USER-ORIENTED INFORMATION SERVICES
(WITH SPECIAL REFERENCE TO OWNER-BUILT HOUSING)

by

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Information services for consumers, or users, of the things which a nation produces will be different according to one's view of how people make decisions. Current literature on consumer information and consumer behavior is surveyed in order to arrive at a judgment of the advisability of information services as a tool for raising the living standard of low income populations.

Insights derived from this investigation are then applied to the field of owner-built housing in order to determine how information services for owner-builders might best be designed. Interviews with suburban middle income owner builders reveal the existing information network to be quite efficient but closely intertwined with the structure of the social and cultural milieu.

An information and advisory service for suburban middle income owner-builders, presupposing removal of existing financial, legal and technological obstacles, is suggested. Doubts, however, are registered as to the usefulness of such a service to promote owner-built housing in the suburbs among lower income minority groups.

The essential argument throughout is that the effectiveness of an information service depends not only on the rational decision-making behavior of the user (which is no less present among the poor and less educated than among other groups) but also upon the previous stock of information possessed by the individual and the social network to which he belongs (which does vary according to social circumstances), and that where this previous stock of information is weak, resources might better be invested in certain more basic activities that will have as their by-product a strengthening and development of the network of experience upon which an effective user-serving information system depends.
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INTRODUCTION

Work for this thesis was begun under a set of fairly clear assumptions:

1. Most information systems in our society exist to serve the needs of industry, government or academicians.

2. An information system to serve the needs of individual citizens and enable them to make better decisions affecting their own lives and environment is as desirable as it is rare.

3. Owner-built housing is a field in which the individual citizen makes the basic decisions about his own living environment and achieves a practical result that is significantly different from that achieved when government or the housing industry makes the decisions. (For a definition of owner-built housing see chapter three, section two.)

4. An information system for owner-builders, then, ought to be a good example of user-serving information systems and should offer an interesting contrast to the usual system which serves the needs of administrators, executives and academics.

And so the task of the thesis was to go and design an information system for owner-builders.
A friend and colleague, William Grindley, had recently completed a survey of 121 owner-builders in nine suburban communities to the north of Boston for a thesis of his own. It seemed a simple task to follow up and complete his work by arranging a set of lengthy interviews with some of his respondents. The plan was to ask these successful owner-builders how they obtained the goods and services they needed to do the task. By asking them to name their bankers, suppliers and subcontractors it was hoped that a picture would emerge of a supply network which could be mapped and described, and that on the basis of this one could design a system which presumably would have facilitated their task and could subsequently facilitate the task for potential owner-builders in the future.

But, alas, after the first few interviews it became clear that these people not only build their houses efficiently, they also obtain information in very efficient ways as well, and it became very difficult to think of ways in which any institutionalized source could improve upon the process which they now use. One also got the impression that this process was closely bound up with the entire social network of middle and lower-middle income suburban white Americans, and that the way this group of owner-builders accomplished their task would not necessarily have any relevance for persons of another social milieu.
So, back to the drawing boards. Since the major premise at the outset had to do with information and not owner-built housing it seemed logical to look for other examples of work done on the subject of information which had an orientation toward the user rather than the administrator. The closest parallel seemed to be information for consumers, of which owner-builders might be considered just a maverick sub-group. An earlier and quicker look at some work done in this area had left the impression that most of it was done to serve the needs of advertisers and marketers, and indeed such is mainly the case. But tucked away on the shelf of the Dewey library was a book in German by Eberhard Kuhlmann, The Informational Behavior of Consumers. Kuhlmann takes the bits and pieces produced mostly by American economists and students of marketing and builds with them a theoretical framework transcending the immediate concerns of advertisers and offering a perspective which is useful well beyond the realm of the 'consumer' alone. Another German work on the same shelf, Karl H. Horning's Elements for a Consumer Sociology awakened echoes of a course taken at Harvard under John Steinbruner on the subject of Cognitive Processes in Policy Making and made apparent the relevance of some material from a paper written for that course.

A good deal of time was spent digesting all of this. The end result was some picture of the information needs of
consumers, but there were still questions about how it all applied to low-income consumers, to owner-builders, who were something more than consumers, and to low-income owner-builders. Further work had to be done on the consumer behavior of the poor and less educated, the interviewing had to be resumed and completed, and the whole thing put together again.

The result is somewhat less neat and more wide-ranging than envisioned. It has two rather distinct parts. Chapters one and two cover a broader field than do the final chapters, and every point raised in these first chapters does not have a parallel in the latter ones. Nevertheless, the essential line of reasoning is applied in both sections, namely, that the effectiveness of an information system depends not only on the rational decision-making behavior of the user (which is no less present among the poor and less educated than among other groups) but also upon the previous stock of information possessed by the individual and the social network to which he belongs (which does vary according to social circumstances), and that where this previous stock of information is weak, resources might better be invested in certain more basic activities that will have as their by-product a strengthening and development of the network of experience upon which a user-serving information service depends.
Special acknowledgment is due to three persons, Ralph Gakenheimer, John Turner and William Grindley. Many others deserve thanks as well, not the least of whom are those who consented to be interviewed.
Chapter One

DEFINITIONS AND DISTINCTIONS
ON THE SUBJECT OF INFORMATION

1.1 The Meaning of the Term 'Information'

It might be enough for some of our purposes simply to define information as that which a person needs to know in order to purchase or to make what he wants. But there are at least two points in this definition which require some discussion.

First of all, the word information has acquired a technical meaning due to the emergence of mathematical information theory. The word information will not be used in such a technical sense in this thesis. Nevertheless some of the sources to which we shall be making reference do attempt to include the mathematical formulas of information theory in their discussion and, for this reason, some clarification may be called for.

The theory of information sometimes called the Wiener-Shannon theory is concerned with the rate at which signals are transmitted by a communication channel. It is totally unconcerned with the meaning, value or purpose of the information. In so far as this thesis deals with amount and cost of information, this theory has some relevance, but, as we shall see, so many variables distinguish the information search of one individual from that of another that the formulas are difficult to apply concretely.
Colin Cherry relates some of the various meanings of the term 'information' to the three levels of 'semiotic': syntactics, semantics and pragmatics. Syntactics is the study of signs and of the relations between signs. Semantics is the study of the relations between signs and the things they designate, and pragmatics is the study of signs in relation to their users. Cherry states that the Wiener-Shannon theory belongs at the level of syntactics. This thesis uses the word information in its pragmatic sense. It deals with 'signs' in terms their "purpose, practical results and value to sign users."

The second point to be made as regards our definition is that "what a person needs to know" must be taken in a very loose sense. For we shall be discussing many kinds of information which a person doesn't strictly need, and some which he could well do without. We are dealing with pragmatic information certainly, but the purpose for which the information is transmitted may not be the same as the user's own purpose.

This leads to a useful distinction. Advertisers know that there is much more to a communication than the facts or claims being presented. There is a field of connotation surrounding the item itself, a context of feeling, belief, nuance, suggestion, intuition. It would be much too narrow to limit our discussion merely to the factual data acquired
in the search for information. A buyer can save himself both money and time, and thus act 'rationally', by relying on his feeling for the trustworthiness of a producer or the fitness of a product. He can also be woefully deceived by such intuitions. Either way, information search is much more than data search. For reasons like this, some authors distinguish between 'thematic' and 'unthematic' information.

1.2 The Distinction Between 'Thematic' and 'Unthematic' Information

Thematic information is information that is perceived consciously and in relation to a specific theme. Information about price, weight, ingredients and performance of a product is the most obvious kind of thematic information. The purchaser, if asked, can give back this kind of information once he has acquired it.

Unthematic information includes the sensual qualities of the object: form, color, etc. It also includes relationships -- that something about the object which evokes the memory of something or someone else. It includes symbolism, suggestions of power, sexual attraction, tranquillity, etc., but all of these in their unspecified, more subliminal forms.

A first reaction to this whole field of unthematic information is to dismiss it as of interest only to the advertising world, as the field of the manipulator and the exploiter. But this would be a retreat from reality. People
do not make decisions merely on the basis of what is explicit. To pretend that they do is precisely to relinquish the field of the implicit to the manipulators and the image-builders. One big reason for the limited impact of consumer information services like Consumer Reports may well be the fact that they deal only in thematic information. Even when dealing with the sensual qualities of a product, such as smell, color or texture, they only describe. They do not transmit an experience the way advertisers or political candidates seek to do and, however deceptively, do so well.

It is relatively easy to evaluate thematic information as correct or incorrect, complete or incomplete, and so on. Unthematic information is much more ambivalent. But it is at the unthematic level that the factual data is related to specific purposes and thereby acquires meaning for concrete individuals. Specifications about building materials, for instance, are just facts. But when they are conveyed in the context of "our dreamhouse" they take on a meaning which in turn motivates decision. Perhaps one might call 'deceptive' that kind of unthematic information which serves purposes at odds with those of the user.

The information that goes into the construction of a house by its owner is certainly much more than information about price, quality and performance of the materials, or the comfort and convenience of various designs and systems. When asked about his information sources and the criteria used in seeking them cut, the owner-builder will, by defi-
nition, speak only of his search for thematic information; but we realize that there are other kinds of information involved when he says things like: "we wanted something modern but not modernistic," or "he likes colonial, but I can't stand it," or when he builds into the structure a special place for storing his guns.

1.3 Sources of Information

Information sources can be classified into four categories, one internal to the searcher and three external:

1. The searcher's previous stock of information,
2. Interest-linked, institutionalized sources,
3. Independent, institutionalized sources,
4. Informal sources.

1.3.1 The searcher's previous stock of information contains both thematic and unthematic elements. It includes all the cultural baggage that an individual brings to his task: everything that he takes for granted, his ideas of what to expect from people in given situations, his 'common sense', his sense of what is odd or audacious, and his idea of what is modern and up-to-date. It includes all the conditioning he has undergone at the hands of advertisers, educators, army officers, relatives and employers. It includes all the skills he has acquired both for the task at hand and for uncovering information. It also includes previously acquired facts.
about the product or service under consideration and previous experience in dealing with it.

1.3.2 Interest-linked, Institutionalized Sources. First among the information sources which are external to the seeker are all those which have some interest in selling him anything. Their overriding interest is their own success, not the seeker's. Their primary concern is to persuade. Nevertheless these sources do provide a good deal of objective information concerning their product or service, both thematic and unthematic. According to the circumstances, they can be the most reliable and the most unreliable of sources. A local craftsman, for example, who knows that his obtaining the job, his getting paid and his future reputation in the community depends upon the accuracy of his estimates and the helpfulness of his advice can be a very valuable source of information. Performance claims of manufacturers, where the item is paid in advance and requires maintenance with parts supplied only by the maker, are probably a good deal less reliable.

The information provided by these sources may be both thematic and unthematic. Neither kind is necessarily true or false. But in general these sources are not concerned with providing the seeker with a comprehensive view of all his options and the attributes of each. Important for our consideration is the fact that these sources can provide a good deal of information at no cost to the searcher. A
lumber salesman will, for example, draw up specifications from the prospective builder's plans as a service in order to obtain his business. Many companies and contractors will make their existence, the products and examples of their workmanship known to an individual just as soon as he applies for a building permit. These can save a person much time and expense in information search. But they will not be much help in providing knowledge of alternatives or assessments of reliability.

From our perspective the magazines like Better Homes and Gardens, House Beautiful, etc., are interest-linked sources in that they are supported by advertising revenue and therefore wish to contribute to their advertisers' sales volume. Their unthematic aim, no doubt, is to raise the general level of aspiration among their readers. But at the same time they are a mine of information on how-to-do-it-yourself. Furthermore, these same magazines, especially in their feature articles but also in their advertisements, contain a great deal of information regarding price, durability, performance, maintenance, etc. which have the general effect of widening the seeker's range of alternatives and his ability to evaluate. In this sense they approach the third category of sources.

1.3.3 Independent institutionalized Sources. In the literature on consumer information the Consumers' Union is the prototype of such sources because, while it may or may not be
interested in furthering consumption \textit{per se}, its interests are linked, by and large, with the consumer rather than the individual producer. One might also make a good case for the telephone book as being the primary independent information institution, though, of course, its interest is to promote the use of the telephone. It will never tell one when he ought to go in person rather than call. If we begin to stretch our thinking wider than the category of consumption, however, to allow the user to play a more active role both in search and in use of information, then the prototype of independent institutional sources for information becomes the school. But a discussion of schools as information sources would lead us too far from the subject at hand.

The reason why Consumers' Union is the prototype of independent institutional sources is that it offers these two services:

1. an awareness of the complete (or approximately complete) range of alternatives among which the information seeker must arrive at a decision;

2. a pooling of many experiences with the performances of a single product.

Information about product performance can be obtained from the producer. Its reliability is highly variable. It can also be obtained from various non-institutionalized sources which will be more reliable in some ways and less in others. Only the independent institution can offer an evalua-
tion that is both disinterested and based on many instances of use under relatively controlled conditions.

We should note that Consumers' Union does not provide the consumer with much information on how to make things for himself. It may offer data and evaluation on materials, but it contributes very little to the acquisition of skills.

Government is another information source which might be included here. It does offer a large number of consumer services and also, in various ways, a good deal of how-to-do-it information. The question as regards government is: to what extent does the information it provides serve the interest of the ordinary citizen and to what extent does it serve the interest of government itself or private business.

In the field of housing especially, the setting of standards and specifications, the gathering of data and the furthering of research by the US government all seem to fit the needs of the building industry more often than those of individuals. Nevertheless there are some useful materials produced by government sources. The Department of Agriculture offers services, through its Agricultural Extension Service and its Farmers' Home Administration which are relevant to our topic. In fact, if one is looking for a model of an information service which enables a person to produce something for his own use (as well as that of others), offering at least a limited range of alternatives and some evaluation of
products that is not directly linked to specific commercial interests, the best model is probably, with all its limitations, the Agricultural Extension Service.

1.3.4 Informal Sources. These include relatives, friends, acquaintances, associates at work and the entire social network through which information is passed in an unorganized and relatively haphazard fashion. On the unthematic level there is a large amount of information communicated in the form of group standards, tastes, fashions, images, prejudices and taboos. On the thematic level there is a pooling and exchange of knowledge about product specifications, and especially, of skills and know-how. And finally there is reputation. The results of individual subjective experiences with products and tradesmen are exchanged in a society to produce a collective assessment of reliability, performance, craftsmanship, honesty, etc., which is extremely important to small businesses like those of the homebuilding industry.

Since the 1955 study of Katz and Lazarsfeld entitled, Personal Influence: The Part Played by People in the Flow of Mass Communications, it has been generally accepted that mass media advertising works not only by direct persuasion of individuals but perhaps even more by interacting with group norms and preferences. In this sense the interest-linked sources of information and the informal sources may work together, though the informal sources can also provide
much information, both accurate and inaccurate, that contradicts the claims of salesmen.

In this final category we would also include the information exchanged among people of similar interests whether or not this exchange is formalized. Many groups based on exchange of interest are, in fact, formalized through professional associations, business clubs, etc. One of the purposes of such groups is to facilitate exchanges among their members, but they are not information institutions as such. The exchanges among colleagues generally take place in informal circumstances such as dinners and cocktail parties. Interest-linked institutions will also use these associations (and sometimes help to set them up) as convenient places of assembly where they can contact, inform and persuade the largest number of potential customers.

More important for our purposes are the exchanges of information which take place among people of similar interests without any formal association. Just as newspapermen have a tendency to frequent the same bars and ham radio operators seem to talk about nothing but their "rigs" over the international airwaves, so owner-builders obtain a good deal of information about building from other owner-builders through informal contacts. As of now there is no organization for promoting such exchanges on a more formal level. It may be, as we shall discuss in chapter five, that many of
the owner-builder's information needs could be served through some such organization better than in other ways.

