plans can be identified, to ascertain whether additional plans can be classified with equal facility and frequency, and, providing the first objective is accomplished, to learn whether the factor of geographical location appears to be associated with any specific type of plan.

Definition of Terms

The floor plan types and terms used in the study were defined in the following manner:

Floor plan - a horizontal section drawing of the boundaries, the exterior, and the interior space divisions of a residential housing structure. Symbols indicate the location of entrances, egresses, and traffic areas.

Basic floor plan - the floor plan of a single family dwelling which can be identified according to its

1. conformance to criteria characteristic of a defined type of floor plan
2. frequency of usage which must be sufficient to describe it as a commonly-used plan.

Front Hall plan - a center front entrance offers direct access to first floor rooms; the stairway is opposite the entrance. Location of the exit is variable.

Open Center Hall plan - a hallway extends from the center entrance through the full length of the house to the exit; the stairway is along one side of the hall.

Side Hall plan - a side front entrance provides access to the first floor rooms; the stairway is along one side of the hall. Location of the exit is variable.

T-plan - a hallway extends back from a center or near-center front entrance and provides access to the family activity areas; at about the middle of the structure this hallway intersects at right angles another hall that provides direct access to the bedrooms. Location of the exit is variable.

Core plan - the mechanical portions of the house (kitchen, bathrooms) are located in a central position and the traffic flows in a circular pattern. Location of the entrance and exit is variable.

Closed Center Hall plan - a hallway extends from the center front entrance and provides access to all rooms. An exit is usually located on one of the sides of the house.

Focus of the Study

It is not known how the six so-called "basic" floor plans, operationally defined above, were first identified; therefore, an effort to determine the validity of calling them basic floor plans would seem to have value. Verification of the existence of basic plans might be an aid in teaching or consultant-type work.

For instance, if certain types of plans could be identified as those which most people actually live in, it might be expedient for a beginning housing student to work with these plans rather than design his own plan from the beginning. He could then concentrate more on aspects of man and space relations and less on learning representational techniques. Similarly, if consumers of moderately priced homes are ultimately reduced to two or three choices of plans, a housing consultant could suggest the plan for a particular situation and modify it to meet personal and economic needs. Many architects do not accept total planning contracts within a moderate price range because the cost of their services is unwarranted.

Consumers and professional people within the housing field might also find basic floor plan information to be valuable. It would seem that in this age of computerized mechanization, the housing industry could use basic plans as a foundation design core. A program based on such a core could be an important factor in cutting housing costs and yet provide for diversity of choice within the basic types.

The objectives which guided this investigation are as follows:

1. To determine whether six mutually exclusive house floor plans can be identified.
2. To ascertain whether any plans that do not fit into one of the six categories can be classified with equal facility and frequency.
3. To learn whether the factor of geographical location appears to be associated with any specific type of plan.

In all subsequent written material in this study the terms floor plans, basic plans and plans refer to house floor plans.

CHAPTER II

METHODOLOGY

The present study is necessarily limited but it is hoped that the investigation will add objective information and will stimulate further study of the floor plan types and other related factors.

A magazine survey was chosen as the technique for collecting data in this study. Since a random sampling of actual housing was not feasible, an analysis and classification of house plans from two magazines was devised as helpful in gaining the desired information.

A brief examination of several magazines revealed that floor plans in magazines provide material from which a relatively inexperienced person could identify plans according to the given classifications. The magazines House Beautiful and Better Homes and Gardens* were chosen for the survey of plans because both had been published continuously for a long enough period of time to obtain an estimate of the frequency of use of each floor plan, and because it was believed they might represent two different cost ranges in the housing market. The avant-garde approach to furnishings and interior design of House Beautiful would suggest that its featured house plans would conform to the same policy.

*Better Homes and Gardens is published monthly by the Meredith Corp. in Des Moines, Iowa. Its readership is over 7,250,000. The cost of a single issue of the magazine is fifty cents. House Beautiful is published by the Hearst Corp. in New York and the price of a single issue is seventy-five cents.

