INFORMATION TO USERS

This was produced from a copy of a document sent to us for microfilming. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help you understand markings or notations which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure you of complete continuity.

2. When an image on the film is obliterated with a round black mark it is an indication that the film inspector noticed either blurred copy because of movement during exposure, or duplicate copy. Unless we meant to delete copyrighted materials that should not have been filmed, you will find a good image of the page in the adjacent frame. If copyrighted materials were deleted you will find a target note listing the pages in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed the photographer has followed a definite method in "sectioning" the material. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For any illustrations that cannot be reproduced satisfactorily by xerography, photographic prints can be purchased at additional cost and tipped into your xerographic copy. Requests can be made to our Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases we have filmed the best available copy.

University
Microfilms
International

300 N. ZEEB RD., ANN ARBOR, MI 48106

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

8203338

WALLIS, ALLAN DENNIS

MOBILE HOMES: A PSYCHOLOGICAL CASE STUDY OF INNOVATION IN HOUSING

City University of New York PH.D. 1981

University Microfilms International 300 N. Zeeb Road, Ann Arbor, MI 48106

Copyright 1981

by

Wallis, Allan Dennis

All Rights Reserved

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy. Problems encountered with this document have been identified here with a check mark __✓__.

1. Glossy photographs or pages _____
2. Colored illustrations, paper or print _____
3. Photographs with dark background ✓
4. Illustrations are poor copy _____
5. Pages with black marks, not original copy _____
6. Print shows through as there is text on both sides of page _____
7. Indistinct, broken or small print on several pages ✓
8. Print exceeds margin requirements _____
9. Tightly bound copy with print lost in spine _____
10. Computer printout pages with indistinct print _____
11. Page(s) _____ lacking when material received, and not available from school or author.
12. Page(s) _____ seem to be missing in numbering only as text follows.
13. Two pages numbered _____. Text follows.
14. Curling and wrinkled pages _____
15. Other _____ _____

University Microfilms International

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

MOBILE HOMES: A PSYCHOLOGICAL CASE STUDY OF INNOVATION IN HOUSING

by

ALLAN D. WALLIS

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1981

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

© COPYRIGHT BY

ALLAN DENNIS WALLIS

1981

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

Aug 21, 1981
date

William H. Ittelson
Chairman of Examining Committee

August 21, 1981
date

Robert D. Hatzfeld
Executive Officer

William H. Ittelson

Leanne G. Rivlin

Susan Saegert
Supervisory Committee

The City University of New York

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Abstract

MOBILE HOMES: A PSYCHOLOGICAL CASE STUDY OF INNOVATION IN HOUSING

by

Allan D. Wallis

Adviser: Professor William H. Ittelson

In comparison to other major sectors of the economy, housing has been regarded as a lagging industry at least since the end of the First World War. Government programs to achieve industrialization have repeatedly failed to obtain their objective. The reasons for this are considered. Some suggest that the failure of industrialization is a problem primarily of material techniques. Others suggest that it involves a change in the consciousness (i.e. attitudes, beliefs and expectations) which serves to organize housing activities.

A paradigm describing the dual character of the industrialization of housing (i.e. as a revolution in techniques and consciousness) is presented. This paradigm considers housing change in terms of an image shift. The nature of an image shift is described as a process involving: a psycho-cultural image of housing, a metaphoric image of industrialized housing, the physical artifact, models of the relationships between various activities in housing, and the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

background of assumptions which a culture holds regarding the nature of technology. Four strategies for the integration of housing innovations, vis-a-vis image shift, are described. These strategies are: conventionalization, syncretism, independence and structuralization.

The body of the dissertation consists of a two part case study of mobile homes considered as a form of industrialized housing. The case study is intended to demonstrate the utility of the theoretical paradigm in investigating the process of industrialization. The first part of the case study analyzes the historical development of the mobile homes from its origins as a travel trailer, in the 1920's, up to the passage of major federal mobile home regulations in 1976. This review is based on a content analysis of trade journals, popular literature, legal rulings and previous scientific studies.

The second part of the case study investigates the use of mobile homes in a single midwestern city: Muncie, Indiana. It is based on: participant observation, in-depth interviews with 10 mobile home households in one park, and a comparative questionnaire survey of 60 people living in mobile homes, conventional homes and apartments.

The concluding chapter identifies two characteristics of mobile homes which seem to make them a successful form of industrialized housing. These characteristics are thinness and collage. It is suggested that they provide a basis for establishing continuity between the mobile home and the indigenous tradition of American housing, while helping in the transfer of the practices of industrialization into the area of housing.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Preface

Prolegomenon to a Psychological Study of Innovation

The idea for this dissertation grew out of a seminar given in 1973 on theory in environmental psychology. At the time, the discipline of environmental psychology (if a discipline may be dated from the time that degrees are offered with their label) was five years old. It is the privilege of a new discipline to try to look at the world whole; but all the while it is under pressure to get its own fragment in order. In that seminar, Bill Ittelson, who suffers that rare need to see the world whole, directed us to consider what a theory in environmental psychology would consist of, and what role it would play in defining the discipline. He later suggested that "our most difficult problems stem from the rather inadequate and shakey theoretical base from which we operate. . .an adequate theory will quickly lead to the resolution of major issues both methodological and substantive" (1975, p. 1).

The most important theoretical perspective to emerge from those discussions was transactionalism (cf. Ittelson, et al., 1975). As I understand it, transactionalism is primarily an epistemological perspective concerning how we can know about the world and our actions in it.[1] If interactionism is an approach to the study of phenomena based on the assumption that persons and things acting together in a situation each have particular characteristics that can be

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

distinguished, independent of the situation, then transactionalism, by contrast, is based on the assumption that such characteristics can only be determined situationally, and that they are in fact constructed through situational transactions.

The transactional perspective is particularly appropriate to the study of person-environment relations. Unseld writes:

> [Transactionalism] is a perspective which informs us that man and environment are mutually dependent systems -- that man experiences and comes to know his world through his actions in it, and that his action in the world is a function of what he knows of it. Transactionalism, thus, in differentiating man from the environment, does not assume that these categories are separate and distinct, or independent, or even that each has an existence separate from the other. On the contrary, it posits that they constitute a larger system, and that knowledge or existence of one independent of the other is impossible. (1975, p. 63)

Whereas other approaches to person-environment relations (as that dichotomous term suggests) treat the environment as another variable or set of variables to be considered in understanding a particular behavior, the transactional approach reformulates the field of behavioral investigation so that environment is an inextricable aspect of all investigations, including the formulation of methods.

The basic assumptions of the transactional approach to person-environment relations may be summarized in four propositions:

- Construction. The environment as encountered is rich in information, and open to multiple interpretation. What we perceive is the production of selection and construction arising out of the need to act.
- Externalization and Reification. Our perception of the environment is an assertion of certainty, which makes

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

intentional action possible. The environment, however, is not perceived as a construction, but a something which is objective and independent of the perceiver.

- Correction and Correspondence. While the environment is open to multiple interpretations, it is not wholly plastic; it resists actions, and thereby fosters correction of our assumptions about its nature.
- Internalization. Collective action is possible because individuals internalize a common set of assumptions regarding the nature of the environment. Internalization is facilitated by the use of artifacts which are themselves the externalization of assumptions.

There is a set of problems suggested by the transactional approach whose relevance is not readily recognized in other perspectives of person-environment relations. This set includes a concern for three issues which are central to the study presented here. They are: the issue of change, the nature of technology and the nature of artifacts.

From the transactional perspective, change is not an anomalous event set against fixed elements. It is the very nature of a transaction to construct the identity of the elements acting in a situation. The focus on change, rather than on constancy, in person-environment relations has the effect of emphasizing process over categorization; of considering qualities of relatedness over the fact of what is related. The focus on change further directs consideration to the issue of meaning. If change is the inevitable

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

manifestation of action in the environment, then the study of change must attempt to distinguish everyday variations produced by action from significant change; that is, change which not only alters our relationship with the environment, but which also alters how and what we know and feel about these relationships. In short, significant change always involves a change in the meaning of the environment.

Among the forces of change operating in person-environment relations, one of the most significant is technology. The issue of the human use of technology is typically regarded as falling outside of the scope of scientific psychology. This omission seems to follow an Aristotelian conception of technology, which Hood (1977) summarizes as follows:

> The essence of the traditional conception is the view that technology is a human arrangement of technics--tools, machines, instruments, materials, sciences, and personnel--to make possible and serve the attainment of human ends. Technology is not an activity which in itself satisfies man's nature. Rather, it is something he does only in order to get through with it so that he can go on to something else; it is not an end in itself but simply a means to some further end. Technology is, as it were, extrinsic to man's nature. (p. 347)

Technology becomes an issue for psychology when it is allowed that the very nature of being human is to utilize technics. This position was explored in the philosophy of Martin Heidegger, whose conception of technics is, again, summarized by Hood:

> A technic always opens some portion of the environment by referring beyond itself to something which is made possible by man's being-in-the-world. The being of man in its ontic dimension confers meaning upon certain entities in the world, that is, makes the creation of technics possible because of man's concern for these entities. In turn, the openness of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> technics makes it possible to objectify and discharge human purposes; they express the intentionality of ordinary experience, crystallizing the fact that man has a stake in maintaining himself and his world of daily existence via things. (p. 356)

The psychological problem posed by technology rests in illuminating that clouded but necessary connection between doing and knowing; between acting and perceiving the consequences of one's action.

If environmental psychology is to take up the complex study of technology, then it will need to define a unit of analysis to focus its attention on. Potentially the artifact is one such unit. Artifacts, as George Herbert Mead so succinctly observed, are "collapsed acts" (1923). They contain within themselves the objectified understanding necessary to execute an act. Traditionally artifacts have been studied either as objects of expression or as instruments of action. From a transactional perspective, they must be considered in both respects simultaneously.

Consideration of artifacts draws attention to the externalized form of assumptions which individuals and societies have about the environment in which they act. Such a focus calls for a symmetrical consideration of the internal organization of assumptions. Transactional psychology has been rather vague in defining what this organization might be, but other developments in cognitive psychology suggest that it may consist of images or schemata (Neisser, 1979). In studying artifacts, then, one might simultaneously consider internalized images and artifacts as two elements emerging out of that clouded connection between doing and knowing.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

I have already suggested that psychology has traditionally ignored the issues of change, technology and the artifact. These omissions express more than a lack of priority or oversight. They are omissions which result from the perception which psychology has had of itself, as a value-free science patterned after the methods of the natural sciences. The transactional perspective further suggests that these issues have been ignored as a consequence of reification.[2] Rather than seeing them as fundamental characteristics of human behavior and action, they have accepted them as independent entities.

Environmental psychology, in accepting the birthright of a new discipline to see the world whole, might take up these issues and make them central to its agenda. To date, however, the issues have been largely ignored.[3]

Environmental psychology is intended to fill a gap left by the social sciences, but the impetus for its creation has not come as much from the sciences as from the design professions. It is no small coincidence that this new discipline has arisen in a period of revolutionary change in design theory; particularly in architecture. The mid-1960's marked a radical rejection of modern design theory; a theory which, ironically, was hopeful of putting design on a more scientific basis.

One of the principal areas in which design was to be put on a new basis, one growing out of objective criteria and aimed toward affecting social reform, was in the development of mass housing. Mass housing refers to both housing designed on a collective scale (as communities) and housing produced through modern industrialized

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

techniques. These theorists (e.g. those represented by the International Congress of Modern Architects--CIAM) felt that the social unrest evident in industrialized nations was, in part, a consequence of the disparities of life produced by rapid technological change. The worker in the modern factory, for example, returns to a flat built in the middle ages. The role of a revolutionary architect would be to eliminate these disparities by improving the physical conditions of life.

Perhaps the single most celebrated event which marks the decline of modernism is the destruction of the Pruitt-Igoe housing project in St. Louis. It was an award winning project, demonstrating the tenets of how design might serve as an agent of social improvement. The two opposing positions which have emerged out of the fall of modernism take Pruitt-Igoe as an object lesson; but one which may be read with radically different conclusions. On the one hand, the failure of modernism is held to be a consequence of the erroneous assumption that architecture can and should be an agent of social change. Freed of this assumption, architecture can now return to its true foundations, which rest in the making of form (Rowe, 1972). On the other hand, the failure of modernism is taken as evidence that designers were overly simplex in their interpretation of the relationship between environment and behavior (Brolin, 1976; Pawley, 1971). It follows that a more rigorous empirical theory must be developed.

In general, environmental psychologists have taken aim at modernism, using its failure as justification for a new discipline. Ironically, the concerns of modernism closely parallel the agenda of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

issues which I have identified for environmental psychology. They were concerned with change, particularly social change resulting from industrialization. Part of their program was to translate the technology of industrialization into design, with the intention of using design as a means of expressing or objectifying the meaning of that technology in everyday life. The specific means for this objectification are artifacts: the things designed, which at once express the relationship of the designer to society, as well as the relationship of technology to society.

In attempting to find an objective basis for an architecture of social change, the modernists were caught in the gap left by the Nineteenth Century fragmentation of social science into areas of specialization which excluded both the study of the human environment and technology. The modernists used imagery and metaphor to bridge the gap. With these they articulated a program of design which could not then, or even now, be proved. Those images remain some of the most vital and least appreciated legacies of modernism.[4] It is more than appropriate that environmental psychology should investigate the theories of modernism; not as empirical hypotheses, but phenomenologically, as a way of seeing the world which it too hoped to see whole.

In this dissertation, I have tried to address the broad range of issues suggested above. On a conceptual level, I am concerned with the nature of change in person-environment relations, and particularly with changes in meaning. I am also concerned with the role of technology in change, and the idea of the artifact as a unit of analysis. On a substantive level, I am concerned with the relationship between

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

people, housing and technology; more specifically, with the industrialization of housing. Finally, I am interested in the role of architectural theory in conceptualizing these relationships, and in the relationship between such theory and the actual progress made toward industrialization.

In order to put these issues into a form capable of empirical investigation, I have focused my research on a single type of industrialized housing--the mobile home. This study is not, therefore, a case study of mobile homes, but a case study of industrialization which uses the mobile home as a "vehicle" to explore the larger issues indicated here.

The first chapter summarizes the characteristics of industrialization. It argues that industrialization involves a dual revolution: in practices and in consciousness. The nature of this dual revolution is further described in a paradigm of the industrialization of housing. As a means of demonstrating the utility of this paradigm, a case study of mobile homes is proposed and outlined. The body of the dissertation presents the case study in two parts. The first part (chapters two-four) is an analysis of the historical development of the mobile home. The second part (chapter five) presents the results of a study of the use of mobile homes in a single community. The concluding chapter returns to some of the issues of the paradigm and relates them to the qualities of the mobile home which are characteristics of American architecture, and which seem particularly appropriate to the development of industrialized housing.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Acknowledgements

Embarking on an exploratory dissertation is a risky venture. One cannot know at the outset where, or if, there will be an end. I am grateful to the members of my committee, Professor William Ittelson, Professor Lee Rivlin and Professor Susan Saegert, for permitting me the freedom to explore a broad topic, and for encouraging me with their comments. I owe an incalculable debt to my wife Peggy who supported me emotionally and intellectually throughout this effort. To those who have helped me in this effort, I dedicate these lines:

> We shall not cease from exploration
> And the end of all our exploring
> Will be to arrive where we started
> And know the place for the first time.
>
> from "Little Gidding" by T. S. Eliot
> (1969, p. 145)

Notes

1. The transactional perspective is contained in a number of theories and disciplines. In philosophy, it is most clearly expressed by Dewey and Bentley (1946), and to a lesser extent by George Herbert Mead and Alfred Schutz. Dewey influenced psychological inquiry through the work of Ames and the transactional school of perception. Mead's work influenced sociology through the school of symbolic interactionism. Schutz's work is elaborated by sociologists concerned with the sociology of knowledge (e.g. Berger and Luckman, 1966). A separate but important line of development was initiated by Harry Stack Sullivan in clinical psychology.

2. The idea of reification is present in most work written from the transactional perspective. I believe that it can be traced to the philosophy of Hegel, notable in his conception of "false consciousness." The idea was transformed by Marx, who treated reification in terms of the relationship between humans and the artifacts of their work (see Bernstein, 1971).

3. There are now a dozen programs in the United States offering graduate degrees in person-environment relations. The Environmental Design Research Association will hold its twelfth annual meeting

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

at the time of this writing. Aside from the concern shown by Ittelson and his students, there is no evidence that the field is moving to deal with the issues identified here. In the anthropological study of person-environment relations, Hall has also identified the study of technology as an important topic (1976), but I am unaware of the influence which his call may have had.

4. The importance of imagery in architectural thinking has been explored by Scott (1924), and in an excellent history of modern architecture by Peter Collins (1971). The role of imagery in the industrialization of buildings is most specifically suggested by Bender (1973).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

TABLE OF CONTENTS

Page

Preface vi

Prolegomenon to a Psychological Study of Innovation vi

Acknowledgements. xv

Notes xv

Chapter One: The Dual Revolution in Housing. 1

Toward a Conceptual Framework for the Industrialization of Housing 17

House as Image and Artifact 18

Significant Features. 23

Image Shift, Metaphor, Analogy and Innovation 28

Criteria of Correspondence in Integration 41

Strategies of Integration 43

Summary of Assumptions in the Paradigm of Innovative Housing Change 48

Introduction to the Case Study of Mobile Homes. 50

Notes 57

Chapter Two: The Historical Development of the Mobile Home: The Era of the Travel Trailer (1920-1939). 58

Origins 59

1936: Consolidation. 62

Form. 62

Users 69

Meaning 75

Formal Meaning. 76

Popular Meaning 83

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Page

Summary: Strategies of Integration 87

The Travel Trailer. 88

The Mobile Home 91

The House Trailer 93

Notes and References. 98

Chapter Three: The War Years: The Era of the House Trailer (1940-1953). 106

Users 107

Form. 118

Meaning 126

Formal Meaning. 127

Popular Meaning 134

Summary 144

The House Trailer as a Service. 145

The House Trailer as Product. 146

The House Trailer as a Process. 148

Notes and References. 152

Chapter Four: The Mobile Home Era (1954-1976) 161

Form. 164

Users 179

Meaning 189

Formal Meaning. 191

Popular Meaning 200

Summary 211

Strategies of Integration in the Mobile Home Era. 211

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Page

Models of Industrialization in the Integration of the Mobile Home. 215

Notes and Reference 225

Chapter Five: Mobile Homes in "Middletown" 235

The City. 239

The Park. 250

Park Management and Rules 254

Social and Physical Organization of the Park. 256

Patterns of Physical Improvements 261

The Mobile Home Park as a Neighborhood. 266

Living in a Mobile Home 269

The Choice of a Mobile Home 269

Perception of the Mobile Home as an Innovation. 275

The Units and the Sites 283

Attitude of Others Toward the Mobile Home 293

Conclusions: Strategies of Integration 298

Notes 303

Chapter Six: Thinness and Collage: Some Qualities of American Industrialized Housing. 309

Thinness as a Quality of Mobile Homes 311

Literal Thinness. 312

Figurative Thinness: Collage 315

Toward a Set of Rules for the Meaning of Industrialized Housing. 326

APPENDIX ONE: Comparative Survey of Mobile Home, Conventional Home and Apartment Residents 331

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Page

APPENDIX TWO: Freedom Acres - Rules and Regulations. 345

Bibliography. 349

Sources and Credits for Illustrations 360

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

LIST OF TABLES, FIGURES AND ILLUSTRATIONS

TABLES

		Page
1.	Strategies of Integration	48
2.	Summary of Integration Strategies: Travel Trailer Era	99
3.	Summary of Integration Strategies: House Trailer Era	154
4.	Characteristics of Mobile Home Households	182
5.	Summary of Integration Strategies: Mobile Home Era	227
6.	Two Way Analysis of Variance: Landscaping by Lot Size, Unit Size and Own/Rent	263
7.	Lot Size by Unit Size Cell Means	263
8.	Effect of Proximity on Lot Improvement (all sectors)	264
9.	Effect of Proximity on Lot Improvement (less sectors with 30% vacant lots)	265

FIGURES

1.	Model of Housing	12
2.	Transfer of Producer Technology	13
3.	Interaction and Transformation of Consumer and Producer Technologies	14
4.	Transformation of Image and Artifact of Housing	15
5.	Background of Technological Assumptions	15
6.	Hierarchy of Elements of Housing	28
7.	Innovation as a Transposition	33
8.	Analogical Projection of the Model	36
9.	Location of Mobile Home Parks in Muncie, Indiana (1974)	248
10.	Freedom Acres Mobile Home Park	253
11.	Pattern of Lot Improvements	262
12.	Configuration of Functional Areas on Different Lots	292

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

ILLUSTRATIONS

		Page
1-21	Travel Trailer Era.	100-105
22-41	House Trailer Era	155-160
42-64	Mobile Home Era	228-234
65-77	Mobile Homes in "Middletown".	305-308
78-82	Thinness and Collage.	329-330

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Chapter One

The Dual Revolution in Housing

> I think that we have little to gain here from arguing the question of whether the technological revolution brought about the sociological revolution or vice versa; we know that they came hand in hand. We also know that today's house is a compromise between what technology might do for us if we let it and the requirements of tradition and manners. The house, in other words, could be a far more efficient machine than it is if more people were willing to sacrifice many of the social customs and values to which they attach importance. (The Domesticated Americans, Russell Lynes, 1957, p. 276)

There is a segment of an educational film which appears frequently on children's television programs showing a modern milk bottling plant. It begins with a scene of cows in a pasture contentedly chewing their cuds. Milking time follows: the cows are taken to a laboratory-like environment of white walls and clean floors, where their tits are hooked up to gleaming metal cups which draw the milk from them. The milk is collected into a tank truck and taken to the bottling plant. Here the tempo of action speeds up. Endless streams of milk are seen flowing through clear plastic tubes, moving from one metal vat to another. Clear glass bottles advance from another direction, jingling along a conveyor belt. Then, a dozen at a time, the bottles are suddenly filled and capped, dropped into cartons and rolled into the back of a waiting truck. The film ends on a pastoral note: the bottles of milk are deposited on a suburban doorstoop where they await the morning coffee and cereal.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Industrialization is made concrete in this and hundreds of other examples. It is something to which children are formally and informally socialized; a consciousness which may teach them to appreciate that a cow is a component of an industrial process; a process in which their own consumption is, likewise, a component.

Industrialization is both a process and a state of consciousness. As a process, industrialization can be described in terms of three basic practices: standardization, mass production and rationalization. As a state of consciousness, it affects the perceived meaning and control which the parties involved in the process have over their role in it and the use which they make of its products. It may be useful to briefly describe each of these aspects of industrialization.

Standardization refers to the practice of dividing an item to be produced into components which are designed to be interchangeable. Interchangeability means that the variations produced by individual craftsperson in executing a component must be substituted for the exactness of machined parts (Pye, 1968). Interchangeability requires dimensional coordination, particularly at joints, as well as the mechanical compatibility of components. Standardized components may be employed in the production of identical objects, but they may also be used to produce a range of different objects. Standardization, then, does not necessarily result in uniformity. It can provide the basis for greater flexibility of production.

Mass Production complements the practice of standardization. The development of interchangeable components is desirable, and usually feasible, only when a large number of identical components are

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

produced. The cost of development is then amortized over a large number of units, and thereby made competitive with similar non-industrially produced units. The economy of scale realized by the mass production of standardized units is enhanced if production is centralized under controlled conditions; such as those offered in a factory. It is also enhanced by the organization of the work process into discrete sequential tasks (Ford, 1923). Mass production, then, is concerned not only with the organization of a product, but with the organization of the process which realized that product.

Rationalization is the practice of bringing the design of a manufactured item and the process of its production into correspondence (Urwick, 1929). It goes beyond breaking the product into standardized components and defining the algorithmic sequence of its assembly, to include consideration of the design of the product itself so that it enhances the efficiency of these practices. In the case of the industrialization of agriculture, rationalization directs the industrial process toward the creation of new breeds of animals and hybrid plants which are compatible with the mechanical elements of the system (see Giedion, 1969).

Rationalization also directs attention to the nonmaterial aspects of production, such as management, financing and marketing. It increases the temporal scope of considerations to include product obsolescence and the means of servicing, recycling or scrapping units. Thus, rationalization extends the practices of industrialization into the domain of the consumer. It suggests that the counterpart of mass production is mass consumption. To assure constant or expanding

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

levels of production, it becomes appropriate to consider means of not only controlling the flow of raw materials, but the rate of consumption as well.

While the benefits of industrialization seem clear to those in a modern society, they are evident only to a consciousness prepared to accept their logic. This point is illustrated in a story told by Werner Heisenberg and approvingly recalled by Marshall McLuhan (1964). The story involves a young man traveling through China who passes an old farmer laboriously drawing water from a well. The young man explains how the water can be brought up easily by constructing a drawing well.

> Then anger rose up in the old man's face and he said, "I have heard my teacher say that whoever uses machines does all his work like a machine. He who does his work like a machine grows a heart like a machine, and he who carries the heart of a machine in his breast loses his simplicity. . . .It is not that I do not know of such things, I am ashamed to use them. (p. 63)

Acceptance of the practices of industrialization and an ability to act accordingly requires a sympathetic consciousness. Berger, Berger and Kellner, in The Homeless Mind (1974), suggest that for each practice there is a corresponding idea or concept. Thus the practice of standardization requires acceptance of the idea of componentiality: that things can be broken into discrete parts. Likewise, it requires the idea of interdependence: that these parts can be reconstituted into functional wholes. The practice of mass production is supported by the idea of mechanicity: that all aspects of an industrial operation have a mechanical nature. It is also supported by the idea of the componential worker: the worker as an interchangeable part. The

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

practice of rationalization rests on the idea of transcience: the perception of production as a temporal cycle. It also rests in an ability to separate means from ends; use from function. In general, the different ideas associated with industrialization affect the meaning which those involved in the process give to their own actions; and the control which they have over that action (e.g. Durkheim, 1964).

Mannheim (1940) observed that in industrialized society, planned action tends to organize unplanned action. The practice of rationalization expands to encompass an even broader range of activities. While an increasing number of activities have been industrialized, the production, design and use of housing has lagged behind. Periodically, since the close of the First World War (and sporadically for at least fifty years before that) there have been calls for the industrialization of housing. One such call, coming shortly after the War, is contained in a concluding essay, "Mass-Production Houses," in Le Corbusier's influential book, Toward a New Architecture (1965):

> A great epoch has begun.
> There exists a new spirit.
> Industry, overwhelming us like a flood which rolls on towards its destined end, has furnished us with new tools adapted to this new epoch, animated by the new spirit. . .
> Economic law unavoidably governs our acts and our thoughts.
> The problem of the house is a problem of the epoch. The equilibrium of society to-day depends upon it. Architecture has for its first duty, in this period of renewal, that of bringing about a revision of values, a revision of the constituent elements of the house.
> Mass-production is based on analysis and experiment.
> Industry on the grand scale must occupy itself with building and establish the elements of the house on a mass production basis.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> We must create the mass-production spirit.
> The spirit of constructing mass-production houses.
> The spirit of living in mass-production houses.
> The spirit of conceiving mass-production houses.
> If we eliminate from our hearts and minds all dead concepts with regard to the houses and look at the question from an objective point of view, we shall arrive at the "House-Machine." (p. 210)

In this one passage, LeCorbusier acknowledges the dual character of the industrialization of housing. He sees the need for industrialization, in part, as a way of balancing the expectations gained in other aspects of modern life with those satisfied by the dwelling environment: the "House-Machine."

There are at least four basic arguments made to support the industrialization of housing. The first concerns the demand for housing. Following the First World War, Europe found itself with both a depleted housing stock and the skilled labor to build new housing (Bauer, 1934). At the same time, governments were under pressure to provide "homes for heroes"; to placate the returning soldiers and to stimulate economies no longer pushed by war materials production (Pawley, 1971). Industrialization, it was argued, would speed up the rate of housing unit production, while using less labor, as well as labor with fewer skills. The United States, which was spared the wartime destruction of housing, did not feel the press for housing until the late thirties and early forties, when the reduced production of the Depression, coupled with the demand for war worker housing, resulted in a severe shortfall in many cases.

The demand for housing remains an impetus for industrialization today. In 1980 there were urban riots in Holland, where people protested the severe housing shortage. In 1968, the President's

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Committee on Urban Housing (the Kaiser Commission) concluded that 22.6 million housing units would have to be built within a decade. They suggested that in order to meet this need, industrialized techniques would have to be considered.

The shortfall in the production of housing is not due solely, nor even primarily, to a shortage of labor. The cost of housing, particularly in periods of high inflation, reduces the production of units for lower and even middle income families. The second argument for industrialization is that it can reduce the cost of housing. Labor may constitute one third to one half of the cost of site built construction. The use of machines in a factory setting, or on the site, reduces labor and the skills required of that labor. It presumably improves the quality of construction because it is performed under environmentally controlled conditions.

The argument of reduced costs has been challenged by the observation that factory built housing has not proved to be less expensive than on site construction (Mayer, 1978). Such observations usually dismiss the example of the mobile home (the most common form of industrialized housing in the United States), while pointing to the fact that increasing land and material costs, together with those imposed by government regulation, have a far greater impact on the price of housing than labor costs. The practices of industrialization, however, are not limited to the use of more machinery to facilitate construction. Rationalization, in particular, includes consideration of improving the means of financing housing, reducing the difficulty of complying with government regulation and dealing

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

with the relationship between land acquisition and the construction of housing.

The third argument made for industrialization is based primarily on extending the practice of rationalization. Observing that the housing industry constitutes 8-15% of the GNP, it is argued that it should be modernized to a level consistent with other major industries. The housing industry puts less of its capital into research and development (R&D) than any other major industry in the economy. Almost all private sector R&D is conducted by building materials and component suppliers. The cyclical character of construction (both seasonal and in terms of periodic recessions) produces sympathetic cycles among suppliers. Industrialization can even out these cycles, in part, by reducing the effects of weather on the production of housing through factory fabrication.

The third argument for industrialization, then, is that housing should be industrialized because other major segments of the economy are industrialized. The final argument extends this position, which calls for expanded rationalization. It suggests that industrialization is necessary because a modern society needs modern housing, and modern housing is industrialized housing. In short, there is a consumer expectation generated in other areas of consumption as well as in the work place, that housing should have more of the attributes found in these areas. Countering this argument is the observation that people seem to prefer traditional housing; perhaps seeing it as a refuge against the rapid changes occurring in other aspects of their lives. This observation, in turn, is countered by the suggestion that

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the preference for traditional housing is a manifestation of the lag in housing, and that rationalization must include some public education.

The first two arguments for industrialization rest primarily on the observation that the housing needs of modern societies can best be achieved by the extension of the practices of industrialization to the production of housing. The last two arguments expand this position by suggesting that the practices of industrialization be extended into the areas of housing consumption and use. Moreover, they suggest that the industrialization of housing is justified to balance the general consciousness of industrialization produced in other areas of the economy and everyday life.

The various demands for industrialization have generated periodic responses, most notably by the federal government. Both world wars created conditions fostering federal involvement in several aspects of industrialization. An impetus toward standardization, for example, was created by the War Industries Board (WW I) and the War Production Board (WW II). Following these wars, efforts toward standardization have been carried out by the Department of Commerce through the National Bureau of Standards. The wars also created the need for war worker housing, and then post war housing. After the Second World War in particular, the government looked toward the production of housing as a means of both meeting the housing demand and averting the post war recession. The Korean War and renewal of the arms race, however, displaced the focus on housing.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Under the Kennedy administration, the Council of Economic Advisors was directed to suggest programs which could stimulate the development of technologically lagging segments of the economy. Their efforts resulted in the eventual development of the Civilian Industrial Technology Program (CITP). The CITP was begun in 1962 with a particular focus on construction and textile industries. The program was never fully funded and was soon dismantled (Nelkin, 1971).

Federal involvement in the industrialization of housing was again revived in the Nixon administration; most notably with Operation Breakthrough. Breakthrough was intended to stimulate the involvement of large industrial corporations into entering the area of housing production. The incentive would be an aggregated market where a successful producer might provide thousands of units annually. Corporations like Westinghouse saw the possibility of moving from the production and sale of kitchen appliances to the production and sale of entire dwellings. While many corporations became involved in housing through Operation Breakthrough, there is little left of that involvement today. The government has largely retreated in its efforts to stimulate industrialization by turning its attention back to issues in the regulatory environment (e.g. the development of the national building code).

Despite the failure of these government efforts there is, in fact, a great deal of industrialization evident in building today. A report by the Battelle Institute (1967) for the Department of Commerce concluded that as much as 90% of the components and materials which are utilized in current housing construction are produced through some

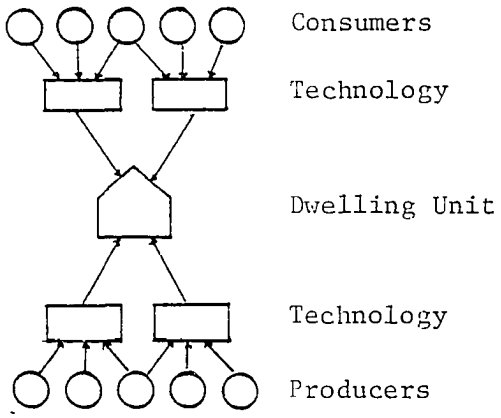
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

form of industrialization (also see Hodes & Jensen, 1973). Elements such as prehung doors and windows and prefabricated trusses are common on most construction sites, as are power nailers and other power tools. Serialized construction (the practice of assembling a large number of units sequentially on a site in order to efficiently schedule the use of equipment and trade labor) has been common on large sites since the end of World War II. By comparison with the rate of development in other industries, however, the progress in building seems pathetically slow.

Assuming that industrialization is necessary for any one, if not all four, of the arguments summarized above, why have efforts in that direction largely failed to date? The answer to that question, and particularly the assumptions behind it, is essential to the formulation of a more successful approach to the industrialization of housing. Before reviewing these answers, it will be useful to sketch a simple model of the elements involved in housing (figure 1). The first element will be the physical dwelling itself. Below it, I will put the material and nonmaterial technologies necessary to realize the dwelling, and below them, I will put the various parties (builders, institutional actors, etc.) involved in applying that technology to the production of houses. Moving in the other direction from the dwelling, I will identify another set of technologies involved in the purchase and use of housing, and above that the parties involved.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Figure 1: Model of Housing



The first analysis of the failure of industrialization rests on the observation that what is required is a transfer of existing technologies into housing. The problem has been that inappropriate technologies have been transferred (e.g. the early attempts at one piece, site poured concrete houses), and that the technologies utilized have not always been compatible. Thus, part of the failure to achieve significant cost reductions in prefabricated construction rests in the additional labor needed to adjust the fit of components at the site. The remedy for this failure, then, lies in the development of better material and nonmaterial technology. As indicated below in figure 2, this analysis does not necessarily implicate the users of the existing technologies (though new users may, in fact, be introduced) or the form of the dwelling itself (though some of the features of that form may change). In short, the problem lies in the production side of the model.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

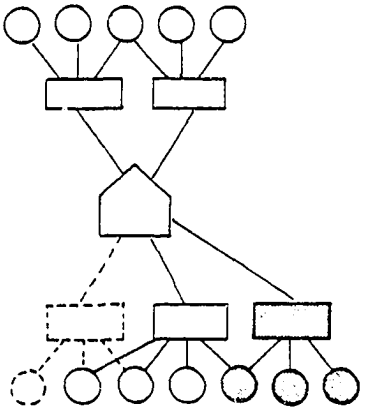


Figure 2: Transfer of Producer Technology

The second analysis of the failure of industrialization rests on the observation that even the best new technologies will not succeed if there is significant institutional resistance to them. Existing technologies support the vested interests of their users, and unless those users can be convinced to identify with the new technologies, they will not adopt them. The solution to the problem, then, rests in creating new incentives for particular user groups, engaging in programs of education and using political and economic pressure to facilitate adoption and diffusion. What is called for here is not only a transformation of practices but a transformation, in some degree of consciousness. This includes attitudes and beliefs held by various user groups (on the top of the model) such as lending institutions. Once again, the dwelling form itself is not necessarily transformed to effect this cure (see figure 3).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

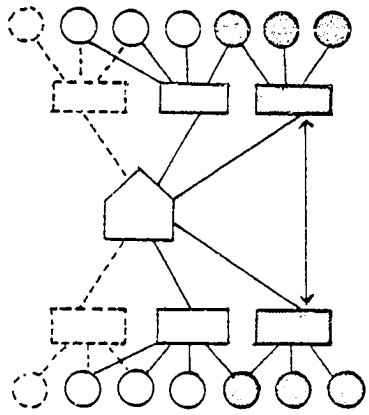


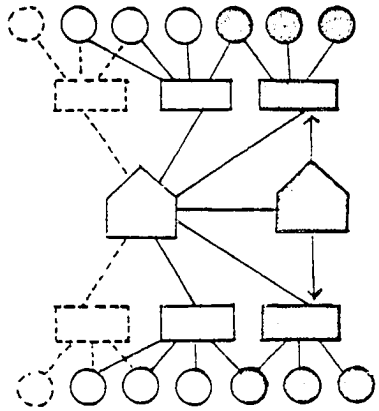
Figure 3: Interaction and Transformation of Producer and Consumer Technologies

The final analysis takes this last position further. While a transformation of attitudes is envisioned in the analysis above, there is no guarantee that a common vision regarding the nature of industrialized housing will guide the individual efforts of the various parties involved in it. What is required, then, is a fundamental shift in the "image" of what housing and, in turn, industrialized housing is about. This shift involves both the operators producing housing and its users. It also implies a transformation of the dwelling as it is perceived, and possibly in its form. This analysis calls for both a change in the practices of housing and the consciousness which guides them (see figure 4).

A major difference between the various analyses presented above consists of their background assumptions regarding the nature of technology (see figure 5). Implicit in the first analysis is that technology is essentially independent of the consciousness of the actors involved: its relationship is actional. The technology should be adopted because it has clear advantages, but its adoption does not assume a change in rationality. The second type of analysis

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Figure 4: Transformation of Image and Artifact of Housing



recognizes that the adoption of technology is not independent of attitudes (or, more broadly, of consciousness), and that its advantages must be translated into a form apparent to that consciousness. This consciousness is not thereby transformed; rather, there is an assumed <u>interaction</u> between technology and the consciousness of its potential users. This interaction requires the adjustment of each element to the other.

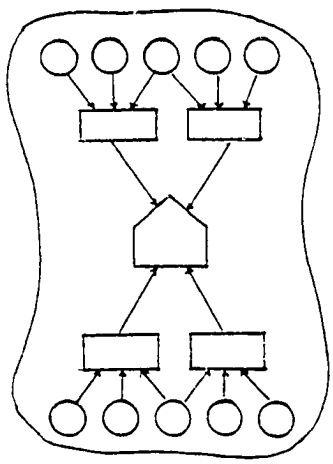


Figure 5: Background of Technological Assumptions

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In the final analysis of the failure of industrialization, it is assumed that practices and consciousness are inextricably tied. Rather than interacting and adjusting, each out of its own character, the relationship is one in which the nature of each is constructed through its encounter with the other: i.e. the relationship between technology and consciousness is transactional.

This position alone fully recognizes that industrialization involves a dual revolution: the simultaneous transformation of practices and of consciousness. It follows that improved progress toward industrialization requires the establishment of an environment facilitating communication between the various users and producers of housing. This communication is significantly facilitated by the use of visual and verbal images which help to embody their understanding of housing and industrialization.

In the remainder of this chapter, I will develop the elements of this last analysis of the industrialization of housing. Before turning to that task, it may be useful to summarize my argument to this point.

- Industrialization consists of a dual revolution in the practices and consciousness of the activities involved.
- The fundamental practices of industrialization involve: standardization, mass production and rationalization. Its consciousness involves corresponding ideas.
- In spite of the persistent demand for the industrialization of housing, progress toward this end has been relatively slow.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

- The translation of industrialization into housing requires an image shift: a new way of understanding the production and use of housing that can provide a basis for continuity and coordination for and among parties involved.

Toward a Conceptual Framework for the Industrialization of Housing

> It is not specific new programs for innovation or breakthroughs which are most needed at this point, but a new paradigm with which to view the built environment; a paradigm in which such programs could find their proper scale and context and their proper meaning, particularly to their ultimate users. (Bender & Parman in Sullivan, 1980, p. 240)

The idea that progress toward the industrialization of housing requires an image shift suggests that the significant relationship between housing and technology occurs at a psychological level of analysis. The advocates of this idea (e.g. Bender, 1973; Schon, 1963, 1967; and Stonebraker, 1967), frequently support the idea of image shift with reference to Gestalt psychological theories of learning and discovery. Thus "image shift" may be read as "gestalt switch." The parallel, however, does not quite fit. Image shift occurs at a societal scale. It is not sudden, but gradual. It involves communication through formal and informal social channels; and it involves complex transactions between the thing imaged and the objective artifact (i.e. housing) which is produced. Image shift, then, is closer to what Kuhn (1970) describes as "revolution in paradigms."

There are several elements involved in image shift which have already been suggested and which will be described more explicitly in this section. These elements include: the focal and source (or

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

metaphorical) image; features, significant features and feature clusters; source and focal models, and the background. These elements will be used to construct a paradigm of technological change in housing. That paradigm, in turn, will be used to organize the case study which is presented in the body of this dissertation.

House as Image and Artifact

The first element in a model of housing change is the physical object--house, itself. The immediate purpose which justifies the object is shelter. Presumably, as the effects of climate and the availability of materials vary, the object will assume different forms: e.g. a house in a hot dry climate would be expected to have a different form of ventilation than one in a cool damp climate, even though both of them meet the same need of providing shelter. Amos Rapoport, in House Form and Culture (1969), argues that while the form of houses is undoubtedly a response to material forces and basic needs, these factors in themselves do not determine form.

> Given a certain climate, the availability of certain materials, and the constraints and capabilities of different levels of technology, what finally decides the form of a dwelling and moulds the spaces and their relationships, is the vision that people have of an ideal life. (p. 47)

While he does not use the term, Rapoport's phrase--"the vision that people have of an ideal life," corresponds to the idea of an image of housing.

The image, defined broadly, is the subjective knowledge which governs intentional behavior in a particular situation (Boulding, 1969). More precisely, the image of housing consists of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

intersubjective knowledge; for while there are undoubtedly highly idiosyncratic elements in any one individual's knowledge of what "house" is, there are shared social and cultural assumptions which lie behind a common understanding of house. It is this common knowledge that Rapoport's statement refers to.