1.4 Two Views of Human Behavior and Their Relation to Information Search

In surveying the literature on consumers' information search one may observe at least two basic theoretical models or 'paradigms' at work. Explanations of consumer behavior differ according to which paradigm the author tends to follow. One is the analytic model of rational human behavior generally followed by classical and neo-classical economic theory, modern mathematical decision theory and systems analysts. The other, which we shall call the cognitive-cybernetic paradigm, is one which combines the insights of cognitive psychology, cybernetics and modern theories of organizational behavior. Any information service would take on quite different characteristics according to which of these two models it follows.

1.4.1 The Analytic Approach. This approach assumes 'rational' behavior on the part of the key actors in any transaction. Rational behavior in this sense may be described as that behavior which:

1. is consistent,

2. is prepared to make trade-offs among conflicting values,

3. is prepared to take risks on the basis of calculated probabilities,
4. considers all possible known alternatives and searches for those not known, and

5. chooses the alternative which represents maximum utility-value to the subject.

Consistent behavior is 'transitive', i.e., it orders preferences such that if, for example, concrete is preferred to bricks and bricks to cinder block, then concrete will be preferred to cinder block. The analytic approach would not require that all consumers have the same preferences. It would merely expect that the concrete-lover in this example would not suddenly switch to cinder block upon learning that there were no bricks available.

Being prepared to make trade-offs among conflicting values implies the possibility of aggregating values to some measurable unit, so that a person who wants a piece of land with both a good view and protection from high winds will settle for some place on the side of a hill which will give him a somewhat less spectacular view than at the top, and a little less protection from the elements than at the bottom, but enough of each to satisfy him.

Given uncertainties as to the outcomes of his decisions, the rational man is expected to calculate, in some way or other (it does not need to be explicit, nor even conscious), what the odds are in favor of various alternative possibilities, and to be willing to take prudent risks when his chances seem good. He is also assumed willing,
given time and availability of information, to be told
about, and to consider, all the possible variations of
a product which fall within his price range.

And finally it is assumed that the rational man
chooses the outcome that is of maximum utility-value to
himself. There are various opinions as to what constitutes
utility-value in given circumstances (e.g., whether you
are risking your neck, or only your purse, may reasonably
change your judgment even if the odds and the reward are the
same) but generally speaking the rational man is expected
to optimize, to get the biggest bang for his buck.

The analytic paradigm makes an enormous assumption as
regards the consumer's approach to information. It quite
simply expects him to undertake "explicit consideration of
the entire relevant range of possibilities." The kind of
information required by this assumption is what economists
call marginal information. In consumers who act according
to the rational model there exists the psychological equiva-
lent to the economists' indifference curves, and the opti-
mizing consumer wants to "land on as high an indifference
curve as his purchasing power permits -- the highest in-
difference curve which can be reached from his budget line."

It is assumed that the optimizing buyer keeps up to
date on price fluctuations because he is always ready to
make trade-offs as the prices of competing goods shift. Furthermore, he seeks information about uncertainties. Should he borrow all the money now, or only part of it? A good answer to that question depends in part on whether interest rates will change, when, and in what direction. No one can say this for sure but the optimizing buyer will want reliable estimates of the probability of such changes and, where the odds are favorable, will take prudent risks. The rational owner-builder as well would be prepared to deal in probabilities, seeking educated guesses from some source or other about how the various markets for land, credit, building materials, tools and skills are expected to behave over the period of time required to complete his job.

A rational consumer also calculates the cost of information in his overall estimates. Where the information he is buying will only tell him about probabilities, he may be expected to forego such costs. Everything would depend, according to rational decision theory, on the relative cost of the information as against the likelihood that the information will improve the odds on the decision he intends to make. 9

This 'rational man' does not, of course, exist. Economists do not claim that their model is a description of individual human behavior. They are interested in market behavior and many of them have found this set of assumptions useful in interpreting it.
Approaching our subject from the viewpoint of the analytic paradigm naturally leads us to discuss the costs and benefits of information search on the part of the consumer. Because it makes the convenient assumption that values can be integrated on some scale of measurement, this paradigm enables us to discuss information search in terms of trade-offs which the individual must make and to talk of a series of contributions which information services have to make to individual and national welfare as though such things were measurable. This kind of fiction is useful for certain purposes as we shall see in the next chapter.

1.4.2 The Cognitive-Cybernetic Approach. This approach explicitly rejects the assumptions of the analytic paradigm. But as a point of view it is much less neat and clearly worked out than the analytic approach and is therefore more difficult to apply in detail to a problem such as ours. Most of the work done so far in this area is descriptive. Any normative considerations derived from its premises must therefore be considered highly tentative. Experiments conducted by psychologists of a certain school seem to indicate that people do not make optimizing decisions. Optimizing decisions imply a search for all relevant information and an inclination to effect trade-offs among conflicting values. These psychologists feel that such a model does not take into consideration the importance of attitudes, feelings
and beliefs in the decision-making process. Their experiments indicate that people choose not to optimize but to achieve balance among motivational, emotional, perceptual and cognitive processes, or between belief and action. A trade-off situation is a situation of competition among conflicting values. "Cognitive balancing" is a conflict-avoiding mechanism which in the face of a new concept which conflicts with an existing concept proceeds by:

1. "altering the intrusive relation,
2. "neutralizing the charge on the intrusive concept,
3. "isolating a sub-part of the threatened concept,
4. "bolstering the threatened concept with a 're-assuring charge.'"

Instead of making trade-offs, the normal operation of the mind, according to this view, is to break up the problem into parts and to isolate conflicting values from one another. The process by which information is sought is a process of "selective search, by which is meant the attempt by the individual to locate attributes of objects and to locate relations between objects such that the balance-seeking processes are appropriately served."

Thus a person will tend to seek only that information which does not create too much "cognitive dissonance" or to select those aspects of any bit of information which he can handle and reject those he cannot. According to this theory a person will also seek to achieve balance in his
social relations so that information which is corroborated by other people whose judgment he respects is welcomed, and its opposite is not.

It may still be true that, barring the existence of conflicting values, an individual wants to get the most for his money. But when this 'most' involves, say, a decision on putting a game-room in the cellar as opposed to a utility-room, or determining the proper size for the master bedroom, then beliefs, feelings and attitudes may stand in the way of a really 'rational decision' and even the desire to find out what the optimal choice really is.

Perhaps the typical builder is one who starts out with a long cherished, tradition-bound picture of his 'dream house' and an equally cherished vision of where he wants it to be. And where a mismatch between house and site rationally calls for a change in one or the other, he will go ahead and build according to his dreams, at greater expense than necessary. No doubt there are people like this. The question is how many and in how many variations. Are people really likely to make trade-offs when the grain gets finer? Will they calculate the difference which a change in interest rates might make in their borrowing schedule? Will they reason that a penny change in the cost of brick might make a change in their original choice of exterior facing highly worth while? Do they want advice on such matters; will they seek it and will they heed it?
Herbert Simon approaches the question of information gathering from a slightly different perspective. He places less emphasis on the influence of beliefs and attitudes but denies nevertheless that most people, in a situation of any complexity, optimize. Instead they "satisfice", they scan the horizon for a choice that is feasible and satisfactory but their search employs a high speed process of elimination. Thus in buying a plot of land the prospective homeowner will not go to see every available plot in his area to compare quality and price. He will start with a general idea of what is a fair price for what he wants, will quickly bypass everything that is too expensive and will choose the first plot that meets his requirements. "In most global models of rational choice," says Simon, "all alternatives are evaluated before a choice is made. In actual human decision-making, alternatives are often examined sequentially." Anyone who has gone apartment hunting knows that he cannot select from the "entire relevant range of possibilities" because time and need to examine in sequence are very severe constraints.

Simon's "model of man" is a modified cybernetic model. It considers the human decision-maker as an organism which relates to its environment through control mechanisms which, by internal feedback of information, enable the organism to adapt to changes in the environment. In a highly complex situation the organism has to find some way of quickly
decomposing or structuring the environment so that it can adapt to it with sufficient speed. This is why cybernetics loves a binary choice system. By a process of either-or it can proceed, like the game of Twenty Questions, to eliminate theoretical possibilities by halves so as to narrow down the field with which it must interact. Cybernetic information searching thus has a strong inclination to standardize. It is comfortable when everything 'out there' is classified, ordered and arranged so that it can adapt through one of a series of standard operating procedures.

If the consumer, or the user, is looked upon as a cybernetic organism then any information service to him would have to devote considerable attention to the arrangement of information in clear-cut categories. Minor variations in price and quality would best be ignored. High priority would have to go to the avoidance of risk and uncertainty. Greater stress would be put on careful descriptions of 'how to do it', leaving little room for variations. In Simon's terms, owner-builders would more likely be looking not for blueprints but for recipes. Most of the marginal information necessary for optimizing calculations would be useless.

Since information gathering in cybernetic theory works like a feed-back mechanism adjusting the organism to its environment, the host of factors -- social, cultural, psychological -- which have made the individual what he is are much more significant determinants of his behavior than the
stimuli he receives from outside on any given occasion. Thus it becomes important to consider things like consumption standards and levels of aspiration, levels and kinds of education: in short, many kinds of unthematic information, when attempting to design an information service. Each of these two paradigms has something to offer in the present circumstances and each has its limitations. The following chapter will deal with costs and benefits of consumer information from the point of view of economic rationality and then with socio-cultural factors in information search from a more cognitive-cybernetic approach.
Chapter Two
CONSUMER INFORMATION AND POLITICAL ECONOMY

2.1 Costs and Benefits of Information Search

Economists of the neo-classical school seem to find their task made easier if they can assume that time can be measured on a monetary scale. This is very similar to the equally convenient and related assumption that labor can be treated as a commodity. The drawback of this assumption will be discussed later, but for the moment it will be allowed to stand in order that we may review some of the economic literature on information search. This literature generally approaches the problem of search from the viewpoint that the chief cost of information search is the time it takes, and that this can be quantified in some sense and compared with other quantities in an analysis of costs and benefits.

Stigler makes this assumption in his basic article on "The Economics of Information". It enables him to produce some convenient measures of information cost in terms of expected marginal return. With this approach we are also in the world of probabilities and that curious measure called "expected value". A single inquiry in search of information is worth the additional expected value it would produce over and above that produced by the previous inquiries.
If, for example, there were only two prices for a given item in existence, $2 and $3, the prospective buyer is assumed to start his search with a 50-50 chance of discovering either price. The 'expected minimum price' is $2.50. After the first inquiry his chances are three-to-one of discovering the lower price and the expected minimum price is $2.25. Thus each inquiry better his chances of getting the minimum price and lowers the expected minimum, but the marginal value of the search decreases with each unit. This is shown in Table I.

<table>
<thead>
<tr>
<th>Number of Inquiries</th>
<th>Probability of Minimum Price of $2.00</th>
<th>Expected Minimum Price</th>
<th>Expected Marginal Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.5</td>
<td>$2.50</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>.75</td>
<td>2.25</td>
<td>.25</td>
</tr>
<tr>
<td>3</td>
<td>.875</td>
<td>2.125</td>
<td>.125</td>
</tr>
<tr>
<td>4</td>
<td>.9375</td>
<td>2.0625</td>
<td>.0625</td>
</tr>
<tr>
<td>1.0</td>
<td>0.</td>
<td>2.00</td>
<td>.00000</td>
</tr>
</tbody>
</table>

Stigler goes on to show that no matter how many different prices there are for a given item and whatever may be their distribution, increased search, if measured in terms of expected value, yields diminishing returns. Stigler's example, however, assumes that each inquiry costs the same amount of time, energy or money. But this is seldom
Kuhlmann has taken Stigler's example and introduced differential information costs. This enables him to compare the expected value in two extreme kinds of buying behavior: a totally rational, planned information search and a completely arbitrary one. The rational consumer can be expected to make some rough calculations about the cost of obtaining information and to plan his search in such a way as to approach the cheapest sources first. He can begin, for instance, by finding out as much as possible on the local telephone. If he has to travel he will go to the cheapest sources first. In this way he can raise the expected value of his first few entries so that even though the marginal return is diminishing he can increase the probability of obtaining a lower price on the first few inquiries, but not for very long.

Kuhlmann develops the example as follows. Suppose that after fifteen inquiries one will achieve absolute certainty as to the lowest price of an item, and in doing so will save ten dollars. Suppose further that the total cost of the fifteen inquiries is sixty dollars. The costs of the fifteen possible inquiries are arranged on a scale from very cheap to very expensive, with the gap between costs widening with each new inquiry. The cheapest inquiry costs only ten cents. The next cheapest costs twenty, the next forty, the next seventy, and so on.
Now we take our two extreme forms of behavior, the totally rational and the totally arbitrary. The totally rational buyer will, of course, begin with the cheapest information, then move to the next cheapest, and so on. The totally arbitrary one will buy information arbitrarily at any price. For him the expected cost of each inquiry will average out to four dollars. The value for successive inquiries according to each form of behavior are listed in Table II.

<table>
<thead>
<tr>
<th>Inquiry</th>
<th>Expected Benefit</th>
<th>Marginal Benefit</th>
<th>Cumulative Cost to Arbitrary Inquirer</th>
<th>Marginal Cost to Arbitrary Inquirer</th>
<th>Cumulative Cost to Rational Inquirer</th>
<th>Marginal Cost to Rational Inquirer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.0</td>
<td>5.0</td>
<td>4.00</td>
<td>4.00</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>2</td>
<td>7.5</td>
<td>2.5</td>
<td>8.00</td>
<td>4.00</td>
<td>0.30</td>
<td>0.20</td>
</tr>
<tr>
<td>3</td>
<td>8.75</td>
<td>1.25</td>
<td>12.00</td>
<td>4.00</td>
<td>0.70</td>
<td>0.40</td>
</tr>
<tr>
<td>4</td>
<td>9.375</td>
<td>0.625</td>
<td>16.00</td>
<td>4.00</td>
<td>1.40</td>
<td>0.70</td>
</tr>
<tr>
<td>5</td>
<td>9.6875</td>
<td>0.3125</td>
<td>20.00</td>
<td>4.00</td>
<td>2.50</td>
<td>1.10</td>
</tr>
<tr>
<td>6</td>
<td>9.84375</td>
<td>0.15625</td>
<td>24.00</td>
<td>4.00</td>
<td>4.10</td>
<td>1.60</td>
</tr>
<tr>
<td>7</td>
<td>9.921875</td>
<td>0.078125</td>
<td>28.00</td>
<td>4.00</td>
<td>6.30</td>
<td>2.20</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>15</td>
<td>10.0</td>
<td>0.0</td>
<td>60.00</td>
<td>4.00</td>
<td>60.00</td>
<td>10.60</td>
</tr>
</tbody>
</table>
Comparing the costs of each type of behavior with the expected benefit we obtain the quantities of Table III.

<table>
<thead>
<tr>
<th>Inquiry</th>
<th>Expected Payoff to Arbitrary Inquirer</th>
<th>Expected Payoff to Rational Inquirer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.00</td>
<td>4.90</td>
</tr>
<tr>
<td>2</td>
<td>-0.50</td>
<td>7.20</td>
</tr>
<tr>
<td>3</td>
<td>-3.25</td>
<td>8.05</td>
</tr>
<tr>
<td>4</td>
<td>-6.63</td>
<td>7.98</td>
</tr>
<tr>
<td>5</td>
<td>-10.31</td>
<td>7.19</td>
</tr>
<tr>
<td>6</td>
<td>-14.16</td>
<td>5.74</td>
</tr>
<tr>
<td>7</td>
<td>-18.08</td>
<td>3.62</td>
</tr>
<tr>
<td>8</td>
<td>-22.00</td>
<td>0.89</td>
</tr>
<tr>
<td>9</td>
<td>-26.00</td>
<td>-2.80</td>
</tr>
<tr>
<td>10</td>
<td>-30.00</td>
<td>-7.50</td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>-50.00</td>
<td>-50.00</td>
</tr>
</tbody>
</table>

These quantities are expressed graphically in Figure A on the following page. We see from this graph that the arbitrary information seeker of this example is already losing money on information search if he makes more than one inquiry. The rational seeker does not really begin to lose money until his ninth inquiry, but his expected pay-off begins to diminish after the third inquiry.
These are very crude examples. They do not represent any real life situation but they serve to illustrate that information search is a factor of some considerable importance in benefit and cost considerations, that reducing the cost of information search can save someone a lot of money in certain circumstances, and that the 'rationality' of behavior in information search can make quite a difference in the outcome.
The above examples have a further limitation that is quite serious. They deal with information search for a single commodity only. They explain something about the situation of a person purchasing one item of some importance. But what about the person with a shopping list of twenty to fifty items? Another economist, Ralph Anspach, has shown that rational economic behavior is possible only where the individual is buying a relatively small number of goods. The consumer with a large shopping list simply does not have time to optimize.