The basic assumption which guided this study was as follows: magazine illustrations of houses and house plans will be reflective of the types of houses constructed by the American public during or within a few years following the time of publication.

For this study, data were secured from each magazine in the same manner. The survey consisted of tabulating data from every fourth issue of two magazines, House Beautiful and Better Homes and Gardens, beginning with the January, 1928, issue and continuing through the issue of September, 1967. All new, single family house plans from the three monthly issues of each year were recorded from each magazine; not all of the plans selected, however, represented actually constructed housing.

The time interval was four months beginning with January of the first year, February of the second year, and continued in this manner through the forty-year span of magazines sampled. Thus it was felt that variations due to seasonal building rates could be accommodated in the study.

Data regarding each plan included the magazine name and issue in which the plan appeared, the page number, the classification (it was listed as one of the six predefined plans or as an unclassified plan), and the location of the house, if known. If the house plan did not fit one of the six categories, a tracing was made and filed for further study.

CHAPTER III

ANALYSIS AND FINDINGS

The data compiled were tabulated. Every plan found was examined and categorized as classified or unclassified, according to its specific time of appearance and according to plan type and location. From this initial fact sheet, tables were developed to organize the data into the established categories.

The data gathered through the survey can be considered according to the objectives stated in the Introduction. Therefore, the content of this chapter is presented in three sections: (1) determination of the identification of six mutually exclusive housing floor plans, (2) determination of the identification of an additional basic floor plan, and (3) association of geographical location with basic floor plans.

Identification of Housing Floor Plans

The purpose of this study was to explore the possibility of the existence of six mutually exclusive floor plans. Table 1 shows that from a total of 514 plans presented in the magazines, 368 or 72 per cent of the plans were classifiable within one of the six categories and

that 28 per cent or 146 plans could not be classified under these headings.

Table 1. Number and per cent of total plans surveyed

Type of Plan	Number	Per Cent
Classified	368	72
Unclassified	146	28
Total	514	100

It was felt that the number and per cent figures for classified plans could be best broken down into figures from each magazine. These figures then could be compared to see if the two magazines favored similar plans in similar years.

It can be seen in Tables 2a and 2b that in the decade from 1928-1937, both House Beautiful and Better Homes and Gardens featured the Front Hall plan, as it appeared most often. The only significant difference in the figures for other plans is that Better Homes and Gardens featured 25 per cent Side Hall plans, whereas House Beautiful had only 4 per cent Side Hall plans.

From 1938-1947, both magazines again favored the Front Hall plan, although House Beautiful had the same percentage of presentation (42 per cent) of the T-Plan as the Front Hall plan; Better Homes and Gardens featured a lower percentage of T-Plans (31 per cent).

Table 2a. Number and per cent of all classified plans surveyed in Better Homes and Gardens within each ten-year time span

	1928-37		1938-47		1948-57		1958-67		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Front Hall	13	46	23	66	27	34	4	13	67	39
Open Center Hall	4	14	0	0	0	0	0	0	4	2
Side Hall	7	25	1	3	0	0	1	3	9	5
Closed Center Hall	1	4	0	0	13	16	2	6	16	9
Core	1	4	0	0	5	6	4	13	10	6
T-Plan	2	7	11	31	35	44	20	65	68	39
Total	28	100	35	100	80	100	31	100	174	100

Table 2b. Number and per cent of all classified plans surveyed in House Beautiful within each ten-year time span

	1928-37		1938-47		1948-57		1958-67		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Front Hall	60	65	20	42	2	7	1	4	83	43
Open Center Hall	13	15	0	0	2	7	0	0	15	8
Side Hall	4	4	0	0	0	0	0	0	4	2
Closed Center Hall	4	4	7	14	1	3	3	13	15	8
Core	0	0	1	2	0	0	1	4	2	1
T-Plan	11	12	20	42	25	83	19	79	75	38
Total	92	100	48	100	30	100	24	100	194	100

The decade from 1948-57 revealed the rise of the T-Plan, attested to by both magazines. House Beautiful exhibited a far higher percentage of T-Plans used, however, as the T-Plan represented 83 per cent of all plans featured. Better Homes and Gardens showed a 44 per cent use of the T-Plan in its illustrations.