If the image consists of some form of internal knowledge about house, then the artifact--house form--is the instrumental and expressive externalization of that image. It is the translation of subjective knowledge into a form that can be communicated. The image of house helps to orient the individual in his or her actions with the object house; while the object house provides a means of socializing the individual into this image. Material forces clearly influence house form, but their influences, as Rapoport suggests, are as "modifying factors" rather than as determinants. The more critical and pressing the factor, the more evident its effect will be; but it will always be an effect mediated by the image which the members of a society have of their housing.

Rapoport is primarily concerned with developing and supporting a theory of the cultural determinism of house form. The question of how house form and the ideal which it embodies change over time is not addressed. He does, however, consider different phases in the development of cultures, and suggests how the relationship of house form and ideals may vary at each phase. Following Redfield (1953), three phases are distinguished: folk, traditional and modern. In part, these phases are marked by different levels of technological development, and concommitant social specialization and complexity. One of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the characteristics of folk societies is the ability of each household to make its own housing. By contrast, in traditional societies, building may be a specialized activity; while in modern societies, few people construct the houses in which they live.

If we consider the reciprocally constructive relationship between artifact and image presented earlier, a particular interpretation of the transition from one phase of cultural development to the next is suggested. The transition between folk and traditional societies is marked by, among other things, a division between the acts of making and the acts of using houses. Builder and user become separate parties, but they are bounded by a shared image of the artifact and the ideal environment which it embodies.

The character of knowledge is also transformed in this transition. The acts of building, in folk society, are typically governed by ritual. The practical significance of the ritualistic way of doing is unselfconscious; it is simply the way things are done. In traditional societies, at least some practices are rationalized: reasons are sought for practices, and treatises on design and construction may be developed.

In the transition from traditional to modern societies, a further division occurs. Now it is not only the makers and users of housing that hold a different relationship with the object; there is an additional division between different makers and users. The fragmentation of responsibilities and consciousness which characterizes modernization is manifested in the ability to accept the practices of standardization, mass production and rationalization. This is evident in the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

way that different individuals attend to different aspects of an activity and an artifact. It is only in their relationship together, in what Durkheim (1964) calls a state of "organic solidarity," that the complete consciousness of an act and the meaning of its artifact is revealed. As a consequence of this fragmentation, relationships and responsibilities must often be codified in law and other technical specifications. The relationship between house form and intentions becomes, at this phase, almost self-conscious: there is an awareness that the nature of the artifact is to execute an intention. Despite this self-consciousness and technical specificity, general coordination of the activities associated with making and using housing is still guided by a shared cultural image.

The fragmentation of the relationship between housing as artifact and housing as image potentially facilitates the process of technological innovation. The tight web of meaning which binds significant features together in the consciousness of the individual is loosened and made thinner. The feature which was once simultaneously bounded by the acts of making and the acts of using, is now potentially bounded by a single act, executed by separate actors. Implicit in the position of technological determinists is the assumption that this condition allows for the positive reformulation of the significance attached to specific features of housing. Features must be stripped of their arbitrary associations which no longer support the acts of housing.

The notion that house form is the objectification of a psychocultural ideal is not apparent in modern industrialized societies.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The consciousness which attends industrialization in general supports the idea that house form can and should be justified by objective functional considerations. This notion is articulated in modern theories of function design. They argue, on the one hand, for more rigorous programmatic analysis and, on the other, for the demythologization of popular housing. The idea that house form can somehow be totally rationalized and removed from the domain of the cultural image is itself a manifestation of reification: the error of seeing technology as independent of human consciousness and having a logic of its own (Hall, 1976). The cultural image, nevertheless, is evident in theories of functional design. R. Buckminster Fuller's highly advanced proposals for housing, for example, are still aimed at achieving a single family detached house. By contrast, European functionalists have generally been advocates of mass housing.

Certain aspects of the cultural image of housing in modern societies are self-conscious; derived, for example, from knowledge about the structural characteristics of various materials. Many aspects of the image, however, remain unselfconscious. Most Americans prefer to live in a free standing house, with a pitched roof standing on its own lot (Cramer, 1960; Cooper, 1974; Becker, 1977), regardless of the diseconomies which this form of housing produces (e.g. in terms of suburban sprawl), or the characteristics of the climate in different parts of the country. Those parts of the image of housing which remain unselfconscious are probably the most resistant to change. The resistance which they generate, particularly in opposition to housing

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

innovation, however, provides a basis for bringing them into consciousness, and therefore putting them under control.

Significant Features

A change in housing can involve a change in the artifact, a change in the image, or in both. Such change is not sudden. As suggested earlier, image shift is a process of incremental change. If change is incremental, then there must be a unit structuring the relationship between artifact and image; a unit out of which each element, in turn, is structured. I will call this unit the significant feature.

The term image was defined earlier as the subjective knowledge which governs intentional behavior in a particular situation. Put somewhat differently, image may be defined as the structure of expectations identifying what housing is, how we use it and how its use can be evaluated. The units composing the image, then, are expectations. Insofar as the image of housing is associated with the artifact, each expectation is associated with some discrete aspect of the artifact. I will call these aspects--features.

A feature is an aspect of an artifact which can be discriminated when employed in an act: i.e. in the exercise of an intention. In linguistics, the test of commutation is used to identify a feature: a feature is a discrete aspect of a word which, when changed, alters the meaning of the word (Barthes, 1964). Similarly, a feature composing an artifact can be distinguished as such by the fact that when it is changed, it changes some expectation associated with the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

artifact. A feature then corresponds to a unit of meaning; a unit previously identified as an expectation.

Form may be defined as a structure of features. Not all features comprising a form, however, are associated with an expectation. Only those features which affect the expectations of a specific user engaged in a particular act are significant. They may be distinguished as significant features. The artifact, in turn, may be more precisely defined as a structure of significant features (Bonta, 1979).

Any one feature may be related to a number of expectations. Similarly, any one expectation may be related to a number of features. Once identified (i.e. singled out from an artifact), a feature may attain a kind of categorical independence. It can be labeled and compared with similar features drawn from different forms: e.g. a door may be identified as a feature and classified with other doors, independent of the type of artifacts that they are drawn from. Once singled out in this way, a feature may become associated with other expectations: i.e. taking on new meanings.

Significant features can be classified by the type of bond which relates feature and expectation. Two basic types of bonds are indexical and associational. The indexical bond occurs when a feature is produced naturally in the course of an action, and is perceived as given as a consequence of the action. The chips of wood left after chopping a log, for example, are an indication of the act which has occurred, and can be read as such by someone with knowledge of wood chopping. The meaning of the chips is, in effect, intrinsic to the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

act. By contrast, if wood chips are taken and spread on the floor of a bar called the Lumberjack Saloon, and are used to evoke as association with woodcutting, then the bond between the feature and the expectation is different. The feature is not produced naturally in the course of the action, but is introduced into the situation with the intention of communicating some expectation. The effectiveness of this communication depends on an identification having been previously established between wood chips and the activities of a lumberjack. The relationship of the feature to the present situation, however, is associational.

The distinction between indexical and associational bonds is useful in understanding aspects of Rapoport's thesis in House Form and Culture. Theories of house form which suggest that the house is, or should be, solely a response to material forces and basic needs argue, in effect, that all significant features should be indicators of those forces and needs. By contrast, Rapoport argues that house form is symbolic of abstract ideas in a culture; thus the bond between features and expectation is often associational. Moreover, the significant features and forms which are symbolic of an abstract ideal help to make that ideal communicable in a concrete form (Polanyi, 1975).

Christopher Alexander (1964), in developing a process for programming the design of form, started by trying to isolate individual forces, or what I have termed features. He discovered that such a process rapidly leads to the isolation of so many features that the mathematical manipulation of their relationships becomes ominous if

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

not impossible. He also discovered that while discrete features could be isolated, they tend to occur in fairly stable clusters (e.g. the requirements related to the use of chairs and desks in an office go together as a cluster). Alexander refers to these clusters as "patterns."

> Each pattern describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice. (1977, p. X)

I will use the term feature cluster, rather than pattern, to describe the coherent and relatively stable structure of significant features which are associated with a specific act or set of acts occurring in a house. A feature cluster, for example, might be identified about the acts associated with entering a dwelling and making the transition between the public and private domain.

Since any number of features may convey the same expectation, and a number of expectations may be associated with a single feature, a single change in a feature or expectation may not constitute a significant change in the artifact in which they are implicated. More precisely, a change of equivalent elements constitutes variation rather than change. True change, significant change, occurs when a change in some element results in a partial reconfiguration or reinterpretation of the feature cluster, or artifact and image, with which it is associated. Changing the knob on a door, for example, from one of brass to one of crystal may not alter the user's conception of what a "door" is (though it may say something different about its owner). Making a door which is a screen of air, such as those used in some

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

department stores, may, however, force the user to redefine what "door" means.

House form , as image and artifact, is composed of smaller units: significant features and feature clusters. In addition, house form operates within a broader set of relationships. The use of housing ties it into a larger physical system: e.g. into a settlement with utility lines, transportation links, and the like). Its users are, likewise, tied into a larger set of social relationships (e.g. neighbors, financing institutions, tax assessors, etc.). To have a house requires at least an operating knowledge of these elements and their relationships. I will refer to this knowledge about housing in its extensions as the model of housing. The figures presented earlier are examples of such models. The function of the model is to organize a broader set of intentions implicated in the use of housing. For example, if several different forms of housing are available in a society, then the model provides a basis for selecting which alternative is most appropriate for a particular individual or household.

At a scale still broader and more abstract than that on which the model operates, is the idea of background, mentioned earlier. Phenomenologists use the term background, or horizon, to describe the overarching definition of reality which a society uses to organize its collective life. "These overarching definitions," writes Berger, et al., "are essential to hold any society together and, for that matter, to keep any particular social situation going" (1974, p. 15). The model of housing, then, operates against a background of assumptions regarding the nature of the material and nonmaterial

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

technologies utilized in executing the activities labeled "housing."

In summary, the activities of housing are organized in a conceptual hierarchy consisting of objective elements in the environment and their internal representation to the actor. These elements are: significant features, feature clusters, images and artifacts, model and background (see figure 6). Change may occur on any of these levels. The idea of image shift assumes a specific pattern of change involving complementary elements drawn from a model not previously associated with housing.

Figure 6: Hierarchy of Elements of Housing

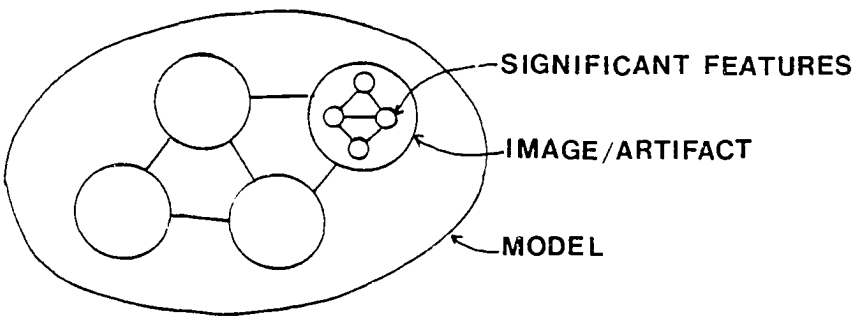


Image Shift, Metaphor, Analogy and Innovation

The elements briefly described above suggest that the environment of everyday action, subsummed under the title "housing," consists of a structure of assumptions operating at different levels of abstraction: i.e. distance from direct concrete action. Regardless of how abstract, these assumptions are ultimately tied to aspects of the objective environment. The environment as perceived (i.e. this structure of assumptions) is subject to correction as a result of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

actions taken in the environment as encountered. The relationship between these two environments, one internal and the other external, is transactional. Neither determines the other, yet each is constructed in the process of acting, and in the need to make the consequences of action predictable.

If the environment is a structure of assumptions, it may be read and responded to in a variety of ways. In the case of housing, as Rapoport observes, people can be accommodated in a wide range of forms. What defines the appropriate artifact for a particular culture is a matter of construction, in the transactional sense. Since the environment is open to multiple interpretations, change, or the possibility of change, is a constant condition of human action in it. Yet, the very predilection of the environment to change is the greatest source of its stability. For action, particularly social action, depends on predictability, and this need is served when established interpretations are preserved.

Man-environment transactions, then, exist in a tension between the possibility of change and the necessity of constancy. This tension becomes evident when conventional predictions fail to produce their anticipated results.[1] Suddenly there is a need to account for this failure and, thereby, to explore the assumptions which have directed the actions in question. Lewin (1951) refers to this condition of being open to inquiry as one of "unfreezing." It is in the context of failed or challenged assumptions that the probability of innovation arises.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In the case of technological innovation, a condition of unfreezing may result from what some theorists call "technological lag' (Rogers, 1962; Morison, 1975): i.e. the operation of related activities is improved, leaving some focal activity in relative lag. The classic illustration of this condition is the development of the textile industry in Eighteenth Century England. In this case, a series of mechanical inventions increased the rate of production of specific aspects of textile manufacturing, putting them out of pace with other areas of production.[2] Assuming that these inventions could be accepted as improvements, then associated aspects of the industrial process would appear to be lagging. The same notion of lag facilitating innovation was suggested by LeCorbusier (Jeanneret, 1927) when he observed that workers exposed to the benefits of industrialization in other aspects of their lives (e.g. at the work place) will demand a similar state of "improvement" in their housing.

The qualification of an innovation as "new and improved" is based on an evaluation of its performance in comparison with some established item or artifact in the context of the model within which that item operates. In this sense, innovation is a conservative change, in that it retains established criteria as a basis for evaluation.[3] By contrast, the qualification "new" suggests something that is significantly different in form and significance from the established item with which it is compared. Implied in these two qualifying attributes is the notion that innovations are at once a source of change and of continuity. Indeed, the whole process of innovation, from invention through adoption and diffusion, is marked by a complex interplay

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

between the need to preserve the identity of situations as they are known and understood, and the realization that the environment is open to multiple interpretations and responses. Innovation, then, must be defined and described in terms of this dynamic . It will be useful to briefly describe the process involved with specific reference to innovation in housing.

The condition of unfreezing occurs when a known situation becomes unfamiliar in some sense, and thus is opened to investigation and reinterpretation. The objective of applying an innovation to such a situation is to restore familiarity and predictability to it. The source of the restored familiarity provided by the innovation consists of elements taken from one established area of action and applied to the unfrozen situation. What makes the innovation new is not the novelty of the items themselves, but their application to a new situation. Schon (1963) describes this process as a "displacement of concepts," or what has previously been referred to here as an image shift. Thus innovation may consist of displacing significant features from one context in which they are known, understood and have predictive utility, into another context where they may serve to provide new insights. Schon further describes the relationship between the established situation and the displaced concepts as metaphorical: i.e. if the significance of the new features is read literally, they are absurd; whereas if they are taken metaphorically, as a means of exploring the changed situation, then they function as innovations. The efficacy of displacement lies in the fact that in transposing elements from one known situation to another, we are actually

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

transposing the expectations associated with those elements. Innovation, in this sense, is a process of seeing-as (Schon, 1979); of treating one situation in the terms by which another situation is understood. Many other theorists exploring the nature of innovation and creativity have also turned to the metaphor as a mechanism which accounts for the production of novel solutions.[4] Black, for example, writes:

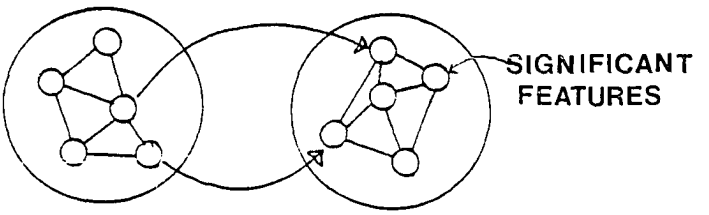
> A memorable metaphor has the power to bring two separate domains into cognitive and emotional relation by using language directly appropriate to the one as a lens for seeing the other; the implications, suggestions and supporting values entwined with the literal use of the metaphorical expression enable us to see the new subject matter in a new way. The extended meanings that result, the relations between initially disparate realms created, can neither be antecedently predicted nor subsequently paraphrased in prose. (1962, p. 236)

Innovation as a metaphor involves at least two images: a focal image which defines the established situation in question, and a source image from which the transposed significant features are drawn (see figure 7).[5] For displacement to occur, there must be some perceived similarity between the two images: i.e. there must be a basis for seeing the one as the other. For example, seeing the production of houses as the production of cars.

There are at least three metaphorical images, identified by Bender (1973), which have been used to explain the nature of industralized housing. The first is the image of the house seen as a car. LeCorbusier, for example, designed the "Maison Citrohan" (a pun on the name Citroën) calling it "a house conceived like a motor-car" (1927, p. 222). The second image is that of the house seen as a telephone.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Figure 7: Innovation as the Transposition of Significant Features



In this case the metaphorical allusion is to the idea of housing as a service which one purchases, rather than as an artifact which one owns. R. Buckminster Fuller (1963), in proposing a "scientific dwelling service," suggests that housing should be an object designed to be updated as technology advances. Another variation on this theme is the idea of housing, specifically collective housing, seen as an ocean liner. In developing the housing prototype, the Unité d' Habitation, LeCorbusier frequently used the metaphor of an ocean liner to describe its program. On board ship one rents, not only a place to sleep, but the total range of services necessary to sustain the community. In both of these images, the ownership of a specific dwelling is regarded as irrelevant. Emphasis is placed on the provision of a service.

The final image of industrialized housing consists of the idea of the dwelling seen as a kit-of-parts. Ehrenkrantz (1970) proposes such an image, suggesting that an infinitely varied range of buildings could be produced from a set of standard parts. Habraken (1972) has explored a similar idea, suggesting that an advantage in viewing

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

industrialized housing in this way is that it focuses attention on the users' role in participating in the selection and organization of their dwellings.

Each of the metaphorical images described above has currency in some established area of organized activity other than housing. Consequently, each suggests a wide range of implications which are known in their original context, and which might have utility in understanding the nature of industrialized housing. For any image to work (i.e. to provide useful guidance in the development of industrialized housing), there must be a basis for seeing the source and focal images as being somehow similar. The perception of similarity involves, in part, the models in which each image operates. Black (1962) suggests that the model provides a way of systematically sustaining the metaphor. It provides the basis for the analogical development of the metaphor. Schon (1963) describes this process of development as elaboration and correction.

What is initially carried over in a metaphorical transposition are significant features. This transposition inevitably identifies flaws in the metaphor; areas in which source elements do not quite fit aspects of the focal situation. This lack of fit initiates the process of elaboration and correction. If the production of houses is like the production of cars, for example, does it follow that houses, as the product of this process, are like cars as a product. In turn, what are the characteristics of cars as products? Elaboration involves the transposition of additional elements from the source image. These elements may consist of other features or they may

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

consist of the organization of features as they occur in the source image or model. Schon (1963) and others (Barnett, 1953; Kuhn, 1970; Black, 1962) suggest that the process of elaboration proceeds analogically; with the features, or pattern of features, from the source image being projected onto the organization of the focal image. For example, if houses should be produced like cars, then houses like cars should be accepted as consumer products; e.g. cars as a consumer product are mass produced in standardized forms, are disposable and protected by warrantees. One of the effects of elaboration is to force simultaneous clarification of both the source and focal images.

If elaboration involves extending the metaphorical transposition, then correction involves localizing or confining its application. Thus, houses are like cars in that both can be mass produced but, unlike cars, they are geographically fixed once established on a site. Clearly, as this illustration suggests, there is nothing absolute in the division between features which are preserved by correction and those which are displaced through elaboration. Mobile homes and recreational vehicles, for example, are forms of housing which are treated as factory produced consumer goods, but which also retain the attribute of mobility.

In the process of elaboration and correction, it is not only the innovation which becomes clarified, but the source image as well. Schon (1963) observes:

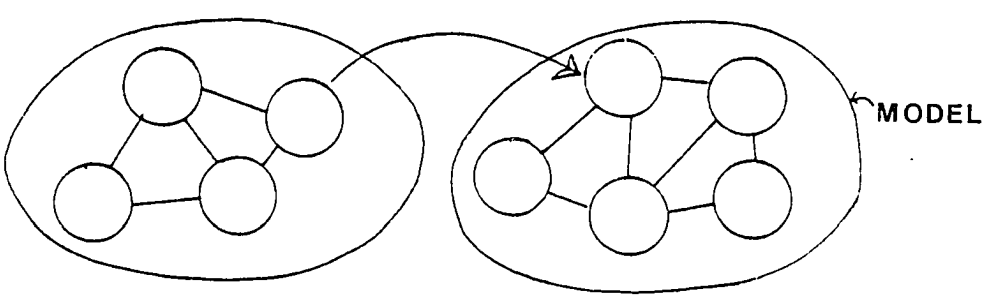
> The process is not a one way affair in which the old theory [image] is corrected to suit the new situation . . . .It is more like a mutual adaptation in which the old theory and the new concept-structured situation are modified in various ways so as to suit one another. (p. 55)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

As suggested previously, in modern societies the image of housing remains, in part, unselfconscious. Through the process of elaboration and correction it may come into awareness.

The analogical development of the metaphor qua innovation is guided by the use of models: i.e. the model in which the source image and/or the focal image is implicated. The use of models helps to translate the practices of industrialization into the field of housing in general, by suggesting which existing forms of industrialization are most appropriate to the character of housing as suggested by the source image. There are three models of industrialized housing which correspond to the three images discussed previously. These are the model of housing as product, housing as service, and housing as process.

Figure 8: Analogical Projection of the Model



The model of housing as product is implicated in the image of housing seen as a car. This model focuses attention on the range of activities involved in producing houses. It draws attention to the rationalization of these activities. Thus the practices of standardization and mass production, characteristic of industrialization, are interpreted to mean that the product (house) should be standardized

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

and mass produced; thereby being reduced in cost and made accessible to a greater number of people. The role of the housing user in this model is analogous to that of any consumer of a mass produced item. The consumer can select from a range of available products, but extensive customizing (ordered by the consumer and produced at the factory) is uneconomical, and should be discouraged.

The model of housing as service is implicit in the image of the house seen as a telephone or as an ocean liner. The practices of standardization and mass production as translated under this model focus attention on the delivery of a standard level of service. The artifact (house) is the mechanism for delivering the services demanded. The artifact simply mediates the relationship between the service provider and the user. Rationalization under this model suggests, in part, that the ownership of the dwelling, or its personalization, is irrelevant and inappropriate. The user might demand special services, but this demand should not be confused with the personalization of the artifact itself.

The final model, housing as process, is implicated in the image of the house seen as a kit-of-parts. In this case, the practices of standardization and mass production are applied to the production of components which make up the physical structure, but not to the housing units as a whole. The rationalization of housing under this model requires the user to participate in the actual assembly of the components. Personalization is understood in terms of the individual's selection and organization of standard components. The physical act of construct inevitably involves a social transaction, in

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

which people with adjacent units must define their common interests and needs.[6]

Just as the transposition of images is guided by overarching models which place the action guided by the image within a larger context, so the choice of models appropriate to a particular activity is guided by the background of assumption held by the innovator and the adopters. Three basic backgrounds relating to the nature of technology have previously been described. These were: actional, interactional and transactional. While any of the models of industralized housing might be developed against each of these backgrounds, as the models have actually been developed by their advocates, they seem to correspond to a particular background.

The model of housing as product, as it has been developed, corresponds most closely with the background of actional technology. That is to say, it follows the basic assumption that the products of technology are somehow independent of human nature: they may satisfy needs, but they do not alter them. The model of housing as service, by contrast, seems to correspond with the background of interactional technology. Technology, here, consists of the organization of the service delivery system. The service providers, as well as the users, are understood to operate as components of this system. The system is a product of their interaction. Finally, the model of housing as process suggests a background of transactional technology. The product is not determined independent of the actors, or by the separate analysis of each component; rather, it results from the ongoing

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

relationship of the various actors in the process of making and using housing.

Elaboration and correction are part of the general process of integrating an innovation. This process is not confined to the inventor who initially conceives of the innovation; rather, it proceeds through the entire diffusion of the item in society. The vast majority of studies of diffusion treat the innovative items as something with fixed characteristics, which becomes spatially and socially distributed.[7] The meaning of the item may change in the course of its diffusion, but not usually its form. By contrast, I will assume that as long as an item continues to be perceived as an innovation, a reaction in the form of elaboration and correction continues.

Just as one can never fully anticipate how various images and models may be implicated in the introduction of an innovation, one cannot know all of the parties which may be affected by the diffusion of an innovation. Schon (1971) illustrates this point with an incident that occurred in the Department of Commerce in the early sixties. The Department wanted to establish a uniform dimension for 2 x 4 wood studs that would be based on a fixed moisture content. Since varying moisture content affects the actual dimensions of lumber, the new standard was to specify allowable moisture content.

The establishment of a fixed moisture content was favored by large lumber manufacturers who already possessed, or could more easily afford, the kilns required for drying. Since the dry measure was an eighth of an inch narrower than the wet, a company already kiln drying

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

its studs could get more lumber out of the same amount of trees. The smaller manufacturers favored wet measure, to avoid the often prohibitive expense of acquiring and operating kilns. The organization of the lumber industry which emerged out of this proposal, and the ensuing lobbying effort, was not one which had previously existed. Rather, it was one created by this particular proposal.

Part of the social process of elaboration and correction is a struggle over the identification of an item as an innovation. As suggested earlier, an innovation is something perceived as new and improved. These are qualifications made by particular actors within a specific context of use. In a social situation consisting of different actors, different perceptions may apply. Several studies, for example, have shown that the successful diffusion of an innovation is often influenced by how its early adopters are perceived: e.g. as persons emulated or scorned (Morison, 1975; Rogers, 1969; Spicer, 1952). An item which is an innovation to one party may be perceived as a ritualized solution to an established situation by another.[8] The struggle over definition is often regarded as one resulting from vested economic and social (power) interests; but in a very fundamental sense, the ability to define a situation is to have control over it.

The ultimate acceptance of an innovation does not imply that all of the parties involved in its use share the same image of it, but rather that each is in sufficient correspondence to avoid conflict. The parties involved may be distinguished as direct or indirect users of the innovation. Direct users are individuals who adopt the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

particular artifact and employ it directly in the exercise of some intentional act. Indirect users are those whose actions can influence the adoption of an innovation by others. Lending institutions, for example, can influence the adoption of a housing innovation by refusing to provide loans to potential users.

Criteria of Correspondence in Integration

In the preceding section, it was suggested that there are several types of correspondence operating through and directing the process of elaboration and correction. It will be useful to list and review these together.

- Correspondence between image and artifact
- Correspondence within the structure of expectations organizing the image.
- Correspondence within the features structuring the artifact.
- Correspondence between the various users of an artifact.

The first type of correspondence, between image and artifact, was mentioned at the outset of this discussion. The image provides expectations regarding the efficacy of the application of an artifact to a particular act. If these expectations are realized, then the image is confirmed. If not, then a correction in either the image or the artifact (or more rarely, in the model) may be in order. The particular operation of this form of correspondence is suggested in attribution theory (Jones, 1972).

The second type of correspondence, that which operates within the structure of expectations organizing the image, has only been implied

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

up to this point. The successful integration of an innovation rests in the ability to elaborate the initial transposition. The process of analogically projecting elements from a source to a focal image involves the compatibility of the structure of assumptions involved: i.e. the ability of expectations from one domain to be integrated into the model of another domain. The particular operation of this type of correspondence is treated, in part, by theories of cognitive consistency (Feldman, 1966). Cognitive consistency, however, is primarily concerned with the semantic content of expectations. At another level, structuralists in anthropology and linguistics have been concerned with the syntactic compatibilities of concept structures; particularly as they undergo transformation (Lévi-Strauss, 1967).

The third type of correspondence operating within the features structuring an artifact is suggested in Rapoport's notion of "modifying factors." The material features composing the artifact constitute a physical system whose operational efficacy depends on the observation of the laws of mechanics, and other physical principles which are independent of beliefs and expectations. Insofar as the objective of correction is to improve the efficacy of an artifact used to realize an intention, adjustment among the features of the artifact may result. This is not to suggest that a form of material determinism is operating here, since the perceived relationship between the features of an artifact must always be mediated through the image; as, for example, in Rapoport's concept of modifying factors.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The final type of correspondence is that operating between various users of an image and artifact within a social situation. The integration of an artifactual innovation requires that the various users of the item involved hold sufficiently similar views of it, so that conflict is avoided. Social correspondence involves achieving nonconflicting uses and beliefs. The social legitimization of the innovation consists of attaining this type of correspondence.

In summary, the integration of a material innovation is bounded by a fourfold criteria of correspondence. Subjectivist theories of innovation tend to stress only correspondence within the image of the innovation; or correspondence between its users functioning as a social system. Materialistic theories stress the correspondence within features and the correspondence among users that grows out of the operational relationship they have to each other. A theory of innovation based on the relationship between image and artifact must deal with all four types of correspondence, as well as with the relationships between them.

Strategies of Integration

The process of innovation, including correction and elaboration, involves at least two images, focal and source; with elements from the source image being transposed to the focal image. Several different types of elements may be involved in this transposition: features, expectations (i.e. the significance associated with particular features) and the relationship between features and expectations.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Looking at the process of innovation as a whole allows several distinct strategies of integration, based on different types of transpositions to be distinguished. Anthropologist Homer Barnett (1953) identified two such strategies: independence and structuralization. Integration, under a strategy of independence, consists of specifying the precise and limited conditions under which an innovation may be utilized. If an innovation is something new, which is accepted as equivalent to something which is established (i.e. some established artifact used to facilitate an activity), it may substitute for that item only in certain situations. For example, an individual or society may accept the idea that a recreational vehicle (R.V.) is a suitable dwelling for vacationing, but not as primary housing for a family. Independence may be achieved through the spatial, temporal or social segregation of the artifact. Thus, in the example of the R.V., its use may be confined to campgrounds which operate only during the vacation season. Independence is, in effect, integration through addition. A new item is added to the established model within which the focal image operates. It is identified as a way of meeting a specific intention, but the established model of housing is not challenged or altered by its inclusion.

Structuralization, by contrast, involves a reorganization of the model. Rather than simply adding an item to the cultural inventory, structuralization involves the redefinition (or reconfiguration) of the image of the artifact contained in that model. For example, the integration of the R.V. as housing, through a strategy of structuralization, would result in the acceptance of the R.V. as a legitimate

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

alternative under a full range of circumstances. Such acceptance would imply a redefinition of the model identifying the range of acceptable alternatives and, in turn, a redefinition or reevaluation of all of the other forms of housing relative to this new frame. Thus, if the R.V. is to become fully accepted as a form of primary housing, conventional home mortgages should be made available for its purchase.

Barnett observes that some cultures seem disposed toward either a strategy of integration through independence or through structuralization. These dispositions may reflect the more general structure by which a society orders knowledge. In modern societies, product marketing strategies seem to intentionally follow either a strategy of independence or one of structuralization. In the development of the mobile home, for example, there are periods in which it has been more advantageous to stress the identification of the unit as a vehicle and, only secondarily, as a dwelling. At other times, the full legitimization of the mobile home as a form of housing was sought.

Independence and structuralization are strategies which involve the significance or meaning of an item. They may involve the relationship of transposed elements within an image, or the relationship between the image and one or more of its models. The form of the innovation as an artifact, however, may not be changed by these strategies; but only the expectations associated with the item. In short, what is involved here is a change in meaning without a change in form. By contrast, there are other strategies of integration which involve the transformation of features and form. One strategy of feature alteration, suggested by Bartlett in his study of memory (1936), is

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

conventionalization. In this strategy the model features are altered to correspond with established forms, typically forms that are identified with the focal image. The conventionalization of an innovation does not mean that it ceases to function in a new way, but only that its form is altered. The case of LeCorbusier's Quartiers Modernes Frugès' (in Pessac, France) is an illustration of conventionalization. This case, reported by Boudon (1972) involved a housing project which was extensively altered by its inhabitants over time. The effect of these alterations was to transform the severely modern design (e.g., with long narrow ribbon windows, flat roofs, and brightly colored exterior surfaces), into units which looked like the traditional houses of the region (e.g. with tall narrow windows, saddle roofs, and muted exterior colors).

Conventionalization wraps an unfamiliar object in a familiar jacket, providing a basis for transferring established meanings to that object; thereby gaining its acceptance. The conventionalization of form should be distinguished from imitation, in which the form is presented at the outset following the appearance of an established item. In conventionalization this transformation takes place over time and involves only selected features of the focal artifact and model.

The second strategy of integration through feature transformation is syncretism (Foster, 1962; Mumford, 1963). As in conventionalization, this strategy is based on borrowing the organization and established significance of transposed features. In this case, however, the model of organization is not provided by the focal artifact and

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

model, but by the source. More precisely, the source provides the basis for organizing features and feature clusters within the new artifact. The result is that the two images associated with the new artifact, i.e. source and focal, are evoked simultaneously. Syncretism is illustrated by LeCorbusier's use of features from various products of advanced industrialization: e.g. porthole type windows and pipe railings from ships. These details are incorporated in mass housing projects, suggesting the idea that this housing is of the machine age. The idea of syncretism is also illustrated in the case of the village of New Peri, reported by Margret Mead (1966). The old village had been built on piles in the shallow waters off the island. The new village, established after a period of Japanese and American military occupation of the islands, was built on the shore. Its pattern followed that of the American military camp. The original functions and social relationships of the village were projected onto this pattern, which was regarded as superior to that of the old village.

Syncretism, as a strategy for the organization of form, is a type of collage. There are ready-made identities which are juxtaposed in such a way that conventional meanings are retained while new meanings, or associations, are fostered. A basic difference between conventionalization and syncretism, as between independence and structuralization, is that the latter in each pair involves the restructuring of the focal model, as well as the focal image or artifact. These strategies of integration are shown in Table 1.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Table 1

Strategies of Integration

		Models for the analogical development of physical innovations	
		Focal Model	Source Model
Elements involved in transposition, elaboration and correction	Expectations (meanings)	independence	structuralization
	Features and feature clusters	conventional-ization	syncretism

Summary of Assumptions in the Paradigm of Innovative Housing Change

The significance of the paradigm outlined here is to suggest that progress toward the industrialization of American housing must be considered at a psychological level of analysis; and not simply treated as a problem of material technology. The psychological dimension of industrialization involves the use of metaphors and analogies. Their use is not ornamental, but a significant means of helping to structure collective thinking about housing and, in turn, to organize action. The basic assumptions of this paradigm are listed below.

- House form consists of two elements: image and artifact.
  - The image is the structure of assumptions which organizes the intentional activities of housing.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

-The artifact is the structure of significant features which objectifies the meaning of housing and facilitates its activities.

-The image and the artifact operate within a model which identifies the character of housing within an extended context of social and physical relationships.

·The industrialization of housing involves a dual revolution: a revolution in practices and a revolution in the consciousness of housing. Industrialization is not a single innovation, but a program of innovations.

·Innovation in housing becomes possible and desirable when the methods of executing housing activities are perceived as lagging behind other aspects of everyday life; thus bringing the efficacy of the conventional solutions to housing needs into question.

-Innovation involves the metaphorical transposition of assumptions about ways of acting, which are drawn from one sphere of activity and applied to another.

-Development of the innovation qua metaphor, involves a process of elaboration and correction in which the metaphor is spelled out analogically within a source or focal model.

-Elaboration and correction are guided by four forms of correspondence.

·There are four basic strategies of integration which assure that the adoption of the innovation will maintain the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

continuity of the larger structure of assumptions which bind society together.

-The strategies of conventionalization and syncretism involve alterations to the artifact which, in turn, assures the continuity of meaning in housing.

-The strategies of independence and structuralization primarily involve the spatial, temporal and conceptual integration of the innovation.

Introduction to the Case Study of Mobile Homes

The body of this dissertation consists of a case study of mobile homes as a form of industrialized housing. The objective of the case study is to demonstrate the utility of the paradigm presented above, for the analysis of the adoption and diffusion of industrialized housing. Although the paradigm of change has been presented before the case study, in their actual development both aspects of the dissertation were worked on simultaneously. Thus, aspects of the case study served to inform and correct the paradigm, while the paradigm helped to draw attention to specific aspects of the case study data. The case study, then, is not intended as a proof of the paradigm but, as suggested previously, as a demonstration of its utility.

The mobile home is single family housing built totally in a factory, with chassis and axles permanently attached to facilitate transportation. Mobile homes were selected as the subject for a case study for several reasons. The first set of reasons concerns the fact that the mobile home is the most widely diffused form of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

industrialized housing in the United States today. In the early 1970's, mobile homes accounted for about one third of all single family housing starts, and over 90% of single family housing constructed for under $20,000. In addition to being a widely diffused form of industrialized housing, the mobile home has been available for a sufficiently long period of time to allow a pattern of response, both formal and informal, to develop. It does not take much investigation to determine that this response includes some vehement objections to the mobile home; considering it to be a blight on the landscape, and its occupants to be "trailer trash." Indeed, one of the aspects of mobile homes that make them attractive to study is the very strength of the resistance which they have generated. Presumably they are touching some core beliefs about housing, and potentially bringing some unselfconscious aspects of the American image of housing into focus. While there is not an extensive body of empirical literature on the response to mobile homes, there is a large body of popular literature which provides the basis for analyzing the non-technical meaning of this form of housing. In addition, there are a great number of legal cases, ordinances and other specifications which provide a basis for analyzing the formal and technical meanings of mobile homes.

A second set of reasons for selecting the mobile home as the subject for a case study concerns the paradigm to be demonstrated. That paradigm considers the structure of housing change in terms of metaphorical images and analogical models. The various labels used to describe the mobile home at particular periods in its development

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

(e.g. travel trailer and house trailer), suggest an immediate metaphorical content: i.e. as an artifact which is an intentional hybrid of two previously unassociated items. In addition, the mobile home suggests aspects of all three models of industrialized housing discussed previously. An investigation of the mobile home, then, may help to clarify the nature and implications of each of these models.

This case study is divided into two parts. The first part, contained in chapters two through four, traces the historical development of the mobile home. The second part deals with the use of the mobile home in a single city: Muncie, Indiana. These two parts of the case study are designed to complement each other: one looking at the application of strategies of integration broadly, the other in depth.

There are several objectives and advantages in developing the historical analysis. The perspective afforded in considering a relatively broad period of time (56 years) helps in the identification of the metaphors used in constructing the innovation, as well as the elaboration of the metaphor through specific models of industrialized housing. Schon (1963) suggests that the historical analysis of an innovation amounts to tracing the life of a metaphor in society. Historical perspective may also facilitate consideration of the complex interactions between the various criteria of correspondence which, in turn, guide the process of elaboration and correction.

The major elements of the paradigm of housing change sketched previously were image, artifact and model. These elements will be dealt with in the historical analysis under the headings: form,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

meaning, user and use. Under "form," the artifact and its immediate physical context will be considered. Data on form (e.g. floor plans, photographs, construction details) are available in trade journals and, for more recent models, through direct inspection. The analysis of form includes, not only a description of its objective features, but of its significant features and feature clusters. A door, for example, may objectively be 2' x 6'3" and faced with sheet aluminum, but to a particular group of users it may be a "trailer type" door rather than a "house type" door.

The determination of significant features and feature clusters requires consideration of the interaction between form and meaning (i.e. artifact and image). Because form is being looked at over time, every change in a feature or a feature cluster potentially indicates a change in significance. This determination, and specifically the determination of a particular meaning, requires a close consideration of the information which attends the change of feature. A magazine ad, for example, which glowingly announces a new style window may indicate in the ad copy that what makes the window so great is that it is just like the type of window one would expect to find in a house. Thus a strategy of conventionalization is suggested; but this interpretation requires consideration of the other features contained in the unit. If the exterior of the unit retains vehicle type action lines, then a strategy of syncretism may actually be operating. In determining the significance of a feature change, it is also necessary to consider whether the unit was successful: whether it continued to be marketed, or whether it quickly disappeared. Even commercial

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

failures are important to study, because they indicate what was not acceptable.

Part of the overt significance of a form lies in how and where it was used. If a mobile home park, for example, is labeled a "community," but it is located in the middle of an industrial area of the city, there is cause to examine more closely what its meaning really is and why the particular label, "community," was chosen. Since an item may be put to several different uses (e.g. as a vacation vehicle or as primary housing), it is necessary to consider the meaning held by each of its user groups (a group being defined by a common and specific use). It is also necessary to distinguish the meanings held by direct and indirect users as defined earlier. In the case of the mobile home, the direct users include: owners, manufacturers, dealers and park operators. The indirect users include: real estate interests, lending institutions, and housing regulatory authorities (such as zoning boards).

Form, meaning, users and use must all be considered simultaneously, even when reporting on only one. A change in any one of these elements constitutes a hypothesis regarding the nature of the innovation; a hypothesis which may be elaborated and supported by concommitant changes occurring in other aspects of the innovation.

The historical development of the mobile home may be divided into three periods. The first period, consisting of the decades of the 1920's and 1930's, may be described as the era of the travel trailer. The second period, commences with American involvement in the Second World War and lasts through the Korean War. This was the era of the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

house trailer. In 1954, major changes were made in the design of trailers, which ultimately transformed them into mobile homes. This period closes in 1976, with the passage of new Federal mobile home regulations.

There are a few analyses of the development of the mobile home which have been useful in identifying general trends in each period. For the first period of development, Carlton Edwards' Homes for Travel and Living (1977), was invaluable. For the second period of development, Meloan's Mobile Homes (1954), provided useful information about the structure of the industry. For the last period, Arthur Bernhardt's massive study of mobile homes (1980) provided a wealth of information. An important primary source of historical data is in trade journals published for mobile home dealers and owners. Ideally, several different journals should be used to structure a quantitive content analysis of changes in the mobile home. Unfortunately, even major research libraries have only spotty holdings of early journals. The type of content analysis utilized in the present study is based on the development of content categories, considered in terms of metaphors and models. It does not follow a rigorous sampling technique, or quantitative analysis of the occurrence of themes, because of the difficulties already mentioned.

Another important source of information for determining the meanings of the mobile home at various periods is the court ruling. Two excellent case books on mobile home law are available: Hodes and Roberson (1974) and Shepard (1975). They were used to guide the selection of materials from legal sources. These data were basically

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

organized by time period, and then by aspects of the mobile home: (e.g. status as a vehicle). Again, these data have been used in a selective fashion to demonstrate issues raised by the paradigm of housing change.

The second part of the case study, reported in chapter five, examines the use of mobile homes in a single community: Muncie, Indiana. This part of the study looks more closely at the strategies for integrating the mobile home in the last of the three historical eras. Even though mobile homes have become less mobile in this period, the economics of that form of housing still favor its use within a park setting. Consequently, this part of the study focuses on the residents of a single park in Muncie; where participant observation and in-depth interviews were conducted. It examines the meanings which users attribute to their housing, how they use and alter it, and how they feel that others perceive their life styles. This section of the study also examines mobile home park life, and the character of neighboring and privacy which result from park living. The methods utilized in this part of the study are described more fully at the beginning of chapter five.