Mathematicians have worked out computer time equivalents for solving such problems and use as a rule of thumb the principle that the effort involved in solving $n$ linear equations in $n$ unknowns is proportional to $n^3$ — and that is only for linear equations. Thus if it takes two minutes for an individual consumer to solve an optimization problem involving two unknowns, it takes 125 times as much time to solve one in ten unknowns, or four hours and ten minutes...and it would take about 21 days to solve a problem in 50 unknowns. 15

Anspach shows graphically that a shopper's "total disutility of optimization effort" rises exponentially according to the number of different commodities being bought. The curve looks something like that of Figure B. A consumer's gross utility curve, on the other hand, rises in a gradually decelerating fashion as in Figure C. When the curve of Figure C is subtracted from that of Figure B we get a net utility function which peaks after a certain number of differentiated
commodities and then begins to slope downward as in the curve AE of Figure D.
This means that when the number of goods to be purchased reaches a certain point (x), optimizing behavior on the part of the consumer becomes irrational. It no longer makes sense for him to consider the entire relevant range of alternatives. He ought to adopt some other form of behavior, some form of 'satisficing' perhaps.

But optimizing behavior is not ruled out in all cases. Clearly there are a limited number of important purchasing decisions to which an individual can, with profit, apply his full powers of rational calculation while leaving the rest to more satisficing methods. And to the degree that information search is made easier, it will be possible, up to a point, for buyers to optimize on a larger number of items.

The pivotal role played by information has been brought out in some of the literature on decision theory. After a series of experiments to see how closely individuals approximated Bayes's theorem when given some simple probability inference tasks, Phillips and Edwards concluded that the general tendency toward conservatism and the failure to optimize seemed to reflect a "general limitation on human ability to process information." As Edwards and Tversky put it, "apparently the most serious deficiencies in human decision making behavior arises in processing information, not in making decisions."
To review the progress made thus far: we have considered some theoretical studies on the cost of information for consumers. They have dealt with information about prices only. They generally follow the assumptions of classical utility theory, and the assumption that "time is money" in particular. Their conclusions are very general, but useful, and they may be summarized as follows:

1. Information search is very expensive and it tends to have decreasing marginal utility. Consequently, reducing the time spent in information search can save the consumer money.

2. Where the costs of information search vary but some information is available at a low cost, the optimizing consumer can increase his expected payoff by planning the process of information search -- up to a point.

3. Optimizing behavior in both search and decision-making is rational for only a relatively few items. As the number of items to be purchased increases, optimization becomes less and less realistic, and some form of partial optimization or 'satisficing' must take over. Anything that will reduce the time involved in search can increase the chances for optimizing -- again up to a point.

If we were to jump ahead and apply these conclusions to the owner-builder without further qualification we could say
that, under the assumptions of utility theory, information search constitutes a large and generally hidden cost in the whole process, that any service which could noticeably reduce the time spent in search would be highly worth while to him, and that, to the degree that the assumptions of the analytic paradigm hold true, the optimizing owner-builder should welcome, and profit from, a quick cheap source of relevant information.

Thusfar we have talked about costs and benefits of information search to the individual. What of costs and benefits to society?

Alfred R. Oxenfeldt wrote a basic article in 1950 on "Consumer Knowledge: Its Measurement and Extent". He analyzed 43 products that had been rated on a point score by Consumers' Union. He compared the prices which consumers would be paying, if they always bought the best their money could buy, with what they were, in fact, paying for the products they actually chose. He found that they averaged only two thirds of the satisfaction per dollar of expenditure they might have obtained. "Consumers of the best values averaged between one-and-one-half and twice as much for their money as the ordinary consumers of these products." If his findings have any validity at all, it is clear that more efficient buying could save a lot of people a lot
of money. Oxenfeldt concluded that "providing product quality information to low income recipients would contribute to a substantial rise in their living standards at a trivial cost to the community."\textsuperscript{20} The effect of this on the total economy would be largely redistributive, in his opinion, although by forcing inefficient firms to improve or go out of business it would also release some resources for greater productivity.

But other studies have appeared to mitigate the hopefulness of Oxenfeldt's conclusions that better information could raise the living standard of the poor. In the article referred to earlier, Anspach observed that Oxenfeldt's hope rested on the assumption that people can and do make optimizing decisions. But where the number of goods to be purchased is large such decision-making is impossible. Still, really good information on product quality that can be grasped quickly and easily should save people a great deal, even given Anspach's reservations.

A more serious threat to Oxenfeldt's conclusions is posed by studies which seem to indicate that people in general, and the poor in particular, are not good optimizers.

2.2 The Use of Consumer Information by the Poor and Less Educated

A major study of consumer decision-making was carried out in 1953 by the University of Michigan's Survey Research
Center under a grant from Consumers' Union. It will be referred to hereafter as the Katona-Mueller study. Its purpose was to investigate, via interviews, the kind and amount of deliberation engaged in by consumers when purchasing television sets, refrigerators, washing machines, stoves and sport shirts. Five dimensions of deliberation were investigated, one of which was 'information seeking activity'. People were asked about recent purchase decisions, and their performance was rated on a scale ranging from highly deliberate to nondeliberate. An overall conclusion was the following:

Any notion that careful planning and choosing, through consideration of alternatives, and information seeking activity accompanied every major purchase was contradicted by the data for each of the four durables. Rather, it appeared that there were great differences among buyers and that many purchases were made in a state of ignorance, or at least indifference.

There was more deliberation over the purchase of the four durables than over the sport shirts, as might be expected, but deliberation over durable goods purchasing was still not very high for the majority.

There was, however, a significant minority, about one in four, which did measure up as careful buyers. When the overall figures were broken down in terms of education and income it was found that deliberation tended to correlate with education. Information seeking in particular increased
with education and, up to a point ($7,500 in 1953), with income. "Among the durable goods buyers with only a grammar school education or with incomes below $3,000, those who neglected to look for information outnumbered the active information seekers by at least seven to one." The less educated did not just neglect to consult written information. They also did less asking around among relatives, friends and neighbors concerning the durable goods.

With regard to the purchase of sport shirts, however, the less educated exercised slightly more deliberation than the better educated. Several possible explanations are offered by the authors of the study for this seemingly contradictory finding, e.g., that sportshirts are more important in the blue collar class than in the white collar, or that the features to be considered are less complex and therefore more easily evaluated by the less educated, but then the matter is dropped. Whatever be the explanation, this finding suggests that it would be a mistake to jump to the conclusion that the poor and uneducated are less capable of rational or optimizing decisions. A good deal may have to do with the nature of the goods which were the subject of the investigation and the complexity of the decisions involved. Less searching among relatives and friends may simply indicate that fewer of them had such items as washing machines to look at.

A review of the literature on this subject is provided
by Louise G. Richards in an article originally published by HEW under the title "Consumer practices of the Poor." Although this article attempts to present a balanced picture and rejects the hasty conclusions of some authors that the consumer practices of the poor are irrational, the overall judgment on the purchasing behavior of the poor is negative. However, if we look closely at the evidence cited, some of her conclusions seem rather tenuous also.

Ms. Richards asks five questions:

1. Do low income families buy necessities first, and luxuries last?
2. Do low income shoppers try to get the best quality for the lowest price?
3. Do low-income families budget their incomes and plan their purchases?
4. Do low income families meet some needs through home production?
5. Do low income families take advantage of consumer benefits available to the poor?

No hard data is cited to justify a negative conclusion on the last two points. The fourth question covers two areas: food production and home repairs. The latter would be of extreme interest to this thesis, but unfortunately the single source cited is a survey which admittedly made no allowance in its figures on home repairs for the vast qualitative and quantitative differences in homeownership among the poor.
as compared with the rest of the population. The fifth question is answered negatively by citing the "existence of many successful programs in legal aid, medical and dental clinics, and similar facilities" which supposedly testify "to the variety of ways the poor could cut their cost of living if they took advantage of them." The agreement of "many experienced workers" is the only support offered for the conclusion that "whether coverage is adequate or not, the lack of full success by established programs is justifiably attributed to apathy on the part of the people who need them most."

As for the third question, do low income families budget their incomes and plan their purchases, the negative evidence cited here is largely based on figures indicating higher insolvency among low income groups and the lower amount of savings and insurance coverage. Neither of these facts is surprising. The lack of steady income which obtains so often among the poor goes a long way to explain them. Only the Katona -Mueller study of 1953 cited earlier and a Minneapolis study of 1963 deal with decision-making and planning directly.

The Minneapolis study concluded from an investigation of 300 families in the Minneapolis-St. Paul area that "...consumership, particularly volume of planning and efficiency in decision making, is found among the better educated
younger marriages, in the married child generation, with low lifetime income and high residential mobility, who share a developmental, modern manipulative, prudential, optimistic outlook with good family organizational skills of communication and high role consensus." Such a finding, of course, is no proof of poor decision-making among the poor. In fact the study in question was unable to predict good "consumership" on the basis of income, husband's occupation and social class as it had apparently thought it could.

As for the first of Ms. Richards questions, whether low income families buy necessities first and luxuries last the answer is, in fact, yes they do. "When consumer goods and services are classified according to their survival value...., the poor spend more of their income on basic needs than others do."28 They also do not buy durables (automobiles, equipment, furniture, etc.) as frequently as higher income families do. However, this overall positive judgment is qualified by the finding that when the poor do buy durables they spend (as they have to) an inordinate percentage of their income in order to get them.

In other words there is a group among the poor (of unspecified size) who buy durables when they really cannot afford, rationally, to do so. These durables are not of every kind, however. They are large household appliances, radios, television sets and phonographs. We touch here
on the question of status and the universal reproach of the well-to-do: "Why are there television aerials on all their homes if they are so poor?" We will say something about this later.

The strongest negative evidence is presented in relation to the second question: do low income families try to get the best quality for the lowest price when they shop? Once again the Katonah-Mueller study is relied on heavily for evidence about deliberation and information seeking, and it is noted that education rather than income per se seems to make most of the difference.

There are two areas in which the purchasing behavior of the poor, as an aggregate, is most clearly inefficient. One is in the scope of their shopping. Poorer populations tend to buy more from neighborhood stores and peddlers, and to pay more in those places, than they would by shopping in supermarkets and discount houses. However, this tendency was found to be more typical of recent migrants than of persons who live in the city for some time. Clearly there are a number of complex factors at work here, the very influences that make a ghetto a ghetto, not the least of which is the insecurity of minority groups outside their own neighborhoods.

The second area of demonstrated inefficiency is that of consumer credit. While a smaller proportion of poor families in 1962 had installment debt than did those above the
poverty line, the ratio of debt to annual income is about twice as high as among better-off families. The evidence seems fairly strong that the poor are badly informed as to the real cost of credit and that this ignorance is well exploited by sellers.29

What, then, does the evidence show? It does not prove that the poor are less rational overall than the rest of the American population in their buying decisions. It does show that they lack a certain sophistication, as a group, in dealing with the durable items like television sets and refrigerators and washing machines which are status items of the American way of life, and that they have difficulty coping with the installment credit without which they cannot obtain those things when they want them. It shows that some poor people in America will sacrifice a lot of more necessary things to obtain these items. It also shows that the American educational system is fairly efficient in teaching the not-so-poor to obtain these things for less money. It shows that the less educated are not much inclined to consult written material like Consumer Reports, and it shows that ghetto people do most of their buying in the ghetto and suffer losses thereby.

Although it is unjustified to characterize the purchase behavior of the poor as irrational, this does not mean that we can assume that low income people will necessarily optimize if they are given sufficient information. We have
already seen, with Anspach, that optimizing behavior is impossible for anyone when the number of goods to be purchased becomes sufficiently large. We might also recall that the rational paradigm, in itself, does not require all subjects to have the same scale of values. As long as they are willing to consider alternatives and make trade-offs, different people can act rationally in the same circumstances with quite different results. What is considered to be optimizing behavior according to the dominant American value scheme may not be at all so when a different set of priorities is at work. For better or for worse, however, the rules of the purchasing game are set by the dominant American value scheme, and those who work by any other are bound to lose money. Furthermore, the analytic paradigm is not much help in interpreting the behavior of other value systems because most of the work done from its perspective has been done within the dominant, white, European-North American tradition.

The cognitive-cybernetic paradigm is just as much a product of that tradition, but it overcomes the problem of integrating values by simply ignoring them. It explains differences in behavior in terms of cognitive dissonance, of reinforcers and sanctions, of stimulus and response. There is a fairly large amount of literature which deals with consumer behavior in these terms, and it offers some fairly plausible explanations for the differences to which
the statistical data points.

2.3 Social Psychology and Consumer Information

Practically all of the experimental evidence offered from this perspective is North American or British. But a German sociologist has put it together into convenient propositions. Some of them have greater empirical weight than others, and the experimenters themselves would probably consider such a quasi-synthesis highly premature. Nevertheless, it is useful because it indicates the tendency which most of these studies manifest and something of what one might expect them to eventually achieve. The following is a partial list of such hypotheses from Karl H. Horning's Elements for a Consumer Sociology.30

If a consumer intends to buy a product, the intensity of his effort to obtain information about the product will be greater the more attributes the product has and the more relevant these attributes are for him. Choice and intensity depend upon, 1) the differences of product variants, 2) the consumer's ability and readiness vis a vis the difficulty of obtaining information, and/or, 3) the consumer's preferences.

The more differentiated a consumer's specific buying preferences are, the more effort he will make to obtain information.

The more a consumer aspires to satisfaction through his buying decision, the more intensive will be his efforts to obtain information.

The greater the discrepancy between income and the consumer's level of aspiration the more intensive will be his efforts to obtain information.

The more a product variant is integrated into the life-experience of the consumer -- as this occurs under the influence of a product's "image" and in interaction with it -- the lower the probability that the consumer will strive for clarity as regards the quality of the total product.
Mass communications media have more influence over the loyalties and behavior of consumers the more effective the intervening variables (e.g., social groups, opinion leaders) are at reinforcing them.

If a special stimulus situation in the past was the occasion for reward to a particular kind of consumer behavior, this behavior is likely to occur again to the degree that the present stimulus situation is similar to the earlier one.

The more the members of a household are motivated to achievement, the more fully and carefully will they communicate with each other in order to be successful consumers.

The less clearly decision situations in a household are defined according to roles, the more necessary is communicative exchange in order to attain consumer goals.

The more egalitarian the authority structure of a household the more there is communication about consumer decisions.

The more narrowly the division of labor in a household defines tasks and problems, the more necessary is communication concerning them.

The weaker the interpersonal relationships of the household to primary groups of the nearby social milieu, the weaker is the consumer decision process of the household.

The more important the consumer decision is for the household, the more the members of the household communicate with one another.31

What is the value of such hypotheses to potential consumer services? They suggest that if the service is able in some way or other to identify the behavioral characteristics of its potential clients it can tailor the kind of information it has to offer, and especially the mode of its communication, to such needs, and thereby help its clients a good deal. But the 'if' is a big one. How can the clients' behavioral characteristics be so identified. In a fairly homogeneous social milieu, clearly, an information service
that knows its customers very well -- someone who understands how the clients think and can communicate effectively -- could be very useful. But in a heterogeneous milieu the service would have to function on a very person-to-person basis with highly skilled (and expensive) personnel in order to apply these notions.