From 1958-67, the percentage of T-Plans featured in both magazines became more similar. House Beautiful had 79 per cent T-Plans and Better Homes and Gardens displayed a 65 per cent usage of the T-Plan.

The total figures show that Better Homes and Gardens featured an equal number of Front Hall plans and T-Plans--39 per cent of each. The figures for House Beautiful were quite close also--43 per cent Front Hall plans and 38 per cent T-Plans.

This breakdown of figures would seem to indicate that although the two magazines had differences in types of plans shown at any given time, the featured plans were highly similar in number of times presented in the total forty year span.

Tables 2c and 2d indicate the number and percentage of classified plans from both magazines. In Table 2c it can be seen that the Front Hall plan was featured most often in the years from 1928 to 1947, after which it began to decline in use. The T-Plan showed a steady rise throughout the years; in the decade from 1958-67 the T-Plan composed 71 per cent of all classified plans

Table 2c. Number and per cent of all classified plans surveyed within each ten-year time span

	1928-37		1938-47		1948-57		1958-67		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Front Hall	73	61	43	52	29	26	5	9	150	41
Open Center Hall	17	14	0	0	2	2	0	0	19	5
Side Hall	11	9	1	1	0	0	1	2	13	4
Closed Center Hall	5	4	7	8	14	13	5	9	31	8
Core	1	1	1	1	5	5	5	9	12	3
T-Plan	3	11	31	38	60	54	39	71	143	39
Total	120	100	83	100	110	100	55	100	368	100

Table 2d. Number and per cent of all classified plans surveyed throughout the four ten-year time spans

	1928-37		1938-47		1948-57		1958-67		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Front Hall	73	49	43	29	29	19	5	3	150	100
Open Center Hall	17	90	0	0	2	10	0	0	19	100
Side Hall	11	84	1	8	0	0	1	8	13	100
Closed Center Hall	5	16	7	23	14	45	5	16	31	100
Core	1	8	1	8	5	42	5	42	12	100
T-Plan	3	9	31	22	60	42	39	27	143	100
Total	120	33	83	22	110	30	55	15	368	100

shown. The total figures indicate that the Front Hall plan and the T-Plan together composed 80 per cent of the classified plans used (Front Hall plans at 41 per cent and T-Plans at 39 per cent). The four other plans were featured much less frequently and were within five percentage points of each other--from the Closed Center Hall plan at 8 per cent to the Core plan at 3 per cent of the total.

Table 2d suggests that the two-story plans, Front Hall, Open Center Hall, and Side Hall, were at their peak usage in the years between 1928-37. Two of the one-story plans, Closed Center Hall and the T-Plan, were featured most widely from 1948-57, while 42 per cent of the Core plans appeared in each of the last two decades covered in the study. The trend indicated would seem to be a change from the two-story house to the one-story house.

Identification of an Additional Floor Plan

A second purpose of this study was to determine whether there might be other plans identified in addition to the six floor plan types previously defined. The data from the survey would seem to indicate that there was at least one additional definable plan. Its characteristics conform to the definition of a basic floor plan; that is, it is the floor plan of a single family dwelling, it conforms to criteria characteristic of a floor plan, and its frequency of appearance is adequate to suggest that it is a commonly used plan.

The additional floor plan, hereafter called the Direct Front Entry plan, was recognized through repeated appearances in the tracings taken from unclassified plans. The Direct Front Entry plan can be described as a plan in which a front entrance opens directly into the living room or family activity area; trafficways through these rooms provide access to all other rooms. Location of an exit is variable.

The remainder of the unclassified plans were defined as Unclassifiable. These plans had no characteristics common enough to be categorized; each appeared to be a unique design. Therefore, the tables on unclassifiable plans contain two categories: the Direct Front Entry plan and the Unclassifiable plan.