One of the reasons why mobile homes appear to have been a successful form of industrialized housing is because they seem to provide a meaningful basis for maintaining continuity with the established ideals (image) and the characteristics of the artifact identified as American housing. In the concluding chapter, two characteristics of the mobile home--thinness and collage--are examined. It is suggested that they provide a basis for continuity; a basis which

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

might be extended in helping to achieve the further industrialization of housing in this country.

Notes

1. Ittelson (1960) refers to this condition as a "hitch."

2. Among the innovations which marked the transformation of the textile industry in the Eighteenth Century were: the fly shuttle, 1733; the spinning jenny, 1764; and the water frame, 1775.

3. The idea that innovation constitutes a form of conservative change (i.e. change which maintains continuity) has been discussed by several theorists: Schon, 1963; Marris, 1975; Barnett, 1953.

4. The idea that metaphor provides a process for exploring novel situations has been developed by several disciplines; as illustrated in Ortony's anthology, Metaphor and Thought (1979).

5. The distinction between focal and source images, which is developed here, is based on Polanyi's (1975) use of those terms.

6. In addition to exploring the model of housing as product, Le Corbusier develops the model of housing as service. In describing the organization for the Unité d'Habitation, he suggests that individual units are to the whole, as bottles are to a wine rack. With this analogy he expresses a distinction between collective and individual domains which is based on technological rather than on social considerations.

7. See Rogers' The Diffusion of Innovations (1966), for a review of the literature on adoption and diffusion research.

8. The term "ritualization" was used by Merton (1968) to describe a type of adaptive behavior in which a person subscribed to a culturally accepted goal, but only imitated its form, rather than actually achieving it. Ritualized housing, in this sense, might consist of a project of suburban houses so scaled down in size and amenities that it becomes questionable whether they are in fact the desired form of single family housing or only a poor substitute.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Chapter Two

The Historical Development of the Mobile Home: the Era of the Travel Trailer (1920-1939)

A Walt Disney cartoon of the 1930's features Mickey Mouse living in what appears to be a pleasant country cottage. The cottage is set on a grassy hill surrounded by a picket fence. As the scene opens, Mickey is shown moving a large lever attached to the floor. Immediately, everything starts to change. Elements of the house; its hipped roof, shutters, doorstoop, fold up into compartments. The picket fence is drawn into a door in the side of the house. The grass follows into the doorway. Finally, the entire sky folds up like an oriental fan and is sucked down the chimney, revealing behind it the presence of the city dump - and standing where the house once was is a travel trailer, ready for the open road. The cartoon constitutes what may be the most curious celebrity endorsement ever made of a product.

By the mid-1930's it was estimated that between 250,000 to one million people were living in mobile homes (Trailer Travel Magazine - TTM, V. 1, 1). Approximately 75% of these units were homemade (Edwards, 1977). To many contemporaries they appeared to be another fad, like miniature golf, soon to be forgotten; but to others they were perceived as a serious threat to American society: a threat striking at the core values of community. The mid-1930's, in fact, marked a turning point

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

in the early development of the mobile home; consisting of a consolidation of early experiments into an artifact with an organized user group, manufacturers and even legal regulations. Almost all of the themes and issues which attend the development of the mobile home to the present day are evoked in this period. It will be useful, then, to divide this period of development into two segments, roughly split about the year 1936. In discussing this period I will use the terms mobile home, travel trailer and house trailer synonymously.

Origins

The origins of the mobile home are often traced to the conestoga wagon (e.g. Cowgill, 1941). It's debt to that form of transportation, however, rests more in a romantic reconstruction of frontier life than in either the technology or the life style actually involved.[1] The travel trailer was a response to a fundamentally new set of circumstances operating in American society after the First World War. These circumstances included a change in personal transportation, the length of the work week and year, as well as a change in family structure.

Perhaps the most dramatic change following the War was the rapid increase in automobile ownership. The large scale production of Ford's Model-T began in 1916. For $345 a person could purchase a runabout; or for $360 a touring car. Whereas in 1910 there were less than half a million registered cars in the U.S., by 1920 there were over eight million, and by 1930 almost 23 million; approximately one car for every five persons in the population (Flink, 1970).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The use of cars, particularly for leisure, was facilitated by an improved road system (e.g. the paving of the transcontinental highway). The national and state park systems provided destinations for the sunday driver or weekend camper, while the reduced work week and annual vacations provided the necessary time for such diversions. In England, trailers ("caravans") were also extensively used for vacationing. However, the sun belt in the U.S., especially Florida, promoted a new breed of nomads: the retired "snowbird," who came south for the winter. To these factors, operating in the 1920's, the Depression added several others. The importance of providing inexpensive family vacations increased while, for a segment of the population, the need to reduce primary housing and maintenance costs became essential (Clark & Wilcox, 1938).

The vast majority of early trailer users, then, were vacationers. Often they were people of sufficient means to have reasonably long annual vacations and the resources to purchase or build a trailer. Through most of the 1920's the most common form of the homemade trailer was probably the folding tent trailer. These were small units with either fixed or fold out tops. The earliest company to produce such trailers commercially was the Chenango Camp Trailer Company, which started production in 1926 (Edwards, 1977).

A great deal of lively experimentation attended the development of the tent trailer, as reported in the issues of Motor Vehicle Magazine. Some units had wings which folded out and supported a bed, others had hinged lift up sections or telescoping sections to provide adequate head room. The tent trailer was an advance over the earlier car tent,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

which was a tent that attached to either or both sides of a touring car, providing covered sleeping areas. If extra space was needed there were beds designed to be hung inside of the car. The folding trailer tent provided greater convenience than the car tent. A 1923 ad for the "Auto-Kamp" Trailer describes its virtues:

> The "Auto-Kamp" Trailer enables the motorist to take even the longest of tours with independence and comfort. It is a completely equipped home, affording absolute protection from the elements... There is room for everything in the "Auto-Kamp" Trailer, as the car is entirely free for the comfort of its passengers. (Company Brochure, Auto-Kamp Trailer Co.; Saginaw, Michigan, n.d.)

The early "trailerites" included many prominent industrialists: Joyce, President of Packard Motor; Ford; Edison and Glenn Curtiss. Joyce's custom-built unit, constructed in 1915, was made on a Packard chassis and was, in effect, a motorized home. There are several other experiments with motorized homes in this period, and while some major car manufacturers considered producing such units, none entered the market.

The unit which aviation pioneer Glen Curtiss designed for himself in 1919 was a solid bodied, streamlined trailer. He called it his "motorized gypsy van" or "motor bungalow;" which he used on hunting trips (Roseberry, 1972). By the early 1930's, two companies were producing Curtiss' design as the "Aero-Car." A contemporary described its interior as:

> ...neat as a yacht and beautifully streamlined. Inside were four pullman type berths, a spotless galley and an airplane type observatory cockpit forward with a glass roof. There were wardrobes and running water and a telephone to the car ahead. (TTM, Vol. 1, 1, p. 26)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The type of rigid body trailer, like Curtiss', became increasingly popular throughout the early 1930's. Several books provided plans and instructions for the do-it-yourselfer (Sims, 1937). The most common form of rigid body trailers were the coach and the caravan. The caravan had a roof which was rounded front and rear with flat sides. The coach type was rounded along all roof edges. The caravan style is the older of the two, and may have been derived from the British "gypsy" caravan. The coach style suggests the influence of streamlined design as well as railroad car detailing. In both styles the interior was arranged as a single room.

1936: Consolidation

Form

The twenties and early thirties were a period of broad experimentation. By 1936, these experiments were being consolidated into a more generic form. The tent trailer had lost its popularity to the rigid body trailer. While the latter offered more convenience in using cooking facilities during travel, it had the distinct disadvantage of limited space; a problem for which the folding trailer could more easily compensate. Perhaps the increased popularity of the rigid body trailer was also a consequence of its streamlined design. Whereas the car of the twenties had a boxy form, consisting of an assemblage of independent elements: head lamps, trunk, running board, etc.; the car of the thirties repackaged these elements into a smoothly sculpted form; a form expressing motion (Bush, 1975).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The new image of the car-trailer ensemble was captured on the cover of the first issue of Trailer Travel Magazine (January, 1936). Set diagonally across the page is the picture of an Airstream Clipper, its unpainted aluminum body reflecting the rays of the sun in what appears to be an approaching desert evening. The tear drop shape of the exterior suggests the fuselage of a plane, or the inverted hull of a boat. The car which tows it is also a smooth and shiny metal form.

The elevations of both commercially built and homemade units throughout the late 1930's reflect a general acceptance of the features associated with motion symbolism and streamlining. These features, as summarized by Bush (1975), include a rounding of edges, smooth surfaces and the tapering of form toward the leading edge of the object. In the travel trailer, the dominant response to streamlining is in the exterior shape of the unit: rounded along the front edge and tapered toward the rear. Wally Byam, designer of the Airstream, argued that streamlined design was necessary to reduce the drag produced by the towed vehicle.

> The front was rounded to present an easy edge into the wind, vertically and horizontally. The tail was tapered off to eliminate suction in the rear. It was streamlined underneath as well as on top...and planned to give an extremely low center of gravity (TTM, Vol. 1, 2, p. 20).

Certainly with improved road conditions and more powerful cars, drag would be a noticeable problem. While Byam conducted tests to determine the most efficient form for his trailer body, many of his contemporaries apparently adopted what they perceived as the effective features of streamlining without benefit of calculation. Some of the resulting

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

forms (e.g. the Aladdin Trailer of 1936) seem questionable. As a contemporary critic observed: "The strangest monstrosities being committed in the name of streamlined design are bad enough today and will probably grow worse" (Sims, 1937).

In addition to the evidence of streamlining in the trailer body, it was applied to other details. The typical window of the period is a top hinged awning type. Often it was rounded on the top or all four corners. At least one manufacturer offered a window that slid down into the side wall of the trailer. A goosenecked hitch was featured on several commercial units. The detail consisted of a cut out along the front of the unit, matching the outline of the trunk of the towing car. Some units also had a trunk compartment on the rear. Molding strips were often applied in the smooth curved lines associated with motion, while wheel cutouts followed a similar silouette.

The use of metal as an exterior skin would be most consistent with the streamlined style. Byam's Airstream trailer used aluminum, with an aircraft assembly technology, for both its interior and exterior finish. For a brief period the Bender Body Company, manufacturers of stamped metal car bodies, applied that technology to its trailers. The dominant structural system and finish for most trailers, however, was wood framing sheathed with pressboard on the outside and plywood on the inside. Canvas was glued to the roof section for waterproofing. By the late thirties, different types of insulations were being inserted between these surfaces. Without insulation, condensation and freezing in the interior were common problems.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Just as the outside of the trailer took its details from the style of objects made for motion, the inside borrowed freely from the same source. The typical commercially produced unit averaged 6'6" x 15' with a ceiling height of between 6'3" and 7 feet. Furniture and appliances were built in, and frequently folded up or converted into other uses (e.g. benches into beds) to take full advantage of the limited space. The problems of making use of a compact space had already been addressed by the designers of yachts and railroad cars, and at least some trailer designs observed the appropriateness of these solutions. Curtiss' Aero-Car used pullman type sleeping berths. The built-in compartments of the Airstream and other trailers follow the same sources. Arthur Sherman, founder of the Covered Wagon Company, acknowledged a debt to yacht design. A contemporary wrote:

> Many persons have commented on the resemblance of yacht interiors to travel trailer interiors, citing kitchen galleys, the compact bunks, the marine type water pump, the mahogany paneling. They draw comparisons between staterooms on a boat and on a trailer. They even design some trailers with port holes for windows. The fact of the matter is that such design developments Mr. Sherman based directly on his cruising experience. (Silbar, 1939, p. 14).

In contrast to the use of features associated with yachting and, in turn, with upper class forms of leisure, other interior details suggest the influence of gypsy wagon design (e.g. gondola arches). This juxtaposition of associationally contradictory forms is characteristic of the whole development of the travel trailer.

The solid body trailer offered far more appliances and accoutrements than the tent trailer did. By the late 1930's most commercial

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

manufacturers offered models with toilets (often requiring manual dumping, but in some models with a grinder to provide for direct disposal where a sewer hook up was available). When parked at a campsite, water was provided by a simple hose hook up. Water was heated either by oil, LP gas or electricity. Space heating in the smaller units was provided by the cooking stove or by a coal or oil heater. Some manufacturers were beginning to feature heating systems in which return air was ducted under the floor. Cooking was typically accomplished on a pressurized gas stove (such as those then and now manufactured by the Coleman Company). The earlier trailers used ice boxes for refrigeration, but by 1939 electric ice box combinations were available.

The solid bodied trailers of the twenties and early thirties were typically entered through a door in the rear. With the introduction of the streamlined body, the door was moved to the side. Some observers (Moose, 1976; Edwards, 1977), have suggested that this shift in door placement was also the result of other considerations: e.g. improved safety in egress, cleanliness, in terms of reducing the amount of road dust which got into the trailer in transit, and an improved floor plan. I suspect that these changes followed the relocation of the door, as a result of the practice of streamlining, providing a further rationalization of this shift.

With the introduction of an increasing number of appliances and facilities, the floor plan of the trailer became a narrow walkway wrapped by appliances, beds, cupboards and the like in essentially the fashion of the present day recreation vehicle (R.V.) Small as

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

this floor area was, by the late thirties there was already a clear tendency to create distinct functional zones in the conventional manner of defining a sleeping room, a cooking and a dining area. The 1940 Ambassador Delux, for example, offered a floor area approximately 7' x 20' with the rear section partitioned as a bedroom. Rather than using folding berths to make dual use of the space, the "luxury" sized trailer utilized its extra space to reassert a conventional zoning and privacy pattern; and thus became, more literally a miniature vacation cottage on wheels.

The development of the folding trailer of the twenties produced a wide range of experiments in expanding the space available in a core, portable unit. With the ascendency of the solid body trailer, these experiments were largely forgotten (only to be rediscovered or reinvented in the last 15 years by the R.V. industry). It is as if those experiments belonged to the technology of canvas (indeed, many of the tent trailer manufacturers were originally tent and awning makers) and were therefore inappropriate to the streamlined modern trailer; even though the requirements for streamlining applied functionally, only when the trailer was in motion.

There are at least two significant experiments in increasing the space of the solid body trailer in this period. The first experiment by Corwin Willson was the development of a two story trailer or "mobile house," as he called it. The first floor contained kitchen, bath, dining and eating areas; while the second contained four beds in a crawl space area. Willson presented his idea in both Trailer Travel Magazine, as well as Architectural Record. His experiment only

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

realized commercial production in the late fifties; after the eight foot wide mobile home was introduced. The second experiment, by William B. Stout, an automotive designer, consisted of an unfolding home. The core trailer, containing the bathroom and kitchen, could be used while traveling. Once parked, the long sides of the trailer unfolded, practically tripling the floor area. The structure consisted of a tubular metal frame. A unit essentially following Stout's design was produced by the Palace Corporation during the Second World War under consignment to the government. Palace went bankrupt after the War but, in the mid fifties, the Magnolia Company picked up production of a similar unfolding model. These experiments at extending the space of the travel trailer only became commercially significant when factory built, rather than homemade trailers, began to be used increasingly as primary housing.

The trailer used either as vacation or primary housing required hookups at a park or site. Most trailers were "dependent:" i.e. without toilet facilities. Since they were auto towed, their movement was restricted to hard surfaces. Trailer parks, or auto camp grounds as they were called in the twenties, started out as spaces in existing vacation cottage sites. By the mid-thirties there was sufficient trailer volume to justify the development of parks exclusively for trailers and auto campers. A typical site might be 30' x 30' with electric and water hook ups and a seep hole for waste water. Communal bath, laundry and toilet facilities were provided. While there were also plans for parks that would offer individual shower and toilet facilities for each unit, there is no evidence that any were actually developed.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The form of the commercial mobile home of the late 1930's, as well as its park, expressed and facilitated a transient lifestyle. They provided the means for a motoring vacation in which a family could simultaneously be outdoors, and yet have some of the convenience and autonomy of home. A few people, like Stout and Willson, were concerned with the issue of expanding the living area of the trailer because they saw the trailer as a potentially significant housing alternative which could accomodate the nomadic work population of the United States. The rhetoric with which they presented their schemes is consistent with that expressed by the architectural avant garde of the time. Their solutions, likewise, follow a machine age aesthetic; rejecting traditional house form as inappropriate to housing needs.

In contrast to this approach, two professors at Purdue Univeristy developed a trailer which was intended to serve as primary housing, and whose form was highly conventional. One model consisted of two trailers that would be attached together at the site along their longitudinal axis. Both units had conventionally zoned floor plans and elevations. As they would have to be towed to the site, they were not intended to alternately serve as vacation trailers.

Users

The need for expandable units, or other solutions that would significantly increase the living area of a trailer was not a pressing issue in the first period of trailer development, since only about 10% of the owners of commercial units were using them as primary housing.[2] Likewise, there was little need for parks to provide facilities to

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

accommodate trailers for long stays in a community atmosphere. Only about a quarter to a third of the units in use in the thirties, however, were commercially produced. The rest were homemade; and perhaps a larger percentage of this population was using its trailers for housing. The total number of trailers in use was estimated to be 330,000 by the Trailer Coach Association in 1940. At a conservative estimate of 2.5 persons per trailer, the population of trailerites would be over 800,000.

For the vacationing trailerite, the trailer provided an alternative to the vacation cottage. These cottages were usually quite minimal, and by the late 1920's had the reputation of being less than wholesome environments. By the thirties, however, vacation cottages were being displaced by the emerging motel industry. Indeed, one of the early sources of resistance to trailer park development appears to have come from this new competitive industry (Clark and Wilcox, 1939). Contemporary surveys suggests that the vacationing trailerites, using a commercially built unit, had a higher level of income and education than the population in general. There is no evidence if the same characteristics were to be found among the users of homemade trailers.

For the year round trailer resident, the type of housing typically being replaced was a boarding house or apartment; often within a private house. The permanent trailer dwellers consisted of migrant unskilled workers, retired persons, and skilled workers: e.g. construction trades. For the traveling construction worker, the trailer made it possible for the family to stay together at a work site where other

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

forms of housing were not available. Even where apartments were available, the trailer afforded greater autonomy for the family.

The use of trailers as primary housing raised concern from a variety of quarters. Even vacation trailer advocates felt that, given the small size of the units, a family forced to live in it full time would soon be at each others throats (Melone, 1954). In addition to a concern over the effects of crowding, detractors from the idea of trailers as primary housing felt that the transient character of the trailer park community provided an unwholesome environment for raising children. The few sociological studies done from the late thirties through the fifties fail to bear out this expectation. Cowgill, in the first of such studies (1940), concludes:

> If we may credit the statements of many of these trailerites, they resorted to trailer life to obtain freedom and adventure and to get away from the city. This would imply, if they achieved these goals, a better mental health for the trailerites.... My observations lead me to state that the average trailerite is happier and has more zest for life than his brother who is tied to one spot and feels more of the weight of the world upon his back.(p. 41)

Despite such conclusions, suspicions remained about trailer parks and trailer life.

The first association of trailerites was founded in 1920. Calling itself the Tin Can Tourists of the World (TCT), it had for its objectives:

- To unite fraternally all auto campers
- To establish a feeling of friendship between them and a friendly basis with local residents
- To provide clean and wholesome entertainment in camps and meetings

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> ·To spread the gospel of cleanliness to all camps, as well as enforce the rules governing all public camp grounds (Edwards, 1977, p. 272)

These objectives indicate that the early trailerites sometimes had problems with local residents, and in finding clean and wholesome campgrounds. By the mid-thirties there were also an increasing number of negative incentives for the formation of user associations; notably in the mounting legal resistance to trailer parks.

Trailer Associations served as a liason between manufacturers and users, as well as among trailerites. In 1937, for example, the TCT joined with several of the large manufacturers to host a show of new units. Previously, trailers had been shown primarily at new automobile shows. Associations organized rallies at least once a year and, in later periods, associations and rallies were organized for the owners of units made by a single manufacturer (e.g. the Wally Byam Airstream Caravans). Rallies were alternatively called caravans or roundups. While pictures of some of the early TCT rallies suggest that little consideration was given to the physical organization of the rally site, in later roundups the wagon train ring was sometimes used.

Manufacturers also started to organize themselves into associations by the late thirties. As in the case of the user associations, the threat of legal restrictions on the industry was the incentive to their formation. Indeed, one of the early activities of the associations was to promote model trailer ordinances. The development of manufacturers associations appears to have been spurred also by the desire of larger manufacturers to develop standards which would prove difficult

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

for the small producer to meet. In 1936, the Trailer Coach Association (TCA) was organized by manufacturers in the West, and the Trailer Coach Manufacturers Association (TCMA) for manufacturers east of the Rockies. These associations later gave either full or partial memberships to other components of their industry; such as suppliers, dealers and park owners (Edwards, 1977). In 1938 The American Trailer Travel Association was formed in order to unify the various components of the industry with the trailerites. It ceased operation by 1939; although individual associations were formed by specific manufacturers and owners of their units. These types of associations continue today among owners of R.V.'s; but not among mobile home owners, or manufacturers.

Even though the majority of trailers were homemade throughout the thirties, the trailer industry was reported to be one of the fastest growing industries in the U.S.. Estimates of the number of units produced commercially varied widely. Fortune magazine put 1937 production at about 100,000 units (March, 1937), while the Department of Commerce concluded that 19,000 units were made (Edwards, 1977). Part of the difficulty in estimating the number of units manufactured and, in turn, the number of manufacturers, rests in the character of the industry itself. It consisted of a few relatively large manufacturers (e.g. Covered Wagon, Schult, Palace) and a great many small producers. The amount of capital necessary to start a firm was minimal. A backyard garage and hand tools were sufficient. The technology involved was also simple. Like individuals making their own trailers, the small manufacturer was able to utilize plans and building

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

instructions provided by a number of books. Only the largest manufacturers could afford to engage in any form of rationalized production (e.g. the Covered Wagon Company with a subassembly line capable of producing 35 units a day).

The early structure of the industry, then, combines aspects of what might be called the hard technology characteristics of industrialization and the soft technology of the do-it-yourself builder. While a few small auto manufacturers entered trailer production (Pierce Arrow with its "Travel Lodge", Nash Motors, Federal Motors, and Hayes Body), none became a major or long standing producer. The mixed structure of small and large manufacturers remains characteristic of the mobile home industry to this day. It accounts, in part, for its success. The number of small manufacturers mushrooms when demand is high, and also declines with demand. The large manufacturers, with substantial capital investment, grow more slowly, but also tend to remain more stable.

The use of trailers and the growth of the trailer industry was, and remains, closely tied to the development of parks and campgrounds. If there were an adequate number of campgrounds or if they were unwholesome, then the desirability of trailers could be seriously effected. In the late 1930's, some manufacturers considered developing parks. Apparently none did. As indicated earlier, there were also proposals for chains of campgrounds (like the current KOA system); but these, too, failed to materialize. Park owners, as well as dealers, were allowed to join some of the manufacturers associations, but their participation appears to have been minimal. Most parks were essentially

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

"mom and pop" operations; where a couple living in their own campground made space and facilities available. The trailer industry, then, from the majority of its manufacturers to its dealers and park operators, consisted primarily of small independents who were being brought together in a loose affiliation, motivated largely by negative pressures, in the late thirties.

Just as the direct users of the travel trailer (e.g. its occupants, manufacturers, dealers and park operators) formed a loose affiliation defined by their ongoing transactions, the indirect users also emerged as a loose affiliation in their attempt to formulate and impose their own definition on the nature of the travel trailer. The indirect users include motel and vacation cottage operators who came to see the trailer as a threat to their business, and real estate owners who feared that the indiscriminate location of trailers could seriously affect the values of their property. It also included tax payers who felt that their real estate taxes were paying for the schooling of trailer children. The relationship between direct and indirect users, particularly when they resulted in court cases, is one of the most important sources for clarifying the meaning of the travel trailer.

Meaning

The meaning of an artifact consists, in part, of its classification as an object appropriate to particular actions and acts. Since the travel trailer is clearly and intentionally a hybrid of vehicle and dwelling, its classification potentially involves these two categories of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

objects. Meaning specifies how, with respect to specific features, use and action, it is appropriate or inappropriate to each category.

There are at least two levels on which the meaning of the travel trailer was developed. The first level is formal, or technical. It consists of regulatory specifications (e.g. vehicular requirements for licensing) and of court rulings. The courts may act as the mediator in conflicting interpretations between various direct and indirect trailer users. In the case of the travel trailer, the legal foundations necessary to involve the courts in its regulation were already established in the 1920's; notably in the cases testing the rights of a municipality to engage in comprehensive zoning and land use regulations. The second level at which meaning is explored is informal; consisting of images and language used in popular magazines and non-technical books.

Formal Meaning

The most widely reported court case involving travel trailers in this period was People v. Gumarsol.[5] The case involved a Mr. Hildred Gumarsol who located his travel trailer on a rented lot in Orchard Lake, Michigan, in the summer of 1935. Rather than remove his trailer at the end of the season, he set it upon blocks, added a porch, and left it there over the winter; returning to it the following summer. The suit was brought by nearby land owners, apparently concerned that Gumarsol's example would be followed by others, and that Orchard Lake might quickly be reduced to a shanty town of trailers. Indeed, there were already five trailers around Gumarsol's. "These

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

people," Police Chief Clarence Carson stated, "roll in their trailers and proceed to enjoy all the privileges of the lake without paying taxes...and they aren't discrete in getting into bathing suits either" (Elwood, 1936, p. 66). An existing town ordinance specified that a dwelling must have at least 400 square feet. Gumarsol and five other trailerites were arrested for being in violation of this ordinance.

In his defense, Gumarsol argued that his trailer was not a dwelling but an automobile accessory. Justice Green ruled:

> It is the opinion of this court that a house trailer of the type occupied by the defendant and having a great many appointments of a modern home would come under the scope of a human dwelling whether it stands upon blocks or the wheels attached thereto or whether it be coupled to or detached from an automobile. (in Hodes & Roberson, 1974, p. 105)

The Justice is reported to have added that "trailer shantytowns will no longer be allowed at Orchard Lake ("Trailer Test," 1936, p. 66)."

Gumarsol argued that his trailer was a vehicle, even though he had set it up on blocks, removed the wheels and added a porch to it. The court, in ruling that the defendant's trailer was a dwelling, simultaneously legitimized it for that purpose, while making it impossible for it to meet the dwelling ordinance requirements. With an average width of 7' - 7'6", a trailer would have to be 53 feet long to meet the code. A trailer of this length, if it could be towed, would violate most vehicular regulations.

The Gumarsol case illustrates most of the common objections raised regarding trailers: i.e. the occupants do not pay their fair share of taxes for the public services received; the controlled

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

placement of trailers and trailer camps threatens real estate values on adjacent properties; and people who live in trailers may behave immorally, threatening the standards of the community. The response to the issue of taxation would be answered in this period through the imposition of registration fees and personal property tax. The threat to real estate would be met by the imposition of permits limiting the stay of trailers and through the use of frontage consents and other devices which could effectively ban the use of trailers in a jurisdiction. Finally, the question of morality would be raised in the courts in an attempt to have trailers and camps declared a nuisance per se.

In the attempt to impose restrictions on the travel trailer, its categorization as vehicle or dwelling is a constant source of difficulty. If the artifact in question is a vehicle, can it be regulated through land use controls? If it is not a vehicle, is it a building? Can it be a building if it is on wheels? Is the nature of a structure determined by its use, the intention of the user, or by the objective physical features which it contains?

The authority of a municipality to regulate travel trailers rests in its police powers, as granted by the states, to protect the health and safety of its citizens. This authority may be applied to limit the stay of a trailer on the basis of sanitation: i.e. if a trailer fails to conform to the established sanitary code of the municipality. In the case of Spitler v. Town of Munster,[6] the town ordinance limited length of residence in a motel to 30 days. The

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

court sustained the town's authority to impose this limit on trailers, stating:

> The town's building and plumbing code fixed requirements for places of permanent residences. Tourist camps are ordinarily considered as places of transient or temporary abode, and the requirements of this tourist camp ordinance are no doubt less than the code requirements for permanent abodes. The provision that a person shall not live in a tourist camp for more than thirty days is designed to maintain the transient character of such camps and the penalty is only a means of enforcing the requirement. (in Hodes & Roberson, 1974, p. 97)

The ruling of the court in Spitler v. Town of Munster acknowledged the power of a municipality to define what constitutes "temporary residence," but it did not overtly express the idea that the very transitory nature of trailer homes poses a threat to the stability of the community. In another case,[7] involving the right of a municipality to limit the stay of trailers in any one year, the court did make such an interpretation.

> Ordinances having for their purpose regulated municipal development, the security of home life, the preservation of a favorable environment in which to rear children, the protection of morals and health, the safeguarding of the economic structure upon which the public good depends, the stabilization of the use and value of property, the attraction of a desirable citizenship and fostering its permanency are within the proper orbit of the police power. (in Hodes & Roberson, 1974, p. 97)

In addition to regulation by building code, the location of a trailer park itself could be restricted by exercise of frontage consent. This is the right of property owners in certain zones to refuse a land use if a majority of them feel that it would be a "nuisance." Based on a 1917 ruling that residents could refuse to have billboards erected near their homes, the court ruled (Cady v. City of Detroit),[7] that

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

property owners could also refuse consent to the establishment of a trailer park. In several cases subsequent to Cady, however, the courts have ruled that parks cannot be classified as a nuisance per se.

All of these cases involved trailers on rented lots or trailer parks. A different set of issues is involved if the trailer user is on his or her own property. In the case of Boxer v. Town of Harrison, the court struck down an ordinance requiring a permit of occupancy which would be valid for only two weeks and not renewable. The trailer in question was located on a private lot owned by the occupant. The court stated, "as the ordinance reads, the plaintiff could have neither the use of his real property for the storage of his trailer, nor the right to full enjoyment of his personal" property" (in Hodes & Roberson, 1974, p. 98). This ruling put the constitutional right of an individual to the enjoyment of property above municipal authority which is not directly founded in the maintanance of community health and safety.

In general, the court rulings of this period had the effect of defining the trailer as a temporary residence. Temporary is defined, in these cases, as geographic. An individual moving from place to place in the same trailer is in a temporary residence; yet a motel, which does not move, is also temporary; while a family moving from one fixed home to another is not in a temporary residence. The ambiguity which seems to surround these rulings stems from the fact that the legal traditions regulating dwellings are based on the assumption that a dwelling is attached to property, whether or not the property is owned by the dwelling owner. What, however, does such "attachment" mean in the case of a travel trailer? As opposed to an ad hoc approach,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the State of Michigan passed an act which replaced all local laws and ordinances affecting trailer parks. The Michigan Trailer Coach Park Act of 1939 was formulated with industry support, and would serve as a model for other states.

The stationary trailer could be considered a building and regulated as such, but as a moving object it fell under vehicular regulations. By 1937, all but four states imposed dimensional limits on vehicles using public highways. Permitted heights ranged from 11 feet in Connecticut to 14'6" in Utah; averaging 12'6". The maximum lenth varied from 26'6" in Kentucky to 60' in Nevada; but the average was 35 feet. The permitted width in almost all states was eight feet. Thus, the maximum gross floor area of a trailer which could be built for use in any state was only 110 square feet.

Trailer advocates frequently listed freedom from taxes as one of the major advantages of full time trailer housing. The advantage to the trailerite was perceived as a danger to the municipalities, which would have to bear the cost of providing public services. A bulletin of the Tax Policy League in 1937 concludes: "The first problem is that of taxation of the trailer. Should it be considered a house or a trailer" (Edwards, 1977, p. 87)? When classified as a vehicle, the most appropriate means of taxation was through the imposition of a registration fee. To this, special user fees might be added, (as in Florida where a $12 charge was assessed on trailers containing children). Twenty states extended their personalty tax to include travel trailers (Meloan, 1954). Both forms of taxation raise questions: e.g. when should a registration fee be imposed (after what period of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

time); if a trailer is registered in one state but used in another, which has the right to assess personalty taxes; should a distinction be made between trailers used as primary housing and those used for vacationing only? While these questions were raised in this period, they were far from resolved.

Both vehicular and dwelling regulations of trailers developed rapidly after 1936. Their restrictions, particularly those regarding the trailer as a dwelling, posed a potential threat to the growth of the industry. However, they also offered an advantage to the commercial manufacturer. Restrictions setting standards for the units could work more selectively on the homemade unit whose designers might be unaware of the various regulations to which they must conform. Indeed, an organized industry might work for strict standards, both improving its image and eliminating its competition. In 1937, a group of companies formed the TCMA. In a set of recommendations made that year it suggested that: states establish a licensing fee based on weight (some used assessed valuation), which would work against the more expensive commercial units; require vehicular lights; require wiring that would meet building codes; and require adequate couplers between car and trailer (Moose, 1973, p. 6). Perhaps the most significant suggestion of the newly formed organization was that the states should treat trailers as vehicles rather than as buildings.

> In view of the fact that trailers are conceded by most authorities to be vehicles, we doubt seriously the ability of anyone to place them under the housing code....
>
> The experience of those in the trailer industry parallels to some extent that of the pioneers of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> the automotive industry. We all can well remember the attempts that were made by municipalities to ban the use of the automobile within corporate limits and, of course you know what happened. It is also a known fact that the percentage of people living in trailers who have been or are on relief is almost negligible. (Brown, 1939, p. 5)

The emerging trailer industry could, and to a certain extent did, take advantage of the legal ambiguity surrounding the hybrid nature of its product to more freely exploit its development.

Popular Meaning

The technical and formal interpretations applied to trailers tend to focus on specific features or aspects of their use, while leaving the broader model largely unconsidered. The popular meanings given to the trailer, by contrast, freely reach out for the broader associative frame; experimenting with references to see what will hold and what will fail. By the mid-thirties, the broad themes that would accompany the trailer life style were already well pronounced. These themes revolved around individualism and community in a machine age.

The car, which made the trailer possible, established the theme of individualism. The mass produced car, as Ford envisioned it, would be a great liberator. It would allow every class access to the country and the choice not to be bounded by the opportunities of a particular geographic neighborhood or town. The car extended a social revolution begun with the diffusion of the modern bicycle. It broke down the dominance of the house as the setting of courtship and friendship.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Ironically, the car, which was made possible by modern industrialization, did not convey the negative onus of industrial civilization. Belasco observes, "the train, not the car, represented Modern Times; ruthlessly efficient, impersonal, insulated, monopolistic." The car and auto camping proclaimed "independence from the rail-hotel complex." He goes on to state:

> Slow, arduous, intimate, and close to nature, auto camping seemed a return to what tourists imagined to be the healthier self-reliance, family solidarity, and more leisurely pace of pre-industrial times. Behind their delight in traveling "off the beaten track" was a profound dissatisfaction with the discipline and institutions of contemporary society. (p. 1)

Auto camping represented, in part, a rejection of fixed community; while being for spontaneous community and the comraderie of the roadside park or the trailer rally. The names given to trailers and their campsites evoke a curious reconstruction of a pioneer past and a technological future: Covered Wagon, Vagabond, Land Yacht and Clipper.

The new medium, McLuhan (1964) observed, takes the old medium as its message. The automotive age emerged shortly after the American frontier disappeared. Frederick Jackson Turner, whose work did so much to solidify the idea of the frontier, finished his essay, The Frontier in American History, in 1920. Summarizing Turner's work, Nash writes:

> Many Americans came to understand that wilderness was essential to pioneering: without wild country the concepts of frontier and pioneer were meaningless.... Toward the end of the Nineteenth Century, esteem for the frontiersman extended to include his environment. (1973, p. 145)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In Turner's own words:

> Out of his wilderness experience, out of the freedom of his opportunities, he fashioned a formula for social regeneration - the freedom of the individual to seek his own. (1896, in Nash, 1973, p. 146)

While the general population could not have access to genuine wilderness, it had increasing accessibility to its pastoral counterpart through the mass produced car. An article in Harper's Weekly concluded that the attraction of the automobile lay in:

> ...the feel of independence, the freedom from timetables, from fixed and inflexible routes, from the proximity to other human beings than ones chosen companions; the ability to go where and when one wills, to linger and stop where the country is beautiful and the way pleasant...and the satisfaction that comes from the knowledge that one need ask favors or accomodation from no one nor tresspass on anybody's property or privacy. (in Flink 1970, p. 90)

The logical extension of the freedom offered by the automobile would seem to rest in the travel trailer: no need to ask for accomodations, a choice of one's neighbors and access to the countryside.

> There is only one disadvantage in living in a trailer..it will infect you.
>
> The basic reason, perhaps, is the sense of freedom which trailer life gives you. If you don't like your neighbors - if you don't like the scenery - if you don't like the temperature - if you don't like the dog your dog associates with - if for even the most trivial reason you want to move, when you're living trailer life you simply move. (Sims, 1937, p. vii)

Mobility is, thus, directly equated with individuality. The wilderness provides the challenge, but it is the willingness of Americans to move to meet the challenge that enables the wilderness to have its transformative effect on the nation's character. As the lines of a poem in the Denver Post read:

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> Time has not dulled that urge.
> The wanderlust lives forever in the hearts of men.
> Trails have grown smooth and comfort goes along
> As covered wagons travel West again. (in Nash, 1937, p.88)

To the extent that the trailer is used as a means for a vacation "escape," a return to a simpler, freer life style, it does not particularly raise the ire of the non-trailer using public. Their resistance seems to stem instead from the prospect of large numbers of people living in trailers as primary housing. This fear was undoubtedly fueled by a widely quoted article by the economist Roger Babson, written for the first issue of Trailer Travel Magazine, in 1936. Babson predicted that in twenty years half of the population of the United States would be living in trailers. He argued that in the fixed home a man feels anchored and in the grip of his employer, marked by the tax collector and unable to control neighborhood conditions. "Those of our people who have turned to rolling homes have been influenced by a characteristic feeling of Americans - resentment against taxation, and a desire for independence and freedom of movement" (p. 11). In a later issue, William B. Stout argued that "an increasing proportion of people can expect to give up the 'house and lot' idea of a permanent residence and go to an automobile and trailer existence" (p. 15).

That these ideas should be espoused in a magazine about trailer living is not surprising; but they are echoed in other, more detached, quarters. Two contemporary sociologists, Clark and Wilcox, writing on the "House Trailer Movement" concluded:

> A man's home has long been his castle and, like a castle, has been permanently rooted to a fixed

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> location. Modern societies have been distinguished by a tremendous increase in the mobility of their populations, but while the ingenious inventors of swift modes of transportion [sic] have facilitated the movement of people hither and yon, they have not thus far on any considerable scale uprooted the pattern of fixed dwelling. The house trailer offers the possibility of severing completely the ties of permanent residence and permitting a nomadic existence in mobile homes. (1938, p. 504)

The Municipal Association (1937), in its major report on house trailers, also suggested that the house trailer might be the appropriate manifestation of modern housing needs.[9] They concluded that the "possible consideration of the trailer as a permanent house will lead to a valuation or revaluation of the major requirements for decent living" (in Edward 1977, p. 90)."

The trailer is presented as a mechanism for securing individual freedom; but, as previously suggested, it could simultaneously be perceived as a threat to fixed communities and the ideal of the permanent home as a committment to geographic community. President Hoover expressed the idea that "...to possess one's home is the hope and ambition of almost every individual in our country.... That our people should live in their own homes is a sentiment deep in the heart of our race and American life" (in Roscow, 1932, p. 751). Presumably Hoover did not have in mind that these homes, however so humble, could be mobile.

Summary: Strategies of Integration

Innovation has often been referred to as a hybrid: i.e. something new constructed out of existing items and ideas. In the previous

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

chapter it was suggested that the process of construction could be thought of as the making of a metaphor composed of elements from a source and focal image. Thus, the travel trailer is a metaphor in which vehicle is seen as house, and in which house is also seen as vehicle. Exactly what constitutes the focal and source images varies with the particular strategy and user group being considered.

The innovation qua metaphor is elaborated and corrected through the development of analogies. Aspects of the source image and artifact are projected onto the focal image artifact and model. In the case of the travel trailer, an important analogy developing the metaphor of house as vehicle is the development of motion symbolism or styling; particularly as it is manifested in the design of advanced industrial artifacts: e.g. ships and railroad cars. The function of the strategies of integration is to achieve correspondence between the established and the new aspects of the situation. An overview of this period reveals many conflicting or contradictory meanings, features and uses. This is a period of broad experimentation, but also of consolidation. The order or structure of its development is made clearer by considering it in terms of the strategies of integration identified earlier. There are three basic sets of strategies evident in this period. Each operates to define the travel trailer in a somewhat different way; as indicated by the different labels used: "travel trailer," "mobile home" and "house trailer."

The Travel Trailer

The interpretation of the artifact as a travel trailer gives equal emphasis to its vehicular and dwelling aspects. It is, however,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

an object intended primarily for use on motoring vacations and, as such, traces its lineage to the tent trailer and, more generally, to camping. The camping complex with its portable, collapsible furniture and appliances; and the idea of getting close to nature and sitting around the campfire at night, constitutes the focal image. The source images are drawn from vehicles. This projection is instrumental, but it is also expressive.

In looking for the proper features and forms for the travel trailer, analogies are drawn from other vehicle dwellings; primarily from the railroad sleeping car and, to a lesser extent, from the yacht, and the gypsy and the Conestoga wagons. Since the travel trailer is equally a dwelling and a vehicle, it is not regarded as inappropriate to have vehicular aspects projected onto the interior as well as the exterior: for example, to use storm lanterns as an interior lighting fixture or porthole type windows.

The overall form of the trailer is regarded as something made for motion which, in the understanding of the period, means something that is streamlined. Moreover, the car and the trailer are seen as a complex: i.e. as something which moves together, even though it is exclusively stationary when used as a dwelling. One of the consequences of elaborating the vehicular analogy is to simultaneously reject design alternatives which belong more exclusively to the camping complex; notably the folding tent with its canvas and awning technology. The majority of trailer designs, both commercial and do-it-yourself, accept the idea of vehicle as something with solid, smooth sides; characteristics which it retains even when it is stable. Thus

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the volumetric limitations imposed on the trailer as a vehicle become the limits of the trailer as a dwelling; and technological elaboration must go into the development of space saving devices.