2.4 Information for Diffusion of Innovation Among US Farmers

An example of a fairly homogeneous milieu could be that of American farmers. There are important regional differences among them and differences created by the type of farming they do, but it is fairly easy to make allowance for these variables. In fact Agricultural Extension as it is organized throughout the United States provides a unique model of a user-oriented information network as it functions in a relatively homogeneous social milieu. The outline of this network may be seen in Figure E, on the following page. 32

In this diagram we may note that the quasi-independent institutionalized information source, the Cooperative Extension service, does not try to pre-empt the information field. 33 It works in conjunction with other existing sources of information and serves as a link between those two actors in the total process which appear not to have any other direct contact, namely the universities and the local farm organizations. It is not clear whether such a link would not have been forged if there were no Cooperative Extension Service (the service is already half a century old) but it appears
Figure E: Agricultural Extension in the United States
(Adapted from Navelock, Planning for Innovation, p. 3-34)
that the service does not attempt to mediate between commercial suppliers and individual farmers. It is not difficult to imagine some good political reasons for this, but there may also be other reasons, and the example is one for a potential similar service in the field of housing to keep in mind.

Besides the model of agricultural extension we also have a considerable body of sociological literature on the diffusion of innovations among US farmers and the process of information-acquisition which accompanies it. These sociologists, concerned mainly with social interaction, usually divide the process of adoption into stages such as awareness, interest, evaluation, trial and adoption. And a number of them have studied the role of various information sources at each stage. Four categories of information source are usually distinguished: Mass media, peer sources (other farmers), authoritative sources (agents, agencies, universities, etc.) and commercial sources. The distinction of mass media from commercial sources is admittedly not completely satisfactory, but it is retained on the basis that the mass media are impersonal one-way sources and that the media are also used by the "authoritative" non-commercial sources. Research carried out among farmers in various regions of the United States seems to be consistent in the finding that the mass media are more influential than other sources in the awareness stage of the adoption process.
It has been generally found that the influence of the media declined in subsequent stages but there is more recent evidence to the contrary.\(^{35}\) The evidence is also in agreement on the finding that "authoritative" sources have relatively the least influence at the awareness stage and the most at the adoption stage. Peer group influence is important at all stages, but apparently most important in the decision-making phases of evaluation and trial.\(^{36}\)

For our purposes these findings suggest two things:

1. When the objective is to introduce an innovative practice into a social milieu where it was not previously known or accepted, awareness of that practice is not conveyed most effectively by an authoritative institutional source oriented toward providing technical information through personal contact. Awareness seems to be more effectively imparted via mass communications media. This stands to reason from the simple fact that the media can reach more people with a simple message. But one may also take into consideration that the media are good at conveying what we have called unthematic information, at communicating on a subliminal level and affecting the attitudinal or emotional context of the message.

2. In so far as these various stages of adoption do, in fact, exist (the literature does not, and probably cannot, prove their existence), a complete information service ought to provide, or see to the provision of, various kinds of information suited to the various stages and various actors in the process.
While the literature of this type on diffusion of innovation indicates the influence of various forces on the decision process, it does not demonstrate the absence of rational decision-making and information search among farmers, doctors, or any other group studied. Farmers who prefer to socialize with one kind of person have shown that they will prefer persons outside that group as sources of farm information where it is clear that their information is better. Doctors will rely on the information supplied by pharmaceutical companies even though they know they are biased—but only in low risk cases. As the seriousness of the case increases the tendency to rely on disinterested sources like colleagues and journal articles increases. Consumer research similarly shows that where the perception of risk is high there is more, and more efficient, seeking of information. People are affected by attitudes, beliefs, traditions, fears, values, needs, and these tend to color their information-seeking behavior. But there is also evidence that people may transcend all of these things to discover contradictory information and thus make more rational choices.

A recent review of the literature on individual and group behavior in relation to dissemination and utilization of knowledge came to the following conclusion:

...there is much in the literature to support the notion that "man" does make decisions based on a "rational" evaluation of the alternatives that are presented to him. Important variables that must be
considered are the degree of arousal of the individual's needs and the weights that individuals use in evaluating the alternatives.... It should be noted that education need not be critical for a rational evaluation of alternatives. Rather, it may provide for more elaborate justifications for the decision or increase the probability that the evaluation has external validity.

2.5 Consumer Information and Social Policy

Returning to the data on consumer behavior among the poor, we found that the only areas which indicate a greater amount of "irrational" behavior are three: spending by some poor persons of an inordinate percentage of income on status-linked durables, excessive credit spending, and a tendency to buy in the neighborhood rather than shop around. Irrational inducement of needs by the media and the general pressure of a society where everyone else possesses a TV and a refrigerator can account, in part for the first item. Lack of self-confidence in purchase decisions concerning unfamiliar objects, unfamiliar transactions or unfamiliar territory can account for all three in varying degrees. Studies have shown a fairly consistent correlation between lack of confidence and "persuasibility" in consumer behavior. Confidence in one-self and confidence in the product are, however, only part of the problem. Confidence in the sources of information is another. An individual's ability to judge the reliability of the information he receives has a lot to do with the amount of experience he has with various information sources on
previous occasions. In the language of decision theory, subjective probabilities tend to approach objective probabilities with experience. But where experience is low or lacking, the consumer tends to stick with products he knows. Therefore the consumer’s access to, and experience with, information are important factors in his being able to estimate the reliability of the tradesmen with whom he deals. Ghetto conditions inhibit the flow of consumer information, and immigrant populations lack experience with information sources.

It stands to reason that people who handle less money will be less familiar with the processes for buying money on the credit market. Similarly persons, especially recent migrants, who do not feel confident in supermarkets or discount houses will tend to deal with neighborhood merchants even though their prices are higher. When the object being purchased is one with which the low-income buyer has familiarity (and therefore greater confidence in his own judgment—as in the case of sport-shirt buying in the Katona-Mueller study) we may expect the poor to act with as much circumspection as anyone else.

To what extent, then, are we justified in hoping, with Oxenfeldt, that consumer information could contribute significantly to redistributing income and raising the living standard of the poor. It is not necessary to postulate that the poor are less capable of making rational purchase decisions
in order to have doubts about the efficacy of the usual type of consumer information as a policy instrument for raising the living standard of the poor in the United States.

First of all it is not clear that such information can be provided "at a trivial cost to the community," as Oxenfeldt suggested. The only support he gave for this assertion was the fact that Consumers' Union operates on a very low annual budget. But Consumers' Union deals almost exclusively in printed information. It is difficult to know how many people actually use Consumers' Guide or similar sources and what impact they have on the market, but the data indicates (not surprisingly) that the less educated do not consult reading material of this sort as often as others do.43

Once we move beyond the printed medium the cost of information, if provided by institutional sources, mounts considerably. Radio and television are expensive and, as we have seen in the case of farmers, they seem to be more effective at the stage of awareness which, in this case, is not the problem. If the Agricultural Extension Service is any kind of model, one would need to set up an urban equivalent of the County Agent who could deal with groups and individuals on a personal basis. Given the population size and ethnic diversity of the poor, this would mean a rather sizable bureaucracy. One can easily imagine a setting in which consumer information for the poor could create a good deal of resentment among the very people it intended to help. A person who feels that he or she would be just as good a buyer as anyone else if only he had some buying power
is not about to sit and listen to a lecture on unit pricing. He may wonder, for instance, what the person giving the lecture is getting paid, and he may roughly calculate that what the audience can save by more deliberate buying is offset by the cost to the taxpayer of the instruction they are getting.

Then there is the fact that consumer information services deal almost exclusively in thematic information. The bare facts provided by Consumers' Guide and other services of its kind have meaning for those who make use of them in relation to some reasonable expectation of acquiring something they want and still having money left over to spend on other things. The unthematic context is largely supplied by the buyer himself or his environment. It is an environment of hope and aspiration, not of mere survival. The same kind of information in a different context has a different meaning. Experimental data has indicated that "an individual with a high motivation for success and a low anxiety over failure will prefer alternatives involving intermediate probabilities of success. On the other hand, high failure anxiety combined with low motivation for success will produce more extreme behavior. The individual will prefer either relatively sure modest gains or low chance of great gain." Relative prices of refrigerators or automobiles in a poverty context are reminders of one's inability to buy. Certain commercial sources inject hope into this situation by offering consumer credit. Since no one else offers credit (and hope) the field is theirs to exploit. To provide the poor with information
about how they are being deprived and exploited without at the same time providing them with the means of obtaining what they want elsewhere is simply to add insult to injury.

Thus, for reasons different from those offered in the literature, consumer information is highly questionable as a policy instrument for raising the living standard of the poor when used alone and institutionalized.

But there are ways in which government could act so as to influence the existing flow of information in a way that will enable low income people to make more optimizing decisions. As it is now, consumers pay for the information they receive in the form of advertising. Advertising costs are simply passed on to them in the form of higher prices. There is no reason why legislation should not protect the validity of this purchase. Some of the possible measures are presently the subject of considerable public discussion. "Truth in lending" is one very important move. It is certainly reasonable that lending institutions of all sorts should be required to furnish the necessary information (and even education) which will enable consumers of credit, especially the poor, to choose rationally. However, in places where there is no credit market except that of "shady" lenders, such legislation will probably not have much positive effect. It may simply dry up the credit market altogether. If, however, something were done to ease credit availability and stabilize income so as to reduce the risk to lenders, then truth in lending and some form of education in the use of credit would be a necessary concomitant.
Truth in advertising, packaging and labeling would also make rational purchasing decisions easier. Congress and the regulatory agencies are beginning to move in this field as well, though there is very much still to be done. Furthermore, as Oxenfeldt observed, better information would force a certain amount of standardization. This would lower the number of items a consumer has to choose among and, as Anspach indicates, increase the proportion of buying decisions on which he can optimize. However, the impact of such legislation would probably not be very strong if advertisers and packages still have the entire unthematic field to themselves. A cigarette company can be forced to issue warnings about danger to health, but it can still do so against a background of "Marlboro Country". The Anti-Cancer societies have had to use a similar (and expensive) unthematic approach to counteract this influence. The more basic problem is the distance between the expansionary living standard of which advertising is a part and the income level of the poorer segments of the population. The flood of items which are considered necessary for maintaining a decent living standard is too large to make optimizing decisions possible in most cases. And even if efforts were made to reduce the expansionary living standard these would be highly detrimental to the poor without a redistribution of income. When and if real efforts are made to halt or slow down the growth cycle and also distribute wealth more evenly, then information would play a crucial role in assuring the more
efficient use of the limited resources available. In an economy which depended not on growth but rather on economic use of resources "satisficing" behavior would not be good enough. Every effort would have to be made to insure that all citizens make optimum use of what they have and that wasteful decisions be eliminated as far as possible. Consumer information would be a sine qua non of such a society. (We might also note that where growth is not valued as highly, time, and therefore information, will be less expensive.) But there is little sign of such radical reforms actually occurring in the near future.

More immediately practical would be efforts to improve basic communications, both formal and informal, in poverty areas. Almost any effort in this direction will be likely to have a positive effect on consumer information: improved public transportation, community controlled Cable Television, localized radio and newspapers, etc. but also increased social and political organization. Social organization may be expected to improve consumer information not only by increasing the flow of facts about prices, goods and services and thus raise the general level of confidence; it will also make a dealer's reputation more important and thereby increase the factor of reliability. Where reputation is important to a dealer, as we have seen, the quality of information provided by him is likely to be much higher.

This raises an important question whose full scope reaches far beyond the present subject: whether it is more
advisable for government to promote local small business
development or to encourage large regional and national
chains to locate in ghetto areas. While there are plausible
arguments on both sides and the issues are too complex to
discuss here, we should emphasize two points: first, the
importance of reliability and trust as a factor on the
side of small business. A business is much more likely to
be concerned with transmitting accurate information if its
fortunes rest with the level of its acceptance in the local
community. Perhaps a cooperative marketing and distribution
organization among ghetto retailers could do more to promote
efficient business than the elimination of small retailers
through competition with large chains whose interests,
basically, lie elsewhere.45

But even more important, from the point of view of inform-
mation, is the stock of previous experience in a community.
When the majority of basic economic decisions are made out-
side of a community there exists a condition of dependency.
Where there is a lack of experience in decision making there
is a lack of experience in information search as well. This
affects both the quantity and quality of information in the
"stock" and also its reliability. One can discover enough
kinds of entrepreneurial skills in ghetto communities (if
only skill in "hustling") to give the lie to the notion that
people have to be taught how to decide rationally. But in
areas where the power to decide has been weak there is not
likely to be much of a stock of information. In middle class
environments many people know how to buy because many people know how to sell. People know what the markup is on certain items because they have relatives and friends in the business. Thus, while supermarkets and chain stores may or may not bring down prices in a ghetto community, they will not contribute a great deal to the basic stock of buying and selling information that would help to eliminate economic dependency.

2.6 The "Consumer" vs. the "User" and the Information Needs of Each.

Up to now we have dealt with the kind of information that is involved in the purchase of a finished product. This is the information needed by the consumer of traditional economic theory. Though it is recognized that the individual consumer may also be a producer, he is not regarded as a producer for his own consumption. The consumer is passive as regards the product; he is active only as regards the purchase. The distinction is convenient for economists but it has some important drawbacks. The consumer can influence the nature of the product only as a collectivity. If enough people stop buying a particular item the producer will change it to make it more acceptable. If various preferences can be aggregated enough, and there is real competition among producers, there will be different versions of the same product to suit different tastes. But however much product differentiation there may be, it is not the individual who decides what the
product will look like, it is the producer in response to various aggregates of consumer demand.

There are, however, many cases in which the consumer is also a producer. Every manufacturer is a "consumer" of materials and components. He buys in volume in order to produce in volume. He does not normally use the product himself. Farmers in the USA nowadays are often manufacturers of food in this sense. They are not the consumers of their own production. But the family farmer is at least a partial consumer of his own produce, and this is why his case has been of some interest for our purposes.

People who make their own clothes, their own food, their own vehicles, etc. are largely considered throwbacks to another age. It is felt that specialization and economies of scale make production more efficient. People can often get a higher quality product by making it themselves, but their costs are higher because they buy in small quantities and the time they spend is more than the time spent by specialized labor producing on a mass scale. People who claim that home production is more economical are thought to have failed to calculate the hidden cost of time.

But the cost of time is not univocal. Economic time is "nine-to-five" time during which labor is paid so much per hour and many other components of production take on value according to volume per unit of time. During leisure hours, however, time is not the same. It still has limits and
measures and even costs, but what people do with their leisure hours can be productive or not according to different measures. For the unemployed and the underemployed time too takes on a different value.

The same holds true for the cost of information. Information cost can be measured in relation to the time it takes when the searcher is being paid so much per hour, or when he is losing so much per hour in opportunity costs. But information search after hours has a different value. Much of the information acquired through the newspapers is obtained after hours. The total time spent by the population reading newspapers must be terribly uneconomical from one point of view, but it is a leisure activity as well. The time spent in information search by the purchasing agent of a large company is directly measurable in monetary terms. The time spent by a shopper who enjoys searching out all his alternatives is not.

Information cannot be treated as merely an item of consumption because information is not consumed. It is acquired, stored and used again; it is also related to other bits of information in a multiplicity of ways that defy benefit-cost analysis. While the operations analyst can measure the rate of information flow over a channel in terms of bits per second, he cannot begin to deal with the multiplicity of relationships among facts that structure an individual's and a community's store of previously acquired information.
In some ways a community is an information network with a particular structure. Information is stored in the community but not in any one place. Learning is fed both from within and from without both by the input of new quantities of data and the establishment of new relationships among people and data. The more decisions that are made in the community the more there is a search for information. The more search the more relationships, and the greater the store of acquired information. Some of this occurs between nine and five and a lot of it does not. Some of the most precious searching costs nothing and some of the least valuable costs a lot. It may be true to say, with Anspach, that the greater the quantity of differentiated commodities an individual has to deal with, the lower the proportion of optimizing decisions he can make. But it is also true that the greater the quantity of decisions one has made the greater the probability that he has a reliable stock of information from which to draw -- at no cost but the energy needed to recall.