Tables 3a and 3b show the number and per cent of all unclassified plans located in each of the two magazines. House Beautiful and Better Homes and Gardens differed in their emphasis on the type of plan used. Better Homes and Gardens consistently showed a greater use of the Direct Front Entry plan; the only deviation was in the decade from 1958-67, when the Direct Front Entry plans and the Unclassifiable plans each composed 50 per cent of the unclassified plans featured. House Beautiful, on the other hand, consistently included house plans that were Unclassifiable except during the period of 1948-1957, when the Direct Front Entry plans and the Unclassifiable plans both were featured 50 per cent of the time. In the total figures for the entire forty-year time span, Better

Table 3a. Number and per cent of all unclassified plans surveyed in *Better Homes and Gardens* within each ten-year time span

	1928-37		1938-47		1948-57		1958-67		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Front Entry	15	58	20	74	13	62	3	50	51	64
Unclassifiable	11	42	7	26	8	38	3	50	29	36
Total	26	100	27	100	21	100	6	100	80	100

Table 3b. Number and per cent of all unclassified plans surveyed in *House Beautiful* within each ten-year time span

	1928-37		1938-47		1948-57		1958-67		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Front Entry	17	39	7	47	1	50	2	40	27	41
Unclassifiable	27	61	8	53	1	50	3	60	39	59
Total	44	100	15	100	2	100	5	100	66	100

Homes and Gardens showed 64 per cent Direct Front Entry plans and 36 per cent Unclassifiable plans, whereas House Beautiful showed 41 per cent Direct Front Entry plans and 59 per cent Unclassifiable plans.

These differences in usage of the two unclassified plan categories might be explained by the fact that House Beautiful gears its approach more directly to the higher income reader than does Better Homes and Gardens. Therefore, House Beautiful would tend to feature more unusual and expensive plans, while Better Homes and Gardens would tend to show plans that could be built at medium cost and would be less unique.

When the figures for both magazines are combined in Table 3c, it can be seen that the Direct Front Entry plan had a higher percentage of the unclassified total than the Unclassifiable plan throughout the years. The Unclassifiable plan had a greater percentage total during two decades of the forty-year span (1928-37: 54 per cent; 1958-67: 55 per cent) but the Direct Front Entry plan composed 64 per cent and 61 per cent of the unclassified total in 1938-47 and 1948-57, respectively. The total figures show that the Direct Front Entry plan category composed 54 per cent of all the unclassified plans used throughout the survey time period.

Table 3d indicates that the greatest percentages of both the Direct Front Entry plan and the Unclassified plan occurred in the first decade of the study. This

Table 3c. Number and per cent of all unclassified plans surveyed within each ten-year time span

	1928-37		1938-47		1948-57		1958-67		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Front Entry	32	46	27	64	14	61	5	45	78	54
Unclassifiable	38	54	15	36	9	39	6	55	68	46
Total	70	100	42	100	23	100	11	100	146	100

Table 3d. Number and per cent of all unclassified plans surveyed throughout the four ten-year time spans

	1928-37		1938-47		1948-57		1958-67		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Front Entry	32	41	27	35	14	18	5	6	78	100
Unclassifiable	38	56	15	22	9	13	6	9	68	100
Total	70	48	42	29	23	16	11	7	146	100

finding might be accounted for by the fact that 48 per cent of all unclassified plans were tabulated in the same first decade.

Table 4, which indicates the comparison of the six basic plans with the Direct Front Entry plan, was set up in order to show that the Direct Front Entry plan was used frequently enough to be described as a commonly used plan. The Front Hall plan and the T-Plan were the most frequently used, with 34 and 32 per cent of the total, respectively. The next most commonly used plan, however, was the Direct Front Entry plan, composing 17 per cent of the total plans investigated. The four remaining plans combined composed only 17 per cent of the total.

