

THE IMPLICATIONS OF  
INDUSTRIALIZED HOUSING  
IN THE UNDERDEVELOPED SECTORS  
OF DEVELOPED COUNTRIES

by

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## ABSTRACT

## THE IMPLICATIONS OF INDUSTRIALIZED HOUSING IN THE UNDER-DEVELOPED SECTORS OF DEVELOPED COUNTRIES: A CASE STUDY OF VERMONT

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Submitted in partial fulfillment of the requirements for the degree of Master of Architecture in Advanced Studies to the Department of Architecture on May 12, 1972.

The thesis provides an analysis of the economic, social and environmental implications of industrialized housing on the economic development of the State as well as on the quality of life of the population.

It provides a conceptual framework for developing alternative housing strategies which 1) address the shelter and institutional needs of the low income sector and 2) might help to overcome the dependancies of low income earners and housing institutions on manufacturers of industrialized housing.

Section one briefly describes the definitional premises of housing, industrialization and development used in the discussion.

Section two describes the context for the study in a discussion of the housing conditions which prevail in Vermont.

Section three describes the economic, social and environmental implications of industrialized housing in Vermont.

Section four outlines three possible strategies for housing action for governmental agencies and housing sponsors. It describes the use of direct user subsidies, the development of a State-wide network of housing advisory services, and finally it describes the efficacy of self help housing programs for low and moderate income families.

The extent of the housing problem in a State such as Vermont can be partially measured by the scarcity of economic and human resources devoted to housing production, by the extensive dependancies of low income earners on welfare institutions and on housing manufacturers, and by the degree of control exerted on the housing market and on housing policy by out-of-State industrialized housing manufacturers.

The conventional construction industry cannot or will not respond to the housing needs of low income earners. The State housing and welfare institutions have not been able to generate sufficient housing for this sector of the population by any of the conventional means. The use of industrialized housing, especially the mobile home, is being widely entertained out of frustration by the State's housing and planning agencies who can see no alternatives to the current housing situation. Housing policy-by-default is neither a sound nor prudent strategy since housing influences regional economic development as well as personal and individual development.

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## 1. INTRODUCTION

### 1.1 Definitions

A study of industrialized housing cannot avoid confronting such basic issues as the nature of 'housing', 'industrialization' and 'development' and their relationship to man and society. Although the meaning of such fundamental terms may appear to be self-evident, they should be discussed briefly in order to establish a frame of reference for this paper and for the value judgement which follows. However, in this short space, all that can be done is to state the most basic definitions.

Housing can be understood as an activity (process) or as a product or set of products. When housing is understood as a product, it will be evaluated quantitatively. The number and material quality of dwellings will be the measure of housing value as well as the measure of the success of housing policy. When housing is understood as an activity, the value of material production will be qualified by the affect housing has on people and on the economy as a whole. Since we are concerned with what housing does for people then we must examine the quality of life of the people housed and the nature of the economic structure of the region before we evaluate any specific housing techniques on production.

Industrialization has produced for a portion of the

world's population an increase in production and consumption of almost all material goods. It has provided that portion of the population with a sense of material well-being, high standards of living and a certain measure of surity about the future. But it has also produced social alienation, social fragmentation, frustration among the "have-nots", and environmental pollution at a scale which threatens our survival as a species.

For the purposes of this thesis, development means the progressive improvement of living standards with emphasis on quantity when levels of necessities are dangerously low and with emphasis on quality of life where levels of consumption and waste are extremely high. The growth of gross product alone is not considered to be an adequate measure of development; neither is growth considered to be synonymous with development. On the one hand, these attitudes can direct attention toward extreme imbalance or maldistribution of wealth. On the other hand these attitudes may point to potentially mortal levels of pollution which development thus far has produced. The rate at which the aggregate of all consumption grows in any particular area will only indicate genuine development if it is accompanied by a reasonable sharing of wealth, by the increased self determination of individuals and by the decrease in pollution which now threatens the expectancy of life.

## 1.2 Industrialization and Industrialized Housing

Industrialization is part of the fabric of the 20th Century especially in the wealthy nations of the world and exists in almost all areas of production.

In the U.S., industrialized housing has been advocated for 40 or more years but has yet to become a reality on the scale visualized by its' advocates. Industrialization does exist in housing. Almost all building components such as glass, structural members, finishes, appliances are produced industrially. More sophisticated components such as premoulded bathrooms and service units are also being developed and used. The appeal for industrialized housing then is an appeal for the development of a more rationalized system and process for assembling already industrialized components.

The accepted operational definition of industrialized housing is simply the rationalized assembly of building components using industrial management techniques and system coordination to mass produce housing. The conventional construction industry does not yet operate to any large extent within this definition since it still uses basically handcraft production technologies.

The definition assumes that industrial production of housing will suffice to solve the housing problem. But housing production alone cannot solve the social and

institutional problems surrounding housing.

Most of the studies concerning industrialized housing address questions of feasibility of developing housing systems. Feasibility relates to industrial processes which are supposed to increase the quantity and efficiency of production, economies of scale which are supposed to reduce housing costs, and technological innovations which are supposed to improve the quality of housing.

The preoccupation with feasibility alone 1) might divert attention away from an understanding of the basic issues of the housing problem, 2) might divert attention away from fundamental policy changes and reforms, 3) might divert attention away from simple and inexpensive alternatives to housing and 4) might continue to waste valuable human and other resources.

The questions which should be addressed are not of feasibility but of desirability.

Industrialized housing today has several characteristics.

1. It is essentially a conservative activity. This does not mean that it conserves the environment by recycling materials or by using new materials judiciously. It uses the traditional technologies and materials of the conventional construction industry. It uses conventional design and planning wisdoms without questioning the allocation of space or spacial relationships of areas in the house. It reinforces

traditional perceptions of housing and the value structures built up by people regarding their environment.

2. It essentially maintains the status quo. The house package does not differ in function or in design from the traditional vernacular designs such as "ranch style", "colonial" or "cape cod". Any industrially produced home can become any traditional housing style with the purchase of a false facade even if the house is produced without a particular design style.

It preserves the system of allocation of resources and distribution of income in that it has not attempted to alter the social and institutional structures surrounding housing.

3. The consumer is considered an exogenous factor, a constraint rather than a functional part of the housing system. The imperatives of industrialization are continuous production and distribution. These imperatives can only be satisfied if a market is aggregated which is responsive to the product and which will continue to consume the product. The housing system must guarantee the market and the responsiveness of the consumer by controlling both through planning. The consumer is thereby excluded from participating in the planning and design process, from the construction process and because of the nature of the products, from manipulation of his own environment after he becomes an owner.

Industrialized housing, a process of mass production, implies: 1) systematization of products in planning and design, 2) specialization of labour, 3) concentration of production and marketing, and 4) mechanization of production.<sup>1</sup>

The processes and resultant products of industrialization can be any combination with various levels of sophistication of these component activities. Techniques of production and assembly do vary in industrialized housing but today's industrialized housing still uses more or less traditional construction technologies.

In this thesis, two types of industrialized housing are predominantly discussed. The mobile and modular home exemplify the box unit which is completely prefabricated in a factory and transported on its own carrier to be installed on a site. The mobile and modular homes do not typify the most sophisticated of housing packages but are the most successful of this kind of construction in the U.S. today. They reflect the ultimate capability in production and distribution of the industrialized housing industry. They are a prominent force in the housing market. They also produce the most serious social and developmental problems.

The other type of industrialized housing is the componentized or panelized unit. It is comprised of prefabricated elements such as walls, floors and roof sections which are factory built, transported as pieces

and erected on site. These units are currently being produced by some housing manufacturers in Vermont. This kind of product and its attendant operations might help in relieving the aggravated housing problems.

Other forms of industrialized housing products and processes do exist but will not be discussed here.

### 1.3 Development, Underdevelopment and Housing

The development of any area is a function not only of the internal workings of that area but also of the external environment--economic, social, political--within which that area operates. The economic development of Vermont is inextricably tied historically to the development of the New England region as well as to national and international development.

Implicit in any discussion of development is a standard of values through which the goals of development are defined and with which the goals of development are realized.

Development, for the purposes of this discussion implies a process of improving not only the material but spiritual quality of life. It does not imply simply growth of an economy. Development can only be achieved if the process is responsible for individual and human self-fulfillment, does not pollute the environment and does not waste human and other resources.

The literature on the theory and philosophy of development, on the history of development, on developmental strategies is extensive. Most of this literature deals with strategies for national economic growth, regional economic growth and assumes that economic and social development objectives are satisfied by an increasing gross product.

Underdevelopment is seen as a state in which these economic objectives have been unrealized. According to conventional economic wisdoms,<sup>2</sup> underdevelopment exists in pre-industrial societies which are similar in structure to what the now developed societies were before they became developed. This model perceives of society as a duality. One sector, through industrialization, has reached a stage of mass produced consumption and material self-sufficiency. The other sector is languishing in a traditional, usually agricultural, state waiting to employ industrialization to become economically self-sufficient. The model implies that each sector has a separate and separable social and value structure and operates to satisfy its own specific objectives. The one sector continues to develop, the other sector wants to begin developing.

The advocates of growth would very much like to see the backward sector "improve" to the level of the "advanced" sector since the latter is the standard of adequacy of the good life.

But underdevelopment is not simply the negative of development. It is a process as well as a state of being which has particular qualities very much related to and functionally consistent with development.

One of the many writers on underdevelopment, A.G. Frank, a Canadian economist, proposes that underdevelopment is a

direct result of the development of other sectors and that underdevelopment is a functional part of the structure of development. He argues that sectors are underdeveloped not because of the absence of a developed sector but because of the proximity of that sector. He further suggests that the closer the developed sector to the other, the more intense is the underdevelopment. This model of development, the metropolitan-satellite model in the context of Latin America, defines his argument.

"Just as the colonial and national capital and its export sector in Latin America became the satellite of the Spanish (and other) metropolises, this satellite immediately became a colonial and national metropolis with respect to the productive sectors and population of the country's interior. In turn, provincial capitals which are satellites to the national metropolis, became metropolises around which revolve the satellites of their own local regions."<sup>3</sup>

The consequences of the historical proximity of a developer (metropolis) which produces the status of satellite according to Frank are serious. A satellite is exploited in terms of its natural and human resources in the interests of the "foreign" developer. The satellite loses control over internal policy and decision making. The people living in

a satellite area suffer from the loss of identity and self esteem. The stronger the relationship of the developed and underdeveloped sectors, the more the people must identify with the values, perceptions and social goals held by the metropolitan developers.

In this argument, there is no duality of sectors. The underdeveloped sector is colonized and made to espouse the same ideologies and ambitions of the metropolis, willfully and by design. Frank's model is on both macro and micro scale. Underdevelopment occurs in nation states within the overall capitalist system, in regions within nation states and in individuals within regions.

Underdevelopment as a process involves the continuing and growing control, exploitation and usurpation of the resources in an area by and in the interests of outside agents. Underdevelopment as a state of being occurs when a society's perceptions of itself are impaired (or controlled) to the point that it can no longer realize the value of its own existence and comes to depend on the developer for its identity.

The most obvious underdeveloped areas in the U.S. include the Tennessee Valley, Appalachia, and parts of the South and South West. They also include inner city ghettos and poor rural agricultural areas around cities.

Vermont, although it appears to be a viable, struggling

but healthy state, exhibits characteristics of underdevelopment. In his article on underdevelopment in Vermont,<sup>4</sup> Lee Webb describes the degree of control of non-Vermont interests in the industrial, agricultural, power and land sectors of the economy.

He describes Vermont as "an internal colony of American capitalism".<sup>5</sup> His main argument is that resource rich Vermont is being exploited by out-of-state interests to the point at which the State has become "a net export of capital". As such, it cannot reinvest its capital in the State to improve the economic and social quality of life of its citizens.

"The problem which few people are prepared to face is that the wealth produced in Vermont cannot be used to develop Vermont as it is siphoned off through the normal operation of monopoly capitalism."<sup>6</sup>

Obviously, there are degrees of underdevelopment exhibited in nation states and in internal regions within developed countries.

The region shares with the rest of the country a common language, history and culture. The nation state may share none of these with its developer nation.

The sovereign nation state has the constitutional capacity to sever ties with the developer, if it desires to destroy the dependancies on the developer. It can do

this with diplomatic agreements, discontinuing trade or raising tarriff barriers. But the internal colony has none of these mechanisms.

As a state, a discreet political entity, the internal colony has two basic alternatives to reduce the dependency on out-of-state developers. It can utilize whatever mechanisms it has to make it difficult for out-of-state interests to establish themselves. These mechanisms might include heavier corporate taxes for out-of-state industries, higher capital gains taxes, special incorporation taxes for industries entertaining locating in the state. It can try to encourage alternative activities and products to compete with the products produced by out-of-state industries. This strategy is the more amenable one and relates to a degree to housing.

Housing plays an important part in the development or underdevelopment of an area. On a superficial level, housing affects economic development by affecting the supply of labour. A recent report of the New Hampshire-Vermont Economic Development Council concludes that inadequacies in the supply of housing were inhibiting industrial development and were contributing to labour shortages in potential growth centers of the region.<sup>7</sup>

But housing more than affects the supply of labour. It affects the flow of capital, the use of land and

natural resources and the quality of environment.

The issues which must be addressed are who makes decisions regarding the quality of housing, who benefits financially from the sale of housing, who decides about the distribution and allocations of housing resources, how responsive are housing institutions to the real needs of people.

## Footnotes

## Section 1

1. Ian D. Turner and John F.C. Turner, "Industrialized Housing: The Opportunity and the Problem in Developing Areas", HUD Offices of International Affairs, Washington, D.C., January 1972.
2. For the purposes of this paper, the discussion was taken from W.W. Rostow, "Stages of Economic Growth". For an excellent bibliographic reference for development see: Regional Development and Economic Growth: Theory, Analysis and Techniques, Council of Planning Librarians, Exchange Bibliography #116, Canadian Department of Economic Expansion, Ottawa, 1968.
3. Andre Gunder Frank, "The Development of Underdevelopment", Monthly Review, XVIII, September 4, 1966, p. 15.
4. Lee Webb, "Colonialism and Underdevelopment in Vermont", Liberation, November 1971, pps. 29-33.
5. Ibid., p. 29.
6. Ibid., p. 33.
7. New Hampshire-Vermont Economic Development Council, Inc., Housing Supply in St. Johnsbury, Vermont and Littleton and Lancaster, New Hampshire, and its Relation to Industrial Growth, Hanover, New Hampshire, 1968.

## 2. CONTEXT: THE STATE OF VERMONT

### 2.1 Introduction

Vermont is a poor, rural, predominantly agricultural state. The social, economic and political conditions which exist there are not untypical of those conditions which have prevailed in other areas in the US and Canada in which the agricultural (or non-industrial) sector, until very recently, has been the main source of employment and productivity.