The information problem among low income populations, then, is not a problem of "consumer" information, it is a problem of "user" information. It is in other words a problem of mental dependency and of the unavoidable need to establish a stock of experience as part of the passage from dependency to self-determination.
Chapter Three
OWNER-BUILT HOUSING AS AN EXAMPLE
OF RATIONAL DECISION MAKING

3.1 Housing As An Item of Consumption And As An Item of
User-Control.

Up to now our discussion of consumer information has not considered one of the largest items in any family's budget, housing. If it is treated merely as an item of consumption, housing does not provide low-income people with much of an opportunity to exercise their powers of rational decision-making.

For most poor people, the range of options in housing is severely limited. The well documented fact that the poor pay a substantially higher portion of their income on housing and that they get poorer quality housing per dollar of expenditure is one indication of how limited is their range of choice. Where housing is in short supply a search for a wide range of alternatives makes no sense. You grab what you can get when you can get it. One's capacities for rational planning are absorbed in getting there first. In the case of rental housing, once it is obtained there are no more significant choices to make except to continue searching for a cheaper or better place. Ownership of an already existing home, for those poor who can even dream of it, provides a somewhat wider range of choices, but those too
are severely limited. Again, with a shortage of supply within one's income range there is little room for consideration of alternatives. The house that one can obtain is more than likely to be badly deteriorated. If one has already spent a disproportionately large percentage of income to obtain and finance the house there is no money left for rehabilitation. The cheapest kind of home ownership is probably that provided by mobile homes, but they provide very little room for any decision-making other than the decision to move them from one place to another, and that too is more of an image than a fact.

But there are forms of housing - even at lower income levels - which do provide people with a significant range of choices and allow them to exercise their own capacity for rational information search and optimal decision making. Some of them involve a greater or lesser degree of collective decision-making, a minimal bureaucracy, or a fairly serious amount of external manipulation (cooperatives, condominiums, aided self-help projects). These we shall leave out of direct discussion because one can argue about the degree of individual choice they actually provide.47

Two kinds of housing which are not severely manipulated by agents other than the market and the law are owner-built housing and owner-rehabilitated housing. The amount of owner-rehabilitation which goes on in the United States is not known. Much of it is clandestine because property
assessments tend to penalize people for improving their houses. One experiment in publicly managed owner-rehabilitation for low income families, Better Rochester Living, Inc. has been successful, but its reduplication elsewhere, and even its own continuation, are doubtful because of bureaucratic obstacles. Outside the context of such an organization, owner-rehabilitation is difficult to measure because the dividing line between genuine rehabilitation and do-it-yourself home improvement is extremely difficult to determine. Therefore, although rehabilitation may be an equally, and perhaps even more, significant instance of user-control in housing, we shall concentrate on the more clearly definable and measureable instance of owner-built homes.

3.2 The Owner-BUILDER

An owner-builder is a person who acts as his own general contractor in the construction of his home. More technically, the Bureau of Census defines owner built housing as "homes started for the exclusive use of the owner on his own land but with the owner acting as his own general contractor or performing some or all of the construction labor." Thus the owner-builder may actually build the entire house himself, do it with the help of friends and relatives or he may subcontract large parts of the operation to others. In all instances he maintains control over the essential decisions which determine the nature of the product, his own home.
Owner-built housing is such an interesting phenomenon because it defies classification and treatment under the usual economic categories of consumption and production, flaunts the notion of labor as a commodity and gives a different economic value to the element of time. And yet it is economically speaking, a very efficient process.

3.3 Benefits and Costs of Owner-Built Housing.

There is a good deal of evidence from outside the United States that owner-built housing is much more efficient than government or industry-built housing by any measure one may choose.49

In fact, a very large proportion of recent low-income urban migrants in Asia, Africa and Latin America are housed by this process. This phenomenon is becoming better known, and governments and international agencies are beginning to recognize that to give basic support to individual housing efforts among low-income migrants is far more productive and efficient than public housing. Although from a North American point of view their environment might be considered far less complex and their options much more clear cut, this huge army of illiterate migrants, representing a wide spectrum of cultural diversity, gives the lie to any notion that the poor, and especially the uneducated, are less capable or rational decision-making when it comes to housing.
In the United States, housing for low-income people is, by culture and living standard, more complex than in most of the poorer nations, but there is considerable evidence even here that owner-built housing is a more efficient process than government-or industry-built housing. It is practiced by the poor in rural and small-town America, by the less poor all over America, and there is reason to believe that it might become a much more widely used path to homeownership for the urban and suburban poor given more favorable conditions.

Between 1963 and 1969 eighteen percent of all single family houses produced (over eleven percent of all housing starts) were owner-built. Seventy percent of this production by owner-builders occurred outside the Standard Metropolitan Statistical Areas. The largest regional concentration was in the Southern and North Central States. The Northeastern States have fewer owner-built homes, but even here the production is not insignificant. In 1968 there were 21,800 homes produced this way in the North East, more than a third of which were built inside SMSA's. According to a 1968 Bureau of Census sample survey on new housing units, the income distribution of owner-builder families is very similar to that of the entire population. More than fifty percent of owner-builders have incomes below the national median. One fifth earned less than $6,000. In the same year only three percent of the housing constructed for sale was purchased by families with an income of $6,000 or less. This indicates
quite clearly that, for the nation as a whole the owner-builder process is a more accessible path to home ownership for low income families than is that conventionally provided by industry. There is no data, however, which breaks down this income distribution by regions or by location inside and outside SMSA's. Owner-built houses in the South tend to be smaller and have fewer amenities than elsewhere. Since about a third of all owner-built homes are in the rural South we might infer that the lower income owner-builders tend to be in the rural areas in general and in the South in particular.

There is practically no owner-builder activity in central cities. Nearly all the owner-built homes constructed inside SMSA's are in the suburbs. Indications are, though there is no data, that these are mostly lower-middle to upper middle income families.

Those owner-builders who have been surveyed report savings which average between thirty and forty-five percent. The OSTI study, referred to earlier, interviewed seventeen owner-builders in the Northeast and twenty-three in the Southeast. The latter reported savings averaging forty-three percent. William Grindley's survey of 121 owner-builders in North Suburban Boston indicated an average savings of just over thirty percent. Comparing the kinds of construction labor which his respondents chose to do themselves with the Kerner Commission's figures on percentage of construction costs attributable to labor, Grindley found that owner-builders
generally decide to provide their own labor precisely in those areas where it will save them the most and to sub-contract those tasks in which labor is a small part of the total cost of a new single family home of comparable size in the Northeast region. Grindley also found that the owner-builders who worked the median number of hours reported earned an equity of six to eight dollars an hour. Even allowing for substantial exaggerations in reported time spent and savings achieved, the equity earned would still be well above the minimum hourly wage.

Owner-building is efficient, and, for those who practice it, it makes possible the attainment of a better home than they would otherwise be able to afford. This should mean that it can make ownership of a modest house possible for a fairly large group who could otherwise afford none at all.

The owner-builder process is not only efficient, it probably produces better-made houses and thus adds to the quality and durability of the national housing stock. It is impossible to assess the quality of owner-built housing statistically. Our interviews and visits to owner-built homes in the suburbs north of Boston have convinced us that they are generally made with better materials and greater care than commercially built homes. It stands to reason that a man building for himself will take greater care than one who is building to sell. Respondents insisted again and again that, while they shopped for prices, they also shopped for quality
in materials and workmanship. Some gave as a reason for building their own house the poor quality of the work in the average contractor-built dwelling.

A third advantage of the owner-builder process is the skill acquired by the owner in the course of it. Quality maintenance of the house, to the benefit of the owner's family and that of society, is assured by the very fact that the owner has built it. He knows how to repair most things and saves a good deal in operating costs thereby. Depreciation is kept to an absolute minimum because the owner-builder has a very high degree of pride in his workmanship. And many of the skills are transferable. Some of those interviewed went into building trades (on a full or part time basis) after their experience. Others built for their relatives or built more houses to sell. The skills acquired, both manual and managerial, have a wide range of future applications.

But there are also costs. Time is a heavy one in some cases. That time could be spent reading, taking courses, moonlighting. Family stress is a possibility. Some find that it creates tensions, other that it brings the family together. These costs are largely immeasurable, but in some cases at least, quite real.

What of the time spent in information seeking and its cost? Those we interviewed did not seem to have calculated time spent in information search as part of their costs. In fact,
such a calculation would have been extremely difficult, as we shall see in the next chapter. While there are incalculable costs and incalculable benefits, the evidence does seem to indicate that owner-built housing, by and large, is an efficient process which produces a better home for less money than industry or government are able to provide.

Why, then, is there not more of it?

3.4 Obstacles to Owner-Built Housing.

We should list two kinds of obstacles, those external to the potential owner-builder and those which are internal.

3.4.1 External Obstacles:

3.4.1.1 Land. "You're not going to build a twenty thousand dollar house on a piece of land that costs ten thousand, you know what I mean?" So said the wife of one owner-builder recently interviewed in Lynnfield, Mass. Many others interviewed were similarly convinced that land prices had risen so much in the years since they themselves built that building for oneself was no longer possible for people in their income range. Soaring land costs in the suburbs is a fact, but it is an obstacle to any kind of single-family home ownership and is not specific to owner builders. According to the study prepared for the Kaiser Commission by Gold and Davidoff, the principal reason for the rise in the cost of residential land in the United States since the early 1950's is not the cost of raw land itself. The critical determinant has
rather been the cost of site improvements.

The rise in the costs of land improvements has been due in no small part to suburban land use policies that are designed to increase per-lot investments to encourage the production of high-valuation (and high tax-yield) housing. Indeed, fiscally motivated zoning and subdivision actions are responsible for much of the increase in site costs in one family housing since the middle 1950's. What this signifies is a concerted tendency to restrict all kinds of low-income housing in the suburbs. Low income owner-builders may be expected to fare no worse than other low-income families in this regard. Since they act as individuals and are interested in buying single isolated parcels of land which are inconvenient for large developers, they may be able to buy at lower than average costs. But the zoning regulations, assessments and other fiscal measures will hurt them also. This problem, though a very real one, goes beyond the scope of this thesis.

3.4.1.2 Credit. Very few of the owner-builders surveyed by Grindley in the suburbs north of Boston had any trouble obtaining a construction loan from a local bank. But they paid the going commercial rate, and they had to have both a piece of land and a substantial portion of the house built before any portion of the loan would be disbursed. Only two persons out of 109 respondents received FHA or Veterans' Administration insurance or assistance. The FHA is apparently not geared to deal with individuals. Its subsidies, basically, are to help the industry. The only government agency which
does much subsidizing of loans to individual homebuilders is the Agriculture Department's Farmers Home Administration (FmHa). Since its jurisdiction does not extend to towns larger than 10,000, it is of no use in the suburbs. Clearly a more generous and more easily obtainable form of interest subsidy would open up access to the owner-builder process for a whole new income level. And if this credit were obtainable at the front end— for land purchase and initial construction— the number of people for whom this is a possible path to homeownership would be even greater. Whether many of those who could then take this path actually would do so is, of course, another question.

3.4.1.3 Legal Obstacles. These obstacles include zoning and subdivision regulations, building codes and standards, and housing codes and standards. The obstacles to the owner-builder process created by these legal constraints are well described in a recent article from the Harvard Journal on Legislation. Discrepancies from one locality to another, bias toward the needs of builders, overrating the degree of professionalism required to build a house, and excessively high standards for minimum space and amenities are the chief obstacles in this category. They militate against owner-builders in general and against low-income owner-builders in particular. One suburban community north of Boston now requires a regular contractor's licence for all builders, making it practically impossible for an individual to build his own home without passing a lengthy examination.
3.4.1.4 Lack of User-Responsive Technologies. The Kaiser Commission's Report presents a "vision of a high-technology housing industry," and urges greater amounts of government support for research and development in new housing technologies. But all of this R&D is to assist the housing industry. It is aimed toward greater industrialization of housing. It is not intended to make the task of a non-professional easier so that he may do more of the construction himself. Yet there are areas, especially in relation to those parts of the task which now require a high degree of specialization such as foundations and footings, water and waste disposal, power and energy, and structural framing which could be made significantly easier for amateurs.

3.4.1.5 Racism. None of the persons we interviewed was black, Puerto Rican or Chicano. There is no hard evidence as to how members of minority groups fare as potential owner-builders in the suburbs, what kind of cooperation they receive from banks, materials suppliers, subcontractors and officials, but, given the generally segregated dwelling pattern of suburbia, we may well imagine that minority groups would encounter as many and more social obstacles trying to become owner-builders in white communities as they do when simply seeking to buy a home. This means that the number of de facto available suburban sites for minority groups is severely restricted.
3.4.2 Internal Obstacles.

There are many potential obstacles to owner building which are internal to the individual or family. Among them are: lack of awareness, lack of time, lack of income, lack of interest, need for mobility and lack of skill.

3.4.2.1 Lack of Awareness (Including Education). Many persons simply do not consider the option of building their own home. Some consider it to be beyond their skill while in fact it is not. Upbringing, school formation, and the general social climate have a lot to do with this. It is a question not just of thematic awareness but of the whole social image of the house and its relation to the dweller. Simply removing other obstacles may not be sufficient to overcome the lack of awareness in an individual that this is a viable option for him.

3.4.2.2 Lack of Time. The person who has to work much more than forty hours a week just to make ends meet and is too fatigued in his little free time to do anything but rest clearly cannot and will not build his own house.

3.4.2.3 Lack of Income. Some people's income is simply so low and unsteady that they can not make any outlay beyond a minimal rent. Without a guaranteed annual wage of sufficient size many of the poorest people are ineligible for homeownership no matter how easy the process is made.
3.4.2.4 Lack of interest. Many people will simply prefer to spend their free time in other pursuits. Some do not want to own a home. Others, even though they have the skills, would rather do something else with them.

3.4.2.5 Need for mobility. For many people home ownership is simply inconvenient because they need to, or want to, be able to move about for various reasons.

3.4.2.6 Lack of skills. This is the most difficult obstacle to weigh. How many people are simply incapable of building their own homes? The evidence from Latin America, Africa and Asia along with some of the arguments of the previous chapter suggest that the capacities of low-income populations for such an enterprise may easily be underestimated. When one considers that an owner-builder need not do any of the actual building himself -- he may simply act as his own general contractor and subcontract the whole process -- actual construction skills are not indispensable. Furthermore, the skills required for doing it oneself could be significantly reduced by the development of more user-serving technologies. The fewer the outside specialists required the less likelihood of the individual's being 'taken'.

Substitutes for actual construction skills exist, and others could be developed. But there is another requirement which is much more difficult to supply, a community of experience with the actual process of building. Survey data shows that only about twenty percent of owner builders have occupations directly connected to the building trades. But the
Interviews reported in the next chapter reveal, in almost every case, some kind of experience with building or close family or friendship ties with persons in the building trades. Since a very large number of working-class Americans are connected to the construction industry this does not mean that the suburban owner-builders surveyed are exceptional types among their peers. It does indicate that, in the absence of such a community of experience, there is likely to be a lower degree of internalized, assimilated familiarity with the homebuilding process. For minority groups in the United States, who are often systematically excluded from employment in the construction industry, this is likely to be a serious obstacle which no amount of interest subsidy, code revision, or externally supplied information can remove. The need is for more information, but not the kind of information that any formalized service is likely to provide.

In the following chapter we shall take a closer look at how middle-class owner-builders acquire and use information in the process of building their own homes.
4.1 Information Needs

The information search involved in the process of building one's own home is, on first analysis, a fairly complex affair. Not only are there several different kinds of information that need to be assembled, but also, for each kind of information, there is a series of factors to be weighed and a fairly wide range of potential information sources. We may list at least nine separate categories of information involved in the process.