Even with the clear volumetric limitations imposed by this line of development, the use of space saving devices is circumscribed by certain conventions regarding the organization of dwellings. The convention of dividing public and private areas (e.g. bedrooms as opposed to living rooms) is practiced as soon as the trailer gets large enough to make a division into two parts practical. The fold down sleeping and the dining alcove that converts into a bed are replaced by a fixed bed, which labels the space as "bedroom" and, therefore, inappropriate for other uses at different times of the day. Likewise, the appliances in the kitchen are enlarged and are organized in the work station pattern developing for dwellings. The basic division of the floor plan into functional areas is also effected by the siting of the trailer in a park. Since the trailer is backed into a space perpendicular to the road, its short side with the hitch faces the road and becomes, in effect, the "front" of the dwelling by convention. It follows that the living, dining and kitchen spaces should be located at this end. In short, the projection of the vehicular metaphor (as spelled out in the analogies of bedroom like sleeping car, kitchen like yacht galley), are corrected to conform with aspects of the image of dwelling house. Moreover, the artifact and image of dwelling house provide the spatial organization within which specific analogical projections can be made: e.g. yachting galley features are projected

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

into the kitchen (food preparation space) which can be open to the living area, but which should be separated from the sleeping area.[3]

The principal strategies of integration evident in the "travel trailer" approach, are syncretism and independence. Syncretism is evident in the free and often literal borrowing from vehicular artifacts. The status of the innovation is significantly tied to the associations carried over with these artifacts. Some of these associations are contradictory: e.g. evocations of the simple pioneer past juxtaposed with elements suggesting the technological future. The richness of syncretism lies in this juxtaposition: in the collage of ready-made features.

The strategy of independence is evidenced in the circumscribed use given to the trailer. It is a special class of vehicle when in motion, and a special class of dwelling when stationary. The travel trailer advocate is not interested in promoting the use of trailers as primary housing. It is an improvement over tents and vacation cottages, but no one would consider those artifacts as anything other than temporary housing. The models within which the use of vehicles and dwellings are understood are not altered by the inclusion of the travel trailer. Rather, they are expanded to include this special case.

The Mobile Home

The "travel trailer" approach is embodied in units of manufacturers like Kozy Koach, Silver Dome, Palance, Covered Wagon and Airstream: the kind of companies that would help form manufacturers associations and sponsor rallies and product shows. The "mobile home" approach,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

by contrast, is represented by units like the Durham Homes. These are units designed to be primary housing: i.e. units in which vehicular aspects are secondary. The whole issue of making the artifact look like something for the highway and as part of a car-trailer complex is moot. The concern for mobility and, in turn, the expression of motion, is of a lower priority than finding ways to expand living space.

In the travel trailer approach it is appropriate to have features associated with vehicles and motion incorporated in both the interior and exterior of the unit. In the mobile home approach such details are avoided and features are drawn primarily from house form: e.g. double hung windows, clapboard siding and the saddle roof are used. Some of these features, and indeed the general form, seem dysfunctional in many respects as mobile housing. For example, the saddle roof, unless it is folded down for transit, would further decrease the interior ceiling height imposed by highway clearance regulations. The use of clapboard siding instead of pressboard or plywood would add to the weight of the unit whose dimensions already require that it be truck towed. In general, the technology in the "mobile home" approach is more conventional, in terms of construction, than that of the travel trailer.

The floor plan of the mobile home, particularly in the double wide unit, is indistinguishable from single family low cost housing advocated at that time. Whereas the travel trailer has to make full use of built-in furniture and storage areas, the mobile home, including the relatively small single wide unit, is shown with conventional

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

movable furniture. The orientation of the unit on the site is apparently designed with the long axis parallel to the street; whereas the travel trailer is typically sited perpendicular to the street, with its hitch side at the front. Here too the solution is somewhat dysfunctional, since it requires longer utility runs (e.g. water lines).

The strategies evident in the "mobile home" approach are conventionalization and structuralization. Conventionalization here seems to amount simply to imitation, but it is more subtle than that. Conventional form must be modified and used selectively within the constraints presented by the new situation. Conventionalization has, the effect of clarifying the image of an artifact which it is presumably imitating. Structuralization is evident in the arguments made by advocates of the "mobile home," stating that this type of unit should be fully accepted as a form of primary housing. It is argued that it could serve low income as well as transient families (whose incomes might make them middle class). Moreover, the arguments are addressed to the conventional housing sector; to the building industry and the city planner (e.g. Tomfohrhe, 1939). Through structuralization, the mobile home would not simply be added to the model containing housing alternatives; it would redefine that model to accept industrially produced houses which were mobile and, therefore, independent of a specific site.

The House Trailer

There is a group of trailers which do not fit either of the approaches suggested above. It includes, most notably, Stout's folding

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

home. Like the "travel trailer," these units are intended to function equally well as a vehicle or as a dwelling but, like the "mobile home," they are intended to provide primary rather than temporary housing. It meets both of these capacities by physically transforming itself. When in motion, the trailer is folded up. It borrows its features and basic form from vehicles. Once at a site it unfolds, becoming a house with distinct functional zones.

The "house trailer" is truly a mixed metaphor. We can alternately read "house" and "vehicle" as its focal image. In terms of its technology, however, it owes far more to the vehicle. Since the "house trailer" is still to be car towed, weight and compactness are essential. These are also characteristics of metal bodied aircraft. As in the Airstream trailer, the technology is a stressed aluminum skin over metal ribs.

The rhetoric used in arguing for the "house trailer" is remarkably similar to that espoused by architects advocating industrialized housing at this time. Consider the following statement by Stout:

> The tremendous trailer movement is an indication that a new type of house is being forced upon us by outside conditions, including the great accumulation of rubbish houses in our cities which are no longer fit to live in and the accumulation of real estate tradition and permanent home laws which in effect deprive the man of modest means and others with the luxury of owning property. But it is coming just as much from the new feeling on the part of the American public that ownership of things is not so important as experiences and living, so when all is said and done, perhaps it is not only the fault of the accumulation of unnecessary things but also "the gypsy in us" that is giving added impetus to the movement. (1936, p. 36).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Compare this statement with one by Le Corbusier in Towards A New Architecture, first published in English in 1927.

> There reigns a great disagreement between the modern state of mind, which is an admonition to us, and the stifling accumulation of age long detritus. The problem is one of adaptation, in which the realities of our life are in question. (Jeanneret, 1946, p. 268)

This parallel is probably not coincidental, but intentional; which makes the peculiarly American twist that Stout gives to the end of his argument particularly significant: "...perhpas it is not only the fault of the accumulation of unnecessary things, but also 'the gypsy in us' that is giving added impetus to the movement." We may take this to mean that the industrialization of American housing will differ from that advocated in Europe, in that it will produce single family units which are as mobile as the working population.[4]

This mobility is further reflected in the acceptance of obsolescence as a characteristic of industrialized housing:

> There is not depreciation any more...there is only obsolescence. Next year - maybe next month - this thing [trailer] will be improved. As changes come people will trade in their houses just as they now trade in their cars. The discarded models, written off in price, will pass into the hands of lower income groups and finally be scrapped. (Stout, 1937; in Edwards, 1977, p. 86)

Here again there are parallels with European advocates of industrialization as well as with such American advocates as R. Buckminster Fuller (see 1963).

These differences between European and American interpretations of industrialization are evident in the development of particular key metaphors, based on ships and cars. In Le Corbusier's argument for

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

industrialization, the ocean liner is a key metaphor. It is a symbol of the technologically autonomous community. The elements of the land based community are projected on it: the shops, dining halls, recreation and entertainment centers. The nautical metaphor as employed by the "house trailer" advocate is based on the yacht: an artifact at the scale of the individual or family. With respect to the metaphor of the car, its use by Le Corbusier and other Europeans is as a model of a uniformly produced consumer good which achieves a high degree of user satisfaction. To the analogy of housing like a car, the American advocates add the idea that housing is mobile, like an automobile, and prone to cycles of technological obsolescence, like the automobile. In the American analogy, relatively little consideration is given to the collective organization of units: parks are just parking lots. Le Corbusier, by contrast, developed the bottle and wine rack metaphor as a way of considering the collective organization of ready-made housing units.[10] It is a vertical organization; unlike the trailer park, which is a kind of undifferentiated urban grid.

There are, then, clear parallels not only with the images of industrialized housing suggested previously, but with the underlying paradigms regarding the operation of technology in society. The attitudes toward technology evident in the solutions of the trailer advocates range from a hard technology, in which requirements can be precisely objectified, defined, and turned into uniform products; to a position of soft technology, in which individual modification and user participation are encouraged.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The three strategies suggested above can be summarized on a two by two table in which one dimension consists of the strategies of conventionalization and syncretism, and the other of the strategies of independence and structuralization (see table 1). Within the boxes of this table a further distinction can be made between positions based on the technological background which they support: hard or soft technology (i.e. technological determinism or transactionalism).

Although there are at least three positions regarding the integration of the mobile home in this first period of integration, the predominent position of the manufacturers and of the majority of their users is that described as "travel trailer:" the mobile home used as a camping and vacation vehicle. There is also a significant degree of correspondence between this major user group and the major indirect user group (i.e. real estate interests) in that each supports a strategy of independence. Resistance to the trailer as housing in this period is based on its perceived threat to the value of community (both physical and social), rather than to the idea of factory built housing. Since the manufacturers were catering primarily to the middle class seasonal vacationer, it either did not appear in their interest to promote the idea of the trailer as housing, or they simply did not perceive of it as such (Clark and Wilcox, 1938).

Distinctly in a minority position were the advocates for "mobile homes:" i.e. the trailer used as primary housing. For both the user and indirect user advocates of this position, integration meant structuralization: the full acceptance of the trailer as a legitimate alternative form of housing. In the next period of development,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

defined by the Second World War at one end and the Korean War at the other, this minority approach predominates among all direct and indirect user groups.

Notes and References

1. The English Trace Their "caravans" to the gypsy wagon. Since the earliest caravans were, in fact, horsedrawn; this derivation seems more accurate than the suggestion that the early travel trailer was derived from the conestoga wagon. In both cases there are strong romantic associations with the life style of the presumed antecedent.

2. This estimate is based on two contemporary surveys: one done at Yellowstone National Park in the summer of 1936, and another done by the Palace Corporation, trailer manufacturers (cited in Meloan, 1954)

3. There is a certain irony in the functional conversion of the back seat of the automobile into a sleeping area, for John Steinbeck observed that Americans were already using it as a bedroom, and that probably half of the population had been conceived in the back seat of the Ford.

4. The American population has traditionally been transient; households moving on average about every five years. (see: Jackson, 1960; Lynes, 1963; Packard; 1972)

5. 4 Municipal Law Journal 4 (1936).

6. 214 Ind. 75, 14 N.E. 2d 579, 115 A.L.R. 1395 (1938).

7. 289 Mich. 499, 286 N.W. 805 (1939), appeal dismissed, 309 U.S. 620, 60 S. Ct. 470, 84 L.Ed. 984.

8. 175 Misc. 240, 22 N.Y.S. 2d 501 (1940).

9. The idea of using trailers for low income, public housing was also advocated in a report to the State Planning Board of Massachusetts. "Special Report on Trailers and Trailer Camps," Karl M. Tomfohrde, WPA Proj. 15245: June, 1936 (mimeo).

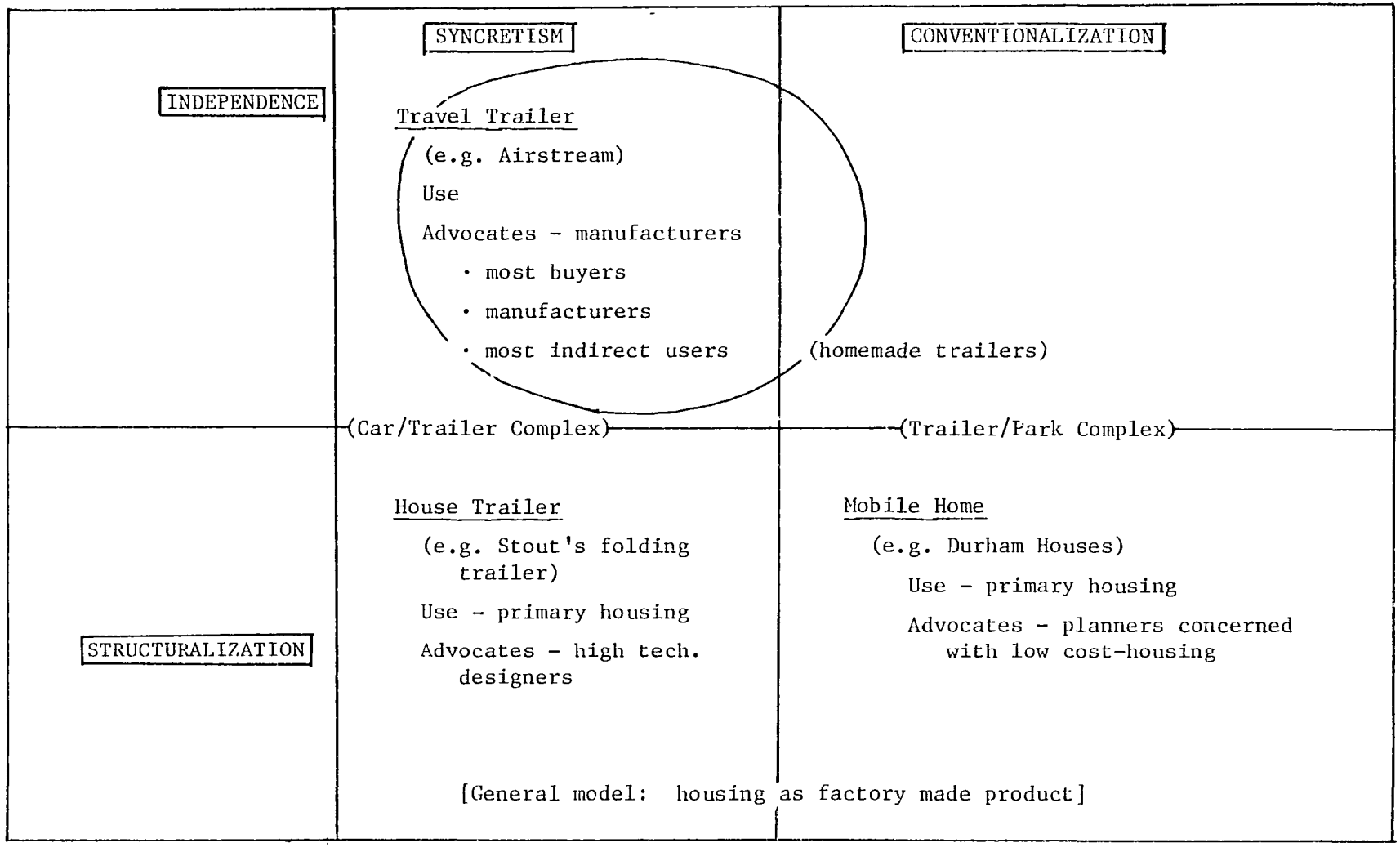
10. The metaphor of the oceanliner is spelled out by Le Corbusier in the development of the Marseilles Block (Jeanneret, 1953).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Table 2

Summary of Integration Strategies: Travel Trailer Era

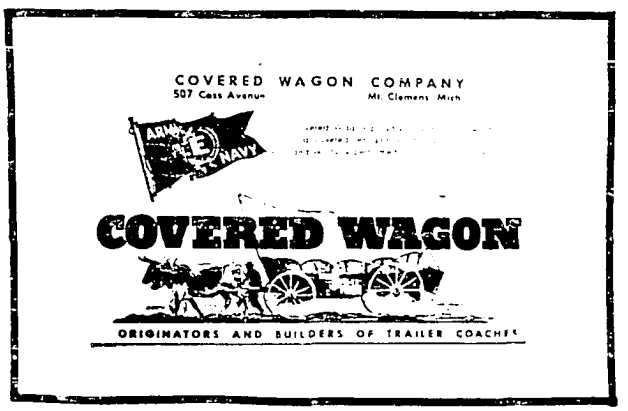


Illustrations: The Travel Trailer Era

Images of the Past

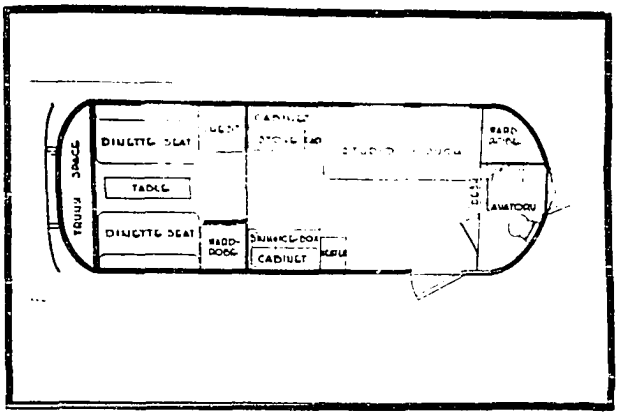
1. The first cover of Trailer Travel magazine (1936) evokes the themes of the wilderness of the pioneer past, and the freedom of a technological future.

2. The logo of the Covered Wagon Company.



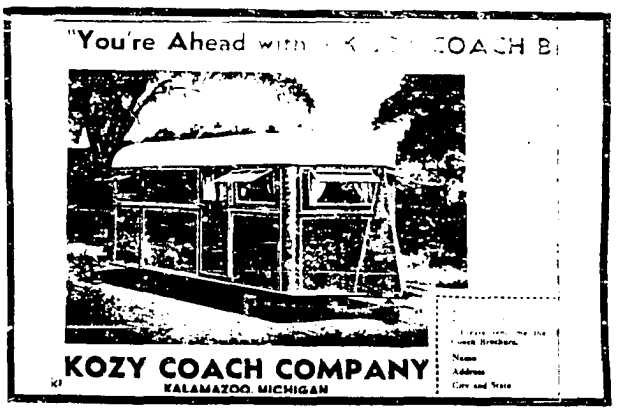
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

3. Typical floor plan of an "independent" trailer with its own toilet facilities.

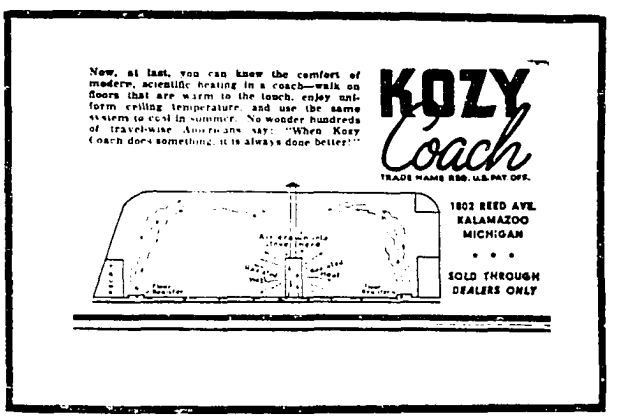


4. A tubular, metal framed trailer: relatively rare in comparison with the use of wood framing.

5. The Kozy Coach: hardboard exterior and a backyard technology



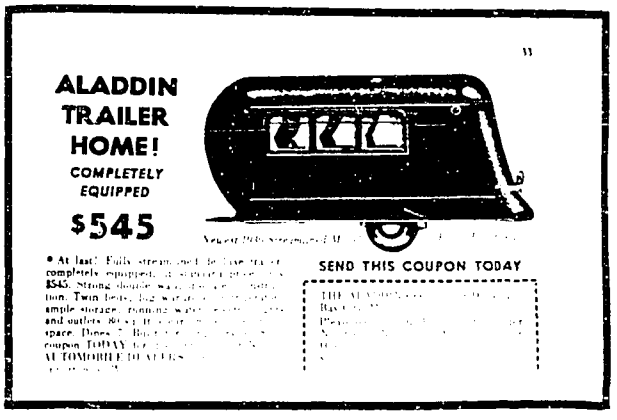
6.



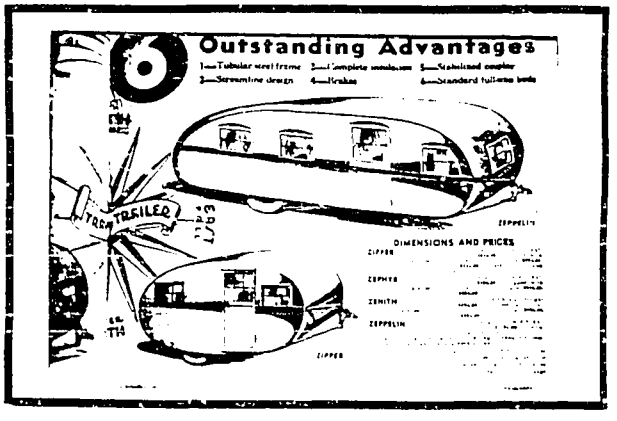
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Elevations

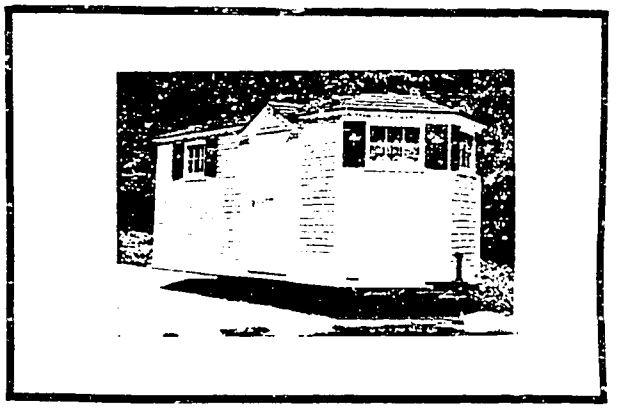
7. The exterior elevations of the American travel trailer reflects the action lines common to vehicular design.



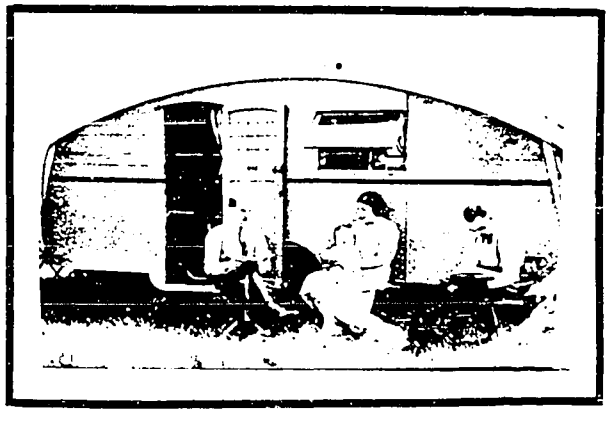
8. The Vacation Coach suggests house features in its windows and doors, but a streamlined vehicular shell.



9. The Batavia Trailer (1937) represents an early attempt at conventionalization. It was apparently a commercial failure.



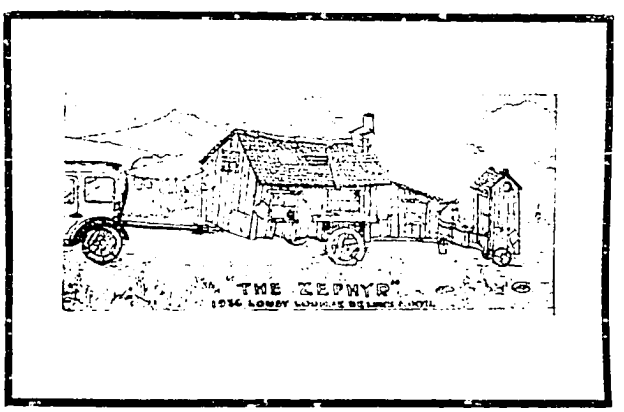
10. A British "caravan" of the 1930's.



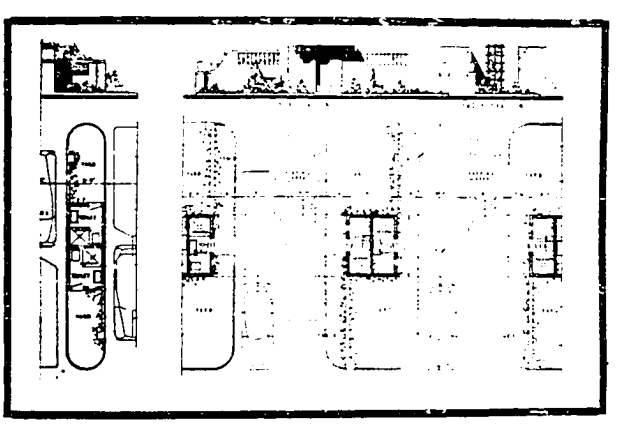
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

11. An unintentional parallel to LeCorbusier's proposal for roof-top gardens.

12. "The Zepher, 1936 Lousy Lounge De Luxe Model." The trailer industry reflects on the homemade counterpart.



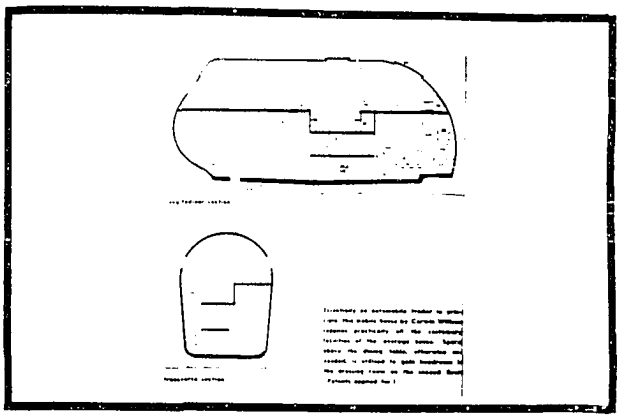
13. Prototype design for a travel trailer park. Each lot has its own yard and bathroom.



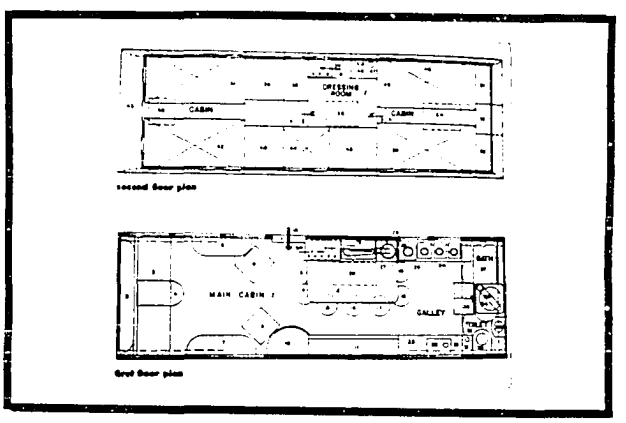
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Experiments in Design

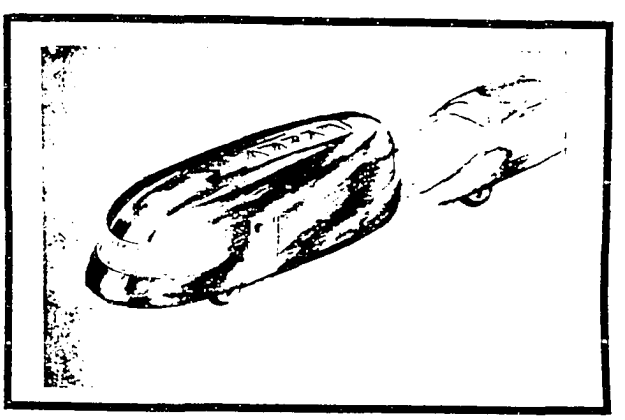
14. Corwin Willson's display "mobile House" of 1936. Porthole windows, galley kitchen, and crawl space sleeping area suggest the spatial economy of yacht design.



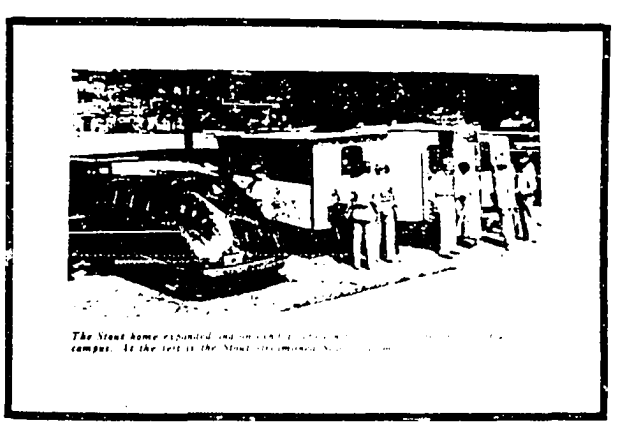
15.



16. A streamline trailer with wrap around window, designed by Royal Barry Wills (1937).



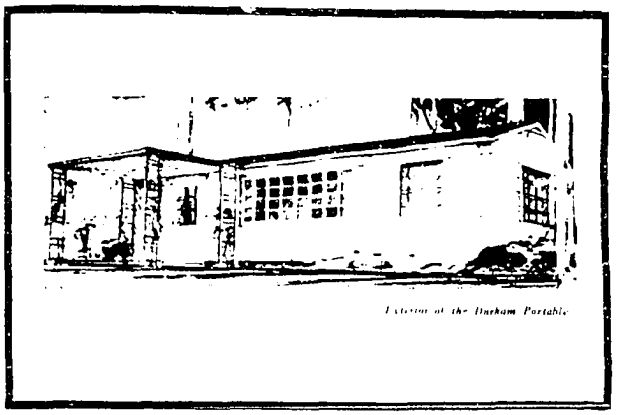
17. William B. Stout's expandable house trailer being exhibited at Purdue University. Variations of this prototype were produced through the 1960's.



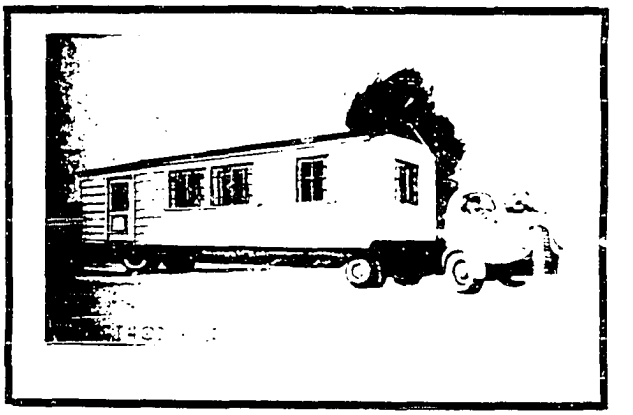
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Conventionalization

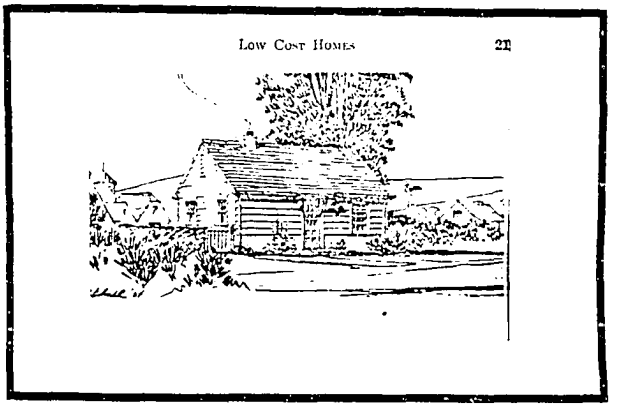
18. Anticipations of the modern mobile home; the Durham Portable Houses (1938) with a conventional home exterior and floor plan.



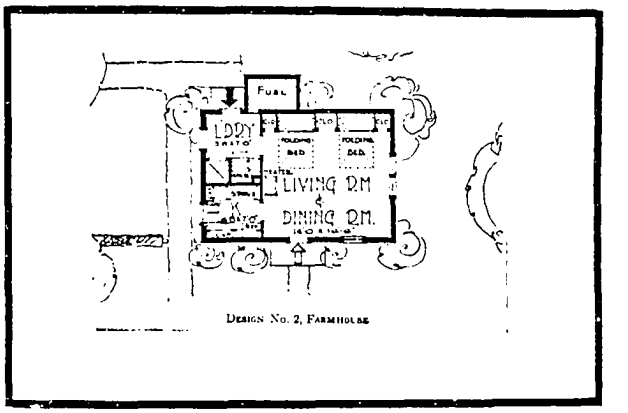
19.



20. In area, layout and appearance, the Durham Houses are similar to the low cost single family housing recommended in the 1930's; in this case, by Kansas State College (1939).



21.



Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Chapter Three

The War Years: The Era of the House Trailer (1940-1953)

The mobile home, in its first period of development, was essentially a travel trailer (i.e. a vehicle providing portable vacation housing). The idea of the mobile home as primary housing was considered, but not promoted by most commercial manufacturers. With the outbreak of war in Europe this condition would change radically. The construction of munitions plants, the expansion of shipyards and the like created boom towns in sparsely populated areas. Workers slept in their cars until housing could be constructed. By comparison, to live in a trailer was scarcely a hardship. After the War, the house trailer was used for emergency housing in disaster areas and as married student housing by people attending universities on the G.I. Bill. It also resumed its function as a vacation vehicle. In the early fifties, with the outbreak of the Korean War and the onset of the Cold War, there was a resurgence of boom town development and, consequently, the use of trailers for married worker housing. The principal use of the trailer in this period, then, is as temporary year round housing. Moreover, as housing which ideally was mobile, both its form and meaning, as well as its function, were effected by the above mentioned factors.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Users

In 1940, 9,728 trailers were produced commercially, and by 1941 production had more than doubled (Edwards, 1977). This increased production was being channeled to places like Charlestown, Indiana, where a munitions powder plant had been constructed; and to Orange, Texas, where the shipyard was expanded and the population increased by 700% (Meloan, 1954). During 1940 the federal government ordered 1,500 units to provide housing for construction workers. In 1941 it asked for the production of 5,000 units. By September of 1942 approximately 16,000 trailers had been built for the government (TTM,Vol. 7, 2). In that same year the rationing of critical materials (e.g. tires) resulted in the provision that house trailers could be sold only to production workers and personnel involved in war related employment for at least 50% of their time.

In a little over two years the federal government had become practically the sole purchaser of new house trailers and, as such, significantly determined their use and location. In addition to this direct intervention, the rationing of gasoline and the high resale value of used trailers undoubtedly reduced the use of units for vacationing. At the outset, government officials saw the advantage of the trailer as a form of temporary housing which could be produced inexpensively, deployed at different locations according to shifting demand, and then finally removed so that war production ghost towns were not left to blight an area reduced to its prewar population. Trailer manufacturers had argued for the use of their units on these grounds,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

particularly to the War Production Board, whose decisions on the allocation of critical materials could have brought all trailer production to a halt.

Trailer manufacturers, while interested in meeting government needs, were also concerned with a post war glut of used trailers effecting the market for new units. In 1941 an industry group lobbied the government to lease, rather than sell, trailers to occupants (Meloan, 1954). To a certain extent this suggestion was followed. In a G.E. plant in Erie, Pennsylvania, employing over 10,000 workers, government owned trailers were offered as rental housing for $6/week (TTM, Vol. 6, 9). At the close of the War the government made hundreds of trailers available to Universities as married student housing. Thus, the trailer indirectly became an industrialized housing service: i.e. single family, detached rental units.

In addition to controlling the production of units, the government became involved in their design, and in the design and construction of trailer camps. In Portsmouth, Virginia, for example, the government constructed a park for 3,300 units: approximately 10,000 people (TTM, Vol. 7, 2). Government camps were typically built to a higher standard of space and facilities than the private camps which mushroomed up in the boom town areas. They suffered, however, from government regulation, so that for some private trailer owners it was preferable to put up with the conditions of the private park rather than deal with government red tape (Carr & Steiner, 1952).

In 1943 the government purchase of trailers ceased. The National Housing Agency decided that the worst phase of the housing shortage had

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

passed and that the government, at this point, should turn to the construction of "permanent" structures. Up to this point the government had purchased 35,000 units. During the entire period of the War, various government agencies and private concerns had produced almost 200,000 prefabricated units: approximately 18% of these were house trailers. An additional 85,000 privately owned trailers were estimated to be in use in defense areas. Thus, the total number of trailers used as prefabricated housing during the war equalled approximately 84% of all other forms of prefabricated housing combined.

Perhaps the single most important characteristic about the war time trailer users is that their adoption of trailer living was a choice made among negative alternatives. The married war production workers were faced with a choice of leaving the family at home with relatives, or staying together in accommodations at the plant site. The subdividing of existing housing as rooms to let undoubtedly provided some accommodations; but the demand for housing was so rapid and large, in most cases, that only trailers or some other form of prefabricated housing could meet it. The trailer, then, provided for some an important, and often singular, means of keeping the family together in the boom town situation. While the small accommodations of the trailer may have added to family and community stress, it was perhaps less stressful than the fragmentation of families and the creation of communities largely void of families (Carr & Steiner, 1952).

The termination of the War brought a sharp rise in the demand for housing in the private sector. Returning veterans starting a family

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

or resuming family life wanted accommodations of their own. As victors they had justifiable expectations that a reasonably improved life style should be part of their reward. The cessation of hostilities also meant a rapid decline in war related production, and the imminent possibility of recession. Building, as a key sector of the economy, could potentially solve both problems.

In 1947, the Veteran's Emergency Housing Program was set up, with the goal of producing 2.7 million housing units through the extensive use of prefabricated technology. After two years, with little success in reaching its goal, it was disbanded. Another government agency, the Reconstruction Finance Corporation, also set about to fund an industrialized housing industry. Its most celebrated solution was the Lustron Home: a prefabricated, panelized structure that was to be produced under full assembly line conditions. The vision behind Lustron was, not only to produce housing under modern factory conditions, but to produce modern housing. Its structure consisted of baked enamel metal faced panels, inside and out. Some of these panels incorporated a radiant heating system. Production of the Lustron Home was terminated due to the exhaustion of public funding after only 5,000 units had been produced (Bender, 1973). The unit and its production process, however, have remained a model of what industrialized housing might become with adequate initial government support.

In contrast with the Lustron experience and other government aided housing efforts, the trailer industry rebounded sharply after the War. In 1947, 60,000 units were produced, while in 1948 the figure increased to 85,000 (Edwards, 1977). Between 1945 and 1951 the number

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of manufacturers doubled, while the number of dealers increased four-fold (Meloan, 1954). Significantly, the new producers included aircraft manufacturers (e.g. Spartan Co.) who saw the opportunity to transfer war production capacity into peacetime use. These manufacturers brought with them aspects of aircraft assembly and design technology; a technology which had previously been introduced to the industry in the late 1930's by William Stout and Wally Byam, among others. The Republic Aircraft Company had also experimented with the idea of entering the housing field. In 1945, it commissioned R. Buckminster Fuller to develop a unit based on its production techniques. Though the unit has become an object-type of industrialized housing, it never went into commercial production.

By 1948 an estimated 7% of the population of the United States was living in house trailers. A survey of trailerites in Southern California, conducted in 1948 (Dunn), found that a majority of users were recently established, young families for whom the trailer was their first home. Almost 70% were veterans. Over 95% were employed and had incomes slightly above the national average for this group.

Government as well as privately owned trailers continued to be used as family housing on military bases. Approximately 13,000 government trailers were given to colleges and universities to provide married student housing for families on the G.I. Bill (some of these units are still in use on the campus of Indiana University). The government also used its surplus trailers for emergency housing (e.g. in 1947 in Texas City, Texas, to provide housing for victims of an explosion; and in 1948 in Portland, Oregon and Vancouver, Washington, for flood victims--see Meloan, 1954).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

During this period the proportion of retired and vacation trailer users declined sharply. An industry survey (Booz, Allen and Hamilton, 1951), showed a drop in the vacation portion of the market from 50% in 1937 to one percent in 1950. The retirement market fell from 35% to 15% in the same period. The percentage of users who chose trailer living primarily because they preferred the lifestyle, however, was only four percent (Booz, Allen and Hamilton, 1951 - cited in Meloan, 1954). The same survey found that the use of commercially built trailers as temporary housing went from almost 0-45%. It should be noted that, while the house trailer was being used in this period under housing shortage conditions, its adoption is somewhat more a reflection of choice than of absolute need.

Two events of the early 1950's significantly influenced the use of the house trailer: the nuclear arms race and the Korean War. Each renewed the demand for massive defense housing. In June of 1950, President Truman ordered American troops into Korea to counter a Communist North Korean invasion of the South. Three years later an armistice was signed at Panmunjom. Korea was a hot spot in a Cold War which had commenced in 1947. The armaments race which has characterized the Cold War since, has included a significant production of nuclear weapons and, hence, the construction of huge nuclear energy facilities in the United States. With the death of Stalin in 1953, the arms race temporarily subsided.

These factors created a new demand for defense related housing estimated at 150,000 units. By the middle of 1951, only 500 units

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

were under construction. During World War II, half of the housing units produced were under government contract. In the present period, the policy would be to allow the private sector, with government financing, to meet the demand. Both the government and the private sector agreed that the units constructed should be of a permanent character. Out of all the temporary units constructed during World War II, less than two percent had been removed by 1951 ("Defense Housing," April, 1951).

Early in 1951, the Defense Housing Bill was proposed to provide financing for needed housing construction. While it languished in the Congress, the house trailer was employed once again to fill the production gap. This time, however, the purchasers were private rather than governmental. In 1949, trailer production had been 46,200 units; by 1950, it had jumped to 63,100 units; in 1951, to 67,300; and in 1952, to 83,000 units.

One of the largest of the nuclear plant construction projects was at Savanah River, Georgia, where the DuPont Company was to employ 36,000 construction workers and their families in 1953. Once completed, however, the plant would only require an operating force of 5,400. Also under construction in the area was an expansion of the Army's Camp Gordon and the $78 million Clark Hill Dam. The most pressing need was for temporary housing. DuPont invited bids on trailers or prefabricated homes for 7,500 single men and 4,000 families. The cost of housing rentals in the area doubled. "Thirty-nine trailer parks dotted the area and Trailerman Boyd Wilson boasted that 10,000 trailers would roll into Aiken County before constructions end" ("Defense Housing

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Fiasco," p. 45). Whereas in 1949, an estimated 20.5% of trailer users were construction workers (Trailer Life, Vol. 10, 7), by 1952 it was approximately 35%.

Some manufacturers had also begun to expand into the production of what is now referred to as "modular housing." These were fully prefabricated trailer-like units, without a permanent chassis, which were trucked to a site and set up on a permanent foundation. The Covered Wagon Company constructed such units for the TVA's Fontana Dam.

In addition to construction workers, military personnel were major house trailer purchasers. One fifth of all trailerites in 1954 were military. Most of these were privately purchased units, but almost 4,000 units were purchased by the government for use on bases where there was a housing shortage (Meloan, 1954). An increasingly common feature of the American military base, then, was the trailer camp.

The percentage of mobile homes used by retired persons as primary or seasonal housing had dropped dramatically from the late thirties to the present period (from 35% in 1937 to 15% in 1950--Meloan, 1954). Since the number of house trailers had increased fourfold or better, the number of retired people living in them was considerably larger than in the 1930's. Retirement parks were concentrated, as they are now, in the sun belt. Bradenton, Florida, boasted the largest such park; featuring extensive social facilities. At least some industry spokespersons felt that the retired trailer user would again become a major portion of their market.