Demographic variables such as population growth and decline, migration patterns, income levels and age distribution provide a rather static, functional view of the condition of the State. What statistics cannot describe are the historical conditions which have led to Vermont's present state i.e. the contextual relationships between Vermont and the nation as a whole or even between Vermont and its relationship to the capitalist world.

The limited picture that the statistics provide is of a State which has chronically low income levels in the major portion of its population, a state in which about 70% of all households have combined family incomes of less than \$10,000.00 per year,<sup>1</sup> a state which is seeking to expand its economic viability by encouraging industry to come in and provide jobs for its growing population, a

state which must balance the increase in economic development with the preservation of those natural amenities which make Vermont so attractive (in the first place) for non-manufacturing activities.

## 2.2 A Profile of Housing

The rising costs of housing production, a growing population and subsequent growing demand for housing, and generally low income levels have made housing a serious issue in the State. This construct is quite similar to the housing problems of the entire country but has particular ramifications in Vermont as will be discussed later.

The housing assistance programs utilized or legislated in Vermont include Federal public housing, Federal urban renewal, Federal Housing Administration (FHA) and Farmers Home Administration (FmHA) low and moderate income housing. To date, there are no expenditures of State funds for housing programs.

There are several state agencies involved with housing. The Agency of Development and Community Affairs has a small department responsible for housing. The total agency received \$255,333 last year of which \$24,518 was appropriated for the housing section. The housing section is, at the moment, collecting and coordinating all the existing information regarding housing in Vermont. The Vermont

Housing Authority, a federally funded agency, limited to the use of Section 23 Leased Housing Programs, administers rent subsidies for low income tenants. There are several regional planning commissions responsible for land use planning. There are, as well, local housing authorities (over which the Vermont Housing Authority has no jurisdiction) which administer federal assistance programs. The Vermont Home Mortgage Credit Agency, a State financed operation, administers down payment subsidy assistance to moderate income families. Finally, in the public sector, are the State and local OEO offices which are beginning to develop and administer low income housing projects. Thus far, they have been mainly concerned with rehabilitation instead of new unit construction.

In the private sector, several small, independent, non-profit housing and development corporations and limited dividend corporations consisting of church groups, local community groups are trying, rather unsuccessfully, to develop housing for low income families. Housing Projects Enterprises, Inc., is a private agency, funded by the New England Regional Commission, which provides technical assistance to limited dividend and non-profit housing sponsors. Included in this corporation is a division which provides information and technical assistance to self-help cooperative housing groups.

As it stands today, these and the public agencies are generally uncoordinated and have produced an extremely small amount of actual new construction.

The industrialized housing industry in the US has been growing rapidly and steadily since 1930 when only 1300 units were produced. In 1970 about 415,000 new units were manufactured (about 48% of all new homes built in that year). While the market for mobile homes has until recently been in the Southwest and California, mobile homes are starting to make their appearance in most parts of the country and particularly in New England where there are now some 58,000 units.

In Vermont, about 5.7% or 8,600 of the all-year-round housing stock of 150,000 units are mobiles. This is an increase of some 270% since 1960. From 1968 to 1969 alone, the number of mobile homes sold jumped from 924 to 1517, an increase of 40% in one year. In 1970, 511 new mobile homes were sold to every 100,000 residents in Vermont while in Massachusetts only 31 new units were sold per 100,000. According to the 1970 Census, in 1968, 37% of all new housing starts in the US including single and multi family units, were mobile homes. The percentage is higher if only single family housing is compared to mobile homes.<sup>2</sup> In 1968 in Vermont, more than 50% of all new housing starts were mobile homes. Table 2.1 illustrates the extent of mobile homes in four counties in the State.

TABLE 2.1 Mobile Homes in Four Counties in 1970

County	Total Population	No. of Families	Families with incomes less than \$3000. as % of all families	Total No. of Towns	No. of Housing Units	No. of Mobiles	Mobiles as % of total stock	No. of Housing starts	No. of Mobile starts	Mobiles as % of new housing starts
Addison	24,266	5,536	4.8	23	8,535	613	7.2	95	129	135.7
Chittenden	99,131	22,196	4.5	16	30,668	1,594	5.1	608	98	16.1%
Franklin	31,282	7,630	4.5	20	11,416	458	4.0	47	27	57.0
Grand Isle	3,574	714	5.3	5	2,618	163	6.0	15	15	100.0
Vermont	444,732			243	150,000	8,600	5.7	2390	1900	79.0

Sources: Office of Economic Opportunity, Chittendon County, Federal Reserve Bank of Boston, Vermont State Planning Office.

Table 2.2 Mobile Homes in Towns in Vermont in 1969

Total number of towns	Towns prohibiting mobiles		Towns in which mobiles exceed new housing starts		Towns in which mobiles only addition to stock		Towns with no new mobiles		Towns N/A
	number	%	number	%	number	%	number	%	
243	26	10.0	72	33.0	15	6.9	24	9.8	18

Source: Federal Reserve Bank of Boston

Table 2.3 Relationship of new mobiles to new housing starts

Towns in which new mobiles equal 81-100% of new housing starts		61-80%		41-60%		21-40%		1-20%	
number	%	number	%	number	%	number	%	number	%
21	8.6	22	9.0	8	3.2	20	8.5	17	7.0

Source: Federal Reserve Bank of Boston

At its present rate of growth, the mobile home industry will soon equal and surpass the number of new housing starts in conventional construction. The extent of the presence of mobile homes is indicated in Tables 2.2 and 2.3. Although 26 towns today prohibit new mobile homes, there are approximately 570 units already located here, some 7% of the total mobile home stock.

Because of the low purchasing costs, mobile homes are, by default, considered to be alternatives for low cost housing for low income earners. A low income earner certainly has more of an opportunity to buy a second hand mobile home at a price he can afford than any other form of housing being built today. The reaction to mobile homes and the feeling among government agencies has been fairly consistent.

"The existing housing shortage has been caused by an increasing gap between what Vermont families can afford to pay for a house and the price at which builders can place them on the market. Consequently, mobile homes are supplying the housing needs for many families."<sup>3</sup>

"Mobile homes will continue to meet a large portion of the demand for new housing units."<sup>4</sup>

"It is clear that mobile homes offer a means of solving one of our most pressing social problems: providing low cost housing in the suburbs so that low and moderate income households can live near the new job opportunities in suburban areas."<sup>5</sup>

"Because the traditional housing market has not responded to this low income demand of those over 65, the presence of mobile homes has proliferated."<sup>6</sup>

But mobile homes are not the only presence of industrialized housing in Vermont. The new burgeoning Modular Housing industry is becoming a growing potential force in housing in the State as it is throughout the country. In the US in 1970, 35,000 modular units were built. The National projections for the industry are dramatic. In 1975, 350,000 new units are to be built and by 1980, the number is to climb to 750,000 modular units.

In 1970 in New England, according to a House and Home magazine survey of modular home manufacturers, three companies in New Hampshire and two companies in Massachusetts produced 542 new modular units of which 52% were single family units. The projected production of these five companies for 1971 was estimated to be 1,932 units, an

increase over 1970 of 77%. Not all of the companies in New England were represented in the first survey so that total production of modular units was probably higher than indicated. Just recently, House and Home came out with the results of a second survey of modular home manufacturers which now included four companies in New Hampshire and five companies in Massachusetts and two companies in Maine. Their 1971 production amounted to 2,291 new modular units of which 69% were single family homes. If estimates hold for production in 1972, these companies expect to produce 4,900 new units.

What must also be considered are the modular home manufacturers in neighbouring New York State. In 1970, eight manufacturers in New York produced 3,045 modular units and projected production of 7,690 new units in 1971. The second year survey included thirteen modular home companies in New York which produced in 1971 a total of 6,282 units and projected for 1972 a total production of 10,841 new modular units.

Vermont is a strategic market location for the manufacturers in the surrounding states and since there is a need for housing it is unquestionable that a percentage of modular home units produced out-of-state will find their way into Vermont.

In spite of the fact that modular units are competitive

with costs of housing built using conventional construction and have been advocated as an answer to low cost housing, they cannot be considered an alternative in the housing market for low income earners without the continuance of governmental subsidy programs.

The following rough breakdown indicates the relative cost range of mobile, modular and conventional construction.<sup>7</sup>

under \$12,000	\$12,000 - 22,000	\$22,000 and above
mobile	modular	conventional construction

At the moment, there are several small companies in Vermont generally in the building materials supply business which are becoming involved with prefabricated or "kit" housing, or modular home production. These companies are described in Appendix I.

The conventional construction industry in Vermont has been unable to accommodate the demand for new housing in the State and certainly has been unable to satisfy the need for low income housing. The Bureau of the Census recorded that in 1969 there were some 2,777 construction establishments with 2,496 proprietors and working partners. Most of the construction companies are very small one or two man

operations acting mostly in the capacity of sub-contractors. In 1970, a total of 1,732 authorized permits to build were issued and the total number of dwelling units constructed was 2,390. About 55% of all the units built in that year were single unit residences.<sup>8</sup>

### 2.3 Criticism of the Standard Definitions of Housing Need

Various housing agencies in the State including the Agency for Development and Community Affairs and the regional commissions are attempting to arrive at an understanding of the housing problem by determining the overall need for housing in Vermont. Their main assumption is that the housing problem is a direct function of unsatisfied need. As will be discussed later, this assumption has serious limitations.

The definition of need for housing in Vermont follows from the 1968 Housing and Development Act which calls for a "decent home and suitable living environment" for every citizen. The definition of the housing problem has traditionally been accepted as the lack of sufficient numbers of units of acceptable quality at costs which are amenable to most people.

The criteria developed by the Bureau of the Census and promulgated by the agencies and institutions in the State are excellent indicators that the housing problem is seen first and foremost as the pathology of the entity called a house. These criteria indicate not only the standards of health of the house but also the standards of acceptable illness. And nowhere do they point out the needs or problems of the people living in the houses i.e. they focus on the object of the problem rather than on the subject.

A substandard house is one which is characterized as being overcrowded (more than one person per habitable room), as having inadequate plumbing facilities and suffering from dilapidation. There are two problems associated with this wisdom. The first relates to the nature of the criteria used to assess the health of the housing stock. The second is the relationship of the housing need, calculated with these criteria, to the overall housing problem.

First, the criteria used by the Census et. al. reflect the judgement and wisdom, above all, of legislators who are searching for objective and impartial standards which do not discriminate, which are equitable and which can produce quantifiable results after investigation. But legislators are people who generally do not live in substandard housing and who equate satisfactory standards with their perceptions about what constitutes a decent home. This is not to suggest that standards must be developed only by those who live in "substandard" housing (although the idea is not without some merit).

Secondly, the criteria established are so explicit as to rule out variations which in fact might be very amenable to the people living in the housing under scrutiny. If a family prefers an outdoor privy, or prefers drawing water from a stream or prefers to live a close intimate life, with brothers and sisters sleeping in the same room, there

are no mechanisms to account for their needs under the present objective standards. In effect, these objective criteria do discriminate against anomoly situations.

Thirdly, the criteria do suggest policy directions and are subject to political manipulation. Units considered to be substandard are quantified and funds are requested for replacement or renewal not necessarily by the residents but by planning and welfare agencies. Programs related to the housing need are developed because of the calculations made using these criteria.

Fourthly, the criteria are susceptible to the skill, judgement and wisdom of an impartial assessor of the housing. He, too, acts with his own perceptions about what constitutes dilapidation. His guidelines for assessment might be the quality of the neighbourhood, his political affiliation, his own house, instead of the housing he is examining. There are no technical measurements taken regarding structural fatigue, incidence of termites or pests, durability of materials and so forth. The assessor has the onerous task, since no other mechanism is available, of determining a house to be substandard without considering the functional or emotional (symbolic) value it has for its users.

Finally, the nature of the criteria and the mechanisms established to satisfy the needs of objective research make

it impossible for the user to determine for himself how adequate his housing is for his own needs.

In its report "Building the American City", the National Commission on Urban Problems warns against the common tendency to read into the census data more than is there. Visible condition of building and plumbing facilities in combination are indeed, as the Census puts it, "one measure of housing quality", but only one--and a crude one at that. The census definition amounts to "a nearly weathertight box with pipes in it" and this notion of quality is hopelessly inadequate.<sup>9</sup>

"Nearly everyone concerned with the subject has known and said this since the first census of housing was published in 1940. Yet these same critics of the data have gone ahead to use, revise and manipulate these statistics to produce elaborate and rickety structures of partial or misleading facts. Personal guesses and far-fetched assumptions with little relation to the actual world around us clutter the housing and urban problems field."<sup>10</sup>

The more critical of the two basic problems previously raised is the second one, the relationship of the calculated housing need to the overall housing problem. As has been suggested, it has been common practice to accept the calculation of need as a statement or definition of the

housing problem. For example, according to the Addison, Vermont Comprehensive Housing Survey: "...our hope is that this report will be utilized to identify the problems and obstacles in housing, but in addition go further by lending itself to utilizing these definitions of needs to implement solutions contained herein, through planning activities."<sup>11</sup> If the housing need cannot be adequately determined it is not possible then that the more complex housing problem can be determined. An adequate definition of need might possibly give some indications as to the extent of the problem but comes nowhere close to solving the problem.

"It is not certain that the poor (or low income) themselves perceive the problem in the same way as does the larger society. Indeed, from their perspective it may be inappropriate to define the problem in purely housing terms."<sup>12</sup>

The criticisms which pertain to the nature of the criteria which are used to define the housing need also pertain to the nature of the housing problem.

1. The housing problem is being defined in objective terms, i.e. in terms of sufficient quantities of units, by planners and legislators who have a limited connection with "disadvantaged" groups.
2. The definition of the problem is suggestive

of specific policy directions, e.g. urban renewal.

3. The problem is not defined in relation to larger societal forces but is defined as a static function of need.
4. The user has little chance to influence policy decisions since he cannot assist in defining the problem.

#### 2.4 Housing Studies in Vermont, Purposes and Problems

One of the central elements or vehicles for future housing activity and programs in Vermont is a study being conducted by students at Dartmouth College in Hanover, New Hampshire. It was commissioned by the Agency for Development and Community Affairs to furnish a data base of the condition of housing in the State to Vermont's housing agencies and to project a housing need to 1976. The study will culminate in a computer program which will assist the government and housing agencies in monitoring the state of housing and housing programs throughout Vermont.

The study is based largely on the standards of inadequacy established by the Census and uses variables such as overcrowding, degree of dilapidation and water and sewer systems to determine need. It goes further than the Census however in defining the kinds of water and sewer systems used throughout the State. Included also are population and migration variables. The study has been designed to assess the ability of each community to absorb new or additional housing units into the existing service structure as the population continues to grow. The assumption underriding this constraint is that the number of new units needed is a function of the existing structure of each town.