1. Information leading to the decision to build,
2. Information leading to the decision whether or not to do a particular task oneself,
3. Information relating to land acquisition,
4. Information concerning design,
5. Information regarding finance,
6. Skill-related information (i.e. information related to the owner-builder's use and acquisition of construction and managerial skills),
7. Bureaucracy-related information (i.e., everything that has to do with obtaining the necessary permits and the services of public utilities),
8. Information regarding building materials, appliances and tools,
9. Information regarding sub-contractors and suppliers.

Clearly there are many individual items of information to be sought within each category. The last one alone involves a search for contractors in excavation, foundations, framing, electricity, plumbing and heating, floor laying, masonry, plastering and perhaps many more items. And in each case the search involves much more than just finding out the contractor's price. Quality of materials and workmanship, speed, reliability, availability at the time needed, durability of the product and future maintenance costs are just some of the factors about which information has to be obtained and weighed.

The following list, based on interviews with owner-builders, indicates a number of factors which need to be searched out for each of the categories of information.

<table>
<thead>
<tr>
<th>Type of Information</th>
<th>Factors to be Weighed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information leading to the decision to build one's own house</td>
<td>Assessment of costs and probable savings</td>
</tr>
<tr>
<td></td>
<td>Assessment of time and opportunity costs</td>
</tr>
<tr>
<td></td>
<td>Own ability versus difficulty of task</td>
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<tr>
<td></td>
<td>Need</td>
</tr>
<tr>
<td></td>
<td>Family tolerance</td>
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<tr>
<td></td>
<td>Personal desire and interest</td>
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<tr>
<td>Information concerning design</td>
<td>Information regarding finance</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Cost</td>
<td>Availability of financing</td>
</tr>
<tr>
<td>Efficient allocation of space and material</td>
<td>Present assets</td>
</tr>
<tr>
<td>Appearance</td>
<td>Cost and repayment terms</td>
</tr>
<tr>
<td>Comfort and convenience</td>
<td>Manner and schedule of</td>
</tr>
<tr>
<td>Present needs and preferences of family</td>
<td>disbursement</td>
</tr>
<tr>
<td>Future needs and preferences of family</td>
<td>Flexibility of bankers</td>
</tr>
<tr>
<td>Safety and security</td>
<td>Expected future value of</td>
</tr>
<tr>
<td>Insurance costs</td>
<td>property</td>
</tr>
<tr>
<td>Tax assessments</td>
<td>Expected changes in lending</td>
</tr>
<tr>
<td>Nature of one's social and business relations</td>
<td>rates</td>
</tr>
<tr>
<td>Sense of accomplishment</td>
<td>Establishing credit in the locality</td>
</tr>
<tr>
<td></td>
<td>Obtaining a mortgage</td>
</tr>
<tr>
<td></td>
<td>Personal acquaintance</td>
</tr>
<tr>
<td></td>
<td>with local banker</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skill-related information</th>
<th>Bureaucracy-related information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to do the job</td>
<td>Speed and scheduling</td>
</tr>
<tr>
<td>Opportunity cost of acquiring a skill</td>
<td>Getting to know local</td>
</tr>
<tr>
<td>Use of skill to do other jobs in the future</td>
<td>officials</td>
</tr>
<tr>
<td>Enjoyment of skill, self-image, etc.</td>
<td>Cutting through red tape</td>
</tr>
<tr>
<td>Availability of time and assistance to learn skills</td>
<td>Possible shakedowns</td>
</tr>
<tr>
<td></td>
<td>Useful advice</td>
</tr>
<tr>
<td></td>
<td>Fees</td>
</tr>
</tbody>
</table>
Information regarding building materials, appliances and tools

- Durability
- Performance
- Appearance
- Convenience of use and maintenance
- Safety and security
- Thermal-acoustic properties
- Cost: initial and long-term
- Ease of obtaining and delivery
- Knowledge of how to use and work with family expectations

Information regarding sub-contractors and suppliers

- Quality of materials
- Workmanship
- Speed
- Ability to get work done on time
- Readiness to stand behind work done
- Price
- Availability
- Scheduling of work and delivery
- Reputation

The above list of categories and factors is not complete. The complete list would vary for each individual. If each item had to be searched successively and independently, the time involved would be fairly extraordinary. But the various factors are not unrelated, and there are sources which can supply the needed information on many separate items.

Sources for each kind of information are multiple, but in general they can be classified as any other information sources according to the categories indicated in Chapter One,
i.e.:

1. The searcher's previous stock of information
2. Interest-linked, institutionalized sources
3. Independent, institutionalized sources
4. Informal sources

The task is likely to appear manageable or overwhelming depending on how much previous experience the searcher has and how capable and reliable are his informal sources. Anyone can get on the telephone and ask a lot of questions, but if he has not a certain background of information against which to compare what he learns the answers he receives will be a mass of undigestible data. The ability to weigh is essential, and it comes from experience -- one's own experience and that of the social community in which one lives.

4.2 The Community of Information in which Owner-Builders Function.

In his survey of 121 suburban owner-builders in the area north of Boston, William Grindley asked his respondents to indicate whom they found to be the sources of most valuable advice and assistance. Nearly three out of four listed one of the following as their principal sources: family, friends at work, or other owner-builders. Again, in reply to the question, "how did you find the names of subcontractors," more than half indicated friends or relatives as their source.
In order to understand this network of relationships better, we interviewed eighteen of the respondents to Grindley's survey. In general, we sought to avoid the twenty percent who had indicated that their jobs were directly related to the home construction business. However, one was a construction laborer and another was a carpenter attached to a school. The others had listed their occupations as follows:

<table>
<thead>
<tr>
<th>Optician</th>
<th>Salesman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attorney</td>
<td>Draftsman</td>
</tr>
<tr>
<td>Manager</td>
<td>Electrical Heating</td>
</tr>
<tr>
<td>Foreman of Paving Crew</td>
<td>Contractor</td>
</tr>
<tr>
<td>Retired Civil Engineer</td>
<td>Pattern Maker</td>
</tr>
<tr>
<td>Machinist</td>
<td>Accountant</td>
</tr>
<tr>
<td>Fireman</td>
<td>Civil Servant</td>
</tr>
<tr>
<td>Fireman, Officer, U.S. Coast Guard</td>
<td>Pilot</td>
</tr>
</tbody>
</table>

Our interviews revealed, in most cases, some form of involvement with one or another phase of the construction industry. This involvement is not easily classified. The web of relationships differs in every case and is best conveyed by verbatim material from the interviews themselves. The following is a rather lengthy sample:

**PATTERN MAKER**

Q. Where did you get the skill from?

"I don't know. Well, actually, my background is -- I went to a trade high school. But I never followed it up very much. And when I got out of high school I went into service...."
Mechanical things came to me naturally. If I didn't know something I found out. (pause) Although there was a friend of mine I worked with -- when I finally decided to build a house. I worked as a journeyman patternmaker. He had worked as a carpenter. If there were things I didn't know I asked him, and if we didn't know we worked it out."

Q. Did you do any reading, to find out how to do things?

"No."

Q. What did you do when you got to a problem?

"I used to build it in my bed. When everybody else goes to sleep, I built the house in my head. That may sound funny, but I could see every member in my head. When I saw a problem -- then I asked around. I suppose the best thing was to just go to the library and get a book. But I never thought of it that way at the time. I just asked somebody."

Q. Who?

"Guys at work, or, when I'd see somebody building a house I'd stop and I'd go through the house..."

"I didn't have that many problems. I have a good mechanical aptitude. But at that time I didn't study. I didn't
ask anyone. I just figured it out for myself. I mean, I didn't know how to read a framing square, okay? But I remember a little of Pythagoras's Theorem, and I said 'okay, I'll use that.' And it's the same thing...."

"But see I lived in Boston and -- maybe this is how I probably know a lot of stuff -- my father had a four family house (actually it was eight families). And, it was depression and we bought that when I was probably ten or eleven years old. And over the years we remodelled the whole thing, my brothers and I.... And...., when I got to be around fifteen or sixteen, I was a little more accurate than my older brother was. He let me do some of the more fancy work."

Q. So your father was pretty mechanical?

"No not my father, we were. He gave the orders. He didn't touch anything. He'd come home and inspect. My older brother was sort of the leader, and we all chipped in. And we knocked down walls. We did so many illegal things, like wiring. And nobody told us anything. We just found out. How we found out I don't even remember. We learned from each other, and we learned from other people most of all. Whenever we saw anything going on I think we watched. We picked it up and stored it away someplace, and then when the time came it all came out."
Q. How did you get the idea to build your own house?

"When I came out of service, I wanted to go to law school, but... I had to wait six months before I could go to school. During the wait I worked for a contractor as a carpenter and kind of fell into it, and kind of like it, quite frankly. And, also, while I was in law school, my father was an electrician, and I used to work with him in services and electrical outlets in houses..., but gave it all up as soon as I graduated. So, what happened, I married a wife who had a mother who bought maybe seven different houses during her lifetime, and built three of them herself -- lived in it for three or four years and then moved on to another one. So that I had a girl that I was courting who grew up with this -- buying and selling houses -- during her lifetime of girlhood (sic). And so she suggested to me that since I had the talent, let's do it. So she was really my activating influence, I'll have to agree. Without her pushing for it I may never have done it."

Q. Your wife's mother had acted as her own --

Yes, moreso than the father. She was quite an entrepreneur. But not on any grandiose scale at all. You know, just
lived in a house a while and while she was there went out and got herself a carpenter that she knew. And she acted more or less as her own agent -- of course with her husband also working beside her. And her husband did a lot of the work -- my father in law -- he was an electrician. He wired every one of these houses, obviously, and painted the interior and exterior.... So my wife saw this, and saw that I had a talent, saw that I had saved a few dollars while I was in the service, and rather than buy a car or, you know, just let it go, we decided to buy some land and actually finish the...house before we got married. And I did have it completed before I started law school."

PILOT

"Of course, I think probably what helped me more than anything: back home I have a brother-in-law who is a carpenter and a contractor, and he helped me...build a garage. And...also, over the years, there had been times that, when I was out of work for one thing or another, I worked a few days with my brother-in-law just driving nails and helping put walls up. I've been around it more than the average guy, I would say. And while I was a kid -- with my father, you know -- why, we built stuff. And I can remember when I was an eleven year old boy, mixing mortar...."

Q. Your father was...?
"He was just a farmer. But he did things around there, like building barns, and stuff like that."

**DRAFTRSMAN**

Q. Where did you learn all that stuff?

"Most of it is just applying yourself. Well, let me put it this way. I'm a farmer from way back... Working on the farm we had to build all our own wagons, or repair this, repair that... I grew up right next to a farm. I worked there all my life. My whole family did: my mother, my father, brothers, sisters -- we all did. And my father being more of a handyman, and being a plumber, a tradesman, you know?

Q. Where did you learn to frame?

"I've always looked at books and, you know, working in apartments I understood how windows were in there and so forth. And then my father-in-law he knew an awful lot about framing. So between him and myself..."

"We had owned apartment houses before. I fooled around with this enough so that I knew I could handle a house. And then my father-in-law he knew a lot about building. He had built quite a few houses. So my father was a plumber, my brother was a glazer, and one of my friends was an electrician... So between every one of us and all the
help: all my brothers and the neighbors and so forth (a lot of people were willing to learn) you had free help. So there was no reason why not to build."

MACHINIST

"Like I said, it's a long story. I had a retired carpenter help set me up, after I got the thing all bulldozed out and the foundation put in, right? Alright. Now I knew nothing about the center beam or anything else. So I had to have help. So there was a retired carpenter that my father-in-law also knew, and I went and spoke to him, and he said he'd give me a hand. So the first two weeks in July went putting in the center beam and some of the joists and that. He helped me do that. So he got me started off on the right foot and he showed me how to put up a wall (and) how to check to make sure that it was square."

Anybody, I think, can put up a wall. I mean as far as nailing it together. But once we put up one wall, all you got to do is add the other three, right? He showed me how to make sure it was square and how to check from corner to corner and, as I said, I didn't really know that much about it. Her father had did it before and I don't think it's really that hard."

Q. You never read a book?
"No."

Q. You didn't even get a simple guide to electrical wiring?

"No. Well, you only have a black wire and a white wire and a ground wire. I mean how can you go wrong? It's that simple. I didn't find no problem that way. Financially, that's the burden."

Q. You're a tool and die maker. Do you think this kind of training assists you?

"No. Well, to be able to work with your hands, yes. But anybody that's mechanically inclined ought to be able to do it, if they take their mind to it.... It's very simple. I thought it was."

Q. You did all the taping and spackling yourself?

"No. I had that done too."

Q. Who did that?

"Shaw. He was from Wakefield or something like that. Because we tried to find him for somebody afterwards and we don't know where he is. I really can't place the guy. The trouble was, see, he was moonlighting, and him and another guy from the job came down here and they did what I call a good job. And they had...done another house that we know the people. So I asked them who they had and he
told me to give the guy a ring. So I gave him a ring and he came down and gave me the price of $250 complete -- go ahead and do it. And I did it since and for $250 I'd never try to do the whole house."

Q. You've done it where?

"The house across the street."

**FIREMAN #1**

Q. How did you know that labor was dependable?

"Well, primarily from association with other people. Like, I know maybe four or five fellows that are carpenters. And you can get a pretty good indication how things go talking with them, you know? They can tell you where to get the best price and cheapest, or they can tell you where to get the quality, if you want."

Q. Where did you get all the rock (for the front wall)?

"I got a dump truck and a bucket loader I borrowed."

Q. A front-end loader is really unavailable to a lot of people....

"I was in the landscaping business with a fellow for a while. He's still in it. I sold out to him. And he's got dump trucks and a bucket loader. So I just borrowed them from him...."
"I have quite a few friends in the trades."

Q. Where from?

"Oh, associations. Like, on my job. I'm a firefighter full time. And I was a call firefighter in _________. And up there many of the fellows on the department were tradesmen: electricians, carpenters, things of this nature. Just like on the fire department in town. We've got master plumbers, and carpenters...."

Q. How can you be a fireman and a contractor?

"Well, see, our schedule is different. Like I'm off now. And I'll be working this weekend...."

Q. Do any of the fellows in the fire department also build?

"There's two others that have built their own home. One has built two of his own homes."

Q. You seem to have many friends in the construction business.

(Wife) "Really, I think most of our friends really are."

ELECTRIC HEATING CONTRACTOR

"I'm in the electric heat and insulation business, a semi-contractor I guess you'd say. So I knew a few people. I knew some plumbers and some electricians.... At the time
there were other houses being built on the street. I used two of the contractors that worked here, and others I just went to the phone book."

"Till I got zoned out of it over in ________, I was going to put up some twenty duplexes. My father (he's my partner) he's done some building for himself. He's built three duplexes and he lives in one of them, and he built his house before that."

FOREMAN OF PAVING CREW

"This land was owner by my father-in-law.... We bought the land for one dollar.... I thought at the time...why not build a house on it? I had the ability to do it. I had done that type of work before."

Q. What type of work?

"Rough carpentry. Not as a job but as hobbies, etc. I had carpentry in school. And I was working in the construction business, but not in the actual home building business. We were sub-contractors. We were doing road work: sidewalks, curbstones, etc., so I had contacts with contractors. So I decided, after talking to a few of them, that the best thing for me to do was to build a pre-fab. This is a pre-fab shell. It was manufactured by Assembled Homes in Winchester.... We had done a considerable amount of work for them up in West Peabody and I got to know them
pretty good, and they said they'd give me a good deal on it.... So we started construction in June. I surveyed the land."

Q. Yourself?

"No... one of my contractor friends did it for nothing."

CIVIL SERVANT

"I've been around property the better part of my life anyway. My own mother owns some property down in the city here. So I've been around it, but as far as construction is concerned I actually didn't get into it until, say, the past ten years...."