Table 4. Number and per cent of all classified plans and the Direct Front Entry plan

	Number	Per Cent
Front Hall	150	34
T-Plan	143	32
Direct Front Entry	78	17
Closed Center Hall	31	7
Open Center Hall	19	4
Side Hall	13	3
Core	12	3
Total	446	100

Association of Geographical Location with Basic Floor Plans

The third objective of the study was to determine whether the factor of geographical location appeared to be associated with any specific plan. The United States Census Bureau standards for geographical regions were used for this section of the study. The regions fall into four main categories: Northeast, North Central, South, and West. During initial tabulation these categories were further subdivided.[1]

The Northeast area was subdivided into two sections: the New England states (Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island) and the Middle Atlantic states (New York, Pennsylvania, and New Jersey). The North Central area was also divided into two sections: the East North Central states (Michigan, Ohio, Indiana, Illinois, and Wisconsin) and the West North Central states (Minnesota, Iowa, Missouri, Kansas, Nebraska, South Dakota, and North Dakota).

The South area was divided into three sections: the South Atlantic states (Maryland, Delaware, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida), and East South Central states (Kentucky, Tennessee, Alabama, and Mississippi), and the West South Central states (Arkansas, Louisiana, Texas, and Oklahoma). The West area was composed of two sections: the Mountain

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[1]U. S. Bureau of the Census, U. S. Census of Population: 1960.

states (Montana, Idaho, Wyoming, Nebraska, Utah, Colorado, Arizona, and New Mexico) and the Pacific states (Washington, Oregon, California, Alaska, and Hawaii).

Table 5a shows the number of classified plans according to the nine geographical categories of states listed above. An added category of "not known" contains those plans about which no geographical information was given. However, it was felt that the nine categories gave too diverse a range to provide significant percentage figures. Therefore, Tables 5b and 5c contain only the four major geographical regions of Northeast, North Central, South, and West and the category of "not known."

Table 5b indicates the number and per cent of all classified plans surveyed within each major geographical region. The Front Hall plan composed the greater percentage of classified plans in the Northeast regions, with 48 per cent of the total. In the North Central region, the Front Hall plan again was used most frequently, with 45 per cent of the total. In the South and the West, however, the T-Plan had the most frequent usage, with 42 per cent and 57 per cent of the total, respectively. Of the plans whose origin was unknown, 49 per cent were Front Hall plans and 24 per cent were T-Plans.

Table 5c shows the number and per cent of all classified plans surveyed in four geographical regions. The highest percentage of Front Hall plans (29 per cent) and Open Center Hall plans (47 per cent) were found in the

Table 5a. Number of classified plans according to geographical location

	Northeast		North Central		South			West		Not Known	Total
	NE	MA	ENC	WNC	SA	ESC	WSC	M	P		
Front Hall	23	20	12	11	9	1	5	1	21	47	150
Open Center Hall	4	5	-	-	1	-	-	-	2	7	19
Side Hall	-	2	3	1	-	-	1	-	-	6	13
Closed Center Hall	2	-	1	3	2	-	-	1	14	8	31
Core	-	1	2	-	1	-	2	-	1	5	12
T-Plan	17	16	14	4	9	4	3	6	47	23	143
Total	46	44	32	19	22	5	11	8	85	96	368

Key:
NE=New England
MA=Middle Atlantic
ENC=East North Central
WNC=West North Central
SA=South Atlantic
ESC=East South Central
WSC=West South Central
M=Mountain
P=Pacific

Table 5b. Number and per cent of all classified plans surveyed within each geographical region

	Northeast		North Central		South		West		Not Known		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Front Hall	43	48	23	45	15	39	22	24	47	49	150	41
Open Center Hall	9	10	0	0	1	3	2	2	7	7	19	5
Side Hall	2	2	4	8	1	3	0	0	6	6	13	4
Closed Center Hall	2	2	4	8	2	5	15	16	8	9	31	8
Core	1	1	2	4	3	8	1	1	5	5	12	3
T-Plan	33	37	18	35	16	42	53	57	23	24	143	39
Total	90	100	51	100	38	100	93	100	96	100	368	100