One of the reasons why the trailer industry was able to fill short term housing needs was the nature of its financing. Conventional

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

construction is tied to federally secured mortgage rates. Permanent construction also rests on the development of municipal utilities (e.g. water and sewage lines) which are typically funded through bonds which must be approved by the electorate. The mobile home manufacturer of this period is relatively small. The initial capital necessary to start a firm is, likewise, small (approximately $50,000 to $75,000). An important source of credit is the supplier.

> Suppliers may grant extra long credit terms to new manufacturing concerns operated by qualified individuals. During peak selling months, the output of these firms can frequently be sold to dealers for cash before supplier's invoices have to be paid. This may help to explain the large number of small firms in the industry today. (Meloan, 1954, p. 85)

Many suppliers cater exclusively to mobile home manufacturers, so that the extension of credit on their part is tied to their own continuing vitality. Local financing is usually secured by the dealer to meet the invoice on stock. The terms in the early fifties were typically 6% per annum; considerably higher than prevailing home mortgage rates.

The consumer, in turn, depends on bank loans to finance up to 75% of the retail cost of a trailer. Terms of repayment ranged from 24 to 60 months. Whereas home loans were paid on a simple interest basis, trailer loans, like those on cars, were discounted on the face amount (i.e. repayment included the sum of the interest as part of the amount borrowed). As a result, the consumer was paying about twice the simple interest rate on a unit costing between $3,000 to $4,000. Though less advantageous to the consumer than a mortgage, these automobile type loans made the trailer more attractive to lending institutions.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The shift in the use of trailers in this period was sudden and, as I suggested earlier, largely the result of external circumstances. The Covered Wagon Company, the industry's single largest producer in the 1930's, was beginning to flounder by the end of that decade; in part because of the inflexibility brought on by its adoption of mass production techniques. The War revived it. The fledgling manufacturer's association also received a boost through its lobbying efforts on behalf of the industry.

Before the War, companies like Covered Wagon marketed their units through franchised dealerships. During the period of government rationing and control this dealership system became largely inoperative, so that after the War a new distribution system could emerge. By the early 1950's there were some 3,500 dealerships consisting primarily of small, independently owned operations exclusively marketing house and travel trailers, and their accessories. With the use of trailers as primary housing, the dealerships assumed a more central function in the industry. As a local operation, it established contacts with parks. In areas where park spaces were scarce, some dealerships reserved spaces to assure a location for their customers. Other dealerships were conducted along with the management of a park, so that admission to the park might require purchase of a unit from the dealership. Another function which dealerships increasingly assumed was the provision of repair and towing services.

With the demise of the franchise system, manufacturers had to market their models at trade shows. Regional shows allowed dealers to survey new models and place their orders. A manufacturer could

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

produce several models for a show and, depending on the demand, decide whether to actually produce it. Thus, the dealers exercised considerable influence on trailer design. The dealer, in turn, had to anticipate consumer preferences. Whereas automobile purchases were usually based on brand loyalty, house trailers were purchased on a comparison shopping basis (Meloan, 1954). Dealerships handling the units of different manufacturers clustered along highway commercial strips in towns and cities, facilitating comparison buying.

The dealers' place in the house trailer industry suggests two models of marketing which, in turn, imply alternative images of the nature of the product. In one model, the relationship of the dealer is as an intermediary between manufacturer and consumer; in much the same manner as a car dealer. The manufacturer provides an advertising allowance to the local dealer; the dealer services the models or arranges for a manufacturer's representative to service local units. Under this model it is both to the dealer and the manufacturer's advantage to promote annual model changes. These changes encourage a trade-in market and a secondary distribution of used models. It is also to the manufacturer's advantage to promote model recognition. As suggested, this model follows the organization of the automobile industry; but its development is thwarted on several fronts: the demise of the franchise system and the fact that half of all the units produced come from small manufacturers.

The second model of the dealer in the industry is as a park developer. Dealers became increasingly involved in parks as a result of the shortage of park space. Being local, they were in a better

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

position than the manufacturers to establish these relationships. In this model, the dealer is potentially marketing a "community" rather than a trailer: i.e. it is the unit as well as its setting which is being provided. The most appropriate place for the development of this model was in the sun belt, where retired people turned to mobile homes as a matter of choice rather than out of necessity. The model is clearly less appropriate in industrial areas where the purchasers are typically transient. For the industry as a whole it was increasingly clear that the attraction of house trailer living would rest in the development of adequate and appealing parks. In 1953 the Trailer Coach Association, established a park division.

In view of the use of house trailers in this period as primary housing, the image of the product as a home/community package would appear to be more appropriate than its image as an automobile-like disposable consumer good. Nevertheless, it is the latter image which dominates. A contemporary study of business practices in this period concludes:

> Mobile homes have evolved into special purpose permanent housing that has become and will undoubtedly remain an important part of American Life. Mobile home manufacturers do not intend to build low-cost, expandible and collapsible dwellings in the foreseeable future. They will continue to produce housing designed to serve the needs of a mobile population. (Meloan, 1954, 114)

Form

As the trailer took on a more house-like function in this period, not surprisingly, it took on more of the features of a house. Its

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

form, however, remained distinctly a hybrid between vehicle and dwelling. Mobility continued to be an essential characteristic so that volumetrically the unit, while towed, was still limited by highway regulations and the towing capacity of the family car. Once set up in a park, however, particularly for longer periods of time, there was a tendency to adapt it to the site. Manufacturers and suppliers provided such accoutrements as awnings, add-on porches or porches incorporated directly into the unit. The users also constructed porches, secondary roofs and the like, which helped to adjust the unit to its site and to its function as primary housing.

As of 1954, most states limited the dimensions of house trailers to a height of 12'6", a width of eight feet and a maximum length of 35'. Twenty-one states allowed a somewhat greater length and, in Maryland, units of 55' were permitted (Meloan, 1954, 117). Since units were still highly mobile, the common minimum dimension became the standard. Although exterior height limitations easily allowed for an interior ceiling height of eight feet, the most common ceiling heights remained 6'6" - 7'; perhaps in recognition of the lower clearance off main highways.

With the increased use of trailers as primary housing, experiments in techniques to expand their volume once at a site resumed. The government was particularly interested in the development of an expanding unit to utilize as temporary housing during World War II. In 1943, the War Activities Committee decided to support a standard house trailer for units to be purchased outright by the government (Edwards, 1977). One of the models presented for consideration was William

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Stout's folding home, first developed in 1937. The present version would utilize a wood rather than metal frame. Unfolded, it measured 9'9" x 22'. It was produced primarily by the Palace Corporation at a cost of $1,600, or a weekly rental of $7.50 (TTM, Vol. 7, 2). It was an independent unit containing its own bathroom facilities. In the 1950's, the architect Carl Koch designed a prefabricated house using the basic concept developed by Stout, but without the dual function of serving as a trailer.

The design which the government decided to produce as its standard was called the "Committee Trailer," because it had been designed by a committee. Its cost per unit was $750. I have not seen plans of this unit but, based on its price, it seems safe to assume that it was not expandable.

Another method of expanding the volume of the basic trailer was by telescoping a section. In 1949 the Liberty Company developed a model with a telescoping second story (see TTM, Vol. 6, 4). The unit apparently never went into production. With a standard eight foot width, a two storied unit would clearly have questionable stability under wind loads. Another approach to expansion through a telescoping section was developed by Budger Trailer Company. In 1952, it introduced its "Expando" unit, consisting of a core with kitchen, bath and a sleeping area that could be used while traveling. Once set up, a section telescoped from the side practically doubling the volume of the unit which, when opened, measured 24' x 14' (see Trailer Life, Vol. 12, 10).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Other models incorporated more modest expanding sections: e.g. porches and entry vestibules. In some cases it appears that the technique of expansion was a tip out section. This consisted of a smaller box set within the main trailer volume and hinged along the floor so that it could be rotated out when set up at a site. The tip out detail recalls some of the models of tent trailers, but it is not clear that it is actually derived from that source.

A final approach to volumetric expansion was a return to Corwin Willson's experiment with a two story high unit. While nothing folds out, telescopes or tips out in this approach, the full legal trailer envelope is utilized. Two duplex units were offered commercially in 1954: the Lighthouse Delux and Mobilehome's Commercias units. As in Willson's solution, the second story, with its low ceiling height, was used as a sleeping loft.

For all of the invention that went into the development of the expanding units, the majority of trailers followed a conventional solid body design. These were clearly the most economical and the easiest designs to make watertight. Nevertheless, the need to expand the feeling of space within these units was still apparent and was addressed in a variety of ways. One common method was to increase the ceiling height over the living-dining section of the unit. Another approach was to increase the window area in this section. One window detail which is particularly interesting is the wrap around front window, such as that featured in the 1950 Pacemaker or the 1952 PanAm unit. From the outside the window read like a windshield (on a boat, perhaps, more than on a car). From the inside it read

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

like a bay or picture window. A contemporary analyst (Meloan, 1954) suggests that units with large picture windows were preferred by individuals using their units as primary housing, while those using them for vacationing preferred smaller windows.

Material shortages during the Second World War restricted the use of metal as an exterior sheathing for house trailers. Hardboard, homosoate and other forms of pressboard were the common exterior materials. By the early 1950's, metal had become the standard material; especially aluminum. In most cases the metal was used as sheathing, rather than as a structural skin. It was generally of a thin gauge and required some form of corrugation to provide stiffness.

The use of metal siding undoubtedly influenced the form of the house trailer shell. Since the metal was delivered in large rolls, it was easiest to attach it to a straight sided frame. Similarly, a roof which is curved only in the front and the rear, and not along the sides, facilitates assembly. Thus, the trailer in this period becomes more boxy, albeit a shiny box, but one which is less streamlined or sculptural. An additional and equally important factor working on this modification of shape is consideration of the interior space and its finishing materials.

One of the consequences of streamlined design was lower headroom at the ends of the trailer. Squaring off the volume provided a more usable interior, and one in which commercial plywood could be more readily applied. The typical interior of this period is a light faced lacquered plywood. Built-in furniture was usually made of the same material (often using scraps from the interior facing sheets). Floors

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

were covered with linoleum, so that the general appearance of the interior, like that of the exterior, was that of a shiny box.

The floor plans of the house trailer continue to show the compartmentalization of functional areas already evident in the larger units of the late 1930's. There are, however, important variations. Whereas the earlier units had their sleeping areas to the rear and living areas forward (near the kitchen), in some of the models of the 1950's, sleeping areas are provided at opposite ends of the units. The plan appears to be an attempt to provide greater privacy within the limited length of the units.

Another feature which became standard in this period was the use of two doors. Usually these doors appear on the same side of the unit: the side that would face the curb if the unit were parked on the street. The location of doors on the same side of the unit has the effect of identifying a single yard area when the trailer is set up in a park. Since this is where the entry door is, it presumably constitutes the front of the house (i.e. house trailer), but the front is also defined by the hitch (i.e. the part of the unit that is forward when it is being towed). The whole question of what constitutes the front of the house trailer is raised in the decision of door placement; but it extends to the organization of the entire floor plan, as well as the layout of park sites.

One of the important changes in the plan of trailers at this time is the increasingly common provision of toilet facilities. Earlier trailers had included showers, and some deluxe models provided a dump toilet but, by the 1950's, many units included flush toilets.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In order to make use of the flush toilet, however, parks had to be equipped with sewer hook ups. The new parks, particularly those constructed by the government, provided such hook ups as well as bathhouses for people in "dependent" trailers. Since the use of public facilities was a source of irritation to many people, the introduction of complete plumbing must have enhanced the feeling of privacy and improved primary trailer housing. Many of the new parks discouraged transient trailers, or placed them in a special section.

After the War, the Trailer Coach Association formed a park division to rate and improve the standards of parks. The Woodall Guide, which began in 1947, also provided a rated listing of parks. Some of their rating standards of 1949 are revealing. They list if electricity, running water and baths are available. Stars are awarded for parks with paved streets, patios and lighting.

Pictures of some of the housing oriented parks of the fifties show covered patios and carports. In some cases, these appear to have been provided by the park, but in most instances the designs vary, suggesting that it was the trailer occupants who developed these additions. I have already indicated that many manufacturers provided extensions to their units (in the form of porches, tip out rooms, etc.) which helped to accommodate the unit to its site and to its function as primary housing. Most units, however, did not come with such extensions.

In Berwyn, Maryland, a family put a permanent enclosed addition onto their unit. They were found in violation of a Prince Georges County ordinance. Another family had spent nearly $1,000 on an addition

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

which they were forced to tear down (Indian Trailer Coach News, Vol. 1, 12). Carr and Steiner (1952) reported that people in war production areas scrounged materials to provide utility rooms and porches for their trailers; while in government parks such additions were not permitted. Clearly, some municipal authorities were concerned that trailers in parks would take on extensive additions, becoming the core units of a squattment type housing. Such additions only became feasible when the unit had remained on a site for some time. What kind of additions were made by people living in units on their own private lots is not evident, but presumably they engaged in making extensive improvements.

The development of user additions to their house trailers suggests that the way the users perceived their units may have been different from the way manufacturers viewed them. While the manufacturers were willing to introduce more house-like characteristics to the interior of units, the exteriors were dominated by vehicular characteristics. One contemporary analyst observed:

> Now that mobile homes are used almost exclusively as semipermanent and permanent housing, one would surmise that manufacturers would make the external appearance of their products more homelike. This is not the case. Generally speaking, the large companies have not tried to make trailers look like conventional homes. (Meloan, 1954, p. 46)

Several manufacturers, however, did introduce more house-like models. The 1950 Pontiac Chief, for example, advertised itself as a "Ranch Type" model.

> In spite of their resemblance to conventional homes, they [the house type models] have not been popular. The majority of mobile home buyers apparently prefer

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> aluminum or steel structures designed and painted so they appear more like automotive equipment than like conventional dwellings. (Meloan, 1954, p. 46)

Nevertheless, users did attempt to add to units where permitted.

Another contrast between user modifications and manufacturers designs is the general trend, emerging in this period, to introduce stylistic variation into units annually. Presumably, these changes were intended not only to make units competitive, but also to encourage trade-ins. Most units still were designed, within the firm, by people without design training.[1] The manufacturers, then, still viewed their products as part of a car/trailer complex. If the style of the car was changing annually, then the style of the trailer might also change. The consumer, however, seemed to be more concerned with the trailer within the park setting, - : functioning as housing. Consequently, they modified its form with respect to this model.

Meaning

The tension structuring the different meanings of the house trailer stems from its hybrid character: i.e. as a vehicle and a dwelling. One method of resolving this tension is to assign different meanings to particular aspects of form. This method was observed in the differentation of interior from exterior areas of the trailer as being appropriate to dwelling and vehicle features respectively. It might be argued that this differentation simply follows from use: i.e. the exterior of the trailer must respond to aerodynamic forces imposed when the unit is towed, while the interior must accomodate

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

daily household activities. Their assignment, however, is more complex. Consider, for example, the very thinness of the skin which separates the interior from the exterior, making it extremely difficult to alter the treatment of such features as windows, doors or rounded roof edges as read from the inside and from the outside of the unit. The structural (or syntactic) properties of the form, then, suggest ways of structuring its meaning and dealing with conflicting meanings.

I do not wish to suggest that the meaning of a unit is not related to its use, but rather that use and meaning are transactionally determined; and that this relationship is altered further in its translation into an objective artifact; i.e. into a media with objective characteristics. In considering the meanings of the house trailer it is also necessary to consider how meanings established in the travel trailer period must now be transformed. That is to say, the travel trailer cannot become a house trailer without reinterpreting its own history, which has become codified in the formal definitions which have been applied to it.

Formal Meaning

The effect of legal cases is to sharpen the categorical boundaries of the image, in this case the image of appropriate dwelling. The house trailer might be wholly excluded from this category, or it might be relegated to a qualified area within it. The mechanisms for categorization, as previously indicated, are building codes, zoning ordinances and taxation classifications.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In the period under consideration, there are several cases involving the attempt to ban the house trailer and trailer parks on the basis that they constitute a nuisance per se. The courts, in these cases, have ruled that such categorical exclusion, which disregards the particular circumstance of use, is an inappropriate exercise of power.

Based on use, the house trailer clearly merits classification as a dwelling; but does being a dwelling mean that the artifact must be a building. If so, can something with the characteristics of a vehicle qualify as a building. In the case of Lower Merion Township v. Gallup,[2] the court upheld the legality of an ordinance requiring that a mobile home used as a dwelling for more than 30 days be considered a single family dwelling under the township's building code. The court stated:

> To say that these [house trailers] were not dwelling houses is an attempt to fictionalize a reality. They were used and intended to be used as homes, and were as much dwellings as any similarly sized structures could be. In fact, they contained household conveniences rarely present in houses so small. They differ from ordinary houses only in respect to the ease with which they could move. (cited in Hodes & Roberson, 1974, p. 106)

The court ruled that after a period of 30 days a trailer could be considered a "permanent" dwelling and, subsequently, be required to conform to building codes. In this case it is the manner of use (i.e. duration) which distinguishes the artifact as vehicle or dwelling qua building.

Six years later, in Brodnick v. Munger,[3] the court ruled that building code requirements could not be imposed on house trailers because they were vehicles and municipalities did not have authority over the design of vehicles. In contrast to the previous case, the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

present ruling is based on the presence of certain features (e.g. wheels and chassis) regardless of use.

Whether the wheels remain attached to the unit, or if it is set on a foundation, has often been regarded as a basis for classification. In Foos v. Engle,[4] the court ruled that a house trailer was not a dwelling because it was not "attached to the soil," but it could be considered as such if dismounted and otherwise made immobile. Setting a house trailer on a foundation could be accomplished on a private lot, but other regulations have the effect of preventing such alteration in a park. For example, municipal fire ordinances may require that the wheels remain on a unit in case it must be moved during a fire.

Attachment to the soil has been regarded as a basis for classifying a travel trailer as dwelling; but in some cases attachment has been regarded as an interest in the land which the unit is on, rather than physical attachment per se. These cases concern the issue of whether homestead rights apply to travel trailer occupants. In Clark v. Vitz,[5] a concurring judge stated:

> The nature of the structure claimed as a home is of no consequence, whether it be a mansion, hovel, tent or auto-trailer. Whether the foundation be of reinforced concrete, pine blocks, or wheels can make no difference. The ease and nominal expense with which it can be removed to another location does not alter its homestead character. (cited in Hodes & Roberson, 1974, pp. 351-52)

"Interest in the land," in the case of the application of homestead rights, need not mean that the land is owned by the trailer occupant, rather that tenancy has been of a sufficient duration to demonstrate a kind of "permanent" committment to a specific space on which the unit is located. Consequently, a unit constantly moved from one park to

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

another would not be protected under these rights.

In several of the cases considered above, duration of stay is regarded as a basis for classifying a house trailer either as a vehicle or a dwelling structure. Yet many municipalities limit the period for which a house trailer may stay within its boundaries, thereby indirectly enforcing its vehicular categorization. Put otherwise, the transient character of the house trailer is enforced. Several cases in this period tested the right of a municipality to impose a limit of stay. The courts have generally upheld that authority. In some cases this authority has also been tested as it applies to limiting the stay of a trailer on a private lot. In Town of Southport v. Ross,[6] the court sustained an ordinance limiting the stay of a trailer on a private lot to four weeks per year. In so doing it overturned a lower court ruling:

> [If] a trailer when suitably located on a private lot is not considered a menace for twenty-eight days. It is impossible to discern what causes it to become a menace on the twenty-ninth day. (cited in Hodes & Roberson, 1974, p. 100)

The use of permits limiting duration of stay have the effect of temporal categorization. Equally common is the attempt to spatially categorize and, in turn, segregate the house trailer through the use of zoning. Several cases throughout this period firmly establish the authority of local governments to restrict mobile homes to parks. This authority was challenged primarily in cases in which the local government failed to operate under a comprehensive ordinance which clearly identified the class of land use trailer parks, or trailers on

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

individual lots, could locate on. Typically, comprehensive zoning excludes trailers from private lots and, in turn, designates parks to commercial and/or industrial zones. Since court support rests on the establishment of a comprehensive zoning plan, mobile homes set up on private lots have often concentrated in areas lacking a comprehensive plan, or in which the plan permits them as a rural structure. In other cases, the courts have failed to support an exclusion where trailers were not specifically restricted, and where the basis for attempting to exclude them was a lack of aesthetic conformity.[7]

A park is regarded as a business and zoned as such regardless of the duration of stay of the units in it. The precedence for such classification rests in the exclusion of motel and vacation cottages (as transient residences) from residential districts. By restricting units to parks, other types of regulations which enforce transience (e.g. the requirement that the unit remain on wheels for fire safety purposes) are more readily imposed.

Another way of classifying the house trailer is in terms of how it is taxed. In the first period of trailer development, units were taxed primarily through licensing fees and by permits that might be required if the unit stayed in a particular jurisdiction beyond a specified period of time. As trailers became used increasingly for housing, and in some cases set upon privately owned lots, to which they were permanently affixed, the question arose as to the proper method of taxation. Is the unit still a vehicle, and should it therefore be licensed, or has it become something else?

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In Crawford v. Borough of Wesleysville,[8] the Borough continued to impose a licensing fee on a house trailer which had been permanently set on a privately owned lot. The court ruled that the unit as it was set up was a "home," and that the privilege of living in a home was a natural right protected by the constitution and, therefore, could not be licensed.

In addition to licensing fees, personal property taxation of trailers became increasingly common in this period. By 1954, 20 states taxed units as personalty. Before, and even after, personalty was established as a basis for taxation, the question of whether a house trailer could be considered real estate and taxed as such, was raised. In many cases the dividing line has been whether the wheels remained on the unit: i.e. if its mobility was unimpaired.[9] The use of physical criteria to determine tax status clearly invites abuse. In a state where property tax is not used and licensing fees are considerably lower than real estate taxes, individuals placing units on lots which they owned could avoid taxes by keeping their wheels on. An expression among trailerites in this period is "keep the wheels on and the tax man off." In some cases, however, the intent of the owner, in addition to physical modifications to the unit, has been considered.[10] If a unit remains in one place for longer than a specified period, is continuously occupied, and also has physical attachments to the site, it should be considered realty. The effect of such rulings may be to remove some ambiguity from the status of units on private lots, but not those located in parks. Here the issue has

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

been raised as to whether a unit set on blocks with its wheels removed and with utilities attached becomes real estate, even though the structure is not owned by the park owner.

In light of the ambiguous tax status of the house trailer, state's attorney generals began to rule on this situation. One of the first was Florida's who, in 1946, declared that house trailers should be taxed in three categories depending on how they were used. If the unit was used as a travel trailer and occupied only during travel periods, it carried a licensing fee. If it was used as a dwelling, but not attached to the land, it was considered personal property, but if it was permanently affixed to the site it was realty (Meloan, 1954).

Most taxes on the house trailer were imposed locally, but at the federal level one tax was charged which supports the vehicular classification of the unit. Until the mid-1950's there was a federal excise auto tax imposed on the purchase of trailers regardless of use.

The effect of the legal rulings in this period are to confirm that a house trailer can be used as a residence, but to restrict its use as a geographically fixed residence: i.e. trailers should be confined to parks and their stay there should be limited. Other measures were also upheld to assure the transient character of the trailer.

It is not only the trailer detractors that have used legal mechanisms toward its definition. The industry itself, through the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

use of codes and model ordinances, attempted to win a favorable definition of the house trailer. This work included creation of a voluntary construction code, in 1952, which could serve as an alternative to the application of conventional building codes when applied to the trailer. They created model trailer park ordinances, in 1948, for the same purpose. Finally, they lobbied highway authorities for recognition of house trailers as distinct from truck trailers, so that the allowed length of units could be increased. As both a vehicle and a dwelling, then, the industry was attempting to establish a special category for the house trailer.

Popular Meaning

The overarching themes in the first period of trailer development concerned individualism as equated with mobility and a return to a simpler life, closer to nature. The travel trailer was seen as an extension of the autonomy afforded by the automobile. This freedom was perceived by trailer detractors as a threat to the traditional values of community, which they equated with stability and a commitment to geographical place. These polar themes--individualism and community: transience and permanence--form the background in which the images of the present period, between the wars, is played out. Because of the significant change in the composition of trailer users (from the retired and vacationing to young families) and in the use of trailers (from secondary to primary housing) the specific images used to convey their meanings have been transformed. For example, the image of the trailerite as a modern pioneer is still evident,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

but it is developed in terms of the act of taming the country rather than returning to the wilderness.

The central issue which ran through the legal cases considered previously was whether trailers could be categorized and, if so, with what qualifications. The same issue is explored in the popular interpretation of the house trailer. Underlying both legal and popular interpretations is the tacit understanding that "dwelling" and "residence" refer to places of relative permanence. To dwell is, literally to be delayed in a place for a time. To reside is to have a place of dwelling; literally, a sediment, a place of deposit.

The travel trailer in this period is understood, by both direct and indirect users, as temporary housing; but "temporary" is taken in two different senses. In the first sense, the dwelling unit itself is temporary; it is not a place that the occupants would choose to remain within. In the second sense, the occupants do accept their dwelling as a house trailer. It is their home that they take from place to place, but they do not dwell on the land. The legal cases previously reviewed showed that there is an attempt to define more precisely what it means to dwell in a place as distinct from dwelling on the land, and which rights are accorded to each condition. To the extent that the house trailer is not a form of housing in which one can dwell on the land, it is perceived as a threat to community. The community in this case is understood as a geographic unit made up of people who share a concern and obligation for a common place. Similarly, to the extent that the house trailer is not an object appropriate for dwelling-in, its use is perceived as a threat to family. The family,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

in turn, is understood as a social unit bounded by a common space which supports its function; most particularly the function of socializing children.

The house trailer is perceived as a threat to traditional community, in part, because it represents a lack of committment to place. The community is understood as something built up over time. Its construction involves a process of physical and social selection. New residents are assimilated to it, and brought around to its standards. New housing is also assimilated physically, through the additions which people make to their units and the maturing of landscape.

Insofar as trailers can be regarded as temporary housing which is adopted under emergency conditions, their presence in a community does not necessarily represent a rejection of traditional values. If they are allowed into a community under other circumstances (e.g. as vacation housing) then they must be classified as part of a business enterprise and segregated from residential areas.

For the occupants of trailers in the war plant boom towns of the early 1940's, the trailer was accepted by most of them as emergency housing. Since the nature of the housing shortage was evident, trailer use was no reflection on their own values. Many of the house trailer occupants had moved from conventional homes, which they owned, in order to work in the war plants while remaining together as a family. Their adoption of trailer housing was the expression of a noble sacrifice; as an excerpt from the diary of one occupant suggests.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> I have wondered many times how many less employees would Willow Run Bomber Plant have if it were not for the men and women living in trailers - men and women who, like us, are praying and hoping for the day to come when they can go back home again back to "normal" living! (Carr & Steiner, 1952, p. 110)

There appears to have been at least an initial sense of adventure mixed with the sacrifice of taking up the trailer life style; a need to be resourceful in order to maintain order and a family environment under cramped conditions. It should be noted that about an eighth of the population of the country was required to move as a result of the war effort, so that the sacrifice of "normal" living was widespread.

The traditional sense of community suggests a social group sharing common values, thus providing a suitable environment for child rearing. The trailer camps of the War were not communities of self selected households. Carr and Steiner (1952) observed of the Willow Run plant:

> Outside of the individual trailer it was impossible to maintain social distances. As one trailerite observed, it was "impossible to select one's associates on a money basis any longer." Or on any other basis, for that matter. Selection was out for the duration. The bomber plant had done the selecting. Ex-bartenders waited for Tennessee drys to vacate the shower baths and middle-class wives from Midwestern Elm Streets took turns at the camp washing machines with Eastern foreign-born "creatures" from across the tracks. In the welter of overcrowded utility houses individual discriminations were rubbed down and individual attempts to control one's own social world rubbed out. The easy going shrugged it off. The stiff-necked suffered. But everybody took it, for there was nothing else to do, no place to go. (p. 96)

By 1943, with the most serious phase of the housing crisis passed, the National Housing Agency was ready to rule that trailers were not houses, and that government efforts in the production of housing

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

should be in the construction of permanent units. Their rejection of trailers as housing was based, in part, on the fact that they were factory built; but on this basis all prefabricated dwellings would not qualify as houses (Meloan, 1954). Underlying the government's classification of trailers was the assumption that housing is something with durability and fixity. The house trailer is still basically a vehicle with a limited life, and not a building which properly constitutes a component of the built community.

With the declared housing emergency over, the use of the trailer as housing reflected a matter of choice (though among severely limited alternatives) rather than necessity. The negative image of trailer camps as slums filled with "trailer trash" followed after the War and helped to generate resistance to the establishment of parks in many communities. This negative image was projected in articles like Alexander Wellington's "Trailer Camp Slums" (1951):

> A new kind of slum, the permanent trailer camp, offers all the bad features of the urban "blighted area," none of the vacation adventure for which trailers were made.... (p. 418)
>
> Trailer camp slums are a very real, if as yet unrecognized, menace to our American way of life. They should be eradicated <u>now</u>, even in the face of an acute housing shortage, for the creation of more slums is not the solution to the problem of housing shortage. (p. 421)

The meaning of the trailer and trailer park, then, is inextricably tied to the reading of the circumstances of its use. It is either temporary housing adopted in an emergency and, therefore, not a reflection of the values of its users; or it is temporary housing which

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

threatens to become permanent, reflecting on both its users and the community in which it is placed.

Throughout this period, but especially during the Korean War, there was a large group of primary housing trailer users who did not regard their units as emergency housing. For the skilled construction worker and the military family, the trailer was housing by choice. Rather than separating traditional values from trailer living, they projected and transformed those values onto this form of housing. It is for and by this group that the theme of the pioneer is developed. This theme is exemplified in a 1945 editorial in Trailer Travel Magazine, entitled "The Trailerite is a Typical American."

> Who is it today, like the pioneers in their covered wagons, feels the desire to dip over the horizon - who but the trailerite? Like the pioneers he, too, is hardy and self-sufficient - he can live and thrive wherever he goes. Why not? His house and his home go with him.... He solves the manpower problems and the housing shortages of the nation. He is independent, entirely democratic. (Vol. 10, 7, p. 5)

What are the characteristics of being an "American" suggested here? It is, as seen in the previous period, an attitude of independence, or autonomy. The individual who is too strongly rooted to a geographic community cannot extend the frontiers of civilization.[11] The construction of the National Defense Highway System, the great power dams, the nuclear power plants and armament facilities required a skilled population ready to move where the need was.

> They [the trailerite construction workers] possess characteristics that are generally prized by all American communities - sobriety, occupational skill, and a genuine interest in contributing to and

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> improving the community in which they live... they take considerable pride in the important and necessary role that they play in industrial development. They view themselves as community assets and are, therefore, extremely sensitive to charges that they are irresponsible trailer trash. (Hagen, 1954, p. 34)

Thus trailerites are not simply typical Americans, but prototypical Americans. They do not always have the opportunities to choose their neighbors, but they have the freedom to move without the traditional encumberance of real estate.

The translation of the significance of property and acquisitions is an important part of this image. The image of the traditional community includes the physical extension of the dwelling onto the land: e.g. landscaping and the construction of additions. The residence is a "sediment," as well as a repository of sentiment. The house trailer in a park does not support this accumulation of possessions. A phrase which runs throughout this, and the preceding period, is that in a trailer "everything is in its place and there is a place for everything." Consequently, personal identity is to be established by direct social contact rather than mediated through the display of artifacts. This suggests, in turn, that trailer living is less formal and less rigidly structured by socioeconomic status. The same type of imagery and interpretation seems to apply to the military family in a house trailer. In both cases there is evidence that the degree of socializing within parks may have been greater than that found in conventional housing communities; especially for transient families.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Trailer living is most typically and favorably contrasted with apartment living, rather than life in a conventional house.

> What is it that we trailerites possess in a more marked degree than those who live in apartments or stationary homes?
>
> It's not the pride of possession, even in these days of the housing shortage, because there are still many who experience that joy without owning a trailer. Personally I think the answer is one word - happiness, the happiness that comes from freedom and the better opportunity we have to make friends wherever we go ("Why I Like Trailer Living;" April, 1950).

The trailer, unlike the apartment, can be more fully dwelled-in as a repository of sentiments, if not full of possessions.

> We've been in nice apartments, though temporarily, but its not the same. I've always had a little lost feeling whenever I go into one. It's not my home. It's not my furniture and just try and keep a child's hands from things. No freedom there.
>
> Of course you may say, "But a child is so restricted in a trailer park. After all, you are renting your land." That's true, but neither we nor our child are any more restricted in a nice trailer court than we would be in the close housing of the cities or suburbs...
>
> As to our bunching together, we love it. Rarely does any neighbor attain the intimate friendliness, the camraderie of a trailer park....
>
> For Heaven's sake, lose that idea that we're all poor unfortunates. Why, one of my neighbors owns a local skating rink. Another has bought a grocery. I've met doctors, bankers, and famous retired people. (Sketler, 1951, p. 47)

The use of the house trailer as primary housing is a threat to the traditional image of family as well as of community. The term "trailer trash" refers particularly to families with no regard for the proper upbringing of children. Implicit in this perception is the understanding of the importance of the permanent home in the process of child

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

rearing. Starting in the Nineteenth Century, in industrialized countries, the perceived function of the home shifts from being a center of production (i.e. the place where the things necessary to the family are made) to a place of consumption and education. (Handlin, 1971) The ideal of the Christian home, which Catherine Beecher and Harriet Beecher Stowe described in 1865, was a place designed for the moral and physical upbringing of children.[12] It is accepted that the quality of the home environment and the community in which it is set significantly influences the character of the child.

To be a proper home, then, a dwelling must provide sufficient space to preserve the autonomy of individual family members. It must preserve the privacy of adults. It must allow for the demonstration of wifely prowess: e.g. in entertaining friends. Clearly, trailer living provides difficulty in satisfying these functions. Their importance, and the ability of the trailer to meet them, is evinced in photographs of people doing the everyday things expected in homes: e.g. baking a cake, sweeping out the living room, junior playing a game of checkers with Dad. The pictures seem to say- "see, it can work." The irony is that the audience for these photographs are already trailerites. The photographs accompany articles like "Being a perfect hostess in a trailer," and Jean Ross' regular column in Trailer Travel Magazine, "Housekeeping on Wheels."

This kind of material seems almost defensive: an answer to the charge that trailers are ritualized and not "real" houses. There is, however, a more strident edge to the image of trailer houses. It rests in the interpretation of travel as educational and the trailer as a means of providing direct exposure to a range of people and

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

experiences. Thus the house trailer may be an excellent environment for a child's education. The trailer is again offered as being far superior to the apartment.

Concommitant with the rise of the idea of the home as a place of learning (vis-a-vis child rearing) is the image of the home as a place of leisure. It is a place to re-create, to further explore one's talents. The house trailer, particularly as a form of housing for the retired, is projected as a dwelling made for leisure. It's virtues are seen as ease of maintenance, low cost, the highly social life provided in the parks and the chance to travel with the sun. In an article entitled "Retire to Adventure," the author observes:

> I've often thought that there was the keynote of trailer living. You take your home with you. You leave the endless cleaning, the taxes, the lawn to mow, the rooms to repaper, but you take with you comfort and the atmosphere of home. (Dowdel, 1951, p. 15)

The trailer in this case is offered as an alternative to the conventional house which the retired couple has presumably lived in for years.

In the popular trailer literature, at least, there is an attempt to establish a place for the trailer as a legitimate form of housing by selecting out certain aspects of the conventional model of housing, and then showing that the trailer satisfies those aspects. Thus, if the model suggests that housing is a place for the education of children, and travel is deemed educational, then the trailer which facilitates travel also facilitates education, and is therefore a proper dwelling. The argument, in effect, is that the trailer should be accepted on the basis of the qualities which it possesses rather than being excluded on the basis of qualities which it lacks.[13]

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Summary

I described the integration of the mobile home in the previous period in terms of three sets of strategies which I labeled the travel trailer, the house trialer and the mobile home. Each suggests a fundamentally different image of the nature and use of the artifact. Of the three, the approach labeled the "house trailer" dominates the pattern of integration of the present period. Even though the title "mobile home" is found increasingly in the literature at this time, a conventionalized unit (both exterior and interior) did not gain significant popularity.

Although the idea of house trailer is dominant in this period, its implications as a prototype for industrialized housing vary widely. In the first chapter, three models of industrialized housing were presented: housing as service, housing as product, and housing as process. Each of these models is evident in particular interpretations made of the house trailer by different user groups in this period. The government, in its application of trailers as a form of temporary and emergency housing, seems to follow the model of housing as service. The trailer industry, in its pursuit of an automotive analogy as a paradigm of organization, suggests the model of housing as product. Finally, the trailerites who were using their units as primary housing, suggests the model of housing as process. The pursuit of each model in turn makes appropriate a different set of integration strategies.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The House Trailer as a Service

The idea of the trailer as a housing service is illustrated by the government's use of trailers as temporary housing during and following the War. The industry also supported this idea, but only for government owned trailers, and partly out of the fear that these surplus units would glut the trailer market after the War.

Housing is understood to be a service to the extent that it is provided to achieve something outside of itself, rather than as an end in itself. It is stripped of its secondary functions (e.g. as an investment, as a means of personal identification) and reduced to the function of providing family shelter. At the same time, the trailer in this model becomes only one part of a system. The trailer camp with its various social and physical support facilities must also be considered in designing the complete service system.

If the government owns the units then it is presumably responsible for their repair. Moreover, as the units become worn out, it must consider how they will be refurbished or replaced. The total design of the service system involves consideration of the expected useful life of its various components, if only to determine what the monthly service charge should be. Since trailers were to be used only on a "temporary" basis, consideration of obsolescence would be important. At the same time, their very mobility seems to assure that when they are no longer needed they will not be left around to clutter up the landscape.

The government's decision to produce a standard unit is a telling part in the playing out of this model. Since it is a unit of service

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

rather than a product which is important, each manufacturer is reduced to providing identical units which, in turn, are components of the trailer park complex. Styling becomes irrelevant, while personalization by users is not encouraged. All concerned understand that the artifact, like the standard black desk phone, is a means of providing a service.

The strategies of integration which follow from this model are independence and syncretism. The house trailer is temporary housing, and, therefore, a special type of dwelling not to be confused or mixed with other forms of primary housing. Trailers must be confined to parks because the park is part of the service delivery system. Parks, in turn, should be zoned apart from permanent housing. Finally, when the government declared emergency ends, the appropriateness of trailer housing (as well as the appropriateness of the government's role as a housing service provider) ceases.

As temporary housing, the house trailer must retain its mobile character. The basic volumetric form of the unit and the way in which it is attached to the site maintains its hybrid character as both vehicle and dwelling. Its form, in short, expresses syncretism.

The House Trailer as Product

In the first period of trailer development the automobile provides an important image for the styling of units. The theme of individualism associated with automobiles is also transferred to the trailer. In the present period the automobile analogy is spelled out further,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

but now the projection involves the way in which the trailer industry perceives the nature of its operation.

If a trailer factory produces an object like a car, then it follows that it should be marketed and serviced like a car. During World War II, the demand for a great number of units served as an impetus for manufacturers to adopt more industrialized practices. As in the automobile industry, they contracted out the fabrication of individual trailer components and focused attention on the assembly of the finished product, using a subassembly line process. After the War there were many more manufacturers, and marketing became more important. The manufacturers understood that they were selling a relatively disposable consumer good. As with automobiles, stylistic changes, as well as substantive improvements in the product, could help to generate new sales and produce a market for used units. In this model, the dealer plays a significant role in moving used units, particularly as trade-ins. Dealers also became the local servicing agent, for which they were reimbursed by the manufacturer by whom they were franchised.

The model of housing as product, specifically as spelled out through an automotive analogy, breaks down at the park level. What are parks if we follow this analogy; parking lots? If one is in the business of making movable housing, is it appropriate to consider what happens to the unit at rest? To be sure, the industry's associations did make overtures toward establishing standards for park designs, but neither the manufacturers nor the dealers, in general, entered the area of park development and operation. Again, in the automotive

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

analogy, even though highways and service stations are essential to the use of cars, the manufacturers rely on consumer demand to generate a response to these needs and do not take them on themselves.

One of the things that is telling about the development of this analogy is that it is utterly foreign to the way the conventional home building industry perceives its operation. The people who make up the trailer industry, however, were not drawn from the conventional building sector, nor were they "contaminated" through the use of professional designers into understanding their "proper" role. They were people making a product in a factory, and the product happened to be a dwelling.

The strategies of integration followed in this model are syncretism and independence. The outside of the unit stylistically remained vehicle-like; the inside, however, became more house-like. Even in the industry's action to promote the establishment of a uniform trailer park ordinance, the park was to be a special land use: distinct from single family residential, but not relegated to manufacturing and commercial districts.

The House Trailer as a Process

The house trailer may be seen as a process to the extent that the act of living in it is allowed to significantly alter its form and, ultimately, its meaning. As opposed to being an object which comes from the factory and is disposed of when its useful life or style is obsolete, it becomes the core of something that can be built upon and extended. In the parlance of industrialized building, it becomes the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

"hearth unit" which contains the essential mechanical elements to support the activities of dwelling, but without the space necessary to shelter all those activities.

The implicit advocates of the model of house trailer as process are the trailerites who used the units as primary housing and who remained at a site for a year or better. In accommodating their units to a lot, and to their everyday needs, they made additions onto it. In hot climates an extra shed roof, covering both the trailer and the car, might be constructed. In muddy areas a utility proch was desirable. A series of steps and possibly a porch were useful anywhere; especially since trailer doors opened out, making entry with packages difficult. The result of these additions is to produce an artifact which is a manufactured product having one or more handmade sheds mushrooming out from it. Of course the trailer, which was permanently affixed to a site, could be expected to have even more extensive additions, sometimes enveloping the entire core unit.[14]

For the skilled construction worker, or other primary housing trailer users, the external form of the house trailer as a vehicle (expecially as an object with a metal skin) is not a contradiction to their image of housing. It is, after all, still meant to be mobile, just as they as a family unit are mobile. Once set up on a site, however, the exterior form of the unit can become conventionalized. Often the conventions adopted are regional modifications to the basic house (e.g. a verandah in warm, sunny areas). Gardens may be planted and even minor landscaping can be attempted. These additions must either be left behind or disassembled before moving on to a new site.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

For this migratory population, locating in a park is desirable since it provides the necessary utilities. The idea that these parks should be segregrated from residential districts, however, is not seen as appropriate. Such segregation carries the implication that the housing and life style of these people are not legitimate and, consequently, pose a threat to stable communities. The trailerite must fight for the structuralization of the house trailer as a residential unit, just as he or she feels forced to prove that taxes are being paid and that their children are participating in the local schools.