"Actually, this goes back 15 years ago too. I did work on a construction deal where they were -- one summer while I was going into my junior year in college.... I got an idea of construction -- and bad construction to tell you the truth. And working with this friend of mine when he built his own house and getting an idea of what good construction could be.... It got to a point where I knew something about construction."

EXCERPT FROM AN ACCOUNT WRITTEN BY THE
WIFE OF THE CONSTRUCTION LABORER

"My husband works for ------------ Construction Company which specializes in concrete foundations. For this reason
we arranged to have them pour our foundation because we knew the quality of their work, the men who did it, and also, mundanely, because they gave us a break in the price - just under $1,000.00. Also, for this reason, we got Mr. ____________ who does earth moving, to dig our cellar and back fill around the foundation and to demolish our old house. His bill will be in the vicinity of $350.

"We chose Mr. ____________ to construct our home because he worked as foreman for ______________ Construction Co. for a number of years concurrently with my husband who was employed as a general laborer. My husband observed that Mr. ____________ was a good, honest, hardworking man and foreman, and work done by him or under his supervision was done properly. He always said that if we ever built a home, Mr. _________ would do it for us as he was the only man he would trust. Together, they arrived at the decisions about the division of labor and cost. My husband presently is on leave of absence while the house is being constructed because he felt that the money we saved on the cost of labor for doing the endless "scut" work associated with construction, would more than offset any earnings he might earn. Also, he would be present all the time in case anything was not being done according to his high standards.

"Regarding the chimney, flu and fireplace - years ago - we did some sort of a favor for Mr. ____________, who had been a friend and presently is the owner partner of the ______________ Construction Co. and he said in return, he'd build
me a fireplace (he is a top mason), and for that reason we arranged to handle this construction detail separately."

As for the others, we may summarize some of their informal ties with construction experience as follows:

**MANAGER:** His uncle, who is a carpenter, helped. His wife's aunt worked for the building inspector. He knew other owner builders from work and their influence helped to convince him to do it.

**RETIRED CIVIL ENGINEER:** His former work was in the office of the City Engineer and he had dealt with contractors extensively.

**OPTICIAN:** His Father, a shoe engineer with USM in Beverly, was "handy". He got the design for the steel center beam from a structural engineer at USM, through his father. Indoor masonry was done by a workman from USM moonlighting. Heating was done by a friend of the family.

**SALES MAN:** He had worked summers for an electrician.

**ACCOUNTANT:** "I've been in different places — worked different places — so I got to know people that have been in the construction business, and I picked out the ones that I wanted."

**CARPENTER:** He had many supplies delivered to his place of work. He picked them up from there in his own truck. He had done a kitchen for the mason who
built his fireplace. He had sheet-rocked the garage for the person who supplied him with a small bulldozer.

**COAST GUARD OFFICER:** Being an engineer, he drew his own plans. His father-in-law owned three houses in the same town. His next door neighbor is a professional carpenter. He heard about the land from a person who works with his father. A friend had previously built his own house.

**FIREMAN #2:** Husband and wife both have real estate broker licenses. Plans were obtained from a contractor with whom he had worked. House was on a parcel of land which was part of a larger piece which they subdivided and sold.

Most of the interviews thus reveal an intricate web of relationships through which information passes, skills are acquired, facts and attitudes are learned, and the reliability and accuracy of what others say and do is constantly assessed. In this way, the long list of information needs and factors for assessment given at the beginning of this chapter is reduced to manageable proportions. Mr. Owner-Builder has learned what to look for in the job that a plasterer does; he has thought a lot (on his own free time) about how kitchens are designed; he has a relative with experience
in electrical work; a friend will show him how to sweat a joint; and some day he will return the favor by helping that friend rebuild his garage. And so it goes. The social network and the network of production are inseparable. From the economist's point of view it is a very efficient information network for two reasons: a) because it drastically reduces the time spent in information search, and b) because it simultaneously provides assessments of the reliability of the information it transmits.

4.3 The Diversity of the Supply Network

One might expect that an information network of this kind, where productivity is so intimately linked with social ties, might tend to become highly concentrated and hierarchical, that it might take on the characteristics of a "mafia", where a small number of rival organizations vie for influence and control. But such is not the case. We asked each of the eighteen interviewees to name the various subcontractors with whom they dealt. Some could not remember all of the persons involved, but we were able to compile a reasonably complete list for the eighteen and to check their names and locations in the local yellow pages. All eighteen live within an area with a six mile radius. None of them lives more than twelve miles from any other. The area of the supply network is somewhat larger, reaching, in one case to Nashua, N.H., and in another to Boston. But most of the suppliers and subcontractors come from within the
same area. And yet there is remarkably little duplication as the tables on the following three pages indicate. The tables give the name and location of the subcontractor (or banker or supplier) used by each person for each function. Where the name is capitalized the source could be found in the current yellow pages of the two telephone books serving the area in question. The date of completion of the house is indicated along with the occupation of the owner-builder and the town in which he built.

Only in foundations, and to a lesser extent in plumbing and heating, is there a tendency for the same names to appear. Perhaps the best indication of diversity in the supply network is the fact that the lawyer, the draftsman, and the manager all built in the same town in the same year, and yet only two names appear more than once in their lists, a bank and a foundation contractor.

These tables appear to indicate:

1. That the existing formal commercial supply network is quite accessible to owner-builders,

2. That the supply network they actually use is wider than that indicated by the yellow pages, and

3. That the social nature of the information network does not inhibit a wide use of the variety of services available on the commercial market.
<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Company/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retired Civil Engineer, Lynn '55</td>
<td>Lynn</td>
<td>LYNN INSTITUTE FOR SAVINGS</td>
</tr>
<tr>
<td>Civil Engineer, Lynn '55</td>
<td>Lynn</td>
<td>LUMBER BUILDERS SUPPLY, Lynn</td>
</tr>
<tr>
<td>Fireman No. 2, Lynn '64</td>
<td>Lynn</td>
<td>NATIONAL LUMBER, Salem Revere</td>
</tr>
<tr>
<td>Civil Servant, Lynn '64</td>
<td>Lynn</td>
<td>G. PEABODY CO-OP BANK, Peabody</td>
</tr>
<tr>
<td>Accountant South Lynnfield '55</td>
<td>Lynn</td>
<td>Watertown Federal Savings &amp; Loan</td>
</tr>
<tr>
<td>Pattern Maker Lynnfield '59</td>
<td>Lynn</td>
<td>SALEM SAVINGS</td>
</tr>
<tr>
<td>Electric Heating Contractor, Lynnfield '70</td>
<td>Lynn</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td>LYNN INSTITUTE</td>
<td></td>
</tr>
<tr>
<td>Lumber</td>
<td>BAILEY BUILDERS SUPPLY</td>
<td>NATIONAL LUMBER, Salem Revere</td>
</tr>
<tr>
<td>Excavation</td>
<td>John Robbins</td>
<td>General Builders</td>
</tr>
<tr>
<td>Foundation</td>
<td>BEVERLY CONSTRUCTION</td>
<td>ASSEMBLED HOMES, Winchester</td>
</tr>
<tr>
<td>Framing</td>
<td>&quot;a jobber&quot;</td>
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<tr>
<td>Framing</td>
<td>&quot;a maintenance man at G.E.&quot;</td>
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<tr>
<td>Framing</td>
<td>&quot;a maintenance man at G.E.&quot;</td>
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<tr>
<td>Electric Coop Construction</td>
<td>ROBERTO CONSTRUCTION</td>
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<tr>
<td>Plumbing</td>
<td>Russo, Lynn</td>
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<tr>
<td>Heating</td>
<td>Russo, Lynn</td>
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<tr>
<td>Masonry</td>
<td>Parker</td>
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</tr>
<tr>
<td>Masonry</td>
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<td>Parker</td>
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Coast Guard Officer
Salem

Finance
RoGER CONANT, CO-OP, Salem

Lumber
LYNN LUMBER, Beverly

Excavation
K&P CONSTRUCTION, Beverly

Foundation
Blue Chip Construction, Beverly

Framing
self, Whittaker

Electricity
MouLISON, Salem

Plumbing
MERCIER, Danvers

Heating
Tinker, Danvers

Masonry

Plastering
Durkey, Peabody
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<th>Occupation</th>
<th>Company/Location</th>
<th>Years</th>
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<tr>
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<td>Hamilton</td>
<td>1964</td>
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<tr>
<td>Construc. Laborer</td>
<td>Wenham</td>
<td>1964</td>
</tr>
<tr>
<td>Pilot</td>
<td>Wenham</td>
<td>1968</td>
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<td>Danvers</td>
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<td>No.2, Danvers</td>
<td>1970</td>
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<td>Middleton</td>
<td>1972</td>
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<tr>
<td>Finance</td>
<td>BEVERLY NATIONAL</td>
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<tr>
<td>Plastering Moonlighter</td>
<td>self &amp; moonlighters</td>
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**Notes:**
- BEVERLY NATIONAL CO-OP
- IPSWICH CO-OP
- ASSEMBLED HOMES, Winchonester (prefab)
- ATLAS CONCRETE, N. Wilmington
- (see Lumber)
- Clark & McKinnon
- Crowell, Incampo
- Self & moonlighters
- friend
- Danvers
- Lynn
- McIntyre, Danvers
- MERCIER, moonlighter
- Incampo
4.4 The Limits to Diversity

Does this diversity in the supply network indicate that the owner-builders studied here actually enjoy many more options than do buyers of commercial homes? Yes it does, but within certain limits. An individual who buys from a contractor must accept the package of subcontractors, materials and financing that he has put together. The buyer may shop around for various packages, but clearly the number of combinations and permutations open to him are far greater if he acts as his own contractor. It is also less expensive for him to make changes in the course of construction.

And yet the end product of the owner-builder is not noticeably different from that of the commercial contractor. It is probably better built, with greater care and with materials that will last longer, and it is likely to be better cared for in the ensuing years. But judging from the houses of our eighteen interviewees, it does not look any different from the contractor-built houses which surround it.

Of course, a house is a house, and there are only so many ways to build one, especially within a middle-income range. But commercial builders are so limited in the number of options they can offer that one might expect a greater degree of innovation or creativity in design from owner-builders who have so many options and possibilities within their price range. In interior design especially, which is much less constrained by existing technology and materials
than the shell itself, one might expect greater diversity than appears to be the case. Of the eighteen persons interviewed, we saw the interiors of fifteen houses. One of the ones not seen was still under construction. Only one, in our judgment, reflected a real individuality.

The reason for this seems fairly obvious. The very same information network which makes it possible for these owner-builders to acquire the knowledge they need is part of a definite social framework which includes the local small business housing industry, its craftsmen and the standards of the trade. The owner-builder may improve on the existing standards, but he is not likely to learn from his father-in-law or his uncle about techniques and designs which are not fairly standard.

The informal network of information is, in other words, largely a cultural network with the same boundaries as the culture itself. When utilized by the owner-builder it provides many options and opportunities for choice and flexibility, but it has its limits. The following quotation from one of those interviewed gives some of the flavor of this situation.

"You see that stairway that was out there that goes upstairs? I spent a week on those stairs. I built that stairway three times and tore it apart. Every time it was accurate, it was perfect, but it just wasn't what I wanted. So I tore it all apart and started all over again. And
finally my wife said, "That's it. It's perfect." And I walked back by the fireplace. We had a cup of coffee, and I started thinking: "You know, if I come down and I bend it like that just the way it is there, that's it." We've got a nice opening so that when you open the door you look up at the stairs, so you're not boxed in right at the doorway. At the same time, when my daughter comes down in her gown ready for her junior prom, she's going to look like a million bucks standing right there. Now, that may sound stupid, but that's just the way I felt. I want a nice spot to take a beautiful picture of my daughter going to the junior prom. And she's only seven."
5.1 Information Services for Suburban Middle Income Owner-Builders

5.1.1 The Potential

Are the persons encountered in the previous chapter a unique breed of individuals with a rare combination of skills and personality traits which make it possible for them -- and very few others -- to become successful owner-builders? Or are there many more like them who, if given proper knowledge and encouragement, could do just as well? We have emphasized the fact that nearly all those interviewed had some experience with construction and some association, via family, work or friendship, with the construction trades. But one out of every twenty non-farm employees in the United States does work in contract construction. And if one adds to that the number of farmers who know a good deal about construction, the number of workers in the manufacturing or service sectors with skills and experience that are usable in construction, and the number of persons in white-collar positions who have had experience with construction at some stage in their lives, it does not seem quite so unusual for a white middle-class American male to have the kind of skills, contacts and
experience that our interviewees describe of themselves. It is quite conceivable, in fact, that there are many more persons in the population who could and would build their own houses were it not for some of the obstacles which were outlined in chapter three.

The large do-it-yourself industry in this country is a good indication of how much construction skill there is in the population. If research and development in building technologies were not, as they now are, oriented almost entirely toward highly specialized craftsmanship and industrialized production, it is possible that breakthroughs could be achieved which would enable many more persons who are able and willing to work with their hands, but do not have the more specialized skills, to undertake the construction of a house. In addition, the availability to the owner-builder of some kind of front-end credit and an interest subsidy program would open up this possibility to a whole segment of the population who at present simply cannot finance such an enterprise. Elimination or streamlining of some of the legal restrictions to which the house-building process is now subject would also make the task more feasible to many.

While it is impossible to predict the volume accurately, it seems safe to maintain that the elimination of these obstacles could make possible a significant increase in the production of owner-built homes in the middle class suburbs
as well as in small-town and rural America. As for the urban and suburban poor, we shall discuss their case in the last section.

What role would an information service play in such a development? On this subject there is an important distinction to be made.

Under the present constraints, it appears that suburban (white) owner-builders obtain the information they need in a relatively efficient and inexpensive way. It is difficult to conceive of any institutionalized service which could provide better information than they now obtain without running up costs far in excess of the savings it would achieve. There are at least two reasons for saying this.

First, any institutionalized service would be acquiring and disseminating information on a strict nine to five time basis, which is to say, in the most expensive way. Owner-builders acquire and exchange much of theirs in off-hours at a far lower cost and frequently a net benefit to themselves.

Secondly, the most important characteristic of the information which owner-builders search for is its reliability. For an institution to provide information on house construction with the same reliability as does the informal network (family, friendship and mutual obligation) it would have to work on a very intimate local level, and practically
supplant that network with a bureaucracy that would be prohibitively expensive, and subject to all kinds of pressures for influence.

However, when and if there are significant breakthroughs in removing the obstacles mentioned earlier then, of course, there is a specific information transmission job to be done. This would include several components such as, making people aware of the new opportunities available to them, promoting the idea of owner-built housing among persons who have never considered it, promoting new technologies in the commercial sector, educating people in the use of new technologies, promoting new financial packages in the financial community, and so on. Under the assumption that genuine progress is being made in user-serving technologies, in credit availability and subsidy and in legal standards then, it would seem, an information service could profitably assist in the growth of owner-built housing in ways that are discussed in the next section.

5.1.2 Three Kinds of Service

There appear to be three basic images which, alone or in combination, can serve as models for an information service of the type we have been discussing. They are: the mass communications media, the county agent, and the club. We will briefly consider what might be involved in each.
5.1.2.1 The Media Approach. There are several media which may be used either alone or in combination. They are naturally more effective if used in combination, but their costs and the kind of impact they can have differ greatly. What they have in common is that they are impersonal information sources, incapable (at the present state of the art) of adapting the message to the receiver except by categories of people. As such they do not require very much implementation on a local level, except as regards marketing and distribution.

A media approach to information services for owner-builders would have two main functions. It would create awareness of the owner-builder process and possibilities, and could provide various kinds of how-to-do-it materials: source guides, handbooks, checklists, or even educational films.