Table 5c. Number and per cent of all classified plans surveyed in four geographical regions

	Northeast		North Central		South		West		Not Known		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Front Hall	43	29	23	15	15	10	22	15	47	31	150	100
Open Center Hall	9	47	0	0	1	5	2	11	7	37	19	100
Side Hall	2	15	4	31	1	8	0	0	6	46	13	100
Closed Center Hall	2	6	4	13	2	6	15	49	8	26	31	100
Core	1	8	2	17	3	25	1	8	5	42	12	100
T-Plan	33	23	18	13	16	11	53	37	23	16	143	100
Total	90	24	51	14	38	11	93	25	96	26	368	100

Northeast, while the major portion of Side Hall plans were located in the North Central states. Forty-nine per cent of the Closed Center Hall plans and 37 per cent of the T-Plans were located in the West. Twenty-five per cent of all Core plans were found in the South. Of the total number of all classified plans, 24 per cent were located in the Northeast, 25 per cent were located in the West, and 26 per cent had an unknown location.

While it is impossible to generalize from such a limited sample, this study indicates that more two-story plans featured in the two magazines were constructed in the Northeast and North Central states and that many of the one-story plans found were constructed in the West and South. The climate factor might be responsible: the colder weather of the northern United States demands a more compact and easily heated structure, while the warmer states encourage long, open houses.

Table 6a indicates the number of unclassified plans according to the nine geographical categories of states. Table 6b shows the number and per cent of all unclassified plans surveyed within each major geographical region. The Direct Front Entry plan composed the majority of all unclassified plans in the Northeast, North Central, and South with 57 per cent, 75 per cent, and 73 per cent, respectively. Only in the Western states did the Unclassifiable plan compose the majority (69 per cent). Table 6c shows that 22 per cent of all Direct Front Entry plans

Table 6a. Number of unclassified plans according to geographical location

	Northeast		North Central		South			West		Not Known	Total
	NE	MA	ENC	WNC	SA	ESC	WSC	M	P		
Direct Front Entry	7	10	6	6	3	1	4	2	9	30	78
Unclassifiable	4	9	4	0	3	0	0	1	24	23	68
Total	11	19	10	6	6	1	4	3	33	53	146

Key:

NE=New England
MA=Middle Atlantic
ENC=East North Central
WNC=West North Central
SA=South Atlantic
ESC=East South Central
WSC=West South Central
M=Mountain
P=Pacific

Table 6b. Number and per cent of all unclassified plans surveyed within each geographical region

	Northeast		North Central		South		West		Not Known		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Front Entry	17	57	12	75	8	73	11	31	30	57	78	53
Unclassifiable	13	43	4	25	3	27	25	69	23	43	68	47
Total	30	100	16	100	11	100	36	100	53	100	146	100

Table 6c. Number and per cent of all unclassified plans surveyed in four geographical regions

	Northeast		North Central		South		West		Not Known		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Front Entry	17	22	12	15	8	10	11	14	30	39	78	100
Unclassifiable	13	19	4	6	3	4	25	37	23	34	68	100
Total	30	20	16	11	11	8	36	25	53	36	146	100

were located in the Northeast, while 37 per cent of all Unclassifiable plans were found in the West.

It would seem that although there was a certain percentage of Unclassifiable plans in every region, a majority of them were located in the West, particularly in the Pacific states. How significant these findings are is undetermined. The magazines could only be reflecting their policy of appealing to their readership. The fact that more plans suitable for northern climates were featured could mean that more subscribers lived in the areas with these climates.

CHAPTER III

SUMMARY

Summary

The research was developed in order to study six floor plans which have been quoted as being basic plans, to learn if any additional plans would fall under the definition of a basic plan, and to learn whether any of these plans appear to be associated by geographical location.

Of the total number of plans studied in House Beautiful and Better Homes and Gardens, 72 per cent were classifiable in one of the six predetermined categories. Figures on classifiable plans were compared in both magazines and it was found that the types of classifiable plans featured at any time were roughly comparable for each magazine.