Part of the effort toward the structuralization of the house trailer is the reconstruction of the myth of the pioneer who sacrifices family comforts for the greater need of civilizing the country. Similarly, the democratic community is defined as a place of great social heterogeneity, where people are accepted for who they are rather than for what they own. Structuralization, then, proceeds by showing that the innovation embodies traditional ideals, albeit in a new form, rather than offering an alternative to them.

There are two specific aspects in the strategies of integration developed in this period which deserve specific mention. The first concerns the dichotomization of interior from exterior aspects of the trailer. The second concerns the collage-like character of the trailer together with its handmade additions.

I have already indicated that in this period there is a tendency to conventionalize the interior of the trailer as "home" while treating

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the exterior as a vehicle. Through this spatial division the inherent contradiction in associations made with vehicles and dwellings is negotiated: i.e. when outside, the unit is a vehicle and part of the car/trailer complex; but when inside, it is a dwelling. This dichotomy extends to the perceived sex roles of the trailer occupants. The man tows the trailer and maintains it outside, while the woman is responsible for the interior. This sex role dichotomy is the subject of many trailer magazine cartoons, where a husband is shown dreaming about the camping vacations that the trailer will make possible, while the wife is imagining the dishes that she will still be left to wash and the ironing that she will have to take along. Similarly, in magazine photographs showing the primary housing trailer family, the wife is pictured executing typical female responsibilities (e.g. baking a cake or putting junior to sleep) while the husband may be tying fishing flies in the living room.

When the house trailer is set up on a lot for a period of time, and additions are made, this fragile dichotomy between exterior and interior, vehicle and dwelling, male and female, is made even more tenuous. At the same time a new dichotomy develops: one based on the contrast between permanent and temporary. Picture the shiny metal trailer surrounded by its handmade wooden sheds. It is the object being serviced by the sheds, which are therefore secondary to it; and yet the sheds have more attachment to the site, if only because they are not on wheels. The contrast of the permanent with the temporary is also a contrast of the homemade with the machine made. It is a contrast, moreover, presented in the form of a collage, in which each element of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the composition appears to be a ready-made object with associations of its own; associations which are enriched in their present juxtaposition.

Notes and References

1. One exception to the situation of non-designers designing trailers in this period was the commissioning of Raymond Loewy to design a unit. I can find no evidence of the commercial production of these units referred to by Meloan (1954).

2. 158 Pa. Super. 572, 46A.2d 35(1946); appeal dismissed, 329 U.S. 669, 67 S. Ct. 92, 91 L. Ed.591.

3. 111 N.E. 2d 695 (Ohio, App., 1952), aff'g 102 N.E.2d 48

4. 295 KY. 114, 174 S.W. 2d S (1943)

5. 109 S.W. 2d 736, 738 (Tex, Civ. App. 1945).

6. 284 App. Div. 598, 132 N.Y.S. 2d 390 (1954)

7. 5 Cumb. 54, 1 Pa. D. & C. 2d 680 (1954)

8. 68 Pa. D. & C. 215 (1949)

9. See, for example, Streyle v. Board of Property Assessment, 173 Pa. Super. 324, 98 A. 2d 410 (1953); Kinkella v. Board of Property Assessment, 173 Pa. Super. 329, 98 A. 2d 413 (1953); and Stewart v. Carrington, 203 Misc. 543, 119 N.Y.S. 2d 778 (1953).

10. See, for example, Coyle Assessment, 17 Pa. D. & C. 2d 149 (1958); and In the Matter of the Assessment of Real Estate, Situated in Sandycreek Township, Venango County, Pennsylvania, 199 Pa. Super. 310, 184 A. 2d 127 (1962).

11. On this point deTocqueville observed "In the United States a man builds a house to spend his later years in, and he sells it before the roof is on: he plants a garden and lets it just as the trees are coming into bearing: he brings a field into tillage, and leaves other men to gather the crops." (Democracy In America. 1946, p. 144)

12. See their, The American Woman's Home, (Stowe-Day Foundation: Hartford, Connecticut, 1975) especially Chapter II: "A Christian House."

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

13. Homer Barnett (1954) refers to this pattern of integration as "convergent incorporation": i.e. similarities in some of the features of an innovation lead to the assumption that it is equivalent to an established item or practice.

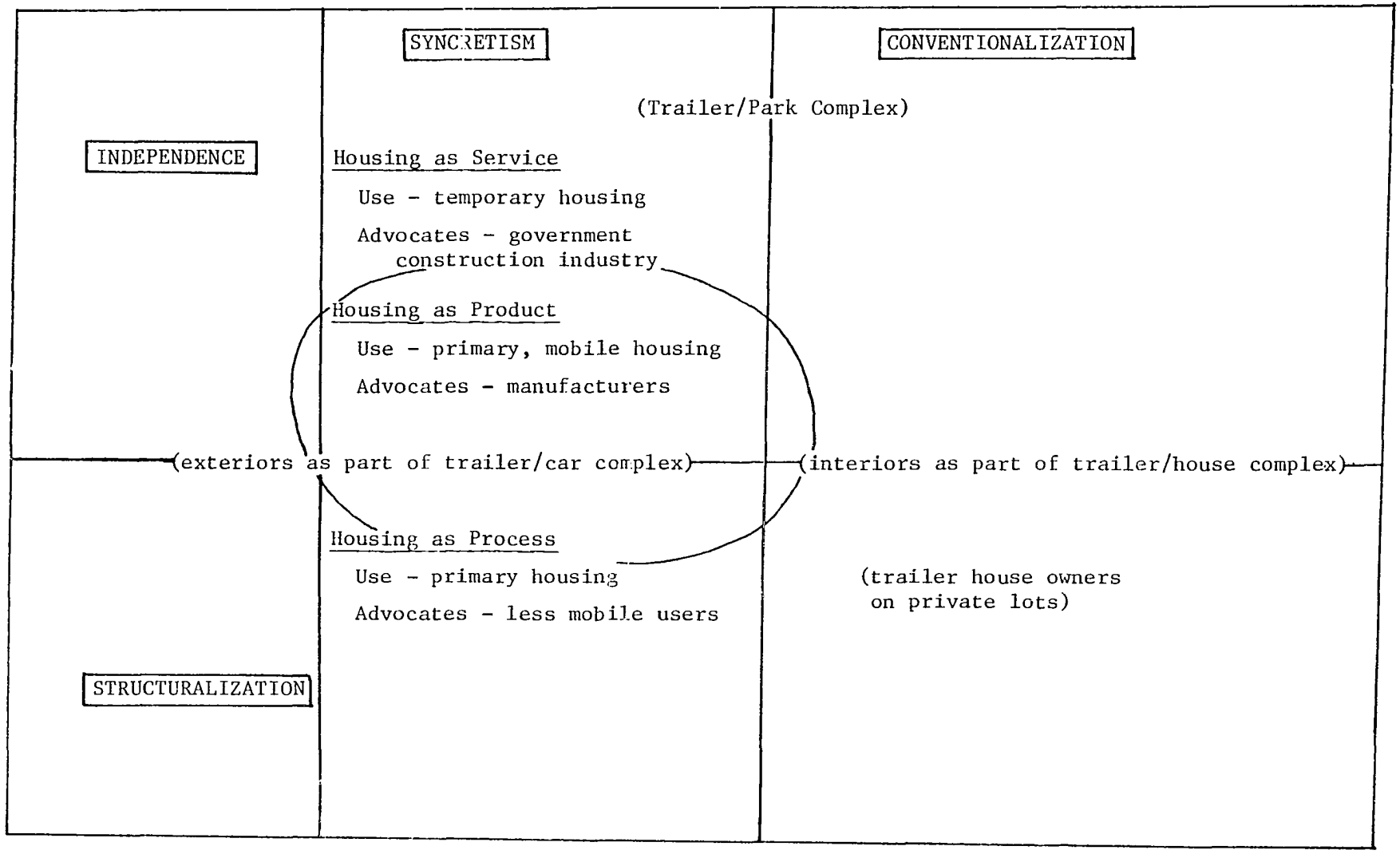
14. Davis (1972) refers to the approach of using a mobile home as a hearth unit on to which modules are attached as the "saddle bag" approach. He suggests that such an approach can make the mobile home more responsive to the desire of owners to personalize their housing.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Table 3

Summary of Integration Strategies: House Trailer Era



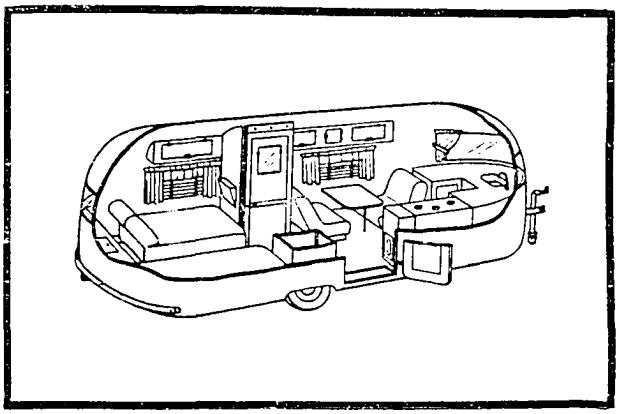
Illustrations: The House Trailer Era

22. The celebrity endorsement, here with Ginger Rogers, suggests that trailer life can be a fashionable adventure.

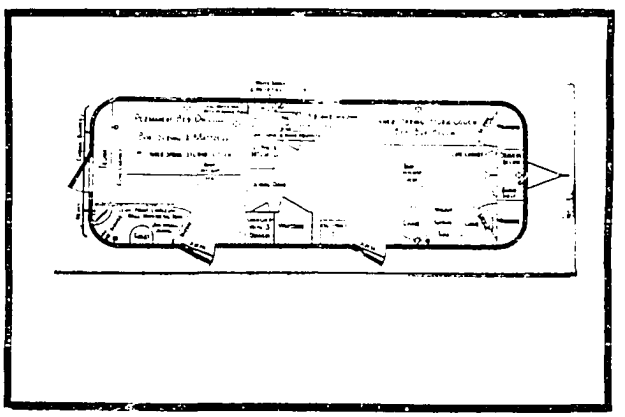
23. A later version of Stout's folding home. Units similar to this were produced for the government during the Second World War. Entrance on narrow end offers a more conventional relationship between the unit and the site.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

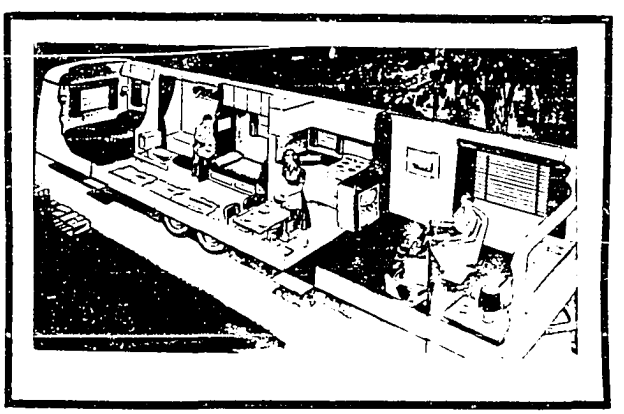
24. The transition from the travel trailer style to the house trailer style is marked by a preference for "squared living." The yacht interior is replaced by the house look, complete with built in television.



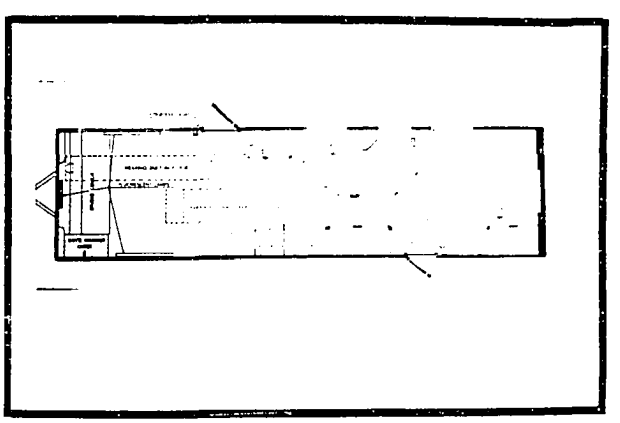
25.



26.

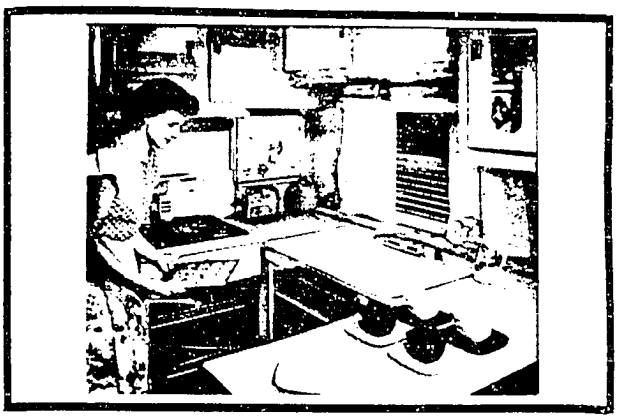


27.



Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

28. The legitimacy of the trailer as a house is argued by a display of its equipment: "if I can cook Thanksgiving dinner here, then it must be home." (1950)



29. "Home Sweet Home. I take great pride in serving dinner to my friends." (1947)

30. The interior of the home, and hence of the house trailer, is portrayed as the woman's domain. The vehicular exterior is the man's domain.

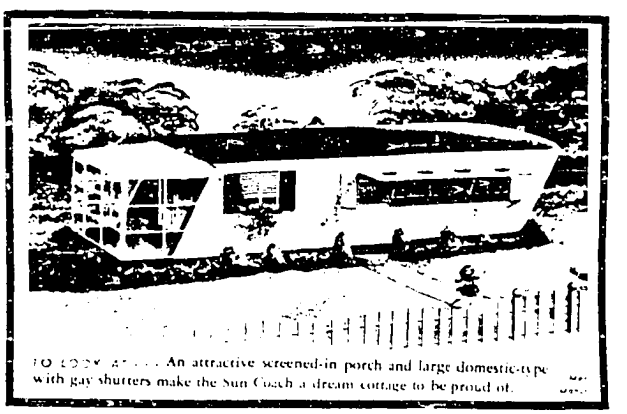
31.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

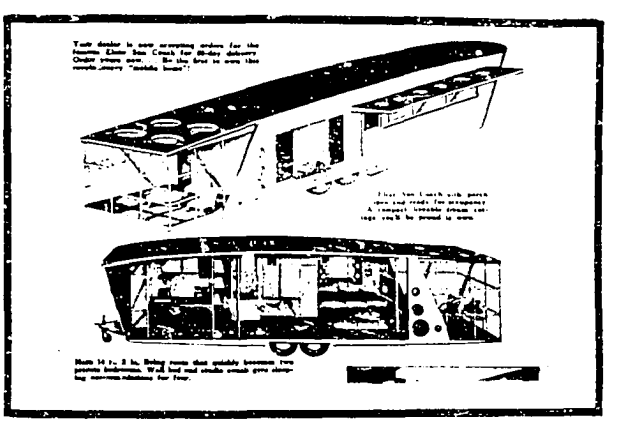
32. Following the War, several aircraft manufacturers entered the trailer industry, bringing with them those techniques of assembly.

33.

34. The influence of aircraft design was not always based on technological decisions. The design of the Elcar Sun Coach combines the styling of a fuselage with shutters and a picket fence.

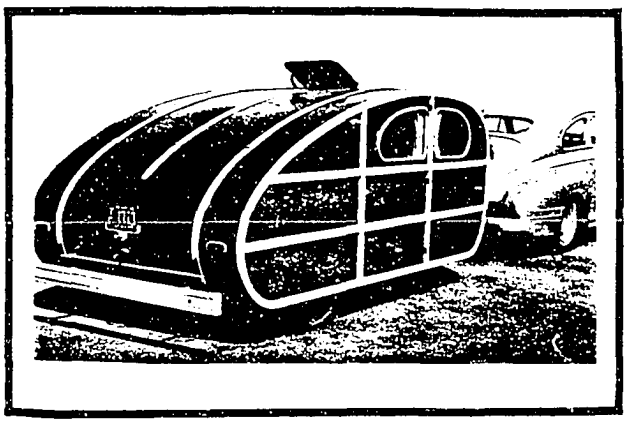


35.

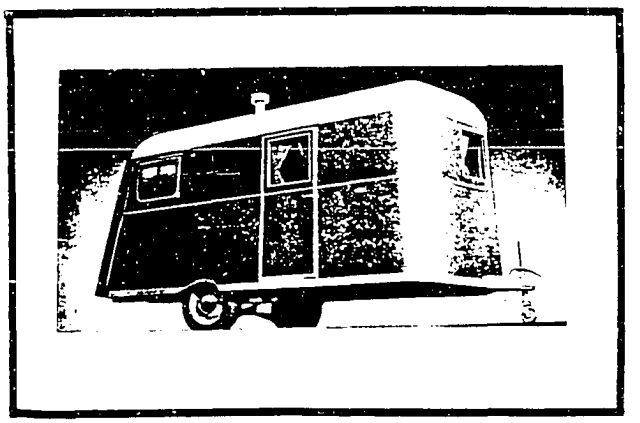


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

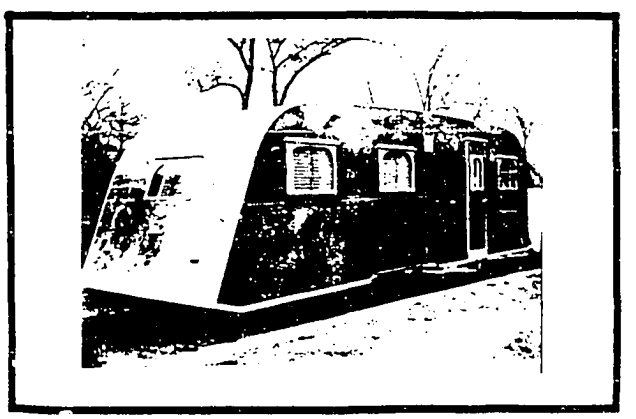
36. In the travel trailer, the design of the exterior was conceived as part of a car/ trailer complex. The evolution of the house trailer involved the introduction of more house features, but these were still largely confined to the interior.



37.



38.



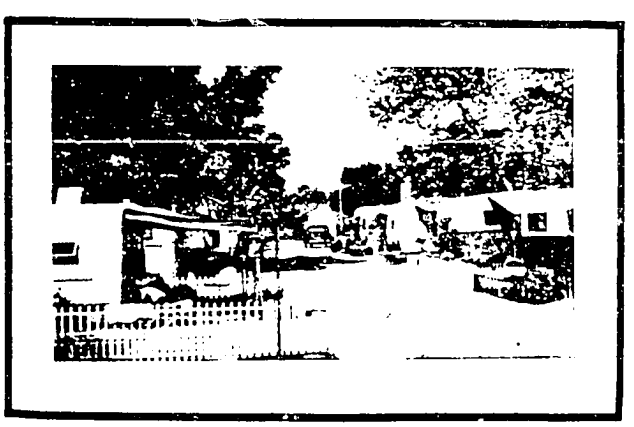
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Unit and Site

39. A unit at the Savannah, Georgia atomic energy plant construction site. Ten thousand units were utilized at this site alone (1953).

40. This unit, enclosed in a shed, was labeled a "grounded trailer," by Trailer Travel magazine in 1950.

41. An attractive park, by the standards of the late 1940's: picket fences, awnings, and some units set parallel to the road.



Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Chapter Four

The Mobile Home Era (1954-1976)

In 1954 Elmer Fry, a house trailer manufacturer, introduced a ten foot wide model. Three years later a dozen manufacturers, out of over 300 in the industry, were offering at least one "10-wide." By 1960, 10-wide units comprised over 90% of the total mobile homes produced. In 1962, a 12-wide unit was introduced, and in 1969 a 14-wide model. In retrospect, it seems clear that the introduction of the 10-wide marked a significant shift in the nature of the house trailer; which in name as well as in form had become the mobile home. Looking at the situation from the perspective of 1954, however, the implications of this shift were probably not clear. Indeed, it is not until the early sixties that changes in floor plans, park design and elevations reflected the effect of the increased unit width.

The house trailer of 1954 was still a car towable vehicle. Its occupants were more mobile than the general population, and they had a higher income level. The mobile home, by contrast, was less easily moved. Because the highway regulations in most states limit the width of vehicles to 96", special permits for towing were required. By 1956 the Federal Aid Highway Act set the 96" limit as a standard for the interstate system. Wider units were more difficult, if not impossible, for the family car to tow; so that professional

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

towing was increasingly a necessity. This added to the expense of a move. The mobile home population, however, also proved to be less mobile than that of the house trailer. Their decreased mobility was not a result of the increased difficulty of moving, but a reflection of a shift in user population to families which were younger and poorer than those of the previous periods.

For those for whom mobility was still important, the house trailer and smaller travel trailers were still produced. As early as 1953, however, they were distinguished from larger trailers with the creation of a separate R.V. association. This distinction was also made legal in the state codes, which differentiated requirements applying to trailers from those applicable to mobile homes.

The whole mythology which had attended the first periods of trailer development were retained by the R.V. users (e.g. the idea of the pioneer life, the importance of travel as an expression of freedom and as a form of education); while the emerging notion of the house trailers as just "little houses" became increasingly central to the definition which mobile home manufacturers tried to create. Likewise, the theme that parks are really communities, and very friendly communities at that, took on increasing importance.

The choice of 1976 as the year which closes the mobile home era is less easily justified, if only because the period of retrospective examination is shorter. From 1954-1973 there was a fairly consistent and rapid growth in mobile home use, but in 1974 and 1975 there was a deep housing recession which effected mobile homes as well as

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

conventional housing. In 1975, sales in mobile homes was about 37% of the industry high, hit only three years earlier. The effect of the recession was to "shake out" marginal manufacturers and, consequently, leave the industry under greater domination by the large producers.

Historically, the cost of starting a mobile home (trailer) factory had been modest in comparison with other forms of manufacturing, but in 1976 a new set of federal regulations promulagated by the U.S. Department of Housing and Urban Development (HUD) had the effect of upgrading the construction and inspection requirements for mobile homes. At the same time, the Federal Trade Commission proposed trade regulations to clarify and enforce manufacturers' warrantees. These requirements would seem to add to the cost of producing mobile homes and, thereby, reduce the profits and competitiveness of the marginal producer.[1] The consequence of the new standards has been to reduce the distinction between mobile and conventional building. The mobile home thus becomes even less vehicular and more like modular housing. Indeed, some marginal producers appear to have switched to modular production rather than deal with the cost of increased regulation. In 1974, the principal of the industry association changed its name from the Mobile Home Manufacturers Association, a name adopted in 1953, to the Manufactured Housing Institute. Despite these changes, mobile homes owners are still battling against attempts to restrict the placement of their units. A major study of the industry, published in 1980 (Bernhardt)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

concludes that the industry is now at a crossroad. It can become either a more complete form of industrialized housing, or find itself serving an ever smaller portion of the housing market.

Form

Since the shift from the house trailer to the mobile home was initially distinguished by a change in form rather than use, it is appropriate to begin with this dimension. The immediate effect of producing a 10-wide unit is to increase the floor area of a mobile home by 25%. Assuming an average length of 40' in the 1954 models, the floor area of a unit would increase from 320 to 400 square feet. The eighty feet gained is roughly equivalent to the area of a master bedroom, or two bathrooms, or a kitchen and dining area in a typical house trailer. The potential exists, then, to either add a room, or increase their size. The latter option was adopted, resulting in a more favorable "houselike" proportion of rooms.

The added width of the 10-wide potentially offers greater privacy as well as space. With an eight foot wide unit, when bedrooms were placed on the same end of the unit, as they typically were, the bedroom toward the middle of the unit, as well as the bathroom, had to double as passageways. An adult moving from the rear bedroom might have to interrupt someone on the toilet and proceed past sleeping children to get to the kitchen. To place a corridor in an eight foot wide space would further reduce the dimension of the middle bedroom. The 10 foot width allows for the introduction of a corridor and a bedroom with a modest but usable width. Initially the 10-wide

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

models did not feature corridors, choosing to use the added space for storage. By 1957, however, many of the 10-wides shown in the trade journals incorporated a corridor plan. Consumers, through their purchases, had presumably made their preference known.

An alternative to the corridor scheme was the plan developed in the late 1940's, featuring bedrooms at opposing ends of the unit. As indicated earlier, this scheme provided privacy, but at the expense of compromising conventional house zoning, which clusters private areas together. At the same time, it makes more efficient use of the added space. Of the 80 square feet gained by increasing the width of the mobile home, about a third is lost to the corridor.

Throughout this period the mobile home grew increasingly wide and long. In the single wide unit the increased length, coupled with the corridor plan, produced a shotgun view down the length of the units. This view is not only uncharacteristic of conventional houses, it strongly reveals the box or container-like nature of the unit. In some cases, owners have placed a door at the beginning of the corridor. Manufacturers, however, have not included this option. More recently, models have been introduced in which the corridor is placed on the side opposite the entry. This alternative, while somewhat reducing the shotgun effect, raises questions regarding the relationship of the unit to its site and, more specifically, regarding the identification of a front and backyard.

One of the popular single wide floor plans of the sixties featured a "galley" kitchen located at the hitch end of the trailer. Here

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

again, the effect of the arrangement is to further conventionalize the zoning of the unit. Now, instead of entering the kitchen-dining area, one enters the living area and proceeds either to the bedrooms or to the kitchen.

In the late sixties, double-wide mobile homes were introduced. They were provided, according to one observer, "for owners wishing 'squared living' rather than 'linear living'" (Edward, 1977, p. 19). Double-wide units are typically organized with a central corridor and a highly conventionalized floor plan. Aspects of its organization, however, still reflect the peculiarities of the park lot configuration.

The net effect of the changes made in mobile home floor plans is to produce a unit which is not only more conventional in its zoning, but also in its complexity. One of the basic dimensions of complexity in the ordinary house is that its floor plan cannot be read from the outside, nor is a sense of its exterior shape retained on the inside. In the single wide, shotgun corridor mobile home, however, both dimensions of complexity are missing. One can read from the elevation what is going on inside, and from the inside one can sense rather precisely the configuration of the exterior envelope. The sense of physical complexity which separates interior and exterior seems to support a social complexity which, again, separates life inside the house from that outside. In the mobile home one is aware of a thinness which is more than physical.

There is almost a total absense of new experiments in space expansion in this period. Expandable units were still being produced,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

but they accounted for a decreasing market share. The main experiment in expansion was in developing a modular unit to which elements could be added; but this approach did not meet with commercial success.[2] Experiments with more modularized elevations and interiors (e.g. partitioning and furniture arrangements) have also failed to gain acceptance. In 1962, for example, the Marlette Company introduced a line of units created by a product design firm. The units had a rather Miesian aesthetic, with recessed channels set between exterior panels, floor to ceiling windows, and a black coping band defining the roofline. The unit went out of production after six months.

Some of the conventionalized aspects of the mobile home floor plan are bought at the expense of space; particularly in the single wide unit, where space is at a premium. There are similar dysfunctional trade offs apparent in the interior appointments of the unit. One example of this is the design of storage units. In order to take full advantage of the limited storage area available in the travel and house trailer, storage wall units were utilized. Closets contained dresser drawers, while overhead shelves were provided wherever they would not interfere with headroom. By the 1960's these details were being replaced by conventional storage elements. Similarly, most of the built-in and convertible furniture was replaced by conventional unattached pieces. Advertising of the period suggests that these older design elements had become associated with the trailer; and if the mobile home was to be a "house," it would have to avoid any such associations.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Loose furniture pieces were already common in the house trailer, but they were often scaled down in size to fit the room area. There were many companies producing furniture exclusively for mobile homes. Mobile home advertisements of the 1960's make a point of the fact that full scale furniture is used. The same upgrading of scale is evident in appliances. The kitchen, in fact, becomes an important demonstration of the house-ness of the mobile home. It is a frequently pictured aspect of units in advertising throughout the 1960's. An acquaintance, interviewing mobile home dealers in 1976, asked one what new buyers look for when first inspecting a mobile home.

> From the outside what a couple sees is a big shiny box, and they're not sure that it is a home. When they step inside the first thing they go to is the refrigerator, the next big shiny box. After they've opened it and seen that it's a real full sized refrigerator, they're ready to consider the object that they're in as a home. (Andrews, 1976)

The next room in which full scaled and even generous appointments are important is the bathroom. Its significance is evident in the numerous advertisements of women putting on makeup before generous mirrors and double sinks. Less frequently, Dad is shaving while Junior brushes his teeth. The prominance accorded to kitchens and bathrooms in giving the message that mobile homes are full scaled real homes is, perhaps, a reaction to the image developed in earlier periods when units were dependent and when kitchens were equipped with camping type appliances. It is telling that these rooms, which contain the greatest collection of functional "equipment" in the house, should be used to communicate its legitimacy as a home.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Two other features of the interior whose development reflects a rejection of the trailer aesthetic are the windows and doors. In the late 1940's and early 1950's there was already an increasing emphasis on providing large windows, especially in the living room. Windows were metal framed, usually with an awning type opening. In the mid-1950's the Ventoura Company started featuring bay windows. Because these windows projected from the exterior, they had to rotate in for transit. While such a detail raises the problem of water and air infiltration, it has the advantage of giving depth to the wall elevation. Indeed, one of the characteristics which continues to identify the mobile home type window is its shallowness. Typically, windows are flush with the exterior and have only a shallow sill on the interior, promoting the sense of a thin container.

The one area in which a window with depth can be easily introduced is over the hitch end of the mobile home. A large window here, however, has the effect of focusing the interior space along the narrow dimension of the room; while opening the interior onto the park road. Indeed, a factor operating in the placement of the main window in the living areas seems to be the establishment, or reestablishment, of a relationship between the interior and exterior of the unit. The picture window functions as much to display the interior of the house as to provide the occupants with a view outside. This display function, however, is buffered by the front yard in the conventional house; while in most mobile home parks the buffered area is not much more than the depth of the hitch.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The total effect of the changes made to the interior of the mobile home in this period is to give it the appearance of something that has been decorated or styled, as opposed to something that has been "equipped." Whereas the built-in and convertible furniture of earlier periods manifests rather directly the requirements imposed by small spaces, the full scaled loose furniture of the present period can be read as an expression of choice, and hence of the taste of the occupants. There were, indeed, many more dimensions of choice by the close of this period. Walls were no longer uniformly wood paneled. Wallboard and vinyl covered board was in use. The uniform linoleum floor, which undoubtedly added a hollow note to the interior, was replaced by wall to wall carpeting. Manufacturers, by the early 1960's, found it appropriate to advertise that their units had been design coordinated, from draperies to furnishings, by "professionals."

The roof and doors are features seen from the outside of a unit as well as from within. Their conventionalization in the interior of the units reflects a similar approach to the exterior elevation. The conventionalization of the exterior had been anticipated by the Durham Houses of 1938. Twenty years later, Ventoura Company introduced two models (a conventional single wide and a duplex unit) in what might be described as a ranch house style. The units were evidently ahead of their time, and faded out of production. A dozen years later, however, such styling would be acceptable.

An informal survey of manufacturers' brochures suggests that the degree to which the exterior of a unit is conventionalized is directly

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

related to its size. Thus, 12-wide units will still follow the shiny box look, while double-wides will be made to look like tract houses. Since there is a significant difference in the cost of the units (not only by virtue of size, but per square foot as well) the manufacturers may be appealing to essentially different markets with different expectations and standards regarding their housing.

The features which comprise the exterior elevation are doors, windows, wall surfaces and roofline. By the mid-1970's the primary door of the unit was a wooden house type door, but the secondary door (visible on the same elevation in most single wides) was still a metal clad trailer type door. In wider units the door might be recessed slightly and, in some cases, set off by an entry porch. More commonly, it was flush to the exterior. Windows were frequently set off by panels intended to give the appearance of shutters. Often these panels were pieces of metal siding in a different color. The most common facing material was still sheet aluminum. Many manufacturers were now offering hardboard exteriors in simulated stucco and other surfaces. Others offered rough sawn hardwood siding. Again, these variations were more common on the larger units.

The new types of exteriors being offered seemed to reflect, for the first time, an attempt to respond to regional styles. In the southwest this meant a stucco look; on the west coast, rough sawn wood siding; and in the midwest, brick veneer. This response to regional preference was facilitated by the development of branch factories. Since mobile homes must be truck-towed, the efficient radius

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of transport is a one day trip; approximately 300 miles. A large company might, therefore, have branch plants in the midwest, southwest and west coast; each producing regional variations on its basic line. In addition, the 1976 HUD regulations required units to meet insulation standards appropriate to the region in which they were to be used.

One of the most important features of the exterior elevation is the roofline. It helps to define the proportions of the elevation, the character of the wall and the relationship of the unit to its site. The ideal roofline of the travel trailer was a smooth curve, running continuously from the side to the top of the unit. The mobile home, with its squared off sides, reduces the roofline to a simple seam where the roofing and siding materials join. Two approaches are taken to differentiate the roofline. The first was to change the ceiling height over the living area. On the elevation this height change was sometimes treated with clerestory windows, following the travel coach sytle. Less frequently, in the beginning of this period, it was treated as a pediment over the entry. Sometimes coach styling and the house type of pendentive were treated together. The second approach, which is more recent, was to project the roof out from the side elevation. If the projection was fixed, then its depth would have to be subtracted from the vehicular width limit of the moving trailer. Moreover, as the height of the unit is limited, a roof style, such as mansard, must be projected down onto the elevation, overlapping with doors and window openings. In some cases, notably where traditional roof eaves were desired, the projections fold up.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In double-wide units, in order to obtain the desired roof form, the whole roof may hinge down for transit. Asphalt shingles and gutters may then be applied to complete the house aesthetic. Many of these roof forms seem to be dysfunctional, or at best afunctional. They required additional set-up labor at the site, and introduced movable joints which could be subject to water and air infilitration. At the same time, they provided relief to the elevation and an added sense of weight which helps to visually anchor the unit to its site.

The roofline may be further extended by the addition of cabanas and carports once at the site. In hot dry climates, and where units were set up on individually owned sites, a second roof might be placed above the first, either to enhance cooling or to add insulation. These additions might be built to look more permanent than the unit itself, creating a certain ambiguity regarding what has been added to what: is the mobile home "parked" amidst its additions?

Two other features which help to visually relate the unit to its site are the entry steps and skirting around the bottom of the unit. Both are additions usually made by the mobile home owner. The most common type of stairs consisted of a short set of wood or metal treads with a handrail to the outside. Little or no landing was provided. Since an outward swinging storm door or screen door was common on most units, the occupant may have to open the door on a lower stair in order to provide clearance before entering the unit. There was, in short, no entry/transition area to the unit (Alexander, et al. 1978; Cook, 1973); one is either inside or outside. A variety of informal activities ranging from a place to wipe one's feet to an

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

area where the paper carrier can stand while waiting to be paid, are not provided for. Not surprisingly, stairs are an area of embellishment.

Skirting is a strip of material, usually metal, which hides the chassis, wheels and utility hook ups of the home on its site. Magazine photographs from the 1950's and early 1960's frequently showed skirting consisting of a low picket fence. The application of skirting was sometimes justified to reduce heat loss under the unit or to protect against the development of lift in high winds. Its utility in these areas has not been demonstrated (Center for Automotive Safety, 1975). In some municipalities, skirting was required by ordinances.

Stairs and skirting help to compensate for the fact that the mobile home is elevated above the ground by its chassis and wheels (most units do not rest on their wheels at the site, but on concrete block posts set to the height of the wheels). An extreme response to bringing the unit down to the ground consists of cutting a trench into which the unit is backed so that the floor is made close to the grade elevation. This detail was used in some of the more expensive parks and where the site was individually owned (either in a subdivision or private lot). It adds to site preparation costs, makes the hooking up of utilities more difficult and, in some cases, raises problems of drainage.

The single feature of the mobile home which most clearly betrays its vehicular character when at a site is the hitch. In the fifties, when LP gas was commonly used for heating and/or cooking, the hitch

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of the parked unit frequently served as a stand for the metal bottles. In 1966 Trailer Topics published an article entitled: "Camouflaging the Draw Bar."

> Beautiful as is the modern mobile home, it does have one unsightly failure which is dictated by mechanical necessity. You will never have a really attractive place until it's covered or hidden in some fashion. (p. 38)

The author recommends: cutting off the hitch (if legally permitted), hiding it with plants, putting a planter on top of it, running skirting around it or building a bench over it. By the mid 1970's some manufacturers were offering a detachable hitch as an option.

Suggestions, like those regarding the camouflaging of the hitch, or hiding the wheels with skirting, combine to form an aesthetic code embodied in the rating system of the Woodall Mobile Home Directory. For some 30 years the Directory was the major source of information regarding the quality of parks throughout the country. Among the requirements for a five star rating (the highest) in the 1970's were that:

- Quality patio or porch of adequate size on all homes.
- Awnings or cabanas on all homes.
- All homes 100% skirted with quality manufactured skirting properly installed and maintained.
- All hitches and jackposts concealed. No tanks or bottles.
- All late model homes in excellent condition. (1974, p. 9)

To make it into the four star category, the park must have no eight foot wide units. Only about half of the parks in the United States

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

rated any stars. Five star parks were concentrated primarily in the sun belt.

As the size of the mobile home increased, the size of park lots increased; but more significantly, the orientation of the units on their lots changed. Rather than being set perpendicular to the park road, units were now frequently sited at a diagonal and occasionally parallel to the road. The parallel arrangement is most like the conventional house siting, and was used most frequently on lots with double-wide units. Since these units have a central circulation core and a rear door, the conventional house siting pattern complements its internal arrangement (e.g. a backyard becomes possible because there is direct access to it from the unit, and rooms can orient onto it).

In single wide units, regardless of the width, the living room is usually in the front half of the unit facing the road. Most often, the living room area has large windows on either side. When set up in a parallel arrangement (i.e. units parallel to each other and perpendicular to the street) these windows often line up so that visual intrusion into the units is increased. Setting the units on a diagonal helps to alleviate this condition while not significantly increasing the length of utility lines. The unit, however, retains a single yard. Because this yard now faces the road more than it did in the parallel configuration, it can be recognized as the "front yard" of the home. The rear yard, however, is still absent. Since manufacturers do not know what the park lot configuration will be, many try to keep the rear facade (i.e. the side opposite the entry facade)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

fairly closed, either by running the corridor along that side or by using small bedroom and bathroom windows.

The net effect of recommended park designs is to try to reconstruct the conventional relationship between house, site and street. Clearly, with the single wide unit, this projection of conventions must be twisted around, both in the internal, as well as in the external arrangement of the unit, to try and make the convention fit. It is both ironic and telling that the effort to reconstruct the front yard leaves the backyard, the area of private family activities, largely ignored. While in the conventional house people often enter and exit through their garage and use the front door for greeting guests; in its quest for legitimacy, the mobile home park developer sought to reestablish the formal entrance relationship, while ignoring the way people actually use the outdoor areas adjacent to their units.

In considering the overall plan of parks (as opposed to individual site layouts), it is necessary to distinguish between community-oriented parks and housing-oreintated parks (Gillies, 1960). The community-oriented park offers a wide range of social amenities: i.e. recreational and social facilities. They tend to be relatively expensive, adult oriented (often excluding children under 18), and concentrated in the sunbelt. The community oriented park provides a recreational environment designed for people who have leisure time. Often this means retired people who have moved out of a house in a northern region, and who have the funds to pay for a larger mobile home and the amenities of a better park. The streets of such a park

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

might be laid out in the romantic, curvilinear pattern common to modern suburban additions. Sidewalks, street lights and landscaping are provided. There might be a special set up fee for the unit moving into such a park, which would include the cost of lot landscaping. At the center of the community, there would be a recreation hall, often adjacent to a swimming pool and occasionally surrounded by a small golf course or some tennis courts. Perhaps the most celebrated of such parks is Bing Crosby's Blue Skies Park near Palm Springs, California, which was built in the late 1950's. People renting park space are required to build additions including a cabana and a "California room," or enclosed porch. These additions might cost three times the price of the unit itself.

The housing-oriented park, by contrast, caters primarily to young families who are more concerned with economy than with providing social and physical amenities. In one survey, mobile home park residents were asked if they were willing to pay more rent for improved amenities. They preferred a lower rent (Baghestani, 1978). Since the least expensive layout of utility lines is a straight run with units close together, these parks are usually laid out with straight streets and parallel lots. There might be a small pool or a rec room, but more often the center of social activity is the laundry room and mail area (in many parks mail is only delivered to boxes at the entrance to the park). In larger parks a separate section for families with children may be designated. Little, if any, consideration is given to orientations, or solar exposure, even though these factors can have an enormous effect on the comfort inside of the units.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

It was suggested earlier that the conventionalization of the mobile home, with respect to its site and the street, involved projecting the model of the single family suburban house into the context of the mobile home. In the same way, the conventionalization of the park is an attempt to project the pattern of the suburban addition onto the park. The best parks are those which have succeeded in this objective. Nevertheless, the organization of the unit itself, and the actual patterns of social behavior supported by it, might have to be twisted around to make the pattern work.

Users

Between 1955 and 1965, the annual production of mobile homes almost doubled. Six years later it had more than doubled again. In 1955, mobile homes accounted for 6.4% of all housing starts; by 1971 they accounted for one in every five. Only a handful of user surveys had been conducted before 1955. The Census Bureau did not identify mobile homes as a distinct category of housing until the 1960 count. Nevertheless, from the studies available it may be concluded that the characteristics of the house trailer population differed significantly from those of the mobile home. These differences, together with a changing pattern of use, may account for some of the observed changes in the features and form of the mobile home.

The typical house trailer family was younger, had fewer children, was more mobile and more affluent than the population of U.S. households in general (Dunn, 1948). These characteristics undoubtedly

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

reflected the large percentage of skilled construction workers using the trailer as full time housing. With the completion of the major public construction projects of the fifties, the number of construction workers in the trailer population probably declined. As a portion of the mobile home population, had their numbers remained constant, their significance would still have declined. In addition, those living in R.V.'s (trailers up to 35' x 8') would not have been regarded as mobile home residents.

During the travel trailer era, only a small percentage of families used these units for primary housing; with the majority of units being employed for recreational housing. Starting with the War, this situation was completely reversed, with the majority of units being employed as primary housing. The use of trailers for vacation housing resumed again in the early 1950's and, by 1953, the industry was beginning to distinguish itself in terms of two separate markets: one in primary and the other in secondary housing. This distinction became more critical with the introduction of 10-wide units; since manufacturers would have to decide whether to serve both markets or just one. By the early 1960's, most were operating in only one market. While the mobile home market in the present period had grown rapidly, growth the R.V. market exceeded it. By the late 1970's there were over 10 million R.V.'s in use. Like the early travel trailer users, they tend to be more affluent than the population in general (Edwards, 1977). It is estimated that somewhere between one to seven percent of these units were used as primary housing. (Edwards, 1977). This is probably

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

close to the proportions of the travel trailer era. The composition of users also seems to be similar.