Regional Housing Element studies are also being conducted throughout the State by the various regional planning commissions. These are patterned in much the same way as the Dartmouth study and will serve to augment and refine the total housing profile. At the moment, these separate studies are in various stages of completion. The Addison County survey report which is completed states "the problems and obstacles have been clearly defined to the point that solutions are ready to be implemented."<sup>13</sup>

Several problems arise as a result of these studies. First, the results of the surveys define only a static, partial view of both the housing need and the housing problem. They do not describe the reasons why the housing situation is as it is in Vermont and falsely assume as the Addison quotation points out that the housing need is synonymous with the housing problem i.e. that with a data base, solutions to the problem are possible.

Secondly, the studies describe the present status of towns viz. a viz. their capacity to accommodate additional housing, and by doing so, define the means or mechanisms for maintaining that status quo. This means that if the present service and community structures of the towns have contributed to the housing problem, through land controls, restrictive zoning ordinances, building by-laws, etc. the problem essentially will continue. Further, the studies in this regard do not take into consideration changing

social and institutional patterns and their effect on communities, nor do they consider changing individual and community needs.

Finally, the studies do not consider to any extent the differences between different kinds of housing, i.e. between conventionally and industrially built housing. The qualitative differences between a weathered timber structure and a rusting aluminum mobile home might have some relevance to the health and safety of individuals living in them.

The data from the Dartmouth and regional studies are already suggestive of policy directions which will be taken by housing agencies and sponsors. The danger is that the studies will cloud the real housing issues and forestall any genuine attempts to come to terms with institutional reforms or readily available alternatives.

## 2.5 Calculated Housing Need in Vermont

There are various estimates about how many dilapidated and unsatisfactory housing units existing in the State must be either rehabilitated or replaced with new housing. These estimates vary depending on when the studies were done and on the kinds of criteria used to determine dilapidation. The Dartmouth study indicates a need for 6,720 new units by 1976. According to the State Planning Office, 17,700 new units are projected for 1980, almost three times as many as determined by the Dartmouth study. By the same year, "If the State should grow at the same rate as the past few years (1.8% annually), the need would be about 26,500 new units."<sup>14</sup> The Eisner report estimated that the number of dilapidated units in the State in 1970 was 8,543 and a report recently undertaken by the Vermont Housing Plan Commission whose estimates for dilapidated units was 8,753.

From all indications, present needs in housing, especially for low income groups, are not being satisfied and future needs will not be satisfied by the conventional housing delivery systems.

Federal housing programs have had very limited success. A recent OEO survey indicates that with Federal programs, only 200 single and multifamily units have been built in the State thus far. Only about 30% of these units were for

low income earners. The projections of housing sponsors and agencies, according to this study, for 1971 indicate that 320 additional units have been committed, 21% for low income earners, 29% for the elderly and the rest for moderate income earners. There are no guarantees that committed housing will be completed. Some of the housing sponsors expressed an interest in developing projects using modular home construction. (None were interested in the mobile home.) At the moment, the only significant production in housing is coming from either the mobile or modular housing industry.

## Footnotes

## Section 2

1. cf. Vermont State Planning Office, "An Analysis of Social and Economic Characteristics of Vermont", Montpelier, 1971.
2. According to the Federal Reserve Bank of New England, 48% of all single family housing starts in 1968 were mobiles. In 1969, 81% of all single family housing starts were mobiles.
3. Vermont State Planning Office, op. cit., p. 9.
4. Ibid., p. 65.
5. Carol S. Greenwald, "Mobile Homes in New England", New England Economic Review, May/June, 1970. p. 22.
6. Bennington County Regional Planning Commission, "Housing Shortage. Analysis of Need, Statement of Problems, Recommendations for Action for the Benning Planning Region", Arlington, Vermont, 1971.
7. Daniel Hodes, "Modular Housing: A Complete Industry Report", Housing Research Inc., Butler, N.J., 1971.
8. Vermont Department of Budget and Management, "Vermont: Facts and Figures", Montpelier, Vermont, 1972.
9. cf. Michael A. Stegman (ed.), "Housing and Economics The American Dilemma", MIT Press, Cambridge, Mass., 1970, p. 13.
10. "Building the American City", Report of the National Commission on Urban Problems to the Congress and the President of the United States, Washington, D.C., Government Printing Office, 1968.
11. "Comprehensive Housing Survey", Addison County Regional Planning Commission, Addison County, Vermont, 1970.
12. William Grigsby, "Housing and Poverty", unpublished paper, MIT, 1970, p.2.
13. Addison County Regional Planning Commission, op. cit.
14. Vermont State Planning Office, op. cit., p. 84.

### 3. THE IMPLICATIONS OF INDUSTRIALIZED HOUSING

#### 3.1 Introduction

Three categories of implications have been selected for analyzing industrial housing in Vermont. These are economic, social and environmental implications. While they are being separated in this way for the purposes of analysis, they are all interdependent and interrelated and each is constantly shifting to accommodate changes in the others.

The section on economic implications describes how industrialized housing prohibits economic development of Vermont and why industrialized housing cannot or should not be considered a solution to the low cost housing problem.

The section on social implications describes how industrialized housing, as a process and as a product, severely limits the autonomy of the individual and encourages dependancies of low income earners on government housing institutions and on private industry.

The section on environmental implications deals with the pollution potential of industrialized housing production and how industrialized housing itself impairs the natural, scenic quality of the State.

#### 3.2 Economic Implications

Much of the research and literature available today

regarding industrialized housing is produced either by the industrialized housing industry itself or by its' advocates in government and academic institutions. This literature deals with the advisability of encouraging industrialization and the potential of technological innovation in housing;<sup>1</sup> it deals with the profitability and marketability of industrially produced housing;<sup>2</sup> it deals with the mechanics of establishing industrialized housing operations;<sup>3</sup> it deals with the economic necessity of industrialized housing production to solve the low cost housing problem.<sup>4</sup> In other words, most of the available literature is directed to the supply side of the housing delivery system and deals with the cataloguing of hardware systems and operational procedures. Relatively little work has been done regarding the consequences (either positive or negative) of increased industrialization in housing and no work, to my knowledge, exists regarding the reaction users and consumers have had to this kind of housing.

Industrialization and the economic structures which support it have been largely responsible for the production of high standards of living and of material consumption in the West. Industrialization "is one of the primary means by which the wealthy nations of the world have enriched themselves."<sup>5</sup>

Industrial production is seen as a major strategy in overcoming the housing problem since, with assembly line operation, housing will be produced in greater quantity and, with economies of scale, housing will be produced less expensively than can be produced by the conventional construction industry. Industrialization is also consistent with the values of economic growth prevalent in the corporate and state capitalist systems. And finally, industrialization in housing is entertained as a solution since no other alternatives to the housing problem are being developed.

1. As stated earlier there are, in Vermont today, no mobile home or modular home manufacturers of the scale which are operating elsewhere in the country. There are eleven small local companies which manufacture prefabricated housing and which are becoming interested in modular home production but their impact so far is very small. All of the mobile homes now in the State were manufactured elsewhere. The growth of the presence of mobiles in Vermont and the incipient introduction of modular homes indicates that there is a market for industrialized housing in the State. Vermont's strategic market location in New England and its new interstate highway system make the market quite accessible to regional housing manufacturers in New England.

The State is surrounded by modular home companies with considerable production capacity; four in New Hampshire, ten in New York State, five in Massachusetts and two in Maine. None of these companies projected production of less than 100 units in 1971 and several projected production of 300 units or more. It seems inevitable that a percentage of these homes will be sold in Vermont.

The State is becoming increasingly dependent for a growing segment of its housing on out-of-state suppliers. This dependency produces two effects. One, it removes a degree of control over the nature and suitability of a segment of new housing for Vermont from local agencies, sponsors and Vermonters, and two, creates an outflow of capital to the out-of-state producer. This capital might have been invested locally, if there were local competition or if alternative mechanisms were available to challenge mobile and modular home growth.

Table 3.1 describes the volume of business of mobile home dealers in Vermont in relation to the prefabricated building manufacturers in Vermont. It is apparent that the fewer mobile home dealers do a larger amount of dollar business than the manufacturers.

Table 3.1 Comparison of volume of Lumber and building materials and prefabricated buildings and parts

Number of Establishments	Sales of Specific Merchandise Line		
	Amount in \$1000	As % of sales of establ. handling the line	% of all establ. in the field
26	\$661	4.3	2.4 of all building materials supplies
Trailer dealers (mobiles)			
18	4000	94.6	92.6

Source: U.S. Department of Labor, 1969.

2. Mobile home financing is a good indicator of who benefits from mobile home sales. Mobile home loans held by financial institutions in New England increased by 29% to \$116M in 1969 after climbing 41% in 1968. Mobile home lending is a very profitable area for banks and other credit agencies. Loans are larger than conventional consumer installment loans, have a longer maturity, incur higher rates of interest than conventional mortgages and produce higher rates of return for the lender. This kind

of financing is much more attractive to banks than mortgage financing, although the problems of default in payments and low resale value of used mobiles tempers the picture slightly.

The large New England commercial banks hold a disproportionately large share of mobile home loans with the large banks in the three southern New England States being the major bank lenders in the region. "Thus while mobiles are generally located in the Northern States much of their financing comes from the banks in the Southern States."<sup>6</sup> Savings banks and to a greater extent, savings and loan associations have played a minor role in mobile home lending. In 1969, mobile home loans outstanding, in Vermont, in New England commercial banks amounted to almost \$8M. Sales finance companies account for \$7M but local savings banks accounted for only \$190,000.<sup>7</sup>

Sales finance companies who do a proportionately large share of mobile home financing are either national finance companies or mobile home dealers. The franchised dealer is ultimately responsible to the out-of-state manufacturer even though he does pay local income and property tax.

The Federal Home Loan Bank Board's new regulations allow federal savings and loan associations to make loans up to 5% of assets. This will exclude all but the large

savings and loan associations located outside Vermont from entering the mobile home lending market since the smaller banks will not be able to develop large enough portfolios to gain expertise in mobile home lending.

The resultant control of a certain segment of Vermont's housing stock by out-of-state financial institutions produces an outflow of capital which subsidizes the capital investment programs of already wealthy banks in activities unrelated to the needs of the State, and establishes a dependency of a portion of Vermont's residents on out-of-state banks. In effect, mobile home owners are subsidizing the development and growth of already large financial institutions.

3. Small local communities are always concerned about maintaining their tax base to pay for services in our present economic system. They are therefore very cautious about any developments which jeopardize this base. Local communities will encourage industrial development by offering companies handsome tax concessions in the hope of long term tax revenue increases while at the same time discouraging housing developments for low income groups because these developments are a drain on expenditures for services. The effects of these activities are particularly important in Vermont which is primarily a state of small rural communities.

Mobile homes generally produce lower tax revenues than other forms of housing. Traditionally, they have been taxed as personal property, i.e. have incurred sales tax of 10-15% of the sale price. Today, mobiles in mobile home parks are taxed as personal property. For a \$6000.00 mobile home, this amounts to \$9.20 per month. Mobiles on individual lots (about 57% of all mobiles in the State) are being taxed more and more as real property depending on the tax policy of the town.

The Property Tax Division of the Vermont Department of Taxes has developed a schedule to arrive at the fair market value of mobiles and is encouraging communities to assess mobile homes at the same level of assessment as other properties in the Grand List Book. Although assessed "at the same level", mobiles do produce a lower amount of tax revenue. Mobile owners receive all the benefits of public services such as sewerage, refuse collection, street lighting, education and other community services without making a comparable contribution in taxes. Assessments on a mobile home do not equal the escalating costs of public services received, so that mobile home owners are being subsidized by other residents and the community.

The disclaimers of this argument suggest that mobiles do contribute their fair share in taxes. Their argument draws on the fact that the largest percentage of the tax

dollar is spent on education. 45.6% of the General Fund State expenditures in 1971 was spent on education. Studies have indicated that the majority of mobile home families have no school age children and therefore do not take advantage of the service of education. So that even with low tax assessment on mobiles, an equitable amount does go to pay for all other public services. It is also argued that mobiles placed on individual lots have assessed values close to the older homes in an area and so do contribute equitably.

But if these arguments are valid, the mobile home ceases to be a viable housing alternative to low income families. The majority of low income families do have school aged children who do use local schools. Also, since residential property taxes are consistently evaluated throughout a community, the mobile home owner would ultimately be burdened with heavier tax loads than the permanent home owner. "While the mobile home industry once boasted that it was the only non-subsidized low cost housing, local residential standards have made them abandon this claim in New England. To meet standards of localities and to provide low cost housing, they (mobile home owners) now need a government subsidy."<sup>8</sup>

In 44% of Vermont's towns, mobile homes constituted between 60% and 100% of all new housing starts in 1969.

This growth of mobiles places a heavy tax burden on communities which are already paying high taxes to receive local educational and municipal services. Government subsidies generally defray the capital costs involved in acquiring housing, but are not designed to help a homeowner pay his taxes.

4. Rising material and labour costs have been responsible for placing conventionally produced housing out of reach of most families in Vermont. The construction industry has been unable to respond to the growing demand for housing for all but a small sector of the market. The growing pressure of competition from lower cost or, at least, competitive industrially produced housing has made it more and more difficult for the conventional industry to respond to that general housing demand.

Market allocation of housing supply seems to be stabilizing in that the construction industry is now most largely concerned with upper income housing, vacation and retirement homes. The growth of the vacation industry and the demand for vacation homes further relegates the construction industry to activity in this sector.

An increase in the growth of government, commercial and business firms suggests that the growth of the construction industry will continue, although there is a serious possibility that less and less of all construction will be

residential. The construction of residential units will continue to be slowed by financial and economic factors and environmental controls so that the vacuum created by the continually decreasing involvement of the construction industry in housing in spite of the growing demand, will have to be filled by other forms of housing, particularly industrialized housing. New housing manufacturing operations wanting to locate in Vermont will find the competition of out-of-state companies, which have consolidated a market in the State, difficult to overcome.

This indicates that the ability of local business in helping to solve the local housing shortage will be reduced in favour of out-of-state housing production and again, will facilitate out-of-state control over a particular segment of the housing market.

5. While it may be the least expensive housing alternative, the mobile home is not necessarily the most efficient or best suited to the needs of users. The cost advantages of mobile homes have been exaggerated. When housing costs are compared, mobiles turn out to be less desirable in the long run than indicated by manufacturers.

What is significant about the mobile home is its relations to the availability of financing. Since it is considered today to be a consumer good, not real property, consumer financing in a tight money market is more

readily available to the consumer than mortgage financing. Also, as has been previously suggested, commercial banks are beginning to see the mobile home as a more profitable short term investment than other consumer goods and than conventional home mortgages.

With consumer type financing, the consumer, in purchasing a mobile home, incurs high interest rates of 11-12%. The typical lending period is seven years although this is being extended to ten years in some cases. The down payment ranges from 15 to 30% of the purchase price of the unit.