The Front Hall plan, with 41 per cent of the classified total, and the T-Plan, with 39 per cent, were the most popular of all plans. Together they composed 80 per cent of all classified plans. The four other plans were used much less frequently and were within five percentage points of each other.

Generally speaking, the two-story plans (Front Hall, Open Center Hall, and Side Hall) were used more widely during the first two decades of the study (1927-1947), while the one-story plans (Closed Center Hall, T-Plan, and Core) were more widely used during the last twenty years (1948-1967).

It was found that there is an additional house floor plan. Designated as the Direct Front Entry plan, it can be defined in the following manner: a front entrance opens directly into the living room or family activity area; trafficways through these areas provide access to all other rooms. Location of an exit is variable. It is possible that the Direct Front Entry plan was not previously defined as a basic floor plan because it was not regarded as a "good" plan. The direct entrance into the living areas of the house might tend to criss-cross these areas with traffic patterns. This study, however, was not set up to evaluate the quality of plans but to determine if basic plans could be identified.

The two magazines differed in their emphasis on the type of unclassified plan used. House Beautiful featured 59 per cent of the Unclassifiable plans and 41 per cent of Direct Front Entry plans, whereas Better Homes and Gardens featured 64 per cent Direct Front Entry plans and only 36 per cent of Unclassifiable plans. When the figures from both magazines were combined, the Direct Front Entry plan composed the majority, or 54 per cent, of all unclassified plans.

When compared with the six initially defined plans, the Direct Front Entry plan, with 17 per cent of the total, was the third most commonly used. The Front Hall plan and the T-Plan were featured more frequently (with 34 and 32 per cent, respectively), but the four other plans combined made up only 17 per cent of the total. An explanation for the fact that the Direct Front Entry plan was frequently featured might be that the plan offers a very economic and adequate solution for the housing of a single person or a small family.

Four main geographical divisions, Northeast, North Central, South, and West, were used in evaluating the effect of location on the type of plan used. Of the classified plans surveyed, the two-story plans were most commonly used in the Northeastern and North Central states, while the one-story plans were more often found in the South and West. The Direct Front Entry plan was located in the Northeast more frequently than in any other region. The majority of Unclassifiable plans were located in the West, particularly in the Pacific states.

Conclusions

It would seem that the term "basic" floor plan is in some ways and in some cases related to restrictions on cost. These restrictions seem to limit somewhat basic housing design. The Unclassifiable category seems to bear this out. House Beautiful featured 59 per cent

unclassified plans exclusive of the Direct Front Entry plan, while Better Homes and Gardens showed only 36 per cent in the same category. It is generally felt that these magazines have different readerships; House Beautiful appeals to the higher-income reader who might more easily afford a distinctive and unique house.

Frequency of usage, a term which is used in classifying a plan as a basic plan, also needs clarification. Theoretically, the highest frequency one could expect would be an equal distribution of the total classifications used. On the basis of six plans, therefore, any plan with more than one-sixth of the total is clearly within the level of frequency required to be considered a common plan and any plan with fewer than this number of plans becomes questionable as common.

It is obvious that a plan which was never used would not qualify as a basic floor plan, even though it was identified. The difficulty is encountered in determining the minimum number for calling a plan basic. It becomes necessary to set an arbitrary number based upon relative appearance or implied use. In the present study, this number was set at one-half of one part of the total classifications used. On the basis of six plans, a plan with less than one-twelfth or 8 per cent of the total could not then be clearly defined as a commonly-used plan.

In summary, the first objective, which was to determine whether six mutually exclusive house floor

plans can be identified, seems to be supported by this investigation. Two of these plans, the Front Hall plan and the T-Plan, have been extensively featured and would definitely fulfill all the qualifications within the scope of this study as a basic floor plan. None of the four other plans (Open Center Hall, Side Hall, Closed Center Hall, and Core) was found with enough frequency to be defined as commonly-used; they are identifiable, however, and they were presented with some regularity.