The mobile home household, in contrast to the R.V. population, was less affluent. It consisted of younger, mainly two person married households. Where there were children, they were usually below school age. While the elderly are a significant portion of the mobile home population, especially in the sun belt, they are under represented in comparison with their numbers in the general population. The 1970 Census provides the most complete data on the general demographic characteristics of the mobile home household in this period. Some of its findings are listed in table 3.

The choice of mobile home living is often regarded primarily as economic. The mobile home household has an average income some 30% below that of all U.S. households ($6,690 v. $9,433). These figures may be somewhat misleading since the mobile home population is skewed toward younger households, where earnings are likely to be lower. The income for mobile home households which are owner occupied is somewhat more favorable ($7,800), but still well below the national average.

In 1965, mobile homes provided 76% of all new housing units under $12,500; by 1973 they provided over 90% of selling for under $20,000 (Center for Automotive Safety, 1975). Mobile homes have been the only generally available low cost housing alternative. Indeed, the square foot cost of a mobile home had increased little in comparison with conventional housing costs (Bernhardt, 1980), but was the mobile home actually low-cost housing? There are a few studies comparing costs.[3]

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Table 3

Characteristics of Mobile Home Households*

Age of Household Head (1970)	U.S. Total	Mobile Homes
Under 35	26%	42
35-54	38	26
55 and over	36	32
Occupation of Household Head (1970)		
Professional/Managerial	22%	13
Sales/Clerical	25	10
Craftsmen/Operators	32	40
Laborers/Service Workers	18	12
Other	3	25
Number of Persons in Household		
1	12%	21
2	30	37
3 or more	35	32
5 or more	25	10
Median Size	3.00	2.30
Family Income		
Under $5,000	21%	27%
$5,000-6,999	12	18
$7,000-9,999	20	26
$10,000 and over	47	29
Median	$9,433	$6,690**

*Based on 1970 Census of Housing, Subject Reports, Mobile Homes (Washington, D. C.: Department of Commerce, 1973).

**Bureau of the Census, Current Population Reports, Series P-60 (June 1973), p. 3.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The conclusion which they suggest is that mobile home living may not be significantly less expensive than carrying a conventional house, or renting an apartment. The difference seems to lie in the ability of the family to make a down payment on a house. The young mobile home families were often not able to do this, but they saw their mobile home as still being advantageous compared with an apartment, since it provided at least some equity toward eventual home ownership.

If income and age were the major characteristics distinguishing the mobile home population, one might expect mobile homes to be uniformly distributed as a portion of the housing stock. Locational factors, such as housing availability and the rate of area population growth, also influenced mobile home use. Mobile homes were less prevalent in the northeast and middle atlantic states, where population had been declining, and zoning practices had been particularly exclusionary. The greatest concentrations had been in sunbelt states with their large retirement populations and new industrial growth. A study by French and Hadden (1965) on the 1960 census data found the largest concentrations of mobile homes in suburban areas outside of central cities but within SMSA's. They conclude that "the presence of trailers is inversely related to the population density and positively related to population increase" (p. 135). Pressures on the housing markets in these areas tended to increase housing prices, making entry into the housing market even more difficult for young families with modest incomes. French and Hadden speculate:

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> The residents of trailer housing...may view their home on wheels as an inexpensive excape into suburbia which will enable them to save for a permanent home while being able to immediately put one foot in the suburban door. Thus, the attractiveness of mobile home living lies not in its "mobileness" but, instead, in having a place to call one's own home. (p. 138)

The mobile home may be seen in this light, not as housing of last resort, but as a viable and even as a desirable housing option for families at a particular stage in the life cycle, and with modest incomes. For the young family, the mobile home was not the equivalent of a suburban house, but an alternative to an apartment or to renting part of a house. Manufacturers and dealers stressed the advantage of building equity by paying off a mobile home as opposed to making rent payments. In a survey conducted by the Census Bureau (HUD, 1968), two-thirds of new mobile home occupants indicated that they hoped to move into ownership of a conventional single family house. This is similar to the finding of a survey of new townhouse owners conducted by the Federal Home Loan Bank Board in 1977. Eight-five percent of the respondents expected to be living in their own "free standing" home within five years (Mayer, 1978).

After young families, households in which the head is fifty-five years or older make up the largest group of mobile home users (though they are underrepresented in comparison with their total numbers in the U.S. population). Often these users will move out of conventional homes when their children are grown and their need for room has diminished.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In addition to providing for families at both ends of the family development cycle, mobile homes help to provide housing for other transitional phases in the life cycle. A large number of divorced women with children, widows and widowers also use mobile homes. These are households which might normally be accommodated in apartments, but who apparently find the mobile home a viable alternative.

For all of these households, the relative ease of maintaining a mobile home appears to be a desirable characteristic (see Drury, 1972). Mobility is also frequently cited as an important reason for choosing mobile home living. The mobile home population, however, is actually somewhat less mobile than the U.S. population in general. Many of the moves which are made are local (see, Annual Housing Surveys, HUD). When the unit itself is moved, the local moves are made to obtain a more attractive or convenient location; sometimes within the same park. Long moves with a unit are increasingly discouraged by their cost. A five year old single wide unit purchased at $10,000 will have depreciated over 30%. The cost of moving is well over $1/mile; so that a move of over a few hundred miles begins to become prohibitive.

One surprising aspect of the mobile home population is the small percentage of minority families. In the 1970 census, there were about 2% black households and 1.5% Spanish speaking households. Mobile homes have been studied as an alternative form of publically supported low cost housing (Drury, 1972; Callahan 1976). It is not clear if the low adoption rate of mobile homes by minority groups reflects a dislike for that type of housing, or whether it is the result of exclusionary practices in parks which may cater to people with fairly

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

conservative values (see Kendall, 1971; Center for Automotive Safety, 1975).

The types of parks which emerged in this period also reflect life cycle phases within the mobile home population. As suggested earlier, two basic types of parks may be distinguished: community-oriented, which tend to cater to the elderly and more affluent, and housing-oriented, catering to young families with modest incomes. The parks in the earlier eras of development were small and often family run operations. The parks of the present period are, by contrast, larger and often professionally managed (Bernhardt 1980). In areas where park space was scarce, dealers might make arrangements to reserve certain spaces for their customers. Some dealerships were run jointly with a park, and some parks only permitted units which they sold or which were sold by arrangements with particular dealers, to use the park. These are referred to as "closed parks." The majority of dealerships, however, did not concern themselves with finding spaces for their customers (Edwards, 1977; Bernhardt, 1980)

The production of new units had consistantly outstripped the development of park spaces, by up to 400%. Since many local jurisdictions restricted the placement of units to parks, and restricted the number of parks, the growth of the industry as a whole might have been impeded by the lagging development of park space. Manufacturers, however, were reluctant to enter into park development. Earlier in this period the MHMA offered park development planning and finance consulting services. In the early 1960's the federal government started to make mortgage money available for park development. By the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

early 1970's, some major land development companies, such as Kaufman and Broad, had entered the park development field. Developers, however, tended to produce subdivisions, condominiums or cooperative parks where the homeowners also owned the land; either individually or collectively.

In 1974, it was estimated that less than half of all mobile homes were located in parks. (Bernhardt, 1980) This undoubtedly reflects a shortage of park space in some areas, but it might also reflect a desire for greater privacy. Only in the sunbelt was there a higher percentage of units in parks than on single lots. Of the units located on private lots, however, about half of the lots were rented.[4] Since the cost of developing a site, including land, may easily exceed the cost of the unit itself, (thus cancelling much of the economic advantage of mobile home ownership) it is appropriate to view the mobile home as part of a unit/park complex, a complex in which the park site is rented; just as the suburban home must be viewed as part of a house/subdivision complex.

Just as there had been a tendency toward larger professionally managed parks, manufacturers had increased in size. As in the previous eras of development, the larger manufacturers account for the major portion of production (Bernhardt, 1980). In 1974 there were 336 mobile home producers. After the housing recession of 1974 and 1975 the number of manufacturers was only 225 (Bernhardt, 1980). Such shake outs have been characteristic of the industry. They reflect a flexibility with respect to meeting housing demand similar to that found in the conventional building sectors; where, for example,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

over 100,000 units annually are produced by part-time builders.

Whether the mobile home industry will return to its characteristic mix is still to be seen, but there are several new factors operating against the small producer who wishes to enter or remain in the field after 1976. The most significant factors are the regulations imposed by HUD. These regulations incorporate previously voluntary codes established by the industry and adopted as requirements by many states. The effect of the various levels of regulation imposed on the mobile home would seem to increase their cost and discourage innovation.[5] Furthermore, by putting standards in the form of hard specification rather than performance specification, the form of the product has been significantly determined.

Writing in 1972, Margaret Drury, in Mobile Homes: the Unrecognized Revolution in American Housing, suggested that industrialized housing had failed to gain a foothold in the country because of institutional roadblocks. The mobile home had become the conspicuously successful form of industrialization in the field primarily because it had not been recognized as housing. It is ironic, then, that the legitimization of the mobile home through the passage of the HUD standards and other forms of federal recognition may now threaten the originality and vitality which have made the mobile home a qualified success as a form of industrialized housing.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Meaning

> A house, typically a single family detached dwelling standing on its own plot of land, both symbolizes the independent self-sufficiency so central to the American Dream and permits much of that dream to come true. Getting and keeping that dream represents the principal target for most people and one of life's chief problems. (Mandelker and Montgomery, 1973, p. 1)
>
> Most men appear never to have considered what a house is and are actually though needlessly poor all their lives because they think that they must have such a one as their neighbors have. (Thoreau, 1961, p. 45)

The increasing use of the mobile home has brought the question of its identity as a form of primary housing into central focus. In the era of the house trailer, the use of the units as primary housing could be understood as a matter of extreme necessity (as in the case of war plant workers) or as a matter of accommodating an unusual life style (as in the case of the mobile construction worker). Understood in these terms, the trailer need not be taken as a challenge to the American ideal of housing, though some critics clearly choose to view it and to condemn it as such.

In the present period, with the dire shortage of housing reduced, the adoption of the mobile home as a form of housing must be understood as a matter of choice and, as such, potentially as a rejection of the conventional housing ideal. Whether this is an appropriate interpretation is itself open to question. Since the largest group of mobile home owners are young families with modest incomes, often living in areas of rapid growth, their adoption of the mobile home may be interpreted as the result of housing necessity rather than choice; and therefore not as a rejection of the cultural ideal. The result of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

surveys presented previously are ambiguous on this point. Some conclude that the young mobile home owner is just waiting until the time when finances make conventional ownership possible. Other surveys suggest that mobile home owners are perfectly satisfied and have no immediate plans to leave their units. Is this simply a matter of cognitive dissonance over their situation? As for the elderly who have adopted the mobile home, most were former owners of conventional homes. Their adoption of the mobile home can be interpreted, not as a rejection of the housing ideal, but as a response to changing life cycle needs. Since they have attained the ideal, it does not reflect negatively on them to give it up for a form of housing which is easier to maintain and which provides a high degree of social interaction (i.e. in the community-oriented parks). The issue, however, is not solely how the mobile home adopter perceives the circumstances of adoption; but how the indirect, and particularly the institutional users, perceive the mobile home vis-a-vis their conception of the ideal image.

The question of how the mobile home is perceived relative to the ideal image of housing is not easily answered, because the ideal itself is vague and subject to change. As suggested earlier, resistance to the mobile home may stem, at least in part, from the fact that it is caught up in contradictions inherent in that image, and between the image and the way we actually use our housing. The irony of this situation is, that in trying to attain conformity with the image of acceptable housing, the mobile home may actually be a force in bringing that image into clearer definition. It is often easier to

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

describe a condition of nonconformity than to describe what conformity to an ideal consists of (Alexander, 1966). The development of formal meaning, particularly as it emerges from institutional sources, is often aimed at distinguishing that boundary between conformity and nonconformity. Moreover, an institution must operate within a prescribed jurisdiction, so its categorizations are usually narrow. The same restrictions do not apply to the development of popular meaning. Definitions at this level tend to be less precise and more global, but at the same time they may be more concerned with reaching out for the broader dimensions of the ideal.

Formal Meaning

Although the courts in the present period have increasingly recognized the mobile home as a primary dwelling, they have frequently supported its classification as a vehicle. In Swigart v. Richards,[6] the court ruled:

> This new concept of home must, at least at its present stage of development, be regulated not solely as a vehicle, or solely as a building, but as a combination of both. The very design and structure of the present day mobile home is a vehicle because of its wheels and design for highway movement by being towed by another vehicle. (p. 178)

Eight years later, however, the Attorney General of Minnesota ruled that a mobile home which has been placed upon a firm foundation, with its wheels and axles removed, "should be assessed and taxed as real estate and need no longer be registered" (Hodes & Roberson, 1977, p. 51).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The issue in contention here, as elsewhere in court rulings, is the hybrid nature of a mobile home. Can an artifact be properly treated as both a vehicle and a dwelling (building) at the same time; and if not, under what circumstances does it become either one or the other? A new way of dealing with this problem of categorization emerges in the present period. It consists of identifying the mobile home as a prefabricated dwelling. This approach recognizes the mobility of the unit as a necessary characteristic of getting the unit from the factory to the site. In so far as it is rendered immobile at the site, it should be regarded as a prefabricated dwelling, and no longer as a vehicle. In State of Washington v. Work,[7] the court was asked to determine the legality of a single wide mobile home placed on a permanent foundation on a lot in an area zoned for single family residences. The court ruled that the unit was not a vehicle in its present condition, but a "prefabricated one-family unit. . . .Its sole curse seems to be that it was moved to its present location and not built there" (Hodes & Roberson, 1977, p. 67). A similar issue was raised in Long v. Chewaski ("Prebuilt Homes," February 1967, p. 26) in which an expandable unit was placed in a zone which excluded "trailers, tents, shacks or other undesirable buildings. . .of a temporary character." The court in its opinion stated:

> It is not the manner in which the home is constructed or assembled which is determinative. It is the nature of the dwelling once completed which must decide the issue. None of the restrictions on land use pertains to the manner in which a house must be erected. (p. 69)

The idea that a mobile home is really a form of prefabricated housing is more readily accepted when it arrives at a site in more

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

than one piece, and when it is squared off in appearance once it is assembled. A New York State case (Kyritsis v. Fenney)[8] involved a petition to locate a double-wide mobile home on a private lot. The town ordinance defined a mobile home as a single towable unit. Consequently the double-wide was classified as a modular unit. Since this ruling was based on the interpretation of the specific wording of an ordinance, it did not establish a precedence. There is evidence to suggest, however, that double-wide units are more acceptable to zoning authorities as single family residences than are single wides. A survey conducted by Roy Butner (1972) on the attitude of zoning officials in New York State to mobile homes, concluded that single wides were perceived as low income housing, whereas double-wides were accepted as middle (if only lower middle) income housing.

> Most communities consider the double wide a form of modular housing which happens to come to the site on its own chassis and wheels rather than on a flatbed.
>
> If double wides can be put on a foundation and considered a "regular house" why not a single wide? If a pitched roof is a major consideration then that's easy enough done at the factory. If removing the wheels means that much, why put them on? (p. 112)

The issue raised by these cases is not purely technical (vis-a-vis the interpretation of the wording of an ordinance), but aesthetic. The courts have held, however, that exclusions cannot be based on aesthetic grounds. Such considerations may nevertheless underlie appeals to local zoning boards, and may be built into the descriptions of buildings and land development requirements found in codes and ordinances. The authority to zone land use, it should be recalled, is based on the responsibility of the state to assure the health and

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

safety of its citizens. It is a power which is to be balanced against the constitutional right of an individual to enjoy the free use of property. To extend zoning on aesthetic grounds has generally been regarded as an infringement of the individual's rights, as illustrated by Vickers v. Township Committee of Gloucester Tp.:[9]

> aesthetic warrant. . .is not a reasonable basis for the exercise of zoning power. . .it certainly is not enough to sanction exclusion of a particular kind of use on the sole ground that its appearance offends the subjective sensibilities of the local governing body. Objective standards in this field are hard enough to fashion and work with, for even expert tastes vary so greatly. (p. 147)

The use of aesthetic considerations in land control remains, however, an openly contested issue. What we see in the attempt to apply aesthetic considerations is the desire to define more precisely the attributes of acceptable housing; and usually to describe it toward the exclusion of mobile homes. It is a way of dealing with the ambiguities posed by the introduction of mobile homes in a community. The more general approach, however, is to restrict mobile homes to parks and then to permit parks only in nonresidential or specially zoned residential districts. As suggested previously, this is a strategy of independence. It does not require that a jurisdiction define what is a proper single family residence, but only to describe what is a mobile home and to treat it as a special category of use.

The authority of local jurisdictions to restrict the use of mobile homes has been well established, and is illustrated by the court's ruling in Napierkowski v. Township of Gloucester:[10]

> In our view prohibition of trailers as residence at other than duly licensed trailer parks or camps is a reasonable exercise of police power, designed to

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> promote the general health, safety and welfare of the municipality by assuming that adequate provisions are made for drainage, sewerage facilities, water and lighting of trailers and operators to centralize and facilitate enforcement of the aforesaid requirement. (in Hodes & Roberson, 1974, p. 74)

The restriction of mobile homes to parks may be related to the method of taxation adopted by a state or locality. At the end of the previous period, about 40% of the states imposed personalty tax on house trailers. A few states used either personalty or realty, depending on conditions such as ownership of land and permanent attachment thereon. The remaining states used special fees. Today the majority of states use personalty. Communities using a personalty tax tend to restrict mobile homes to parks (Bernhardt, 1980), suggesting that over time a consistent definition and treatment of mobile homes develops at a specific level of government.

Although all states now have a clear method of mobile home taxation, the question of whether the mobile home owner pays a fair share of taxes is still open. Bernhardt (1980) suggests that the mobile home industry has promoted the approach of personalty tax because it is more favorable to the consumer. Butner (1972), however, observes that because the mobile home is regarded as a consumer purchase, it is often subject to state and local sales taxes which add to the initial financial outlay by the consumer. Hodes and Roberson (1974) conclude that since both personalty and realty taxes are assessed at the same rate in jurisdictions where both are applied, the form of taxation imposed is primarily the result of the relative efficiency of the collection process in use.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

As a result of the zoning and building restrictions imposed by municipalities in urban and suburban counties, mobile home parks and single lots have often been forced into outlying areas. In a study based on an analysis of zoning ordinances from urban, suburban and rural counties, Arthur Bernhardt (1980) drew several conclusions regarding exclusionary practices.

- A municipality will have a greater propensity to exclude mobile homes if it has a high per-capita income.
- It will have less of a propensity toward exclusion if it is experiencing rapid growth.
- Exclusion is favored where there is high population density.

Often in areas experiencing rapid growth, city limits are extended to include the mobile home parks which they previously excluded; setting, if inadvertently, the precedence for mobile home land use.

The practice of restrictive zoning has had significant, if unintended, adverse consequences for the mobile home park tenant. Where parks have been zoned into undesirable locations (e.g. near railroad tracks or industrial sites), the stereotype of the mobile home and its park as unattractive has been reinforced (Bernhardt, 1980). In restricting mobile homes to parks and, in turn, limiting the number of parks and/or spaces, local jurisdictions have created defacto monopolies in which park managers are able to exercise undue authority over their tenants. Until recently the protection of mobile home tenant rights fell into the void between full tenant rights (i.e. for parties renting their unit as well as land) and homeowners rights. The mobile home user is an owner-tenant, and a "tenant at will" in

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

most states. In some early cases this was interpreted to mean that the mobile home in a park is a transient rental accommodation; much the same as motels, hotels and overnight campgrounds (Nyberg, 1972).

Under the conditions of limited park space, some park managers have created "closed parks," and established entry (or set up) fees, as well as exit fees. If a person wishes to sell a unit and leave it in its park space, a fee may be charged by the park manager to retain the space. In addition, most parks have rules which encroach upon the free use of the unit, such as requiring guests to register and charging for such guests on the basis that they use extra utilities (Hightower, 1975).

Park managers have defended their actions under the landlord's right to control property, while tenants have sought protection under antitrust and consumer protection laws. By 1973, eight states had enacted mobile home tenant laws; in most cases as extensions of consumer protection laws ("Tyranny in Mobile-Home Land," 1973). The inference is that park operators are service providers with the service being offered on a particular property.

In spite of the type of abuses cited above, some studies suggest that the tenants support the establishment of park rules and see it as a means of positively controlling their community (Johnson, 1969; Deck, 1972). The law, then, views them as consumers, while they seem to view themselves as residents of a community whose rules are mutually beneficial to management and residents. The rules, in effect, are evidence that the management will be selective in choosing tenants, and that it has the authority to remove unruly tenants.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In general, the tendency of local, and frequently of state, regulations has been to integrate the mobile home through a strategy of independence. By confining the use of mobile homes to parks and, in turn, restricting the location and number of parks, a great deal of control has been achieved. The adoption of this strategy is not surprising, since local regulations generally reflect local interests, which are frequently realty related. Local authorities also tend toward a conservative definition of housing which holds that mobile homes are a category of dwelling distinct and separate from the single family house (Hagern,1954; Butner, 1972; Bair, 1961).

The situation at the federal level is in marked contrast to the general local response, and a reversal of its own position held in the previous period. The house trailer was recognized as temporary and emergency housing; but not as permanent, primary housing. By the mid-1950's, the housing shortage induced by the War and Depression had eased, and the need for temporary housing under anything other than extreme circumstances was regarded as undesirable. Some local jurisdictions which had created temporary areas zoned for trailers now revoked them. During this period of shortage, however, the federal government had become increasingly involved in the production of housing; first as a means of providing jobs and stimulating the economy, then increasingly as a mechanism for social reform. In this century the private building sector has largely disregarded the lower third of the housing market. For the lowest income groups, the federal government became the houser by default.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In 1968, the Congress passed Title IV of the Housing and Urban Development Act. The act set the goal of producing 26 million new housing units in a single decade. This objective was to have been reached through the development of "new and advanced technologies." HUD's Operation Breakthrough was to be the catalyst for the industrialization of the housing industry. Some of the successful contractors in the program were mobile home manufacturers who simply adapted their units as modular housing and created stackable units. The noted architect Paul Rudolph designed a housing project for New York's Urban Development Corporation, using mobile home type units. He foresaw the use of such units as "twentieth century bricks." (The project was closed in 1980, apparently because of extreme maintenance costs.)

One of the provisions of Title IV was that the President reported annually to the Congress on the government's efforts to meet the Act's stated production goal. In 1970, President Nixon decided to add mobile homes to the count of total housing starts. Up to this time the Department of Commerce had excluded mobile homes from its tabulations. Since mobile homes had accounted for over 20% of the housing starts in 1967, including them in the count considerably improved the appearance of housing performance. Thus, after the clamor of Breakthrough and the annual need to show results, the mobile home industry emerged as a recognized producer of industrialized housing. No longer a national embarrassment, it became a genuinely American approach to industrialization.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

If mobile homes were now to be considered permanent housing (since the President in one sweeping gesture has categorized them as such), then their durability had to be assured. In 1974, Title VI of the Housing and Community Development Act was passed. It had two important sections affecting mobile homes. First, it extended the authority of the FHA and VA to insure mobile home mortgages. Second, it directed HUD to establish mobile home construction and safety standards, and to establish inspection procedures to ensure compliance with these standards. On June 15, 1976, those standards went into effect. They represented the first national building code applied to private construction. The net effect of the recognition of the mobile home by the executive branch has been to set in motion a series of regulations which attempt to structure them within the institutional mechanisms which largely control the production of housing.

Popular Meaning

Robert Merton (1968) defines innovation as the development of new means to achieve an established cultural goal. The innovative means are new, in part, because they are not institutionalized. Indeed, they may emerge because established means are not accessible to certain segments of society. Up until the 1970's, the mobile home and its predecessors might be considered innovative because they did, in fact, meet an established need by a new means: making single family housing accessible to an income group which had been excluded from the market. Federal recognition of the mobile home as primary housing, and as a successful form of industrialized housing, would seem to not

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

only legitimize it, but to indicate that it does retain the cultural goal or image of housing. The response to mobile homes at the local institutional level, and the popular attitude toward them, hardly supports such a conclusion. Rather than innovative housing, the mobile home seems to be regarded as ritualized housing.

Ritualization, as Merton describes it, is the use of culturally established means in a way that suggests the attainment of a cultural goal but which, in fact, fails to achieve it. The mobile home, in this sense, could be regarded as a miniaturized house: house-like in form, but not in substance. The mobile home occupant would, in turn, be regarded as someone who cannot really achieve the cultural goal, but acknowledges it through the use of this mock house.

Merton's definitions are elegant and precise but, in order to actually apply them in the present case, it is necessary to be able to differentiate means from goals: i.e. to distinguish the image of the end result from the action taken to attain it. In the case of physical innovation (and it should be noted that Merton is concerned with social innovation), the distinction between means and ends is confounded because the physical artifact used to obtain a particular goal may simultaneously symbolize the goal. This would appear to be the case where the object, "house," is concerned. Is the house a means toward an end, or is it the end toward which we wish to apply innovative means? Is the innovative aspect of the mobile home (if it may be allowed that it is an innovation) related to how it is made, how it is used or by whom it is used?

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The conflation of means and goals with respect to housing results, in part, from the vagueness of the cultural goal or image of housing itself. It is in this vagueness that the artifact assumes the function of a symbol; but it is not perceived of as such. Rather, the house is taken as a tool: as something which indicates its function in a very concrete manner. An additional dimension of the difficulty here is that neither means nor goals are static. The mobile home may be addressed to a cultural goal which has been transformed. Indeed, the mobile home may itself be a factor in this transformation.

It is in light of the complexities indicated here that, as suggested earlier, the mobile home appears to be caught in a set of paradoxical contradictions. Its mobility, for example, is regarded as a threat to community, but its occupants are actually less mobile than the typical American household (moving on average every 5.2 years as opposed to 5.1 years--Moose, 1973). These contradictions are particularly significant because they seem to arise from the tension produced by changes in housing means and goals in general. In this section I would like to examine three aspects of the image of the American house which illustrate the kind of tensions suggested above. These three aspects are generally regarded as fundamental to the character of housing and housing decisions (see, for example, Smith, 1971; Foote, et al., 1960). They are: housing as physical shelter, housing as an extension of self and family, and housing as part of community. I will be examining these aspects primarily at the level of popular meaning.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The idea of housing as shelter involves at least four interrelated attributes: durability, permanence, fixity and safety. At the level of formal meaning, these attributes can be precisely described. Durability, for example, can be defined financially as a unit that can last the lifetime of a standard mortgage. In engineering terms, it means something that can withstand particular structural loads. What durability means in the popular mind is considerably less clear, as the following quotes may serve to indicate.

> Until recently, Americans have been committed to the use of a "permanent" home. . . .Part of our cultural idiosyncrasy is that we have psychological prejudices against units that are made to appear temporary. Today, however, there is pressure for reexamination of our traditional goal of "build-a-house-to-last-forever," especially among the more mobile portion of our population. (Drury, 1972, p. 10)

> People urgently needing shelter were slow to believe there was only one way to build; nor were they easily convinced that a simpler way was dangerously flimsy. Anyway a speed-minded and economy-minded people were willing to be satisfied with "lower" standards. (Boorstein, 1965, p. 150)

Both of these quotes reflect on the nature of durability as a feature of American housing. The first suggests that resistance to industrialized housing in general, and mobile homes in particular, derives from a prejudice against that which appears temporary. The second quote also refers to a form of industrialized housing, and what it implies in terms of impermanence; but the subject of the quote is balloon-frame housing just developed in Chicago in 1833. Presumably, it is the "dangerously flimsy" wood framed house derived from the technology of the 19th Century which embodies the characteristic of permanence threatened by the mobile home.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The attribute of durability appears to be conflated with permanence and fixity. Thus, a house should be durable; meaning not only able to withstand structural forces, but enduring on a site. The house should be part of the site and built on it, rather than being wheeled to it and retaining the possibility of being wheeled away. Indeed, any unit built in a factory may be suspect with regard to its permanence (Bernhardt, 1972). The attributes of durability, permanence and fixity are conveyed by the form of the house, and by specific features and feature clusters of that form. The way the unit is set on the site (e.g. on a foundation or footing) and the way it is roofed seem to be two such clusters (Boudon, 1969; Becker, 1977). The materials used to surface it may be another important feature. A thin metal skin which announces itself as "metal" because it is shiny, may not communicate the sense of permanence of brick; regardless of whether the brick is 1/2" veneer or an eight inch wall.

The house as a physical shelter should provide safety, not only from natural elements, but from accidents within (e.g. fire). The safety of the mobile home has been a frequent concern of government officials, and more recently, of consumer groups (e.g. Center for Automotive Safety). The most recent issue of concern has been the presence of formaldehyde fumes in units. The chemical is used to speed the drying of glue, but it lingers long after assembly is completed. The safety of mobile homes is a common issue in the popular press. When tornado and hurricane damage is reported, mobile homes are often singled out in the account of casualties. If a principal function of the home is to provide physical shelter, then the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

appropriateness of the mobile home as housing is challenged by such accounts.

The house is more than a physical structure; it is an extension of the individuals who occupy it. It provides privacy from the rest of society, while objectifying the identity of the occupants to society. Privacy and control are related, in part, to ownership. The extension of self in society is related, in part, to personalization.

The majority of households who have purchased their own homes do not, in fact, own it but mortgage it. The American mortgage derives from the Roman hypotheca. Under this system, as Martin Mayer (1978) explains, "title, possession and use - all three - are held by the borrower, and the lender merely has claim against the property if it goes unpaid" (p. 18). Conventional wisdom used to hold that a home, free and clear by old age, was the foundation of a secure retirement. This "wisdom" is based on an economic assumption about housing which is becoming increasingly doubtful. With the rapid inflation in housing, the importance of the house is not so much to provide shelter in old age as to provide a "nest egg"; a hedge against inflation which can be liquidated if need be. Apparently, many older people who are choosing to sell their houses are moving into mobile homes. They can buy it free and clear, and assume that it will outlive them (Johnson, 1969; Deck, 1972).

For the young couple entering the housing market, the economics of mobile home ownership are also complicated by changing market conditions. A favorite argument of the mobile home dealer is that, instead of paying rent you can be building up equity. In short, the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

buyer should consider ownership in terms of investment. In the conventional housing market units are expected to appreciate because of rising replacement costs and land values. Mobile homes depreciate rapidly (like cars); from 15-25% the first year. It is desirable to buy a late model used unit, but some of the better parks prefer to admit only new units. Mobile homes can appreciate, but only when they are secured to a park space (i.e. the space can be passed on with the unit), and this often involves paying a sales commission or "exit fee" to the park operator.

The situation presented by the mobile home, then, forces a distinction between ownership as physical security and ownership as financial security. In the conventional home, both dimensions seem to be conflated in the psychological sense of control conferred by ownership. Historically, the financial aspect of ownership was a means to the goal of physical security. Today that situation seems to have been reversed.

When a household purchases a unit rather than renting it, it is assumed that its selection is a matter of taste. Since the majority of new mobile homes are sold completely furnished, what is selected is the shell together with all of its equipment. From the mid-1950's on, manufacturers have often stressed, in their advertising, that their units have been professionally decorated; assuring that everything is "tasteful" and coordinated. Manufacturers also offer a range of decors, but custom ordering often adds to the cost of the unit.

The way in which mobile homes are sold fully furnished has struck some critics (e.g. Kendall, 1971) as a sign of the insecurity of the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

purchasers vis-a-vis their own taste. The validity of this criticism would seem to rest in the assumption that the way a mobile home and its contents are selected is qualitatively different from what happens in conventional housing. The choice of furnishings in a conventional home is the result of selection and combination. Few, if any, furnishings in the household are custom-made unless they are the product of a do-it-yourself project. Combination occurs over time; things are accumulated: little additions sprout out of the house and knicknacks clutter the interior. "Taste," with respect to selection, combination and accumulation, constitutes a qualitative evaluation of a household process of personalization.

The character of the mobile home seems to alter the process of personalization. Because it is a complete package, the occupant must take possession of the artifacts in the house as opposed to using the artifacts as a way of claiming the house (i.e. when we move into a new dwelling the presence of our old furniture helps to claim it as something familiar, that is our own). The limit of space, at least in the single wide unit, operates against accumulation. The early travel and house trailer advocates would proudly claim "all things in their place and a place for everything," but this condition is no longer seen as an asset. For if there is "a place for everything," then there is no room for accumulation.

The criticism against mobile home "taste," then, may be understood as a critique of the mobile home vis-a-vis its capacity to support the process of personalization. The other half of this critique must be an appreciation of how personalization operates in

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the conventional home. Clearly there are more options for accumulation, particularly in altering the physical shell; but because of the high rate of housing mobility, personalization is increasingly tempered by the consideration of resale value. The conventional wisdom among real estate brokers is that the more traditional a house is, the easier it will be to sell (Mayer, 1978). Thus, in personalizing a home, the owner must consider the future buyer (especially if he or she perceives ownership as investment vs. physical control), and live in the unit with this implicit party in mind.

If accumulation is an important aspect of personalization, then one might expect the elderly to be particularly keen on maintaining a unit that can house the artifacts of a lifetime. Among elderly mobile home residents this assumption is challenged. At least some confess that an advantage of the mobile home is to get away from the accumulation of "junk."

Personalization is only one aspect of the dwelling as an extension of self. Another frequently cited aspect is privacy. Privacy is understood as both privacy from outsiders as well as from other members of one's family. I will consider privacy from outsiders in discussing the dwelling as a part of community. The issue of privacy from other members of the household has been treated in a few sociological studies of the mobile home , in which the assumption was made that the size of the unit would exacerbate family tension and have everyone at each other's throats (Cowgill, 1941; Hager, 1954; Carr & Steiner, 1952). None of these studies have shown this to be the case. Since the mobile home household tends to be smaller than that in the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

single family home, the ratio of persons to rooms is about the same, although the amount of area per person is less.

If perceived density is a threat to family solidarity, it might follow that a greater allocation of space, privacy and other amenities would enhance solidarity. In general, the single family house has been increasing in size and amenities, but the effect of this may be to increase the anonymity of family members, rather than to increase the solidarity of the family as a whole (Slater, 1964). Bruno Bettleheim (1974) observes that the ideal individual space is defined, not only by a lower limit, but by an upper limit of area. Clearly the environmental factor is not the only one operating here, but the choice of dwelling environment undoubtedly lends expressive and instrumental support to these other factors (e.g. changing economic status, increased leisure time, greater personal mobility).

The question of the effect of the density within units is related to the question of the density between units. The proximity of units in parks suggests that people will not be able to control their interaction with neighbors and, moreover, that they will not be able to select their neighbors. However, because of their density, as well as the homogeneity of their population, mobile home parks appear to have more neighborly interaction than the conventional suburban subdivision (Carnevale, 1958). Moreover, residents seem to perceive this as positive, and as something which enhances the safety of the park. Thus, while crime prevention authorities are attempting to establish "Neighborhood Watch" programs in order to counteract the situation

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

where burglars blatantly dismantle the contents of a house in midday, the mobile home park does not seem to require such a measure.

On the issue of the selection of neighbors, mobile home advocates historically have argued that an advantage of the dwelling is that if you don't like your neighbor, you can easily move your unit (assuming, of course, that park spaces are available). Indeed, intra-park moves, and moves from one park to another within the same locale constitute a significant percent of the relocations made by mobile home owners. By contrast, the mobility of the owner of a conventional home is impeded by the cost of selling and buying another house. Unless the original house has appreciated adequately and the move is upward (to a more expensive house), the finances involved operate against horizontal mobility (between houses of equivalent market value).

Another concern raised regarding the mobile home household as part of a community is related to a sense of responsibility to the larger community beyond the park. This issue is raised in the formal concern over the taxation status of the mobile home (i.e. if we understand taxes as the socially imposed obligation to support community services). It is also raised in the impression that mobile home park occupants do not participate in the politics and civic events of the larger community. Some of these events, however, may be tied to property ownership, such as participation in local school board elections. While there is only scant evidence on the rate of participation among mobile home occupants (e.g. Johnson, 1971), the national trend in general is toward declining political participation. Once

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

again, the expectation generating an issue, and the reality from which it presumably stems, may be moving in opposite directions.

The issues covered here are selective, but they support the idea that the mobile home is caught in the tension and ambiguity generated by changes in housing needs and patterns of usage, and the conventional image of what the ideal community consists of. The situation observed in housing extends to all other aspects of modern life in the midst of rapid change, which in no small part has been facilitated by industrialization. In this respect, it may be hypothesized that the resistance to the industrialization of housing, particularly on the part of the consumer, may stem from a desire or need to preserve the home as a refuge against change. There is at least some evidence to suggest that the more private areas of the house are slower to change, particularly when the change is cross cultural (Canter, 1974; Mead, 1966). The more conservative attitude evidenced in local responses to the mobile home, in contrast to the federal response, may result in part from their sensitivity to local property interests and from an implicit charge to preserve a particular way of life.

Summary

Strategies of Integration in the Mobile Home Era

There are three strategies of integration evident in the mobile home era: independence, structuralization and conventionalization. Independence, as previously mentioned, is evident at the scale of local jurisdictions with the power to regulate mobile home use. They have generally favored the restriction of mobile homes to parks.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

State mobile home manufacturers associations have, in many cases, also supported independence, perhaps as a way of demonstrating to local authorities that mobile homes can be excluded from single family housing areas without banning their use. Independence, in this case, is a form of spatial segregation. In the previous period, with the creation of temporary mobile home land use districts, and with the use of mobile homes as emergency and temporary housing, independence also took the form of temporal segregation. Independence, then, resolves the categorical ambiguity of mobile homes by declaring them a special form of housing. This clarity, however, is challenged in the case of double-wide units, which have sometimes been treated as modular, rather than as mobile, units. Independence is also apparent in the clarification of tenant-owner rights. These rights are developing as an extension of consumers' rights rather than as an extension of the common law rights protecting some tenants.

Since the early 1970's, the approach to integration at the federal level has been one of structuralization. The financing of mobile home parks, and then of the units themselves, has been open to the support systems established to promote other forms of housing. The effect of structuralization has been to bring the industry under increased regulatory control, making it the only form of housing controlled by a national building code.

While it is still too early to tell, the effect of structuralization at the federal level may be to alter the composition of the industry; reducing some of the organizational and product flexibility which have helped to make mobile homes successful. The mobile home,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

under its new title as manufactured housing, may become undistinguishable from modular housing and, perhaps, additionally burdened by local building and labor union resistance.

The principal strategy of integrating the mobile home as an artifact has been conventionalization. In the few cases where manufacturers have attempted to introduce units with an industrial design aesthetic (i.e. units which suggest a prefabricated modularized unit), they have not been successful. Operation Breakthrough encouraged the development of several mobile home based building systems providing multifamily housing. Suppliers to the industry have also encouraged design development. The Reynolds Aluminum Company, for example, sponsored a national mobile home design competition for four years; but in 1976, it discontinued the program. Kaiser Aluminum, Owens/Corning Fiberglass and Jones and Laughlin Steel have also encouraged improved designs. The building recession of 1974-75 seems to have dampened much of this development and innovation on the part of individual manufacturers in general.

It is perhaps significant that the design of mobile homes has, for the most part, been done without the involvement of professional designers. In small companies it may be the president's wife who will decide what will sell. Moreover, because of the flexibility of the production and sales aspects of mobile homes, it can be particularly responsive to consumer demands. Units which don't sell at dealer shows can readily be modified in production or removed from the product line. In its ability to respond to popular taste, the mobile home may represent a true form of industrialized vernacular design.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The strategy of conventionalization, as the mobile home demonstrates, is not simply a matter of imitation. In conventionalization, new features and/or meanings are projected into an established model of relationships. This projection procedes analogically: e.g. if the double-wide mobile home is like a conventional single family house, then it should be arranged on its site like a single family house and such sites should be arranged in the pattern of a suburban addition. Insofar as the model used as a basis for conventionalization is unambiguous, analogical projection can develop easily; but in the case of the house, ambiguity is introduced by changing patterns of use and form affecting the single family dwelling. Thus, projection may procede on a model which is itself becoming obsolete, and which the mobile home may be helping to make obsolete.

An example of a model changing while projection is occurring, is the attempt to improve the entry area of the mobile home and the relationship between the front entry and the street. In the conventional house, the development of the attached garage has had the effect of making the door from the garage into the house the principal functional entrance. This development was clearly underway when detached garages along alleyways were in common use. Then it was the utility porch which served as the functional entrance. At that time, however, the front porch still served many functions. It was a place to sit on warm evenings and greet neighbors out for a walk. The front door, together with the front porch and the path to the sidewalk, constituted a transitional greeting area which mediated a variety of relationships between the family and its neighbors. Today, when front

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

porches are applied to houses, they are frequently so shallow that they cannot be used for sitting on. The builder may not even provide a path to the door. When one is provided, the path may run from the driveway to the door; rather than from the sidewalk, if there is one.

If the garage door has, in fact, become the functional door of the house, then the mobile home in a park, with its direct relationship between carport, or pad and the front door, is functionally equivalent to the relationship found in the house. The siting of double-wide units, however, retains the traditional front door arrangement, even though units located in parks are not subject to the setback requirements which had institutionalized the definition of the front yard and supported, in turn, the maintenance of the front door display.

Models of Industrialization in the Integration of the Mobile Home

Specific strategies of integration are guided by models which define the function of the artifact in a variety of contexts. For example, if the artifact (i.e. dwelling) is seen as a form of investment, then the model helps to organize action to treat it in that capacity. The basic models of industrialized housing, introduced earlier, are: housing as product, housing as service and housing as process. In the previous chapter, the relationship of these models to the development of the house trailer was discussed. These models continue to operate in the mobile home era, but they are further elaborated by the evolution of the artifact from a house trailer into a mobile home.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The model of housing as product is often conveyed in the image of the house-as-car. If housing is seen as a car, then it should be manufactured like a car, marketed like a car and used like a car (i.e. with the expectation that stylistic and technological changes will promote a cycle of obsolescence). The industrialized production of consumer goods usually means factory assembly. The advantages of such assembly of housing are given as: controlled environment (free of the vicissitudes of weather), year long production, improved tolerances in assembly and a rationalized sequence of assembly supporting mass production. While these benefits exist in mobile home production, they are not fully realized. The sale of mobile homes, like conventional housing, is seasonal. Since dealers cannot afford to hold excessive inventory on their lots, and manufacturers find stockpiling units expensive, the seasonal character of sales produces a corresponding cycle of production (Bernhardt, 1980).