The purchase cost of a mobile unit can include freight, delivery, set up, handling charges and all necessary connections. It does not include property, other personal property, costs of foundations, the development of a water/sewer system i.e. well and septic tank or the 3% Vermont sales tax. Also not included are the costs of accessories, skirtings, extra storage space, landscaping, road licences. The mobile home quickly becomes more expensive than its sales tag indicates. An article in House and Home Magazine suggests that 10% of the sales price be added to produce the effective purchase price.<sup>9</sup>

A typical mobile home might sell for \$7,000.00. It requires a 20% down payment or \$1,400.00. The consumer must finance this down payment, if he has not accumulated sufficient savings (which is a strong probability if he is

a low income earner) at rates ranging from 20-30% over a short period of time. He must then finance his loan of \$5,600.00 over a period of seven years at a rate of interest of 12% per year. The total interest payments calculated over the seven years amount to \$2,704.00, so that he pays the lending company in total, \$8,304.00. His overall interest payment has amounted to 33% of the total repaid loan. But overall costs and purchase price are usually subordinated to the monthly operating costs as a criterion in purchasing either a conventionally or industrially produced house. The following Table 3.2 delineates a comparison of the average monthly costs of owning a mobile home and a conventional house.

The calculations in this table were based on the assumed average price of a mobile home located in a mobile home park. But \$6,000.00, even in 1969, was less than the average price for a mobile. Today, the average price of a mobile is approximately \$8,000.00.

Table 3.2 A Comparison of the Average Monthly Costs of Owning a Mobile Home and a Conventional Home. (First 5 years of ownership)

\$6,000 Mobile Home		\$24,000 Conventional House <sup>1</sup>	
<b>Financing Terms</b>			
Type of loan .....	Consumer instalment loan	FHA mortgage	Conventional mortgage
Maturity .....	7 years	30 years	30 years
Interest rate .....	12 percent	8½ percent	8 percent
Downpayment .....	\$1,200	\$2,400	\$6,000
<b>Monthly Costs</b>			
Loan repayment and interest .....	\$ 84.74	\$165.32	\$132.08
Park rent .....	36.00	—	—
Taxes .....	9.20	50.00	50.00
Maintenance .....	3.00	15.00	15.00
Heating and Utilities ..	30.00	50.00	50.00
Insurance .....	5.00	10.00	10.00
	<u>\$167.79</u>	<u>\$290.32</u>	<u>\$257.08</u>
<b>Monthly Cost</b>			
Income Tax savings ...	— 8.79	— 42.20	— 35.73
(20 percent marginal tax rate) .....	<u>\$159.15</u>	<u>\$248.12</u>	<u>\$221.35</u>

<sup>1</sup>A \$24,000 home was used in this example because this was the median price of an older home in the Northeast in early 1970. The median price of a new home was \$31,600.

NOTE: Obviously, the homeowner costs for taxes, heating, etc. are only crude estimates of average expenses.

Source: New England Economic Review

The most important cost consideration, depreciation, is missing from this comparison. Mobile homes depreciate as much as 50% in 5 years. The mobile home cost schedule developed by the Vermont tax department places depreciation largely at the discretion of the assessor. The guidelines set out depreciation as a function of the visual quality of the unit but not unfortunately as a function of the use value of the unit to the user.

<u>Depreciation</u>	<u>Condition</u>	<u>Description</u>
0%	Excellent	Like new condition, not more than a year or two old.
20%	Good	Well maintained mobile, one, two or three years old with very little sign of wear and tear evident.
35%	Average	Three, four or five year old mobile that shows signs of wear and tear but shows very few structural defects.
50%	Fair	Five year old or older mobile; visible wear and tear with evident structural defects but not as major in regard to the cost of repair.
75%	Poor	Major structural faults apparent and the mobile should only be used as a camp. <sup>10</sup>

If depreciation is added to the monthly costs of the mobile home in the example cited in Table 3.2 (although it is not a direct cost requiring outlay of capital), an owner

incurs a \$50.00 per month loss. Or, his monthly costs now run to over \$200.00 a month. And while the mobile home is depreciating, other kinds of housing including modular housing are appreciating. In industry, depreciation on equipment is tax deductible but for the homeowner, depreciation is a cost he must bear. The low income family uses his housing to build up equity and generate savings. It is perhaps the only way this can be done since the low to moderate income earner is virtually eliminated from the investment market and has difficulty saving. With the mobile home, the low to moderate income earner can neither build equity nor generate savings.

The mobile home owner now must also pay property tax if the unit is located on an individual lot. The extra costs would be generally low. In Vermont property tax rates are relatively low, ranging from \$3.00 to \$15.00 per 100 per year depending on which community the mobile is located in. In a community with an average tax rate of \$6.50, the owner of a 5 year old, \$6,000.00 mobile would be paying \$195.00 a year or \$16.20 a month in taxes.

Adding the extra costs previously mentioned and taking depreciation into consideration, the monthly operating costs of the mobile home cited in Table 3.2 are optimistically low.

A rough breakdown of monthly costs, exclusive of land,

of owning a mobile home on an individual lot, using the case of the \$6,000.00 unit in Table I, would be as follows:

Financing terms

type of loan	consumer installment loan
maturity	7 years
interest rate	12%
down payment	\$1,200.00

Monthly costs

loan repayment and interest	\$84.74
taxes	16.20
maintenance	3.00
heating and utilities	50.00
insurance	5.00
income tax	-8.79
savings	<u>\$150.15</u>

Add on depreciation over 5 years	50.00
	<u>\$200.15</u>

Total  
exclusive of land.

In 1970, the government instituted FHA and VA insured loans for the purpose of assisting moderate income earners in acquiring mobile homes. It is not clear that they provide financing for down payments. But the income qualifications for FHA loans usually start above the established subsistence level of \$3,800.00. The very low income earner cannot therefore receive assistance. It is not clear either, whether FHA provides assistance for the purpose of acquiring a second-hand or older used mobile home. The market price of used units might be amenable

to low income earners with a small amount of assistance for down payments from housing agencies. But if such assistance is not available, the individual is constrained to borrow money from loan sharks or small lending businesses which charge exorbitant rates of interest.

6. While modulars have somewhat lowered the cost of housing, skepticism about the overall effectiveness of industrialized housing still exists.

"We ought not to count too heavily upon a greater reliance on off-site fabrication to reduce substantially the costs of new construction."<sup>11</sup> According to the Kaiser Commission "Report to the President's Committee on Urban Housing" in reference to industrialized housing:

"Even with the implementation of effective policies to squeeze out every practicable, attainable cost reduction, we can realistically expect a reduction in monthly housing costs of only 10 percent in the foreseeable years ahead."<sup>12</sup>

Consumers save approximately 11% by purchasing a modular home as opposed to a conventional home but because of the increasing costs of the modular home delivery system, "it is highly unlikely that these minimal benefits from industrialization will have any perceivable impact on the total housing picture."<sup>13</sup>

Whatever its disadvantages might be, many of Vermonts'

housing sponsors have expressed an interest in modular construction. The Vermont Housing Authority is in the process of constructing a modular, rent subsidy development in St. Johnsbury. The advantages to housing sponsors seem to be that they can rely on the production and delivery of units perhaps to a greater extent than on housing produced conventionally. Units are somewhat less expensive and the costly time delays of conventional construction would probably be eliminated although down time is an important consideration in factory production. Start to finish on any development might take less time and have tenants housed more quickly at a savings of both developments costs and rent subsidies required.

This is not to suggest that rents will automatically be lower than in other developments. Rent schedules are only partially a function of the costs of a project. They are also affected by location, access to services and amenities, quality of environment and the general supply of units available for rent.

But modular housing requires government subsidies for low or moderate income owners or renters and as with the mobile home, perpetuates the dependency of the low or moderate income family on the government.

7. There is a case of an unsuccessful attempt to establish such an operation in Vermont. This case

dramatizes the immediate impact on labor in particular, indicating that a full scale housing operation has a large impact on small communities.

International Structures Inc. was established in St. Albans, Vermont in 1970 for the purpose of producing manufactured housing. It was encouraged locally because of projected job opportunities for between 600 and 800 men and women between 1971 and 1973. This number of new jobs would have had a substantial impact on Franklin County which has a high rate of unemployment. Unfortunately, I.S.I. has ceased operations. The reasons for the shutdown were attributed by I.S.I. owners as delayed deliveries of equipment needed for production and a need to refinance and reorganize the operations. The Registry Department in the Vermont Attorney-General's office has corporation applications which show that since its inception, I.S.I. has already been reorganized with three major changes of executive directors.

To begin its operations, I.S.I. received \$230,000 to provide job training, \$144,711 from the Department of Health and Welfare and \$85,284 from the Department of Labour. This money was to finance 141 weeks of training for 329 prospective employees in the plant. Only 68 trainees were put through the program and of these, only 25% ultimately got jobs with I.S.I.

Some units were actually built, but the work force of 79 employees in August 1971 dwindled to 34 by February 1972. With the closing of the plant, all employees are out of work.

The case of I.S.I. is not unique to Vermont. Modular home production operations have had a high rate of attrition largely due to faulty planning or insufficient capital investment to continue production by organizing the market through promotion and advertizing. The I.S.I. experience had not only serious economic implications in terms of using funds for training programs which did not produce jobs, but had perhaps even more serious psychological and social implications by not fulfilling its promise to create employment.

The promise of industrialization to reduce costs and increase quantities of housing as a solution to the housing problem has to date been hollow. Costs of industrially produced housing inhibit low and moderate income earners from acting autonomously and independently of housing agencies in getting housing.

The economic development of the State is conditional upon the investment of local capital to improve the services and amenities of the State. Decisions about investment and re-investment of capital can only properly be made by private citizens and institutions which are

familiar with and responsible for the direction of development policies. If capital is invested by choice or by necessity, through the purchase of high cost products such as industrialized housing, in out-of-state markets, economic development is impaired. State officials cannot afford to abdicate their responsibility for housing and other policy decisions to industries solely interested in tapping a market for profit. (In the case of housing, this market is a very lucrative one.) But this is happening in Vermont because there are no housing policies, no policies regulating the sale of industrialized housing and no production mechanisms within the State to compete with out-of-state housing production. Increased Federal assistance to housing developers, necessitated even with "low cost" industrialized housing for the low income sector, is not such a mechanism.

The housing shortage itself impairs economic development since it affects the supply of labour. Industries will not expand or locate new facilities when the shortage of labour is exacerbated by inadequate services including housing. The general decline in industry, which has been a pattern in New England over the last several years, has created serious unemployment and has resulted in a growing sector of the population which is dependent on welfare.

Economic development is also conditional upon the

equitable distribution and allocation of resources, housing being considered a resource. Industrialized housing has not produced any significant change in the existing maldistribution of housing resources. The low income earner is still relegated to accepting total welfare for his housing or partial assistance from housing agencies. The industrially produced home, in the form of the mobile home, has generated hostility in both the community which fears extra tax burdens to support mobile home owners, and in the government which fears that such housing detracts from the State's other natural scenic resources. These other resources are the basis of attraction of the new industries (such as the ski industry and tourism) which are producing a growing gross product for the State.

## Footnotes

## Section 3.2

1. The Report of the President's Committee on Urban Housing, "A Decent Home", Washington, D.C., 1968.
2. Daniel Hodes, "Modular Housing: A Complete Industry Survey", op.cit.
3. Antony Herrey and William Title, "Industrialized Housing Feasibility Study", MIT, Cambridge, Mass., 1971
4. Carol S. Greenwall, op.cit.
5. Ian D. Turner and John F.C. Turner, op.cit., p. I-1.
6. Carol S. Greenwall, op.cit., p. 17.
7. Ibid., p. 18.
8. Ibid., p. 12.
9. Max Huntoon and John Kirk, "It's Time to Take the low Price Market away from the Mobiles", House and Home, Vol. 39, No. 4, April 1971, pp. 62-71.
10. Source: New England Mobile Home Association.
11. Michael A. Stegman, op.cit., p. 107.
12. The Report of the President's Committee on Urban Housing, op. cit., p. 44.
13. Bruce Hanson, "Issues in Determining Impacts of Industrialized Housing", Federal Home Loan Bank Board Journal, Vol. 4, No. 4, Washington, D.C., April 1971, p. 6.

### 3.3 Social Implications of Industrialized Housing in Vermont

1. It must be understood that the extent of industrialized housing in Vermont at the present time is small. Only 5.7% of the current housing stock in the States consists of mobile homes and an unknown but smaller percentage consists of modular homes. A discussion of social implications, then, must be general and conceptual deriving as much from experience generally as from in Vermont in particular. Discussions of social implications traditionally relate to aesthetic quality of housing, to how this kind of housing impinges on the natural and scenic landscape in a state such as Vermont with a long, well-developed architectural vernacular. But the inevitable and continued growth of industrialized housing will foment more serious discussion related to individual behaviour and to community health and development. It is these latter areas which will be discussed here.

The main concerns of this section revolve around the issues of autonomy and control especially of the low income individual. This section deals with the relationship between the suppliers of housing either in the public sector--governmental agencies--or in the private sector--housing manufacturers who provide services or more often products for people, and the low and moderate income sectors who have been excluded from the normal housing

market. In Vermont, these latter groups constitute the largest percentage of the population.

2. When housing is provided for people, they are considered consumers or passive beneficiaries. Further, housing developers who are the real clients of the agencies administering housing development remove the users a step beyond being consumers. Decision making power regarding housing rests in the hands of the supply sector and excludes the user from the most critical decisions regarding his housing. Users then become non-clients or passive consumers.

"Corporate clients and their experts generally insist on arrogating to themselves the right to make decisions for the 'user'. To the expert and his client, the 'user' becomes an impediment or a useless appendage. As an impediment, he is to be manipulated. As a useless appendage, the user is to be ignored or normalized."<sup>1</sup>

If housing is perceived as a function of what it does in the lives of its users and not in the material qualities of the physical product, then the material worth of the products and the manner of their production are dependent on their highly variable uses. To the low and moderate income groups, housing is an important "existentially significant activity". It is an activity as are all

those on which the "immediate ends" of life depend. To remove the user from decisions about an activity which plays such a significant part in his life threatens his security, incapacitates his autonomy and severely limits his choices about how he wishes to live.

3. Low income earners especially are characterized by very low economic capability, subsequently low levels of savings and therefore low potential for investment. Housing is the most expensive single purchase most people make but it is seen as a highly worthwhile and profitable investment. The low income earner cannot invest in conventional investment markets (such as the stock market) and has limited access to the credit market. Housing becomes the only mechanism for the low income earner to establish equity and savings. As a consequence, there is a high premium placed on the limited financial resources which are available for this kind of an investment.

"Middle income households with five or ten times the minimum needed for survival can afford the diseconomies of unsuitable housing and can often compensate for such diseconomies by means of alternative expenditures. The lower the income level, the better the match must be between the demand and the housing process if both the household and the housing economies are to be maintained."<sup>2</sup>

It is too simplistic to define the housing problem through variables such as low income and high costs of production, for these categories do little to explain the reasons for inequitable distribution of income or rising building costs. What seems to be peculiar about the low income sector is not simply the lack of sufficient earned income or low levels of savings but the institutional and market forces which impinge on low income individuals.