By staying with the print media for the most part and using existing distribution channels such as general and specialized popular magazines (e.g., Popular Mechanics, Better Homes and Gardens, Readers' Digest, Sunday Newspaper supplements) and the schools, a fairly inexpensive service could be put into operation rather quickly. If properly managed and marketed it might even eventually pay for itself. Of course its impact would be quite limited, but even if it were responsible for only a small number of new owner-builders it might be considered to have made a contribution.
A more expensive media approach would involve television and educational films. Television could be vital in creating awareness of the owner-builder option, but it would only be worth the expense of paid TV exposure at the moment of some significant breakthrough in technology, finance or legislation. At such times a good press agent might even contrive to obtain quite a bit of free coverage.

Educational films would be of two kinds. One, which describes the general process of building for oneself and illustrates its advantages, could, if imaginatively created, attain some popularity in the schools, create a greater awareness of the possibility among young people and contribute over the long haul to the future of the owner-builder movement. But immediate impact would be slight. It might be that the same resources invested in the more general effort to promote learning from the urban environment, awakening interest among young people in the construction work which constantly surrounds them, would be even more productive. No doubt a film which is adaptable for public television and school use and which is conceived as part of the movement for environmental learning would get the most mileage. It might even conceivably turn a profit.

Educational films of the how-to-do-it variety would probably make sense only when the demand for them is clearly established. Such films have need of a specific setting in which to be shown. They presuppose a group already motivated to learn.
To summarize, then, a media approach using only printed media might conceivably stand alone but would have only limited impact. A television-film oriented approach would probably make sense only as part of a larger package.

5.1.2.2 The County Agent Approach. The county agent is a unique kind of communicator because he can deal with individual people and individual problems while bringing to the task a professional training and a direct link to the more remote and impersonal sources of research and development. Authoritarian though his role may tend to be, he is in a position to receive feedback from people and problems which enables him to tailor his information to concrete needs and also contribute to the cycle of research and development.

A county-based information and advisory service for owner builders could serve many of the information needs that a media approach could not. It could fulfil a whole series of advisory functions from assistance in assessing one's own capabilities to help in making one's way through bureaucracy. It would play a vital technical assistance role in the diffusion of new technologies when such are developed. It could provide financial advice and, if new measures for financial assistance are adopted, it could be the agency through which such assistance is channelled.
It could also play a role as advocate of owner-builders before city and town government and other agencies. It could act as a kind of better business bureau, providing a place to check on disreputable sellers and subcontractors. It would, at the same time, be a distribution spot for printed materials, both old and new, which assist the owner builder on specific aspects of his job.

A service which offered these advantages would, generally speaking, have to be located at a county level (except for some of the smaller cities where a city-wide base may be possible). Accessibility and the need in the agent for knowledge of local conditions (prices, building codes, services available, subcontractors, suppliers, etc.) require that he be answerable for at most one county. The owner-builders we interviewed are all residents of Essex County, Massachusetts. The area twelve miles in diameter which encompasses them all is less than half that of Essex County. It would tax the skill of a very experienced agent to know all the conditions of that area and to offer the kind of localized services mentioned above. Half of that county might be more realistic a base for his services, but we will stay with the notion of a single county agent for reasons of cost, which we shall discuss below.

5.1.2.3 The Club Approach. If a good deal of information search by owner-builders is now carried out through informal exchange among themselves and with other persons who
have construction skills, perhaps the best way to induce greater productivity in the owner-builder field is to undertake activities which will foster informal social interchange within the "target population". Perhaps the imaginative organization of some kind of owner-builder clubs would do more to channel the right kind of information to potential new candidates than any formal service. Whether or not such an idea would be successful in actually producing a significant number of more owner-built homes is difficult to determine without some kind of testing. The key problem is that most owner-builders only build once and they do not necessarily regard the activity as a continuing avocation giving them some special identity. A mixture of successful owner-builders with aspiring novices would have to be achieved. Such an organization based on common interest can easily become exclusive. One way of widening the 'club' would be to include the large population that engages in extensive rehabilitation of their own homes.

A club approach could be used as an auxiliary to either the print media approach or the county-agent approach. Publications could offer to put aspirant owner-builders in touch with successful ones in their area who were willing to be contacted. The county agent could do the same thing much more informally, and if he were solicitous for creating social ties between older and newer owner-builders in his area he could be responsible for the creation of many new
information channels with highly productive results.

5.1.3 An Integrated Information and Advisory Service for Suburban Owner-Builders

What this discussion of the three approaches points to is, of course, a service which integrates all three. Integration of approaches necessarily implies integration of the three levels, national, regional and local. The following outline of such a service, once again, assumes the occurrence of breakthroughs in finance, technology and legislation for owner-builders. Cost factors will be discussed in the next section.

The National Center (in Washington, D.C.) would have the following tasks:

1. lobby for congressional action in favor of owner-builders,
2. conduct media campaigns to popularize the idea,
3. produce literature (and/or films) on owner-built housing of several kinds:
   a. periodical literature for maintaining 'club' sense, disseminating new developments in housing technology and design and reporting on tests of materials and tools,
   b. educational literature to make students aware of the idea,
   c. sets of standard plans,
d. how-to-do-it information booklets and check-
lists on various aspects of the process,
4. promote and coordinate research on new technolo-
gies and materials testing,
5. provide central administration for programs of
loan subsidies and insurance.

The Regional Centers (corresponding perhaps to the
regional offices of HUD) would have the following tasks:
1. distribute and market media products of the na-
tional center,
2. adapt certain media products to regional needs,
3. coordinate feedback from county agents to re-
search and development centers,
4. lobby with states and regional organizations on
behalf of owner-builders.

The County Agent's Office (eventually located in some
four hundred* suburban counties** would have the following
tasks:
1. advise owner builders on:
   a. the decision to build for themselves,
   b. the decision to do particular tasks themselves,

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*There are about 450 counties located inside the Standard
Metropolitan Statistical Areas. About fifty of these are
classified as totally urban.

**Similar services in rural areas might be independent or
might be coordinated with the Agriculture Department's ex-
isting county agent system and its Farmers' Home Administra-
tion programs. Cf. Spohn, art. cit.
c. site acquisition,
d. design,
e. finance,
f. acquisition of construction and management skills,
g. dealing with government and utilities' bureaucracy,
h. purchase of materials, tools and equipment,
i. obtaining the services of subcontractors and suppliers,

2. maintain up to date files on:
   a. current costs of various materials and services,
   b. available contractors, agents and suppliers, and financial institutions,
   c. local housing, building and zoning regulations, and required fees,
   d. successful owner-builders who are willing to be contacted for advice,

3. act as a better business bureau to accept complaints on bad performance by subcontractors and suppliers, real estate agents, banks, etc.

4. maintain a library of materials published by the national and regional offices and other literature of interest,

5. promote and lobby for the interests of owner-builders in local government agencies, chambers of commerce, civic associations, in schools and with local information media.
6. act as an agent of national or state government in coordination with local banks in the administration of interest subsidy and insurance programs for owner-builders,

7. promote the establishment of formal and informal social exchanges among owner-builders by:
   a. referral of aspirants to successful owner-builders,
   b. organizing social gatherings of owner-builders where feasible,
   c. feeding news to local newspapers establishing owner-builders' identities and interests.

5.1.4 Drawbacks of Such a Proposal

5.1.4.1 Another Bureaucracy. One may rightly wonder whether the whole thing is really worth this addition to the growth of the creeping monster of bureaucracy. There is even something ironic in proposing a new bureaucratic mechanism to foster the self-reliant individualism of the owner-builder. The fact that fewer and fewer houses in this country are built by their owners is partially a result of a growing dependency of people on government and large commercial institutions. Does this proposal not, in the long run, promote this very kind of dependency?

It can scarcely be denied that this objection contains a good deal of truth. But there are certain facts to be faced. Government, and a certain dependency of people on
government is a fact of modern life almost everywhere. In
the field of housing the existing bureaucracy generally fa-
vors the building industry rather than the individual. The
creation of another bureaucracy to counteract this bias is
regrettable, but it is probably the most effective way to
do so in the short term, since changing the mentality and
the standard operating procedures of an existing bureau-
cracy is extremely difficult. As a unit of the larger bu-
reaucracy it may even have some impact from within.

A point that should be emphasized here is that no bu-
reaucracy can possibly substitute for the social network
that presently transmits information, advice, skills and
attestations of reliability among the various people who
contribute to the owner-builder process. No formalized
service can hope to provide information that is as inex-
pensive and as reliable as this social network does. No
such service can provide the training, communication and
exchange in skills as inexpensively as does the continuum
of family, friends and companions at work. Any formalized
service can only hope to succeed if it works as a facilita-
tor of this process.

Another point is that for such a service to enter into
competition with the existing small contractor building in-
dustry would be a serious mistake. For many of the skills
which owner-builders make use of are ultimately derived from
some experience within the industry. While there is work
to be done in keeping that industry honest and helping to raise its standards of performance and product, to further weaken it at a time when it is under pressure from tendencies toward heavy industrialization and centralization could actually lessen long term production in owner-built homes. Until such a time as owner-built housing becomes so widespread that it is the principal channel for transmitting skills and experience (as no doubt it once was in an earlier rural America) the small contractor is a necessary, even if reluctant, ally of an owner-builder movement.

5.1.4.2 Cost. Prior to its establishment, any plan for information and advisory services for owner-built housing would have to be subjected to some fairly rigorous benefit-cost analysis, both as a whole and in its parts. Not that the usual benefit and cost criteria are the only ones by which owner-built housing should be judged. But if government is going to intervene in support of such a process there must be some publically justifiable reason for doing so, and, for better or for worse, benefit-cost is it. The following are some of the elements which should go into such an analysis.

We take as a criterion of costs and benefits the principle that there is no sense in establishing a government service if one could simply distribute the cost of that service among its potential clients and achieve a comparable result. The government could, after all, simply pay owner-
builders an hourly wage for the work they do themselves. The service would have to show that it is getting more homes built in the country than would ordinarily be built by the industry and owner-builders without its help, and a sufficient number more as to exceed the costs of the service.

Now if the service is trying to increase housing production by concentrating on a group who have not enough money to buy the cheapest commercially built home but could afford to build for themselves at a somewhat lower cost, it will be dealing with relatively inexpensive houses. If the costs of the service and the percentage it is able to save the owner-builder are constant, it will take more low-cost houses to offset the costs of the service than it would medium cost houses. In fact since land, in the suburbs at least, is likely to require a higher percentage of total cost in low priced homes than in others, the percentage which can be saved by the owner-builder is probably less in a smaller home.

But the savings have to be high enough to attract a sufficient number of clients. It is doubtful that many people would be induced to put in the long hours that are required if they would only save something like 5% thereby. In order to be really attractive, the savings ought to be around 20% or more.
The crucial question then becomes, what kind of service is necessary in order to achieve this level of savings?

If there are significant changes in housing and building codes, if new forms of interest subsidy and front-end credit become available (in such a way that they could also be administered by other agencies as well) and if new user-serving technologies are developed, perhaps a fairly massive media campaign to make people aware of these new possibilities and then provide them with manuals, check lists and other do-it-yourself aids would be enough to launch a new crop of owner built houses at savings of twenty percent or more.

On the other hand, it might be necessary to provide a service of the county agent variety in order to achieve this kind of savings. This personalized advisory service would be undoubtedly the most expensive part of the operation. An advisor is a professional of sorts, requiring experience and training and commanding a professional salary. Leaving aside the costs of administering a finance program, a minimum advisory service of one professional county agent would mean a budget of at least $25,000 per county per year. (The annual budget of the Agriculture Department's County Agent Office in Middlesex County Massachusetts is around $200,000.59) Established in 400 counties, this service would cost ten million dollars annually.

Now such an item would be justifiable under the criterion
established above if each agent could establish clearly that he was responsible for anything more than, say, ten additional houses worth 12.5 thousand and built at a saving to the owner of 20%. But without some testing we would not be sure that this same result could not have been achieved by a media approach costing half the amount of the county agent service.

It would seem, then, that a nation-wide media approach ought to be tried first, with some experimental county agent offices established in selected counties. The resulting increases in output of owner-built homes could be compared among counties which had the experimental agents and those which did not.

5.2 Information Services for Potential Owner-Builders Among Low Income Minority Groups

There is another, and far less appealing, side to the picture conveyed in chapter four of an intricate network of family and friendship ties which creates a community of experience among middle-class suburban whites. It can be expressed in the words of a federal judge addressed to a New York trade union that has 13 blacks among 1500 members:

There is a deep-rooted and pervasive practice in this union of handing out jobs on the basis of union membership, kinship, friendship and, generally, 'pull'. Numerous blacks, often with substantial relevant work experience, vainly shaped the hall day after day during the summer months, at a
time when inexperienced students, other inexperienced white men and similarly situated whites got jobs through people they knew. 60

Blacks, Puerto Ricans, Chicanos and other minorities seldom work on construction while waiting to get into college or during their summer vacations. They have fewer uncles, brothers and fathers-in-law with construction experience and skills. In 1960 the percentage of white workers who were carpenters was three times as high as that of non-whites, the percentage of whites who were construction craftsmen other than carpenters was twice as high. Nearly 14% of white employees were craftsmen and foremen, while only 6% of the non-white population was so classified. 61 These figures have begun to change in the last decade, but not nearly enough to create in black communities a situation as favorable to individual enterprise as that which can be found among whites.

When the chances of having a friend or relative who was a carpenter are three times as great for a white as for a black man, the community of experience or, to use the terms of our earlier chapters, the stock of information, is much weaker. And this applies not only to quantities of data and skill but also to the subjective reliability of whatever is transmitted.

The same kind of reasoning applies not only to construction experience but to managerial experience in general. The low percentage of black-owned business in this country
and the low percentage of blacks in managerial and supervisory positions means that there is bound to be a concomitantly weak community of experience in all kinds of managerial tasks. This does not imply any less ability to perform such tasks. It does imply that the stock of information and experience from which members of various white communities are able to draw is not present to the same degree in black, and other minority, communities.

Clearly a service whose aim is to draw upon a pre-existing network of experience in construction related tasks cannot hope to have the same impact in minority communities as it can among middle-class whites.

What, then, should it do? Should it adopt a more paternalistic stance toward minority group clients, offering instruction and guidance in various construction tasks, courses in management of resources: budgeting, scheduling, borrowing and the like? Should it supervise and direct construction on the site? Hopefully, no.

It really seems that the money which might have been devoted to information services per se in minority communities could much more profitably be invested elsewhere. Specifically as regards our subject, a program to support both minority enterprise and minority hiring in the home construction business could probably do more per dollar at this time to contribute to the development of future owner-builders among minority-group citizens than any kind of information service.
Of course minority groups aspire to home ownership as much as any others, and any program to foster low income home ownership must be just as accessible, if not more so, to them as to others. But if our analysis is correct it is unlikely that a service such as that described in the previous sections will have a large number of clients from minority groups under present circumstances. If the aim of such a program is to help those who really deserve it, then its resources, or a relevant proportion of them, should go where they can do the most good.
NOTES


3. This distinction is made by Kuhlmann, op. cit. though it is not original with him.

4. From related fields one might include automobile magazines, Hi-Fi magazines and Popular Mechanics in a similar category. In the entertainment world many publications or sections of publications serve the same purpose, juxtaposing advertisements with critical reviews.


8. Ibid. p. 190.


11. Ibid.


19. Ibid., p. 312.

20. Loc. cit.


22. Ibid., p. 53.

23. Ibid. p. 56.


40. Alan E. Guskin in Havelock et al., *op. cit.* p. 4-31.


44. Peters, op. cit. p. 262.

45. For an opposite opinion see articles by the editor in Sturdivant, op. cit.


50. One must compare, however, not simply the shacks with which urban migrants start but the permanent dwellings which, if given any chance for a steady income, these same people finally build for themselves over a period of 20-30 years. Cf. John Turner, "Barriers and Channels for Housing Development in Modernizing Countries," Journal of the American Institute of Planners, 33 (1967).

52. The question has been raised as to whether this one-fifth represents a disproportionate number of retired persons. Available survey data indicates that retired persons represent only 6.4% of owner builders. Cf. OSTI, op. cit. p. 66.


59. As per telephone conversation with County Agent.


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