The Direct Front Entry plan, not one of the original six floor plans, was found to have occurred with enough frequency (17 per cent of the total on the basis of seven plans) to qualify as a commonly found plan. The author feels that although the scope of the study sample was limited, the percentage of occurrence of this previously undefined plan was important.

Because geographical information on many of the plans identified was not given, information concerning the geographical location factor is limited. The two-story classified plans and the Direct Front Entry plan were located more frequently in the Northeast and North Central regions. The Unclassifiable plan and the one-story classified plans found greater usage in the South and West.

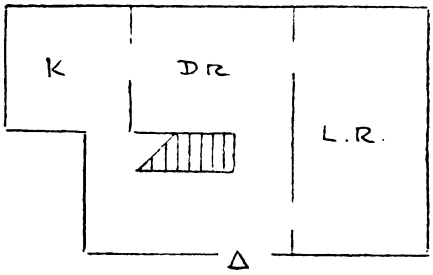
Recommendations

Because the author made all the decisions for placing the plans into the classified and unclassified categories, it is recommended that a panel of judges follow the procedures of the present study in order to verify the identifications made. They might only need to sample the plans surveyed as a spot check against the present study. If there was a high degree of agreement, these findings would establish quite firmly that six mutually exclusive floor plans can be identified.

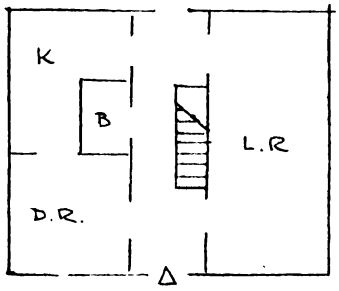
In view of the fact that the study was limited to a survey of plans featured in consumer-oriented magazines, it was only possible to infer the frequency of use of particular types of plans. House builders' magazines give numbers and types of units constructed over a given time and they would yield some data indicative of the kinds of houses being built; thus, they probably would be a better base for determining the actual frequency of use of any floor plan.

Obviously, an inventory of existing houses would be the most reliable and valid method of ascertaining the frequency of use of any plan but the cost would be difficult to justify. However, the association of geographical location and additional valuable information associated with each plan such as cost, size, and material could be obtained in this manner.

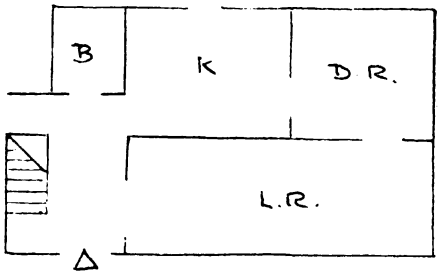
HOUSE FLOOR PLANS



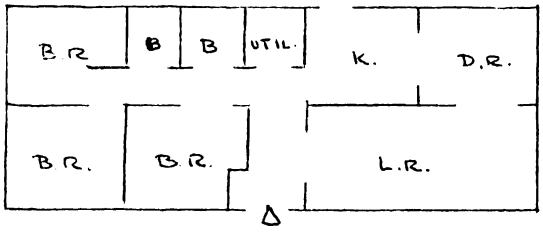
FRONT HALL



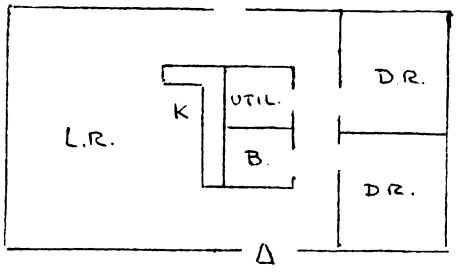
OPEN CENTER HALL



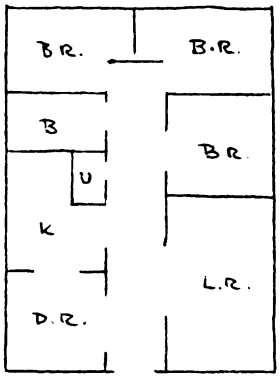
SIDE HALL



T-PLAN



CORE



CLOSED CENTER HALL

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