Public institutions and private industry have removed the individual "consumer" from the decision-making process and have, in effect, inhibited him from investing his savings in housing.

"Here we have an evident contradiction between what a central body considers the desirable minimum and what the users consider desirable."<sup>3</sup>

Through systems of subsidies to private industry the State is encouraging and maintaining the dependency of the low income sector. The loss of self esteem and the humiliation and frustration which result have led to violence and unrest. The effects are felt across the population and aggravate general social dissatisfaction. Why environments deteriorate in public housing, why the incidence of abandonment in subsidized housing has increased to the extent that it has, especially in central city areas, should be no mystery when explained in these terms.

4. The State of Vermont provides no funding for developing housing programs. Money for subsidizing the developments that are being built comes from Federal sources. Very few Federally sponsored programs subsidize the user directly and most assistance programs rely heavily on non-profit corporations and cooperatives sponsored by churches, settlement houses, labour unions and similar groups as mediators of low and moderate income housing.

Housing assistance provided under Federal assistance programs is available, theoretically, to lower income families who, without such assistance, cannot obtain decent housing in the private market. However, to obtain housing assistance, low income families must live in communities where there are local or state housing authorities, or in communities where there are qualified housing sponsors capable of developing housing under federal programs. But, the shortage of housing institutions, in general, and the limited capability of housing institutions which have no specific housing policies partially explains the limited use of federal programs in rural and small urban areas. In other words, recognized mediators must exist before assistance can be given to low income families.

Further, with the exception of programs administered by the Farmers Home Administration, most programs are designed primarily to serve urban housing needs. There are

some assistance programs designed to suit the needs of rural communities. Sections 502, 503 and 504 Rural Housing Loans and Grants under Title V of the Housing Act of 1949 provide funds for farm owners and rural residents to buy, build or improve homes and farm service buildings. These are direct, insured loans.

Section 515(a), Direct Rural Renter Housing Loans and Cooperatively Owned Housing and Section 515(b), Insured Rural Rental Housing Loans and Cooperatively Owned Housing provide assistance to low and middle income levels and to senior citizens. These loans are mediated through non-profit corporations and private sponsor groups.

The problem for low income families in Vermont is the jurisdictional boundary between urban and rural housing programs. A low or moderate income family might have difficulty qualifying for Section 502 housing because it lives in a small urban area. It needs to be close to a source of employment and cannot afford high travelling costs which would be incurred if it lived in a rural area. But living in an urban area with inadequate housing agencies prevents it from getting the assistance it needs.

Also, most programs require income minimums to qualify for assistance. Families that earn below necessary income minimums are relegated to public housing or rent supplement housing. Farmers Home Administration provides

insured loans for down payments and purchase of low and moderate income housing. The income range to qualify for loans is between \$5000 and \$8000.

Not only are low and moderate income earners dependent upon programs, agencies and sponsors for relief but the State is establishing a dependency on the Federal government for funding, more as a matter of volition than necessity. Since housing plays an important functional role in the development of a region, the dependency of the State on sources of capital from the central government removes some of the development decisions from the aegis of the State.

5. The study of the response of individuals to industrially produced housing is in effect the study of manufacturers and the imperatives of business. Housing manufacturers have not eliminated the programs of subsidy. In fact, they are helping to encourage them. The promise of industrialization in housing was the overall reduction in housing costs. As has previously been stated, even the mobile home, the penultimate in low cost housing has had to become involved with subsidy programs as the costs of the product increase. The modular home, without question, for low income earners is available only in a subsidy program.

The industry has done two things. It has perpetuated the need for subsidies and aggravated the manner in which

subsidy is allocated i.e. to the clients of low income housing, the housing sponsors and development agencies, not to users. Through programs such as Section 236, the supply sector is encouraged to produce housing. There is becoming therefore less and less opportunity for the low and moderate income earner to act directly in his own behalf. The means by which a low income person acquires his housing, be it self-built or purchased from a dealer, is of secondary importance at this stage. Of primary importance is that the means by which a low income individual can freely choose the kind of housing he needs, are not available.

6. By its very nature, the business corporation cannot include the user, and quite possibly not even the client, in its decision-making process. The corporation has one objective--that is to survive. John Kenneth Galbraith in "The New Industrial State" developed a model for the ways in which corporations satisfy that objective. Although the model relates to large scale national and multinational corporations, he suggests that the general principles apply to firms of any size. Corporations need to eliminate market uncertainty and effectively reduce uncertainty to risks. Therefore, corporate decisions are made to control the activities of the market as well as the principal actor in the market, the consumer.

The other imperatives corporations must satisfy are the maximization of profits and the reinvestment of accumulated capital surplus. Profits are required to maintain the continuous production of industrial operations. Capital is accumulated through profits as well as through investments private individuals make in corporate activities. Some of the capital is reinvested in expanding the production and marketing capabilities of the firm and the rest, considered savings, is reinvested in other corporations and business ventures. The firm cannot afford to let its accumulated capital surplus just sit in a vault.

In order for the firm to satisfy these two imperatives, it must be able to act autonomously and without constraints imposed upon it by outside institutions such as banks or the government. These outside institutions may have other interests or imperatives which must be satisfied which are inconsistent with the needs of the corporation. For example, a strip mining company would not be able to continue production if it had to rely for financing on bank managers who had a high regard for the environment and who were interested in conservation.

The corporation must have internal control of capital, to reinvest it where and when it would be most profitable. One of the ways of insuring internal capital control is to exclude consumers as well as stockholders from the internal

decision-making processes of the firm. This is done partly through the lack of public disclosure of the firms' activities and partly by investing stockholders with only token power.<sup>6</sup>

"Corporations have an unabashed alliance with size."<sup>7</sup> Another mechanism for ensuring the maximization of profits is large size. Through vertical (and horizontal) integration a corporation can control supply of raw materials, eliminate costly inventory and stockpiling, be assured of adequate transportation and communication facilities and in some cases guaranteed sale of secondary products. For example, Westinghouse Corporation realizing that it produced 80% of all the elements (components) in a house, invested in a manufactured housing operation which provided the other 20%. Sales of those 80% products were made to Westinghouse subsidiaries--internalizing the flow of capital and greatly enhancing the profit potential of the final product.

Finally, the corporation has a need to diversify and not be "stuck" with one product which may be susceptible to a market collapse or competition.

This brief discussion of the imperatives of corporations was made to give dimension to the trend in production of industrialized housing.

Galbraith's model relates more to large scale manufacturers than small scale companies. The large scale

corporations are very much interested in getting into the housing field. Firms such as Westinghouse, US Steel, General Electric and aerospace industries such as Lockheed Aircraft are either buying construction companies or studying the feasibility of starting housing operations. These operations would borrow from the existing industrial capabilities of the corporations so that the products will be industrialized, mass produced housing.

The consumer may not be totally excluded from marketing and production decisions made by small companies but as the size of the company increases, the consumer has less and less potential affect on internal corporate decision-making and becomes increasingly dependent on corporate policy which does affect the market.

The companies producing modular housing in New England are relatively large. A House and Home survey conducted in 1971 describes the operations of modular housing manufacturers throughout the US. Several companies are located in New Hampshire, Massachusetts and New York State. Two companies located in New Hampshire--Westville Homes Corporation owned by Amskeag Co. and Weil-McLain of Indiana--are both privately owned businesses. The Westville Corp. produced 110 single family units in 1970 and the Weil-McLain factory produced approximately 270 single family units. The Weil-McLain factory has about 100,000 square

feet of space and projected production for 1971 to be about 50% higher than in 1970. The Westville Corporation has a factory of about 80,000 square feet and projected 1971 production of about 400 modular units with an increase of plant facilities of 30,000 square feet. Two other companies located in New Hampshire have smaller plant facilities around 20,000 square feet each but have produced in 1970 a total of around 150 single and multifamily units and project a total of approximately 500 units in 1971.<sup>8</sup>

The production of housing in the Westville Corporation alone in 1970 was almost equal to the total production of all the housing manufacturers in Vermont in the same year.

7. It has been documented that there is a strong, although not causal, relationship between housing and poverty. In his article on "Housing and Poverty", William Grigsby states:

"To some degree, poverty can only be understood as an intolerable condition of life of which housing deprivations are the most important element. It is evident that being deprived with respect to housing is a large part of what it means to be poor."<sup>7</sup>

The issues arising from the relationship between housing and human behaviour are complex and diffuse. It is an area in which there is little information, little adequate research and virtually no grounded theory. Although it

has not been demonstrated that there is any causal relationship between behavioural change and housing as a physical entity, the symbolic significance of housing can affect behaviour.

"The house is, of course, much more than a repository of artifacts; it is in its own right and par excellence an artifact to which deeply buried meanings are attached."<sup>8</sup>

One cannot help but feel the meanness of the life available to those who live in less accommodating environments in which the needs which must be satisfied at higher levels are frustrated by uncommodious, superficial, innocuous space and spatial arrangements. And one wonders about the symbolic significance of mobile homes.

8. The degree of physical flexibility in housing is a major factor of how housing relates to behaviour. Mobile and modular housing units are designed as closed systems, complete and discrete packages. As such, they do not allow for accommodating change in the family structure, growth of the family, change in life style or change in temperament. Industrially produced packages are similar to public housing and rent supplement housing in this regard since tenants and owners cannot easily make any major structural or other changes in their environment. In the former case, the constraints are physical. In the

latter cases, the constraints are institutional.

The lack of flexibility of physical space coupled with the inability of the family to make any basic decisions with regard to design, planning, and space utilization place the owners of house packages in positions of subservience to designers and technicians. For the low and moderate income family this kind of control serves to reinforce the institutional controls already in operation.

Space standards are defined by FHA and are adhered to by modular home manufacturers while the mobile home industry has developed its own space and construction standards to minimum levels lower than the standards set by FHA. These standards are primarily functions of cost, not human need and the standards dictate the kinds and qualities of space and the degrees of flexibility without considering what it is that families will need at costs they can afford.

9. Housing authorities, planners et. al. stress the need for housing of any so-called "adequate" description, almost in spite of social costs, in order to solve the housing problem. The mechanism of "filtering down" has been advocated as a means of producing low and moderate income housing. Conventionally produced housing in the market, now out of reach of low income families, will, over time, become available to this sector as the units get older and the occupants move to other locations.

This is a justification for continuing the construction of middle and upper income housing. The process of filtering down fails in the context of Vermont. First, the supply of older homes is small and the demand is high. Second, the conventional construction industry cannot provide enough new units per year to satisfy even the upper income demand.

Older, more picturesque houses are now being widely sought after by upper income groups, for vacation and second homes. In the south of Vermont, vacation housing comprises about 30% of the total housing market. And the demand for older homes has resulted in their being more expensive than ever. Low and moderate income families who might have been able to afford an older home are now excluded from this part of the market.

The slow rate of construction of more expensive housing will produce only in the very long run enough units which might "filter down". The planners and housing agencies are suggesting that industrialized housing can satisfy the quantitative demands for families who need housing now. But as has been discussed, the costs of industrialized housing are higher than families in real need can afford. The poor are not only relegated to industrialized housing with subsidy but, if they wish to act autonomously, are relegated to second or older used industrialized units.

The extent and condition of used mobile homes, for

example, is not known. Although depreciation is a function of market viability and not a function of the use value to the user, it is to a degree an indication of the quality of the product. As has been discussed previously, mobile units depreciate quickly--50% in 5 years. The second hand or older units available through the filtering down process to low and moderate income families are of sufficiently deteriorated quality to justify that rapid depreciation. As a consequence, the family must either live in already deteriorated housing or pay heavily for repair and renovation, an expense which offsets the viability of the unit as a low cost housing alternative.

Modular homes built to FHA standards may not have the problem of deterioration that exists in mobile homes. But the low and moderate income family cannot afford to act autonomously to purchase such a unit in any case.

10. Public reaction and public policy are rather ambivalent about industrialized housing in Vermont. The State legislature just recently tabled a manufactured housing bill drafted this year. The bill essentially defines the limits of acceptability of industrially manufactured housing and describes advertizing and authorization procedures for acceptable industrialized units.

The Agency for Development and Community Affairs has established no separate standards for manufactured housing.

According to Section 4023, Chapter 90 of the Manufactured Housing Bill,

"the agency shall use the state building code as its standard for the certification of manufactured housing for the state insigne of approval."<sup>9</sup>

Vermont does, however, have legislation regarding the transportation requirements of manufactured housing on highways. This legislation defines the permissible size of units with and without permits, costs of permits, speed regulations, signs, towing vehicles, insurance requirements and license regulations.

More important than these two relatively innocuous pieces of public policy regarding manufactured housing are the zoning ordinances which have a direct bearing on the life of the community and individuals in need of housing. Existing patterns of zoning restrictions permit only particular types of housing to be located in various residential areas. An industrialized housing system which depends upon the use of attached housing units would find itself largely excluded from suburban sites because of zoning provisions which require detached housing on separate lots. Vermont has zoned its suburban areas for one acre minimum residential lot size. The problem is compounded by the consideration which involves the

attitudes of local residents towards lower income housing. Zoning ordinances have traditionally been used to enforce economic and, by association, social discrimination in residential areas, and any widespread attempt to introduce low cost industrialized housing into these communities may bring violent political repercussions. Zoning not only reinforces community homogeneity by prohibiting high density or low income development but it also ensures the appreciating value of property.

Even in neighbourhoods where zoning ordinances do not prohibit lower income housing or high density housing, opposition has been effectively mounted against proposals for new housing developments intended for residents of different economic class or race.

The greater the number of sites required, the greater will be the magnitude of the problem. Industrialized housing systems capable of high volume production, will only exacerbate this problem by trying to force low cost housing into areas where it is not wanted. The alternative may be to build the new housing on marginal sites that are unacceptable to the lower income sector. Mobiles have traditionally been forced to locate in parks in peripheral and undesirable locations, which in turn increases the public antipathy towards such housing and its occupants. Interestingly however, the State of Vermont has only 26

towns, about 9% of all towns, which prohibit outright the introduction of new mobile homes. Compared to Massachusetts in which 80% of all towns prohibit new mobiles, Vermont's figure seems insignificant.

While the costs of mobiles may be lower than modular or conventionally constructed housing, the price of land is the same in spite of type of residential unit and is rapidly increasing. The low income family which may have been able to invest in mobile home housing, even though it was a second or older unit, might have great difficulty placing the unit in a suitable location, near services and close to employment because of land costs and restrictive zoning.

The nature of the industrialized unit, especially the mobile home, and its location (which is a function of public policy) tend to proliferate social class distinctions viz. a viz. housing. This is also true of other kinds of housing, especially in subdivisions or in developments. But communities disparage individual mobiles and communities of mobiles alike.

11. Home ownership is no guarantee of community acceptance although the status of home ownership is widely accepted as an ultimate family objective. In 1969, in Vermont more than 90% of mobiles were owner-occupied. While home ownership can provide a sense of achievement and

autonomy and is available to the consumer of a new mobile unit within seven years, the quality of that tenure must be questioned. As has been previously stated, the building of equity is less efficacious for the mobile home owner than it is for conventional home owners owing to the very rapid and high depreciation of mobile units. The mobile home owner is confronted by the antipathy of the community which feels that he is not paying an equitable share in taxes to support local services and which feels that the physical and aesthetic quality of the mobile home detracts from the natural environment. If the mobile owner is a low income earner he suffers the added embarrassment of social and economic discrimination. Finally, the mobile home owner, whether on an individual lot or in a park, must contend with public policy and legislation which considers mobile homes unsightly and which strictly controls their use.

The quality of tenure with this kind of housing is poor and must seriously affect the behaviour and health of a family struggling to maintain itself.

12. As far as the individual in the mobile home park is concerned, he no longer acts autonomously but is subject to the costs and regulations imposed by park administrators. The regulations concerning behaviour in parks are much more severe than regulations governing behaviour in apartments and even in low income rental housing. The strictness of

the rules might possibly be a reaction to community antagonism. The following rules come from the approved zoning ordinance of Halifax, Massachusetts but serve as a model of required behaviour across the country in other mobile parks of a similar nature.

1. All residents of the park must be 50 years of age or over. (In Vermont, 20% of all mobile home owners are older or retired.)
2. No pets will be allowed, or if permission is given to keep a pet, it must be on a leash. Any justifiable complaint from other tenants will necessitate the removal of the pet from the park permanently.
3. Two tenants will be approved for each mobile home. Guests staying for more than two weeks must register and an extra charge will be made for more than two persons.
4. Television, radio, etc. must be kept at a moderate listening level. Original landscaping will be done by the management. Flowers, shrubs, or other land improvements may be done by the tenant but cannot be removed if vacated. Additions of awnings, accessories, or digging, etc. must be approved by the management. No fences may be erected. All mobile home sites must be kept orderly, grass cut, and trimmed.
5. Outdoor drying of laundry may be done only in area designated.

6. Repairing cars in the mobile home park is prohibited, and cars dripping gas or oil must be fixed. No parking of uninsured vehicles or trailers of any description will be allowed on the mobile home site.
7. An approved mail box must be erected by tenants desiring mail delivery.
8. Visitors must be accompanied by a tenant, and the tenant shall be responsible for their guests. Tenants will be held responsible for any damage caused by any of their family or guests. Guests may park their cars in the street near the mobile home.
9. The posted speed limit within the park must be maintained, such speed limit shall not exceed 10 MPH.
10. Posting of "For sale" signs in the windows or on the site is not permitted.
11. Tenants may not lease their mobile homes.
12. Solicitors or peddlers will not be allowed in the park.<sup>12</sup>

13. The discussion thus far has dealt with issues surrounding the loss of individual autonomy of low and moderate income families and the extension of control of private industry and public institutions over these families as a consequence of their relationship with certain kinds of industrialized housing.

Individuals, as regions and nations, are subject to the contemporary forces of development and growth. If a

region is to develop adequately (not simply grow but improve the quality of life for its inhabitants) it must follow after the development of its population. Adequate development can only be measured in terms of self-sufficiency and fulfillment not in terms of income level and consumption characteristics. But as has been discussed, much of Vermont's population is subject to and controlled by public and private forces outside the State and outside the area of influence of individual families. As the housing problem increases and industrialized housing in its present form expands into the State, low and moderate income families will become, of necessity, more and more dependent on these forces which inhibit their own as well as the State's internal development.

## Footnotes

## Section 3.3

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5. John Kenneth Galbraith, "The New Industrial State", Signet Books, New York, 1967.
6. Ralph Nader, "G.M. and the Auto Industry: The Threat of Corporate Collectivism", Crisis in American Institutions, J. Skolnick and E. Currie, eds., Little and Brown Co., Boston, 1970, pp. 137-147.
7. John Kenneth Galbraith, op.cit., p. 43.
8. Max Huntoon and Jeffery Smith, "Who's Building the Modulars and How Many", House and Home, Vol. 39, No. 6, June 1971, pp. 45-59.
9. William Grigsby, op.cit., p. 4.
10. J. R. Seeley, R.A. Sim, E.W. Loosley, "Crestwood Heights, A Study of the Culture of Suburban Life", John Wiley and Sons, Inc., New York, 1956, p. 42.
11. State of Vermont House Committee Draft, Chapter 90. Manufactured Housing, Article 4203, January 1972.
12. Approved Zoning Ordinance, Halifax, Mass., New England Mobile Home Association, Granby, Conn., 1971.

### 3.4 Environmental Implications of Industrialized Housing

1. One of the most prominent issue areas emerging today is the general area of development related to environment, conservation and ecology. The dwindling supply of the world's non-replenishable resources such as oil, the increased incidence of chemical pollution in the water and the air, the increased pace of consumption of natural resources with technologies such as strip mining and clear cutting of timber, and the extinction of many species of animals has had and will continue to have a marked effect on human life.

Hitherto accepted growth and development strategies such as the use of industrialization are being challenged universally by scientists, conservationists and the general public. The question of what kinds of growth strategies should be employed for development is being supplanted by the more basic question--should growth take place at all?

Vermont is in a difficult position in regard to this latter question. The natural and scenic amenities in the State have largely contributed to the growth of the tourist and recreational industries as well as, now, to attracting people from large urban areas who wish either to "get away from it all" or to begin new life style experiments such as communal farming. The State is intent on maintaining

its natural amenities upon which depend the growth of its natural amenity-related industries. Strict environmental legislation has just recently been adopted in this regard under the Land Use and Development Law (Act 250) of 1970. But Vermont is also intent on improving its economic viability internally and nationally. These two intentions are not always compatible.

2. Population and population growth are serious factors which affect the environment. As long as population continues to grow, there will be a concomittant growth in demand for goods and services including housing. The problem may be compounded if that growth is dramatic and sudden, as it has been in Vermont in the last 20 years, adding extra strains on the existing service structures. Further, if the demands of the population migrating from southern urban areas entail providing the same quality of goods and services as this group has been accustomed to, the strains on the environment might become excessive.

The growth of population, in and of itself, should not be a very serious problem but coupled with current value systems and prevalent social norms regarding life style, the problems become monumental. These values and norms in housing include one room per person as a standard of spatial adequacy, the single family house on a one acre lot as a standard of status, private ownership of property as a standard of achievement and autonomy.

The housing demand, as has previously been discussed, has been calculated by various agencies in the State. New housing is going to require more water supply, more sewer services and more electricity whether units are produced conventionally or industrially. From the projected figures of demand, it seems evident that new housing will far exceed the capability of towns to absorb units within the existing services structure. Economic costs are obviously involved with regard to who pays for new services. Environmental costs should be calculated as well.

3. Industrialized housing differs from conventional housing largely because it is produced in a factory. To be more specific, it differs because it is assembled from components in a factory. Both conventional and industrial production use synthetic materials to a large degree, although the use of synthetic materials is more prominent in industrialized housing. These materials include plastics, fiberglass, aluminum etc. The industrial manufacturer is more and more using preassembled components such as bathroom and kitchen units built out of the synthetic materials in order to cut out the middle men--the tradesman, reduce handling costs and material wastage, and increase profits. While housing production in general is relatively innocuous to the environment the synthetic materials industries are not since these industries do pollute. The

industrialized housing industry will more quickly popularize preassembled components to the extent that they will soon become stock-in-trade of the conventional construction industry as well. The more popular the preassembled components become, the more serious will be the environmental consequences.

As far as the effects of the kinds of equipment and technologies used in industrialized housing manufacturing on the environment, there has generally been no research done at all in this area.

If preassembled component suppliers were to locate in Vermont, the short term economic benefits should be weighed against possible long term environmental costs.

4. One of the major environmental problems which faces the State today viz. a viz. housing involves specifically the mobile home. As has been previously stated, not much is known about the life cycle of the mobile home. No studies have been done regarding the deterioration of units and all one has to do is drive around the State to see mobiles in all stages of deterioration, from slightly used to abandoned and rusting.

The economics of mobiles virtually justifies their being junked. High depreciation and low resale value, no used-mobile recycling mechanisms and limited market demand, for used vehicles even with a large low and moderate

income population, make the disposal of mobiles difficult. Older than second hand mobiles have almost no resale value (and low use value owing to their condition). The simplest and most efficient means of disposal is abandonment or junking. The all too familiar image of rusting car bodies in a field and car graveyards is a quite probable model for used mobile homes.

As yet, it is too early to tell about the impact on the environment of the modular unit itself. The economies of modulars do not justify junking although little is known about the possible extent of deterioration over time.

5. One of the major provisions in the Land Use and Development Law (Act 250) is a law which provides for stricter control over mobile home parks. This provision was first discussed in the Governors Committee report on manufactured housing in 1969.

"...because the mobile homes currently available so often provide unsatisfactory living conditions and because they present a threat to Vermont's scenic environment, public regulation is needed at once."

The reasons for suggesting legislation were twofold: aesthetics, "because most mobiles currently available are so unattractive" and health, "for in such (mobile home) parks people are living with inadequate health and sanitary facilities, with inadequate open space (or none) for outdoor recreation and children's play."<sup>1</sup>

It is certainly evident on driving through the State that mobile home parks are generally congested and provide little space around units for the use of families. The feeling of constriction is increased because the parks are usually in the midst of open country.

Legislation regarding manufactured housing, tabled this legislative session, defines the extent of State control over mobile home parks and mobiles on individual lots. The legislation suggests that mobile home parks should be densely screened from the highways and adjacent land and densities should be regulated. But it also suggests that local government authorities should be limited in their power to prohibit mobiles unless the town already has a large number of mobiles or the town has some other adequate means of providing low cost housing. The basic state policy, to encourage this form of 'low cost' housing, must override the objections of any town, which, by its prohibiting of mobiles, would nullify the availability of housing to low and moderate income families.

A problem arises in that if the State countenances mobiles as a low cost housing solution, no other alternatives may be made available. The question then becomes what other forms of housing would be better than mobiles?

Footnotes

Section 3.4

1. R.A. Metz and N. Williams, "Report to the Governors Committee on Manufactured Housing", Montpelier, Dec. 1968, p. 8.

#### 4. PLANNING AND HOUSING POLICY

##### 4.1 The Public sector vs. the Private sector

1. One of the most serious conflicts in housing, generally, and in Vermont in particular, is the conflict between State legislation and planning, and the private sector and the market system. The conflict is evident in current literature on housing, government reports--both national and local--and in housing surveys conducted by private consultants for State agencies. The conflict becomes further complicated because of jurisdictional difficulties within the public planning sector.

While there is unanimous agreement of the Vermont public and the State government as to their opposition of too much intervention in State affairs by the Federal Government, these groups are not agreed on the jurisdictional boundaries of local government. According to the survey conducted by the Becker Corporation, the majority of the residents interviewed favoured local zoning<sup>1</sup> as opposed to State zoning, while at the same time the same majority favoured State control and intervention through land use planning in environmental matters. The State government, on the other hand, favours State land planning, zoning, and state tax controls for industry as opposed to local planning and local tax control. At the same time, the State favours local controls over some housing development such as mobile home parks. Towns are authorized in the new

manufactured housing legislation to acquire land and resell it for mobile home park developments and to provide for tax exemptions on the improvements in such parks for a period of years.<sup>2</sup>

These jurisdictional disputes have made zoning, land use planning and tax systems very complicated. The State Planning Office has tried to uncomplicate matters by recommending possible alternatives in three areas, land, taxes and housing, for policy regarding housing. In terms of land, the Planning Office suggests separating land markets into categories such as residential, agricultural and timber uses to prevent speculative development and to prevent spiralling land costs. It also suggests possibly providing free land to low income earners.

In reference to taxes, the Planning Office suggests that that the tax incentives for industry should be determined at the State, not local or town level and that tax concessions should be in State not local taxes. The rationale is that tax concessions at the local level will hurt the tax base of the town which wants to encourage industry. Also, the tax on property should become a function of the income potential of the use of the land instead of being a function of the quality of buildings. This may help standardize the tax structure and would produce from industry more tax revenue than is produced at present.

The planning office also advocates a high rate on capital gains tax and a general taxation policy emanating from regional land use planning.

"Having determined appropriate uses for the land, an equitable tax rate could be determined."<sup>3</sup>

In terms of housing, the Planning Office advocates exploiting Federal housing programs and low rate construction loans. It also suggests State financing of housing construction, something which is not now being done. For low income housing, it suggests providing free land, building materials and in some cases labour to get housing built.

But, "of course, any plan which provides housing at less than cost will require a supply of capital; it cannot be done 'for free'".<sup>4</sup>

Other agencies and private industry recommend the increased use of industrialization as a strategy of providing low cost housing in volume. This strategy does not necessarily entail extensive State planning.

On the one hand, planning is advocated to provide a general framework which in many respects addresses the housing problem. On the other hand, the market system is advocated which specifically addresses the issue of costs of housing construction.

2. Planning is the locus of operation of major corporations. According to Galbraith,

"the corporation must exercise control over what is sold...over what is supplied. It must replace the market with planning."<sup>5</sup>

Planning is also the locus of operation of government and its planning assumptions are logically consistent with the perceived directions or goals of society. Planning proceeds from an information base which has been collected by planners et. al. who have specific value orientations. The data base is formulated into policy by legislators who also have specific value structures. Policy produces programs which ultimately justify the social values used to produce the policies in the first place.

Questions arising about the planner's tools, such as how has the problem area been defined, who collects the information, what are the intentions of the collectors of information, how will the information be used and in whose interest will the information be used, are all questions relating to values i.e. are all moral questions. Unfortunately, these questions are rarely asked but rather are accepted as constraints. The assumption is that planning activities are in the best interest of the individual and the State. A similar point of view regarding the market system is also suggested by the advocates of the market.

3. There are several difficulties with the planning process. First, one cannot define a problem area distinctly

since it is impossible even with today's techniques of analysis to discover all the relevant data and information concerning that area. It is necessary to take a "fix" on a problem so that it can be defined and worked with. Second, planning is usually done by experts or professionals who are physical or morally unrelated to the conditions which prevail in a given problem area. Their objectivity is largely conditioned by value structures and moral attitudes derived outside of their subject group. Third, the planning process takes a long time, so that conditions which existed at the beginning of a study might have changed dramatically before policy is enacted. Fourth, the programs which are planned and made operational develop an inertia of their own rather quickly, sometimes rigidifying to the point of inflexibility. They can neither be improved nor destroyed. A good example is the Model Cities program in the US.

Finally, planners take little personal moral responsibility for their work and account to the decision makers and legislators, not to the people who will be affected by decisions and policy.

All this is not to suggest that planning is fraudulent and unresponsive or that it will stay the way it is now. But the planning process which does not include the citizen is bound to be paternalistic and unresponsive to real need.

As has been suggested in the section on social implications, people must feel responsible to a large degree for their own lives. This is particularly true with regard to low income earners and housing.

In Vermont, the Planning Office sees the housing problem as inequitable distribution of income and the solution, to use the market system to redistribute income. However, the subsidies or redistributed incomes are generally given to the supply sector instead of to individuals in need. This almost amounts to giving to the haves what they already have and to the have-nots, nothing. The direct subsidy of developers profits the developer and only increases the dependency of the individual. Planning has been advocated as a responsibility of the State, not Federal government.

"Federal programs are unlikely to solve Vermont's housing shortage"<sup>7</sup> since "programs to lower the price of housing or to increase family incomes have only had limited success in meeting the housing needs."<sup>8</sup>

As far as the market system is concerned, it too has difficulties. Unbridled production of goods has largely contributed to the state of environmental chaos we are now facing as well as to the high and rising costs of land and housing.

4. Planning can resolve certain problems through zoning legislation, low cost housing, improved public transportation, controlling the appearance and locations of commercial business and mobile home parks, and providing 40,000 jobs by 1975 to local Vermonters living where there is chronic unemployment or where the labour force must commute long distances. But the State recognizes that,

"in general, any interference with the market system will be less efficient and therefore have measurable monetary costs."<sup>9</sup>

The essential questions seem to be, how does one reconcile planning and the market system? Are the two compatible, complimentary or unreconcilable?

Unfortunately, the questions cannot be answered by a simple choice. Even a combination of planning and market systems has proven ineffective in housing through Federal programs such as Section 236 and 235. There must then, it seems, be a reappraisal of both systems relating the nature of the planning process to the real needs of the individual and the community, and relating the market system to the satisfaction of those needs.

Planners must recognize that the low and moderate income individual has the capacity and desire to work in his own behalf and place less emphasis on the advice of

experts. They also must recognize that the individual needs to act in his own best interest even if his economic capability is limited. Further, planners must realize that the subsidizing of the private sector through government programs has done little to relieve the housing problem and tends to increase the dependency of low and moderate income individuals on agencies. Finally, they must realize that the reformulation of ineffectual housing programs cannot provide solutions but must be abandoned to prevent increasing disappointment and frustration in 'recipient' groups.

The housing supply market can be made more effective in response to housing demand through alternative programs which do not cause either a loss of profit to the supplier or do not entail a major revision of the operational structure of a business.

In Vermont, there seems to be an excellent opportunity to respond to the housing production problem by combining planned programs with the supply market. The opportunity exists in the form of local, small-scale building supply and manufactured housing operations. There are in the State some 29 small companies, according to the Department of Labour, which manufacture prefabricated housing. A brief survey of eleven companies was conducted regarding their operations (cf. Appendix I). The results of the

survey seem to indicate that building material suppliers who are involved with manufactured housing are concerned about low cost housing and would like to do something to relieve the situation.

Briefly, these companies have generally had a long experience in the lumber and building material supply business--on the average of about 40 years. They have been involved on the average of 10 years with manufacturing housing and housing components. Of the companies surveyed, two produce housing units for a market price of about \$12,000. The involvement of these companies and encouragement of this kind of operation might reduce the conflict between the market and planning.

5. Mobile homes have been criticized throughout this paper since they are the most successful industrialized housing product available and since they are being considered as an alternative as housing for low income earners. Hopefully, it has been demonstrated that mobiles are not only an ineffective alternative but on economic, social and environmental grounds are destructive of individual and regional development.

The State is now trying to legislate against mobiles through zoning legislation and land use planning but without interstate tariff barriers, the tide of mobiles will not be stopped. The only effective mechanism for

controlling the flow of mobiles into the State is an effective and viable alternative for housing.

Mobiles however might be effective in non-housing buildings for they provide an efficient, inexpensive answer for temporary shelter and for specialized functions. The demand for specialized facilities is occurring more and more in the industry for school facilities, mobile library facilities needed in rural areas, information centers, housing relief from natural disaster, traveling medical clinics, entertainment facilities such as theatres and exhibitions and for community facilities. They have two advantages as specialized function facilities. First, they provide a low cost alternative for expensive permanent public facilities which costs both the State and taxpayers unnecessary capital and second, they can provide services to most rural areas throughout the State. Modulars too could act in the capacity of specialized facilities as well as being available for housing for families who can afford them.

## Footnotes

## Section 4

1. Becker Research Corporation, "Perceptions and Attitudes of Vermont Residents Regarding Housing Needs in the State", 1971.
2. cf. Real Estate Research Corporation, "Program Potentials in Housing: A Regional Action Program", Washington, D.C., 1971, p. 58.
3. Vermont State Planning Office, op. cit., p. 88.
4. Ibid., p. 86.
5. John Kenneth Galbraith, op.cit., p. 49.
6. Denis Goulet, "The Cruel Choice, A New Concept in the Theory of Development", Athenaem, New York, 1971, cf. the introduction.
7. Vermont State Planning Office, op. cit., p. 86.
8. Ibid., p. 9.
9. Ibid., p. 7.
10. The first national discussion of housing allowances was in the Kaiser Commission Report, A Decent Home, pp. 12 and 71.
11. William Grindley, "The Suburban Owner Builder: A Case of Autonomy in the Utilization of Information and Resources", unpublished thesis, MIT, 1972, p. II-41.

#### 4.2 Conceptual Framework for Housing Strategies and Tactics

Strategies for housing policy and action cannot simply be enumerated in a list. They proceed from moral and cognitive conceptualizations about the nature of a specific problem area as well as about the nature of Man in society. Such conceptualizations embodied in the discussion of this paper define potential strategies as much as do specific point by point recommendations.

Strategies are conceptual orientations taken by planners and policy makers to formulate tactics. Tactics are the political vehicles through which action is successfully or unsuccessfully realized. Strategies and tactics or "prognosis and programs" as Myrdal calls them, are mutually interdependent, each having a reciprocal effect on the other.

What is being suggested here, then, is a conceptual framework for three potential tactical orientations based on the valuations and premises which underscore this paper. These tactics include the redistribution of housing resources through direct subsidies to users, the development of a housing advisory service network to disseminate information and technical expertise, and the encouragement of self-help housing for low and moderate income earners. These represent only some of the possible tactics which could be used by governmental housing agencies.

### 4.3 Direct User Subsidy

Several conditions pertain in the present housing assistance and subsidy system which are not conducive to solving the housing problem.

Housing assistance can only be provided for families in need when an approved agency exists to manage and mediate that assistance. These families, then, are functionally dependent on responsive and responsible public and private mediators. But the existence of a public or private housing agency or sponsor does not guarantee its responsiveness to recipient families. In the first place, Federal, State, local government agencies and private housing sponsors are not accountable to the families they are administering assistance for. They are accountable only to the regulating and fund granting institution. In the second place, local agencies are too often underfunded, understaffed and underinformed to provide adequate services to families who need assistance. In the third place, qualified housing sponsors are infrequently located in small urban communities and in rural areas.

Most of the housing assistance programs, with the exception of those administered by the Farmers Home Administration, are designed primarily to serve urban housing needs. Most programs encourage the use of multifamily housing, inappropriate to life styles of families in small

urban communities and rural areas. They also do not take into account the widespread dispersal of the poor in non-urban areas.

Housing assistance programs specify limits of income within which people might qualify for subsidy. These limits generally pertain to over-poverty line (\$3,800.00) or moderate income (\$5,000 to \$8,000) families. Those below the poverty line are relegated, out of hand, to public housing. In 1970, this sector accounted for about 12% of the population in Vermont.

The recipients of welfare, in almost all housing programs, are not users but housing developers and sponsor groups. Without such subsidies, it is argued, the private sector would not become involved with an area as unprofitable as low income housing. The developer is richly subsidized for his efforts. He builds housing with Federally insured mortgage money (without making any substantial capital investment of his own), he receives the benefit of tax shelters and depreciation allowances which he can further sell to other companies or use himself. Rents in his project are subsidized by the government and at the end of 20 or 30 years, he ends up owning property and buildings which supposedly have appreciated in value. The tenant and the user derive little economic and psychological satisfaction from this process. Direct housing

subsidies to users would overcome this situation and help reduce the dependencies of low income families on housing agencies.<sup>10</sup>

The individual directly subsidized would now be able to act autonomously, in the conventional housing market, in choosing a house which suited his needs (eg. location, size), or, in building a house for himself.

A system of direct subsidy has other advantages. Public antipathy towards the location of subsidized housing projects would be significantly reduced if the project approach were eliminated. Also, the costly and time consuming process of administering housing projects would be eliminated.

The mechanisms for producing direct subsidies to users will not be discussed here although it is strongly recommended that they emanate from the state and local level as much as possible.

Three possible reactions might result because of the adoption of direct user subsidy. The cost of housing, in the short run, might be inflated by the supply side of the market. Landlords might take advantage of uncounselled and unsuspecting families by charging them higher rents and by providing inadequate services. Recipients might not spend their subsidy entirely on housing (although this cannot really be considered a misuse).

But redirecting subsidies is not a sufficient strategy in itself, since the existing institutional environment and prevalent social attitudes regarding low income earners still largely exist. Without institutional change, the three reactions previously mentioned, might well occur.

#### 4.4 A Housing Advisory Service Network and Self Help Housing.

The user, who, through a direct housing assistance program, has the economic capability to enter the market must also have information about what to do in the market. Information diffusion and technical expertise could be services provided by a loosely coordinated series of operations called a housing advisory service network. The network would include private business as well as public agencies and would be accountable to the user.

The HAS would provide information on self help building, on the organization of cooperative housing groups, on taxes and legal rights, on planning and design, on financing procedures, etc. It might also act as a clearinghouse for projects throughout the State to inform individuals or groups who wish to build housing about the experiences of others in the State who have already built.

Such a service network could not be a centralized, cumbersome vehicle for disseminating information. If it were, it would only exacerbate the administrative costs of

other housing programs and would be one more institution with which low income families would have to contend.

Today, only a few agencies in Vermont provide information on housing directly to low income families. The Vermont Housing Authority only describes the conditions of tenure for a low income family in a project i.e. what the rules are for being a tenant. Housing Projects Enterprises provides technical assistance to non-profit housing sponsors. But direct user related information assistance generally comes from local OEO offices which are more concerned with general welfare than with housing. Local material supply companies, notably those which also produce manufactured housing, are an important link in the whole advisory service network. In fact, these companies already act in the capacity of an information service as a matter of general sales practice. They inform customers about the nature and quality of materials needed to do specific jobs (cf. Appendix I).

The local building supplier has a variety of experience in housing. He responds to a wide market and a wide variety of needs, from the do-it-yourself handyman who is slowly improving his house, to individuals who are making major repairs on renovations. The five companies which produce manufactured housing can also supply a house "kit" to individuals who wish to build a new house.

The companies have accumulated a fair amount of expertise, which has largely been unrecognized. They have access to material supplies within their own supply network. They have established relationships with local banks and generally understand the local climate and environment. In the final analysis, they are probably quite sensitive to the needs and motivations of local Vermonters.

The services they provide or will provide in a coordinated service network will guarantee them a certain amount of business and they can participate in such a network without incurring any loss in profits and without a major structural reorganization of their operations. Any additional services provided by these companies to low income groups or individuals who wish to build housing could effectively be subsidized by government. These services would ultimately be less expensive and more efficient than special programs set up by government for the purposes of disseminating the same kinds of information.

With a direct subsidy, the user could utilize the services provided by these companies in purchasing materials and renting or purchasing tools to build his house for himself. He could purchase the shells produced by the companies and finish the unit himself. Or, he could purchase a finished "package". In any case, the user has a wide range of alternatives and can choose a

process that satisfies his immediate needs.

The housing advisory service network, including the material supply sector has several advantages. Low income families have a wide range of alternatives to select housing. Capital, in profits will remain in the area and be returned to the community and state through business and corporate income taxes. The inclusion of local banks in assisting residents to get housing strengthens the network and makes it conducive to internal economic development.

Finally, the kinds of housing produced through this network will tend to preserve the natural and scenic environment more effectively than high technology produced "imported" housing packages.

Self help programs have been in operation for some time. In Nova Scotia, Canada, a cooperative self help program was instituted in 1934. Section 504 of the 1970 Housing and Urban Development Act is also a limited self help program. Housing Projects Enterprises, Inc., has a self help technical assistance section.

In his study on suburban owner builders, Bill Grindley has shown that this method of production not only produces savings, (in the range of 20-30% of construction costs on the average), but produces a product of quality not readily available in the housing market. He further demonstrates

that in the process of construction, an individual will 'earn' equity through savings.

"If an owner builder had worked 1200 hours on his home, he would have earned an equity per hour of \$6.06. If the owner builder had worked no more than 900 hours, and saved the average of 30 percent of the market price, he would have earned an astounding equity per hour of \$8.09.<sup>11</sup>

#### 4.5 Conclusion

Housing agencies and housing sponsors et. al. must recognize the conceptual limitations and biases of existing (and future) research and housing development programs. They must realize that housing is an existential part of life for all people but becomes an even more critical and fundamental part of existence for low income families who are so much excluded from activities in the mainstream of life in America. They must also realize that low income earners can and desire to participate in creating their own environments.

The frustrations of low income individuals in being unable to satisfy their housing needs and the difficulties of development faced by the State are closely related. Industrialized housing cannot be considered a viable solution for either of these conditions.

## APPENDIX I

## Industrialized Housing Manufacturers in Vermont

According to the 1971-72 Vermont Directory of Manufacturers, eleven companies in the State are involved in some capacity with manufacturing housing. This list may not be inclusive of all housing manufacturers since, as the Department of Labour statistics indicate, in 1969 there were some 26 companies in the State which were involved in manufactured housing operations.

A brief survey was conducted of nine of the eleven companies to provide a general overview of their operations, a profile of their customers and a description of the kinds of house products they produced.

The companies can be grouped into three general areas: lumber and building supply companies, specialized housing, and panelized housing. The findings of the survey will be discussed under these separate headings.

1. Lumber and Building Supplies

- i. Operation.

Five of the eleven companies fall under this general heading and four of the five were surveyed through interviews.

All of the companies are privately owned in Vermont and have had a long, previous experience in the building supply industry. The average length of their operations is about 40 years. Their involvement with housing production has also been relatively long, certainly longer than the other companies surveyed. The average length of operation in housing production is 10 years. Only one of the companies surveyed does not yet manufacture housing per se although it does intend to enter the field and, as will be discussed later, has the capability of doing so.

The companies employ on the average about 5 men for the in-factory production of houses although their total operations involve around 45 employees each. This employment figure varies slightly according to the season. The size of the plant facilities varies widely from 5,000 square feet to 20,000 square feet but the correlation between the size of facilities and the amount of production cannot be directly determined since all the operations differ in the kinds of housing produced. The percentage of dollar volume of the housing part of the total operation varies widely as well. One company does not as yet produce housing, one does 25% of dollar volume in housing, another 50%.

All of the companies have cash and carry operations as the basis of their total operation. They stock and supply lumber as well as hardware, some appliances, finishing materials, fixtures and accessories and in some cases tools for construction. Three of the companies also produce cabinets and kitchen counters.

This operation facilitates the housing operation. Their inventory of lumber guarantees adequate material for construction of the houses. Interior fittings etc. are in stock and available. The companies are vertically integrated in that the stock of materials needed for the cash and carry operations is also used in the housing operation. Housing can be almost completely constructed and finished from the basic supply operation. One company indicated that it carried everything that went into its housing. This seems to be an advantage in that they are not so dependent on the exigencies of the market and other suppliers as a manufacturer who does not have that built-in lumber and building supplies operation.

These companies also have ready access to materials which they do not supply or stock partially because of the nature of their business and partially because of their reputation, having been in business for so long.

Three of the companies have had no previous involvement with Federal or State housing programs for low income housing. One has had some involvement in bidding on a 236 project. Two of the companies expressed a desire to become involved with housing programs in the future (none was specified), while two expressed no interest or intention to become involved at any time.

In fact, the two companies which expressed no desire for direct involvement in housing programs do conduct a fair amount of business with customers who have received loans from the Farmers Home Administration, a Federally funded institution which makes grants and loans available at low interest rates to low income families and housing sponsors in rural areas.

#### ii. Product

No definite, succinct categories can be made to describe the type of housing produced by these companies. Each company has a different product and a different marketing process. Only one company has a complete factory built modular unit which is shipped totally assembled to its destination as a package on its own carrier. In 1971, the company produced 50 units and has a capacity to produce 100 units per year. 90% of these units are sold to a local

market within a radius of about 50 miles of the factory. The market does include part of New Hampshire where the remaining 10% of units are delivered. About 75% of these units are used as year round houses while 25% are used as vacation homes. All units are capable of being used as year round housing.

This company sells about 75% of all units to private individuals and the remaining 25% to contractor developers. All of the units produced are custom design units, either modified standard plans or designed by architectural consultants.

Two other companies produce "low cost" housing which is not modular. Units are built of prefabricated, factory produced wall and floor panels and roof trusses. Panels are constructed in the factory without services (wiring and plumbing) in the one case and with services roughed-in in the other. The panels are then shipped to be erected and finished by individuals or contractors on the site.

In 1971, the two companies produced 56 and 65 units respectively. One of the companies could produce 100 units per year; the other about 130 units per year at maximum capacity. All of the houses sold by these companies are sold to a

local market consisting of about 80% full time residents of Vermont. The market radius ranges between 50 and 60 miles. In one case 90% of the units are used as year round housing while in the other 100% of units are used as year round housing.

One company offers a standard plan but has a planning department to handle any custom work and design changes which the customer requires. The other company offers only two standard models. Design changes including landscaping and finishing are the responsibility of the homeowner after he has moved in.

About 85-90% of the units produced by one of these companies are sold to private individuals. The remainder are sold as shells to building contractors who in turn sell completed units to private individuals.

The extent of owner involvement in the construction of the houses is apparently small and the company does suggest local contractors and sub-contractors who can do the work. The house can be sold strictly as a shell to be constructed by the family or by a contractor and finished by the family itself or by sub-contractors. It can be sold with everything

in it but furniture. Obviously the owner has the option of changing it or improving it once he has moved in.

The other company sells 100% of its units to a subsidiary corporation which acts in the capacity of contractor, real estate agent and developer. About 70% of the units produced are sold to individual owners on individual lots. The balance are located in 3 suburban type developments quite near the factory. The extent of owner involvement occurs after the unit has been occupied.

The fourth company which does not yet manufacture housing does a large cash and carry business which includes lumber to appliances. At the moment, it does manufacture components such as roof trusses as well as cabinet work for kitchens. About 90% of its products are sold to a local market with a market radius of about 80 miles. Most of the customers of this operation are residents of Vermont and since this company does not produce housing, it competes in the market with other building supply dealerships in the area.

About 90-95% of all the products sold by this company are used in year round housing, the rest in vacation housing. There have been relatively low percentages of owner builders although 30-40% of sales are to private individuals. Products

generally purchased by private individuals are for home improvement and renovation rather than construction. But about 60-70% of sales are to contractors or sub-contractors who are building new housing.

The components sold by this company are usually for homes averaging in price from between \$23-25,000. This latter company sometimes does custom design work such as kitchen layouts or specialized custom millwork. But basically it is a building supply company which carries almost everything needed to construct and finish a house. It has the capability to become involved in housing production without extensive restructuring or high capital investment.

The costs of the houses are hard to equate since the kinds of housing varies so much in construction, size, quality of materials and design. It was generally agreed though that if units were built and finished by owners, a cost savings of 20 or more percent could be realized. The following table describes a breakdown of cost to the consumer.

The companies were not in the practice of stocking roof trusses or wall panels but produced according to the orders on hand.

Two of the companies were using small amounts of new materials and new technologies. Both companies sold and used plastic pipe for housing especially in water waste systems and one company used fiberglass bathtub enclosures thereby producing some savings in material and labour costs.

### iii. Customers

It was difficult to get anything but a very general picture of the kinds of consumers who purchased the housing produced by these companies. Three of the companies sold the housing both to private individuals as well as to contractors. The fourth company sold all of its housing to its developer subsidiary. None sold housing to local non-profit housing sponsors or to State or Federal housing institutions:

	Company 1	2	3	4
private individuals	75%	85-90%	-	30-40%
contractors	25%	10-15%	100%	60-70%

Company 4 does not as yet manufacture housing so that the figures represent sales of building supplies.

Table I Comparative Costs of Housing

Company	Basic <sup>1</sup> Shell	Unit with <sup>2</sup> Services	Extra costs- foundations	Cost per sq. ft.	Complete <sup>3</sup> unit
1	\$5500	\$13,497	\$3335	\$18.00	low cost model \$17,000 \$20-\$30,000
2	\$5000	\$10,685	Foundation installed by owner	\$12.80	\$11,650
3	\$4500			\$10- 11.00	\$12,000- 15,000

1. Basic Shell excludes plumbing, wiring, interior partitions, and drywall.
2. Includes plumbing and wiring interior partitions, interior doors, kitchen cabinets, but excludes final finishes.
3. Completely finished unit, painted and perhaps carpeted.

NOTE: Add on 3% State sales tax and freight. In one case freight was \$50.00 extra plus per mile rate of \$1.75 from point of delivery.

Income levels ranged from \$8,000 and up. But two of the companies which manufactured panelized housing generally sold products to consumers with incomes ranging from \$5-8,000. Farmers Home Administration was largely responsible for assisting these customers in financing. The companies also do a cash and carry business which services all income levels. One of the companies indicated that between 5 and 10% of its customers fall in the \$3000-8000 income range.

In two of the companies, between 90-95% of the customers who bought housing were married couples with children. The remaining 5-10% was spread between elderly couples and married couples without children. In one company, 90% of the customers were young married families without children while approximately 8% were elderly. One company could make no estimation. None of the companies sold housing to single people.

The general age range of all customers was between 30 and up.



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The extent of customer involvement in housing varied widely. The company which does not produce housing indicated that there were very few owner builders but that most private individuals were owner-rehabilitators. One company indicated that shells constructed and finished by owners was rare. One company indicated that about 50% of owners did nothing in regard to construction of their housing while 50% had partial involvement in design and finishing. The last company provided only a small amount of painting and finishing to be done by the owner while the developer subsidiary did all of the construction work.

#### iv. Financing

The building materials companies financing operations were the same in all cases. Customers could purchase materials with cash or on an open credit account. In one company, cash and carry sales consisted of 50% cash and 50% account financing. Building contractors purchase on account in all operations and receive a trade discount on materials.

As far as the housing operation is concerned, none of the companies offer internal mortgage or credit financing. The companies prefer cash sales i.e. where previous arrangements have been made by customers with their own banks or

lending institutions. But the companies will suggest sources of financing whether through Farmers Home Administration or through local banks. One company goes so far as to act as a financial consultant to customers by establishing the customers credit and by taking the customer to the local bank, sometimes "by the hand".

None of the companies do extensive advertizing and customers usually hear of the housing products by word of mouth.

In general, these companies provide an extensive service for their area. They are well established and reputable and have built a relationship with local residents and local financial institutions. This kind of relationship serves to assist potential customers who need financing and who otherwise might have difficulty establishing credit and borrowing money. Financial institutions are also more apt to finance the proven quality of the houses which are manufactured, moreso than if a local individual wanted to build his house by himself.

The companies provide an internal information service regarding selection, cost and use of materials as an integral

part of their selling operation and in some cases provide tools to get certain jobs done. Their long experience in the building supplies industry gives them first hand knowledge about construction techniques and their situation in the local community gives them expertise in areas such as land costs, taxations, wells and septic tanks, municipal services etc. Even if they do not have direct experience and information, they are connected to a network of actors in the construction industry throughout the area who do have information.

## 2. Specialized Housing

### i. Operation

This category refers to two of the eleven companies which manufacture log cabins and log buildings. One of the companies is also involved largely in the building materials and lumber supply industry while the other does all of its business in log buildings. Both companies are privately owned in Vermont. These companies have been in housing manufacturing for 3 and 9 years respectively. One is a very small scale operation employing 4 men in a factory of about 10,000 square feet. The other company has a subsidiary company in another state and in Vermont employs 38 people in plant facilities of approximately 80,000 square feet. Only the larger company which produces log buildings exclusively was surveyed so that this section will essentially discuss its operations. It has not yet been involved in any housing programs or with any sponsor groups and does not intend to be involved in the future. Actually, the nature of the product mitigates its involvement to a large degree.

### ii. Product

Essentially the products of the two companies are similar. They are building shells without services composed of precut logs which are numbered and shipped to the

site to be erected. The log kits do not include interior partitions, services or foundations which must be provided by owners.

In 1971, one company which has the building material supply operation produced 16 units while the other company produced some 400 units. Since the beginning of its operation the larger company has sold some 2500 units. This operation has a capacity of 500 units per year. 30% of all units are sold to a local market which is comprised of almost no permanent residents of the State. This is a nationally based company which 'exports' 70% of its production. Only about 50% of its units travel to sites less than 100 miles from the factory.

In Vermont, only about 30% of the units sold are used as year round housing while the remaining 70% are used as vacation or retirement homes.

The company offers a wide range of models and can do custom design when it is requested. The sales operation is conducted by franchise dealers across the country who are responsible not only for selling units but in some cases, for suggesting contractors, doing construction themselves etc. The parent company does not involve itself beyond manufacturing and distributing units.

### iii. Customers

The profile of customers was relatively difficult to get in this case because of the bulk of business which is done by local franchise dealers. All units produced are sold to private individuals in the over \$15,000 income category. About 50% are families with children, 30% married couples without children and the remainder elderly or retired couples. About 50% become completely involved with the construction of the shell while the 25% either do the interiors themselves or sub contract out plumbing, wiring and finishing. The remaining 25% contract out the entire job.

### iv. Financing

Since the customers are generally in the upper income brackets, they have access to credit and financing. The company does most of its business in cash sales. The costs of the basic shell range from \$3400 for a small cabin to \$7600 for a 4 bedroom unit. These costs exclude everything but the logs for the shell and roof. It was indicated that if the customer built the shell himself he could realize a 20-30 percent overall savings. The company does provide detailed instructions on erection but does not suggest finishes or other materials not supplied with the package.

### 3. Panelized Housing

#### i. Operation

Two of the eleven companies are involved strictly with manufacturing complete house packages which are transported in sections (panels) to their destination. Both companies are privately owned in Vermont and both have been in operation for a relatively short period of time, 3 and 5 years respectively. Both companies have been started by owners with previous experience in the construction industry as contractors and engineers.

One company has 10 employees and the other approximately 30. There is no seasonal variation in employment. The operations are carried out in factories of 10,000 and 17,000 square feet respectively.

The smaller company has not been involved with any housing programs nor does it intend to become involved, while the larger company is currently involved with producing units for an out-of-state low cost housing development. Interest was expressed in becoming more involved in programs and housing development in the future.

ii. Product

The house is produced in basically the same way as was described in the first category companies. Units are composed of prefabricated wall and floor panels and roof trusses, finished with windows and doors in place. The panels are shipped to the site where they are erected and services are installed.

In 1971, the smaller company produced 15 units while the other company produced 100 units. The capability of the larger company (which has been in operation only 2 years) is about 600 units per year.

Whereas the smaller company sells its products locally within a market radius of 50 miles to a market composed 50% of local residents and 50% of out of state residents, the larger company sells 100% of its units out-of-state within a market radius of between 500 and 600 miles. About 80% of the units produced by the smaller of the two companies are used as year round houses while almost 100% of the other companies' housing is used as vacation homes.

Both companies do custom design work exclusively i.e. producing units on order to the customer's or an architect's plans and design.

iii. Customers

The smaller of the two companies sells housing exclusively to private individuals at this time although future plans include the sale of shells to contractors and developers. The general income level of customers is high, over \$10,000 a year income. About 95% of the owners are families with children, usually with a professional as the head of household. About 4% are families without children while 1% are elderly or retired.

The larger company sells units exclusively to contractors and developers on order. At the moment, this company is involved in producing units for an out-of-state low cost housing development designed by a Boston architect and consisting of about 100 units. The bulk of the housing is bought from developers by families in the upper income levels. It was not possible to specify who the customers were nor what their involvement in the construction process was.

Neither company provides information on construction. Generally units bought by private individuals are contracted out for construction.

#### iv. Financing

The basic shell of the smaller company sells for \$6800 excluding erection, foundations but including services. Completed units range from \$15,000 to \$70,000 for custom design houses. The larger company sells units for between \$10,000 and \$13,000 including delivery but excluding services etc.

Neither company offers internal financing arrangements. The smaller company which deals with private individuals while it may suggest local banks, deals basically with cash sales involving prearranged financing between the owner and his own bank.

These companies have a small impact on the total housing market in the State. Total production of all the different kinds of units amounted to 700 units (about 20% of which left the state) and total employment was approximately 220--a very small percentage of the residential construction industry in the state.

All of the housing is single family housing generally for married couples with children and for families in the moderate and upper income brackets.

While customers participate in the process of housing in terms of suggesting design changes and doing interior finishing themselves, the majority of housing is built by contractors and sub contractors for customers, in spite of the fact that all companies agreed on a 20% savings in construction costs if the customer built the house for himself.

Only a few companies were previously involved with or interested in housing programs for low and moderate income families. Reasons given included red tape and excessive bother with programs. This is a function of existing programs, their administration and the potential owners.

This survey has been done to provide only a brief sketch of the current housing manufacturers in the state, to gauge the extent of their operations and the kinds of housing they manufacture.

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