Factory production should result in better tolerances of assembly, but mobile homes, like conventional construction, suffer from low tolerances. The passage of the mobile home construction standards (1976) assures the soundness of units and, to a limited extent, promotes standardization. High tolerances, however, are only necessary when standardization is applied to the production of interchangeable parts. In the case of the mobile home, it is the unit as a whole which constitutes the component of housing. The critical point of interchangeability is where the unit must hook up to the tow vehicle, and where it must be connected to site utilities.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Part of the economy achieved by mobile home production stems from the use of rationalized assembly; which supports mass production. Components (e.g. wall sections, kitchen cabinets, etc.) are sub-assembled and brought onto the assembly line when required. The same kind of rationalized assembly, however, can be achieved in on-site construction with the use of serialized production. Indeed, the degree to which mechanical techniques are used to assemble units in the factory are not significantly greater than those utilized in large scale housing developments. Perhaps this means that the serialized housing site is a factory, but that it is not perceived as such because the process is not enclosed in a building. The same observation can be applied to highly industrialized agriculture. The image of the housing factory, then, may be limited by a too literal interpretation of what a factory is.

In developing housing as a product, the manufacturers have acted as if the product were the unit and not the unit/site ensemble. To be sure, their associations have suggested standards for park design, and at times have offered design services, but few manufacturers have engaged in park development. The park is to the unit as highways are to the car. Each is dependent on the other, but car manufacturers, like mobile home manufacturers, do not take direct responsibility for developing this support system. Some dealers and park developers have attempted to tighten this interface, but the result is often the creation of a "closed" park. The very notion of a closed park and the legal response (e.g. that consumers should be protected against such parks) reinforces the identification of the unit itself as a product.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

What does this make the park then; another product or a service? Presumably, it is a service, since the unit owner typically does not buy the site.

To assure high levels of production, manufacturers must attempt to expand their market, but they may also encourage the recycling of their existing market by promoting the stylistic and technological obsolescence of their units. A necessary part of such an approach is advertising, which promotes recognition of the units produced by individual manufacturers. Dealers support this approach by offering trade-ins when selling new units; while some park operators promote it by allowing only new or late model units into their parks.

There are potentially two different consumers for the house as product. One is the developer, who can buy the units, set them up on the site and sell both as a package. This occurs occasionally in condominium, cooperative and subdivision parks. The ultimate householder bears the same relationship to the production sector as a person buying a developer's house. More commonly, it is the household purchaser who completes the analogy. In some cases this does occur. The purchaser will buy a new unit after several years; trading-in the old unit. Particular brands may be looked at, and the same dealer used. Such cases are the exceptions. More often, the first unit purchased is the only mobile home that the household will use. It will be selected generically, rather than by brand name. It will be perceived as a product by virtue of the way it is obtained and because of the expectation that the object has a limited life and will depreciate as it gets older. The expectation of depreciation will be

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

a disincentive in making improvements. In short, the unit will be treated as disposable, or subject to percolation down.

In the first chapter it was suggested that a model is spelled out against a background of assumptions. The model here concerns the industrialization of housing. The background, in turn, consists of some fundamental assumptions about the character of technology as a particular type of organization of human activity. Background assumptions preclude the selection of a model, and affect the way it is developed. In the model of housing as product, the background characterizes technology as actional: i.e. there is an existing technology which produces a known product which, in turn, corresponds to a stable need. The function of the new technology is to produce the same product more efficiently. Certain functions which were a consequence of the old technology may be lost, but the essential functions of the product are retained and possibly enhanced. Conventionalization may be seen in this light as the process of identifying what is essential in the product; of reaffirming the significance of particular features. The product may also be changed to conform with aspects of the new technology, but these changes are taken as modifications and not as a transformation of the underlying need which is satisfied by the product.

The model of housing as service is not as fully developed as the model of housing as product. There are, however, certain instances in which the nature of this model can be examined. One is with the use of units as emergency housing. Another is in the development of the closed service park. In the product model, the manufacturers are

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the leading advocates. In the service model, the service providers, primarily the park operators (public or private), are the advocates. The model of housing as service is illustrated by the modern motel chain. No matter where one goes, from coast to coast, there is an identical room with identical service waiting. There is no problem in adapting to new surroundings, but only in remembering where one is. A variation on this theme is the executive house finding service, which can place an executive in a house and neighborhood similar to the one being left (Packard, 1972).

What is standardized in the present model is not the physical unit, but the package of services. In the service park, it is not housing that is sought per se, but community. Housing is part of the package. Indeed, the park developer may determine the units that can be purchased, and act as exclusive dealer. A landscaping package is also part of the purchase and fee for admission to the park. The dealer/park management may now also be responsible for servicing warrantees.

Mass production may play a role in this model if parks are developed as a chain. The government parks of the Second World War were a kind of chain. The KOA campground system is another such chain (though, for highly transient recreation vehicles). If standardization consists of a standard service, then mass production consists of the economy of mass purchasing and development in delivering this service.

In this model the consumer should regard ownership as a secondary characteristic of housing. Ideally, the service provider should be

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

upgrading the unit: replacing older units with newer ones, the way a landlord replaces appliances in an apartment. Ownership could, in fact, be a disadvantage to the full development of this model. Extensive personalization, likewise, is a disadvantage. Units and sites should be made as interchangeable as possible.

The background of assumptions that this model developed in is one of technological interactionism. The unit and the park are the result of the demand of the users or, more abstractly, of the market on one side, and the operating characteristics of the service system on the other. Both sides are part of an ongoing exchange, but their relationship to each other is constant. The physical artifacts (unit and park) mediate this relationship, but they do not constitute the ultimate basis for it.

The third model, housing as process, is also evident in the development of the mobile home. The image is the house seen as a kit-of-parts. Its chief advocates are the users, especially those on privately owned lots. They treat the commercial unit as a core onto which they add homemade or commercially produced extensions. These extensions may totally envelop the unit. The process here consists of the ongoing production of the house as an objectification of the needs and taste of its occupants.

It is not difficult to grasp the concept of housing as process, but it is not clear how the artifact (dwelling) should participate in that process. Based on the model of housing as service, the process need not be expressed by the unit, but simply supported. If needs change, services can be supplemented. Selection is involved, but not

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

manipulation. The assumed motivating force behind the model of housing as process is the desire of people to alter their personal environment, not only to accommodate needs, but to express control over it.

The mobile home could accommodate housing as process better if it were made up of modular components that were truly interchangeable. There have been proposals for the development of such units, but they have primarily remained ideas presented in design magazines (e.g. Kendig, 1972; Carter, 1970). There have been a few commercial attempts (e.g. James Hills' House of Architecture), but they have been short lived. Many manufacturers offer customizing options (e.g. special windows, shingled roofs, upgraded doors, etc.), but these do not truly constitute a kit-of-parts as suggested here. The add-on market is now served primarily by some manufacturers offering prefabricated room additions. Commercial availability of such rooms began in the mid-1950's, but, to my knowledge, no mobile home manufacturers have been involved in their production. Clearly, the mass production of a kit-of-parts system would enhance its economics and promote the model of housing as a process. At this point, however, the market is far from adequate and the industry poorly organized to achieve this objective.

Ironically, the relatively low cost of a mobile home (particularly an older, used unit) provides both an incentive and a disincentive for the development of additions. Because it is inexpensive, it may not be worth adding extensions; rather, one should move to a larger unit, trading-in the old one. At the same time, the low cost

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of the unit may remove some of the financial and aesthetic risks that are involved in altering a conventional house. Whether a unit is located in a park or on the occupant's own lot is another important factor. The tenant/owner status of the park resident may obligate the mobile home occupant to make additions to the unit (as in the Blue Skies Park, in Palm Springs, California) or it may eliminate that possibility. Building codes and zoning ordinances may also act as a disincentive.

In the other models of housing, the consumer plays a relatively passive role, influencing the system through the selection of products and services, but not directly altering the product and defining its character. Indeed, in Arthur Bernhardt's massive study of mobile homes (funded by HUD), a systems analogy is used to describe the industry, but the mobile home consumers are not considered a formal component of that system. Presumably, they are part of the environment in which it operates. By contrast, the rationalization of industrialized housing under the process model would elevate the user/consumer as a key component in the system. Whereas in the product and service models the user need not have knowledge of how his or her housing is made; in the transactional model such knowledge is essential. Moreover, this knowledge is not simply knowledge <u>about</u> housing (i.e. a purely technical or descriptive understanding), but a tacit knowledge <u>of</u> housing which emerges through the act of manipulating the environment through dwelling.

The historical development of the mobile home illustrates a range of images and models which have been used to translate the principles

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of industrialization into housing. All too often there is a tendency to treat these images and models as rhetorical devices meant to illustrate a situation. Conversely, they may not be seen as images and models at all, but as objective statements regarding the nature of a situation, and therefore free of any structure in themselves.

Consider, again, Bernhardt's discussion of the mobile home industry as a "system" of producers, distributors and park operators. He observes that it is the "market" that structures the "system." "The structure of an industry can be determined by gauging the control that individual participating firms exercise over the industry's product market" (1980, p. 405). He concludes his analysis by suggesting that the industry can best be advanced by pursuing this systems approach. Industrialized housing may indeed be thought of as a system, but it must be understood then as a system trying to understand itself. The label "system" offers a model toward that understanding.

The analysis of the historical development of the mobile home suggests a structure of development by which the use of various models and images are altered over time. The use of the theme of the "pioneer," for example, changed from an association with the return to nature (in the travel trailer period), to one of taming the wilderness (in the house trailer era). Similarly, the clever devices for improving storage that were employed during the travel trailer and house trailer eras, were abandoned in the mobile home period because the association with those previous periods, and with dwellings made for motion in general (like Pullman Cars), no longer seemed appropriate or desirable. Thus, part of the structure of the development

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of models and metaphors consists of the relationship between established and emergent interpretations: between past and future.

In general, the structure of development seems to be ordered by the fourfold criteria for correspondence. As indicated in the first chapter, these criteria consist of: correspondence between image and artifact, correspondence within the structure of expectations organizing the image and model, correspondence within the features that structure the artifact, and correspondence between the various users of the artifact. Theories on the diffusion of innovation often consider only one type of correspondence: (e.g. in communications models it is the correspondence between various users which is most important). Similarly, technological determinists are likely to focus on the correspondence within features. The development of the mobile home suggests that all four forms of correspondence must be considered; especially in their relationship to each other.

Notes and Reference

1. Martin Mayer (1978) estimates that between 5-30% of the cost of building is a result of complying with various government standards and requirements.

2. One unsuccessful commercial venture in producing a modular unit was James Hill's House of Architecture. Sam Davis (1977) suggests the modular approach as a way of making mobile homes more responsive to the needs of their users.

3. For estimates of the comparative cost of owning a mobile home, see Mayer (1978), Center for Automotive Safety (1975); Moose (1973).

4. Estimate based on figures from the "Annual Housing Survey: 1976," part E. HUD, Washington, D. C. (March 1978).

5. Mayer (1978).

6. N.E. 2d 109: Ohio Common Pleas (1961).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

7. 75 Wash. 2d 204, 449 P. 2d 806 (1969).

8. 66 Misc. 2nd 329 (1971).

9. 37 N.J. 232, 181 A. 2d 129 (1962).

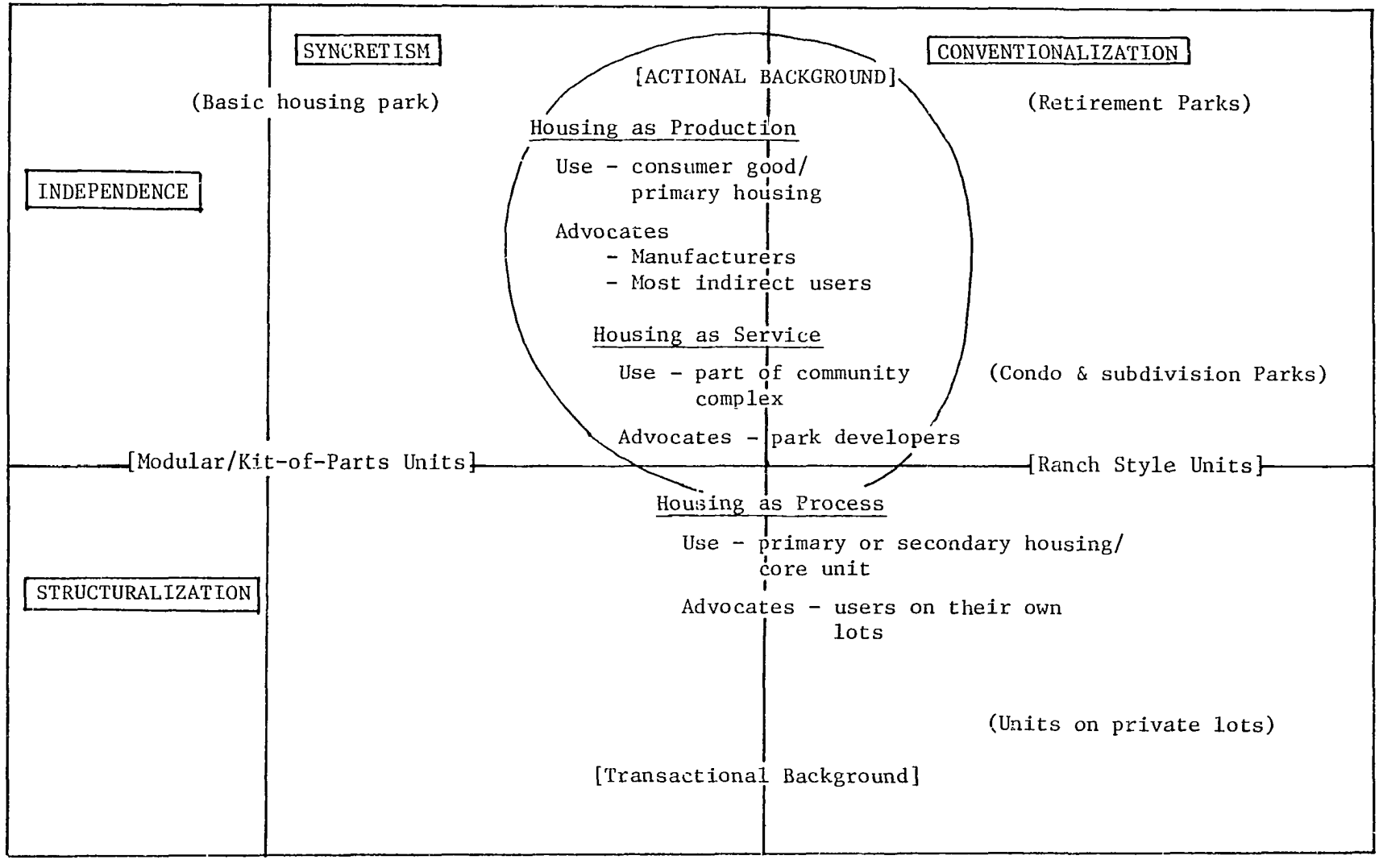
10. 29 N.J. 481, 150 A. 2d 481 (1959).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

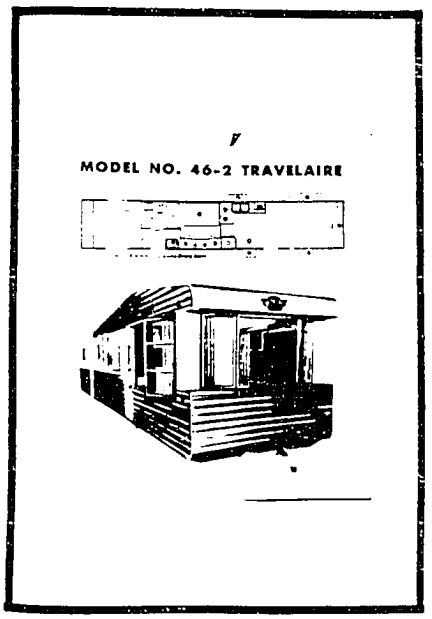
Table 5

Summary of Integration Strategies: Mobile Home Era

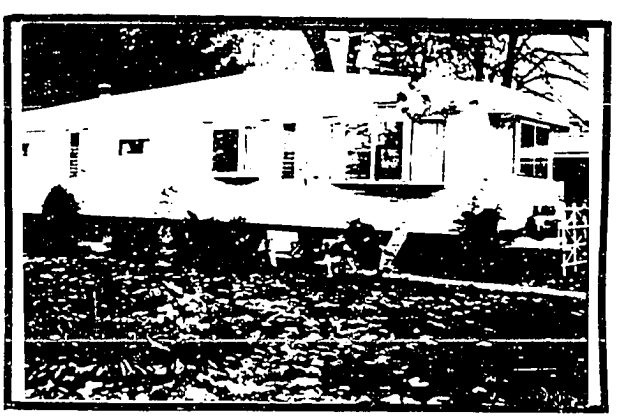


Illustrations: The Mobile Home Era

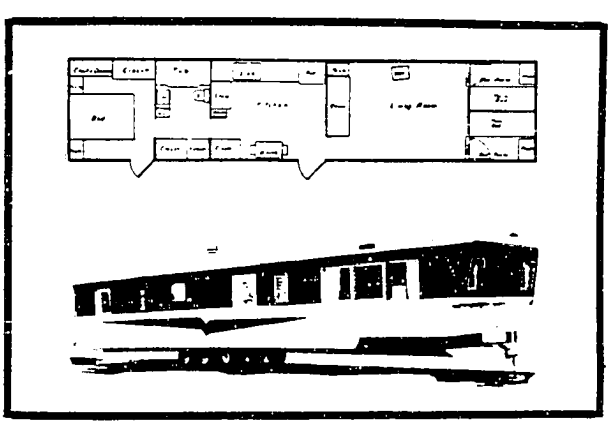
42. The exterior of this Ventoura unit presents a curious blend of motion and house features. The bay windows, which swivel in for transport are advertised as enhancing the spaciousness of the interior.



43.



44. Although a 10-wide unit, this 1957 model by Herrili retains a walk through bathroom, while maintaining privacy with opposing bedrooms.

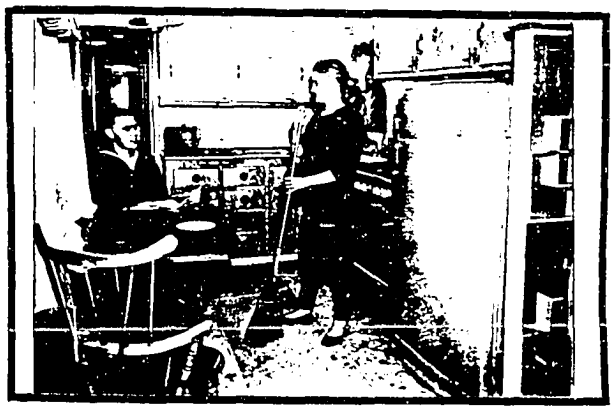


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

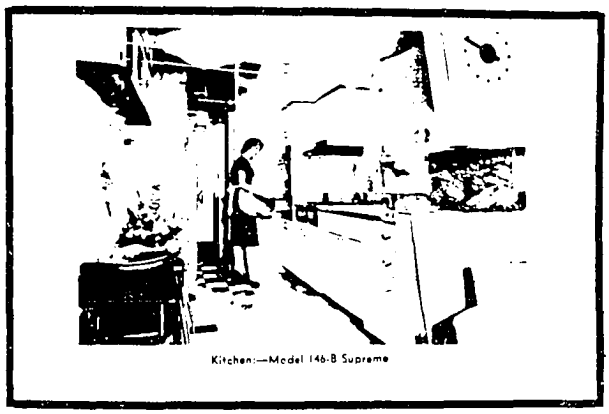
"Equipment"

45. The increased spaciousness of the mobile home is demonstrated in its "equipment" rooms: the kitchen and bathroom.

46. "Robert 'Nick' Starr. . . of the U. S. Navy. . . watches his pretty blue-eyed wife Diane make with the chores in their mobile kitchen."



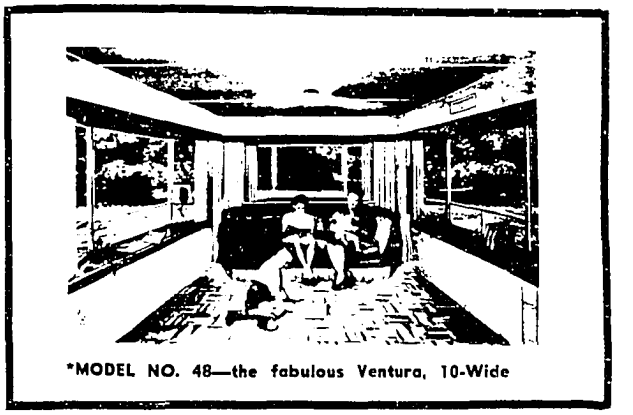
47.



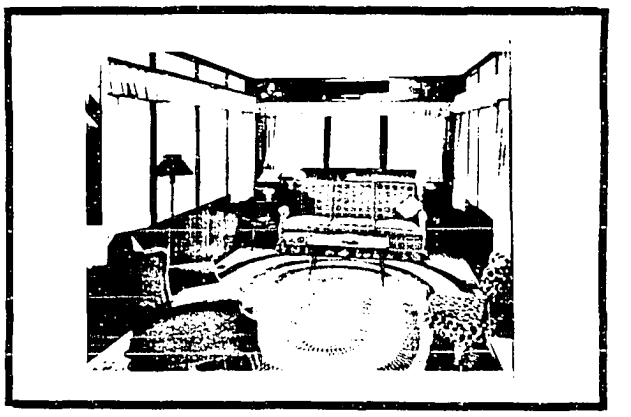
Kitchen:—Model 146-B Supreme

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

48. The transition from the house trailer to the mobile home is marked by an increased emphasis on windows.

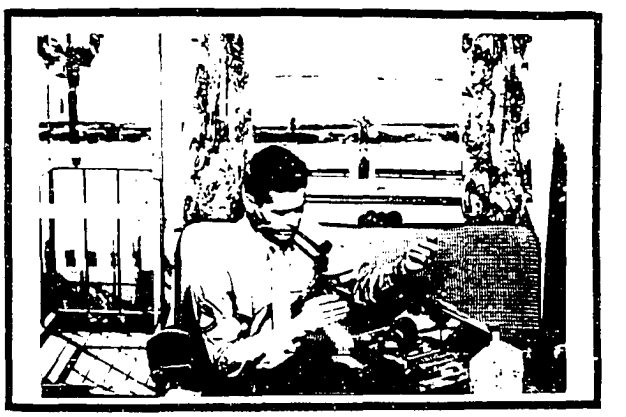


49.



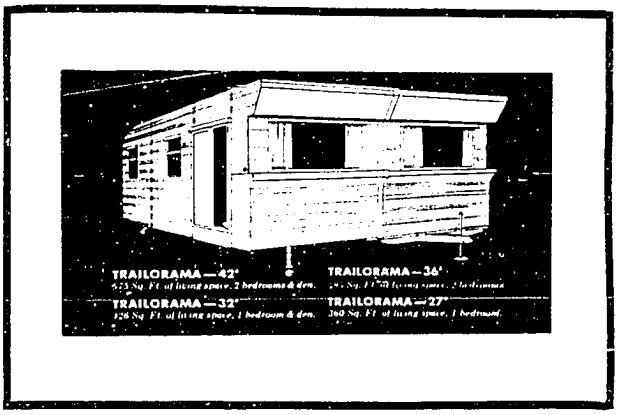
50. "Air Force personnel. . . enjoy the benefits of mobile home ownership."

51. A military man tying fishing flies: the theme of leisure living.

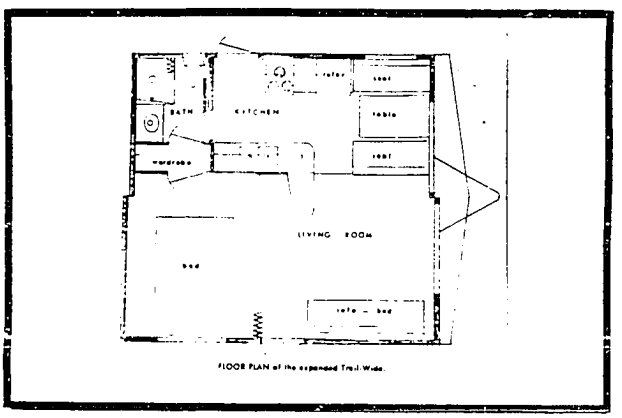


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

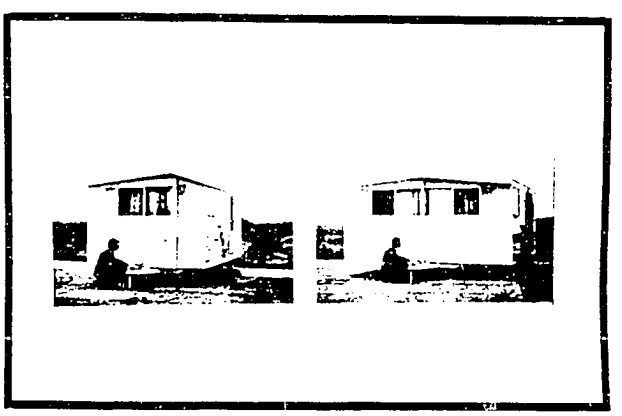
52. Before the development of 12, 14 and double-wide units, several companies produced models which doubled in size by utilizing a pull out section.



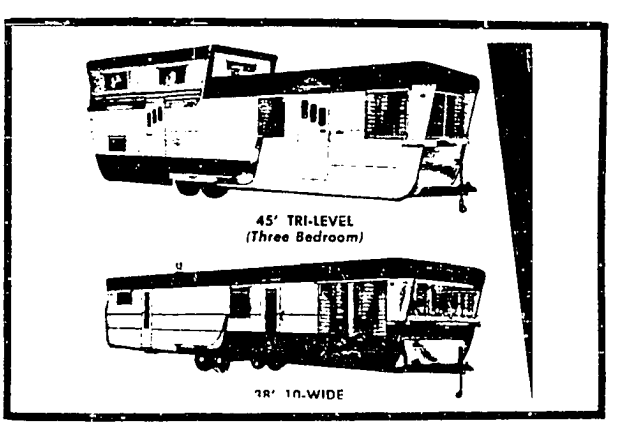
53.



54.

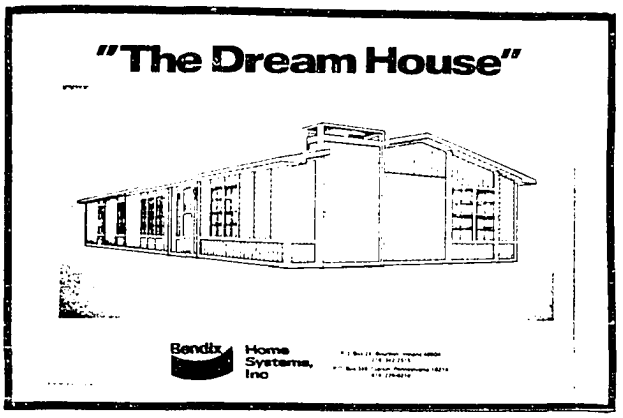


55. Another experiment in spatial expansion is the duplex unit, first suggested by Corwin Willson in 1936 (see illustrations 14 and 15).

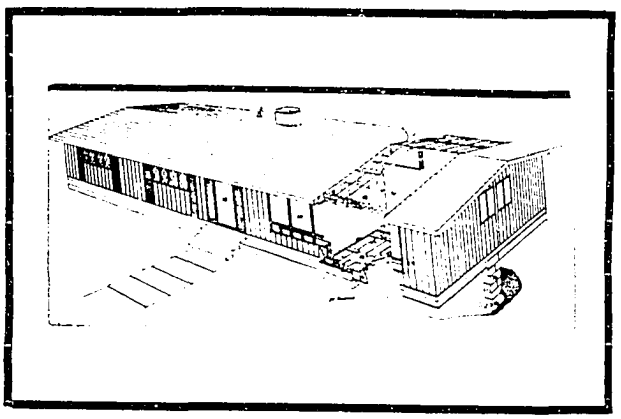


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

56. The mobile home era is marked by the conventionalization of the exterior, as well as the interior, of the unit. In the end, the distinction between mobile and modular homes is largely obliterated.

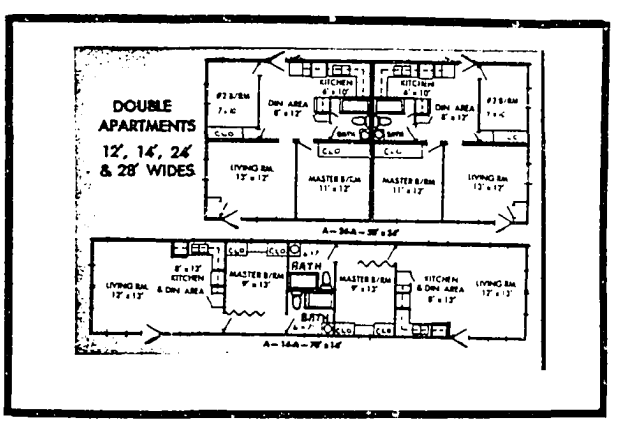


57.



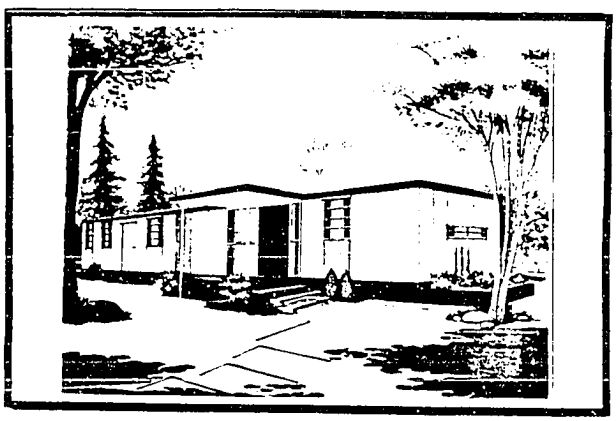
58.

59. These duplex units suggest a rental use, possibly in boom town areas.

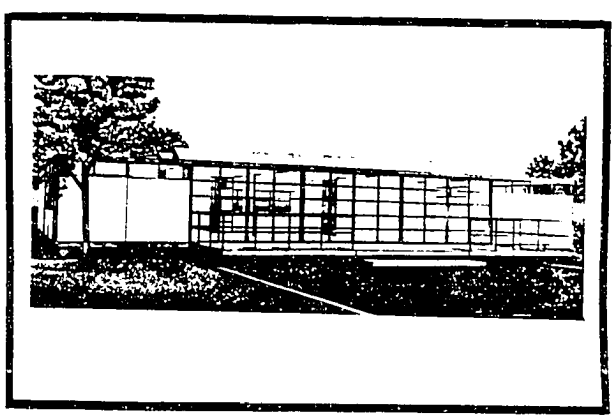


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

60. This Marlette unit, produced briefly in 1963, was designed by an industrial design firm using modular coordination.



61. Product suppliers have attempted to improve mobile home design. Shown here is the 2nd prize winning solution in the 4th Reynold's Creative Design Award Program.



Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

62. With the development of the mobile home, the travel trailer (R.V.) became a separate entity; retaining much of the meaning and myth previously associated with the travel trailer in the 1930's.

63.

64. Artist's rendering of a High-Rise mobile home park. At least one such structure has actually been built.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Chapter Five

Mobile Homes in "Middletown"

The historical diffusion of the mobile home at once demythologizes the ideal of housing while simultaneously reconstructing it. Because the mobile home is not accepted as objectifying the ideal, it has the effect of forcing that ideal into definition. That which is not a house, by its misfit, helps to define what is a house. This relationship, between the innovation and the convention, is not static. The ideal is not a constant waiting to be brought into focus; rather, it is constructed in the process of adoption and diffusion, just as surely as the innovation is constructed.

The relationship between the innovation and the convention involves changes in attitudes, beliefs and assumptions, as well as in concrete actions. It is a relationship which also involves physical form. The continuity which must ultimately be struck between the innovation and the convention is significantly mediated by form and features: features which are familiar yet unexpected; features which lay claim to the identification of the artifact as a house and yet not a house. The strategies of integration which were described and applied in the previous chapters are simply a typology of approaches for achieving mediation and continuity.

Tracing the historical development of the mobile home reveals the broad strategies of integration operating at particular periods. It

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

does not, however, capture the response of individuals within the concrete context of their everyday use of the mobile home. The objective of the present chapter is to enter this context and to consider more closely how a population of mobile home occupants perceive its housing, what it understands as its ideal of "home" and house, and how it regards the industrialization of housing. I will also be concerned with how it feels that others see it; and how, in fact, others do see it and its form of housing. The strategies of integration utilized by mobile home owners will be considered, particularly with regard to the features of their units which they identify as significant. The typology of strategies identified earlier will remain the same, but the details of how they are executed will vary to fit the level of action at which the individual occupant operates.

The research reported in this chapter was conducted in Muncie, Indiana, from October 1975 to June 1978. The characteristics of Muncie which make it an appropriate location from which to study mobile home use are discussed in the next section. While there are many mobile homes located on individual lots in and around Muncie, emphasis was placed on units in parks (i.e. the housing innovation was identified as the park/unit complex).

The principal research methods used in this part of the study were: participant observation, in-depth interviews, observations of physical improvements and a questionnaire survey. Participant observation was conducted over a period of six months at a single park. A mobile home was rented and occupied part time by the researcher and

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

his family during this period. The park owners provided permission to conduct the study, and offered useful information on the background of all of its tenants. The residents who were interviewed were also informed of the researcher's purpose in living in the park.

An important reason for using participant observation in the park was to learn first hand about the qualities of mobile home living. I know of no other structured study of mobile homes in the present period in which this form of participant observation has been used.[1] During the period of participant observation, field notes were maintained recording observations on the park, as well as personal experiences. In addition, some structured observations of improvements made to lots and units were carried out. Preliminary findings and concepts which emerged during participant observation were shared with the park owners to see if they could offer confirmation or further interpretations.

During and immediately following the period of participant observation, in-depth interviews were conducted with park residents selected to represent different phases of the life cycle. There were ten interview subjects, two each from the following stages: young single household, young married without children, young married with children, retired couples, and single elderly persons (see note 2 for the coding of interview subjects). These stages were selected because the literature on mobile homes and housing in general suggests that housing aspirations and needs, as well as the meaning of housing, varies with the individual's stage in the life cycle. The interviews consisted of a set of open-ended questions, followed by probes

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

requesting the subjects to fully explain their answers. Interviews were recorded on tape and transcribed. Interviews were broken into individual statements, separated on cards, and then sorted by content areas. A frequency count of specific responses was used where appropriate to select the most characteristic answers. Interviews were also conducted with the park's owner/managers and other residents. In Muncie, additional interviews were given to park managers, dealers and local officials. Visits were made to several mobile home manufacturing plants in Indiana and Michigan. Industry trade shows and local association meetings were also attended.

Data gathered in the park interviews were used to construct a comparative questionnaire survey. This survey was administered to a sample of twenty mobile home, conventional house and apartment dwellers (N=60) in Muncie. The questionnaires were administered in the form of an interview. All subjects were women with young children. They were selected from areas with similar income characteristics as determined from block level census data. Data from both the in-depth interviews and the questionnaire survey are reported selectively within the discussion of mobile home park life which follows. The survey form itself and a tabulation of basic findings are included in the appendix.

The findings of this portion of the study are reported in four sections. The first provides background on the city and the distribution of mobile homes in it. The second discusses the park. The third treats the park occupants and their units, and the fourth offers some conclusion.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The City

Muncie, Indiana was founded in 1827. Set in a landscape of gently rolling, fertile plains, it is bisected by the White River which loops around its central business district. Folk wisdom holds that tornadoes do not strike at the bend of a river, but this bend also happens to fall at the center of the Center Township. The city, the county, indeed the state, are laid out in the gridiron pattern established by Jefferson to impose order over the then new territories, and to facilitate land speculation. Cutting diagonally across this orthogonal system of roads are the tracks of the Norfolk and Western, the Penn Central and the C & O. In the autumn, train whistles are heard incessantly as they carry great loads of grain to port. From the air the confluence of economy and technology which have shaped the land are apparent.

Approaching Muncie today from the northeast, along Broadway, its entrance is announced unceremoniously by a row of mobile home parks. The parks are set in a wedge of land defined by a state road on one side and railroad tracks on the other. Broadway, heading into the city, is a commercial strip replete with fast food franchises, Christian supply centers and adult book stores. The regional shopping mall is located here. Its construction helped to precipitate the decline of the downtown area. Still heading toward the center, one passes the new Central High School. The original had been located in the city's core, and was a source of its vitality.

The center of the city was once defined by a graceful courthouse. Like most Indiana courthouses built in the late Nineteenth Century,

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

it had a copper clad copula. It, and other courthouses in the growing cities, are now being replaced by modern structures, unlikely to inspire any form of civic pride. The new courthouse terminates a four block pedestrian mall. Intended as a means of revitalizing the core, the construction of the mall has aided its decline. Many of the merchants resisted the mall, but its construction was a condition for moving the world headquarters of the Ball Corporation to the downtown area. The new headquarters was opened in 1976.

The economy of the city was once dominated by the Ball Brothers glassworks, which had been attracted to the area by the discovery of natural gas in the 1880's. With the cheap gas long gone, the glassworks now stand as rows of huge grey abandoned sheds by the railroad siding. New industries have taken its place: Westinghouse generators, Borg-Warner Gear, Chevrolet assembly and the once small normal college which has grown into a university with over 17,000 students.

In 1924, Muncie became the setting for a sociological field study, later published as Middletown. A sequel, Middletown in Transition, was published in 1937. The authors, Robert and Helen Lynd, came to investigate the "interwoven trends" that comprise the life of a typical American city. They were concerned, on the one hand, with identifying its typicality (i.e. the core ideals and artifacts which make up an American city); and, on the other hand, they were concerned with the forces that were working to rapidly change that environment. In particular, they were interested in the effects of material technology.

> We are coming to realize. . .that we today are probably living in one of the eras of greatest rapidity of change

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> in the history of human institutions. New tools and techniques are being developed with stupendous celerity, while in the wake of these technical developments increasingly frequent and strong cultural waves sweep over us from without drenching us with the material and non-material habits of other centers. (1956, p. 5)

The real waves of conflict which they investigated, however, were not those from without, but those generated from within by technological change: conflict between a remembered and physically evident past and an emergent future seemingly driven by the logic of the new technology.

One of the principal aspects of life in Muncie that the Lynds studied was "Making a Home." Using 1890 as a base year for comparison, they observed that new technology was dramatically affecting the organization of home life. Among its effects was the loosening of the bond of propinquity in community life. New forms of leisure changed patterns of socializing. The motion picture houses, for example, created additional social gathering places, while providing a new opportunity for courting couples to be away from their parents. Similarly, the radio brought the family together in the parlour, but it eliminated the need for reading aloud. Above all, the car released the family from neighbors, and opened up the countryside. An 86 year old resident today recalls its effects.

> We lived out in the country and we had lots and lots of friends because we could go places and take them in our car. But that didn't last long, because soon one then another got an automobile. That's when everyone commenced to drift apart, when it got to the place where everyone could afford an automobile, or have one whether they could afford it or not.
>
> We used to have neighborhood gatherings. We had carry in dinners, we had thrashing dinners and things like that. After the car came that disappeared. This neighbor went this way and that went that way, and in

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> my opinion it was all because of the car. You could go further and you could see more. (Subject 4)

The car and the movies provided new opportunities for privacy or anonymity outside of the house; while inside the house, the introduction of gas and then electric lighting, the use of central heating systems and the diffusion of indoor plumbing, enhanced the opportunities for privacy within the household (Banham, 1969; Wallis, 1974).

It was not only the mechanical equipment of the house that was changing, but the shell and lot as well. Under the speculative pressures of rapid growth, brought on by the discovery of natural gas in 1886, lot sizes decreased. The once ample gardens used to supplement the family's diet, were reduced by the reduction in lot size and by the addition of the garage and back alley. People began buying more of their food from the store. New residential construction included central heating, and that required at least a partial basement to house the furnace. The front porch made way for the sleeping porch and the glassed in den, as electric fans and wire screening helped to create new possibilities for privacy. The floor plan of the house, in general, was changing. The Bungalow style, which was sweeping across the continent from the west coast, reached Muncie in the 1920's. These units were more open and less formal in their room arrangement, reflecting the general relaxation in manners following the First World War.

The new housing was more complicated to build. While the technology for constructing the basic shell of the house remained essentially unchanged from the 1880's, the new technologies being

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

introduced required additional construction skills. Whereas four carpenters were sufficient to handle the erection of a house before, now electricians, plumbers and foundation contractors were needed.

In 1924, the vast majority of people lived in single family detached houses (86%), as they had in 1886; but more people owned the houses in which they lived. Between 1900 and 1930, the percentage of people renting their homes dropped from 65 to 49% (Lynd & Lynd, 1965). The cost of owning a home was equivalent to one year's salary. The increased use of Savings and Loan Bank mortgages helped to facilitate the trend toward home ownership.

As the Lynd's saw it, technology was not only changing the routine of daily home life, it was also altering the larger pattern of residential mobility. The mobility of the working class had increased and, to a lesser extent, so had the mobility of the business class. Mobility was particularly pronounced among renters. In 1935, for example, 82% of owners were in the same house that they had lived in, in 1930; but only 11.6% of the renters were in the same house (Lynd & Lynd, 1965). While residential mobility has always been a characteristic of American culture, the Lynd's saw the trend toward increased mobility as a potential threat to the solidarity of communities.

> There may. . .be distinct elements of survival value to the individual, living in a culture characterized by rapid change, in his learning to "travel light" and to put on and off the physical paraphernalia of living as readily as he does his coat. But this advantage may be counterweighted by the marked impairment of those elements in social organization in a democratic culture which depend heavily upon the individual's feeling himself to be rooted in the subsoil of a neighborhood and community and therefore

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> personally committed to participating in terms of its problems and its future. (Lynd & Lynd, 1965, p. 188)

The 1920's saw a dramatic increase in the amount of housing in Muncie, but it was also a period of housing shortage. The Lynd's felt that the industrialization of building, such as that evident in automobile assembly, could facilitate the production of housing; but they also saw that progress toward increased production involved reducing or simplifying the burgeoning regulations controlling building.

> Standardized large-scale production, the new habit in industry that makes Middletown's large automobile parts shops possible, is coming very slowly in the complex of tool-using activities concerned with making houses; the building of homes is still largely in the single-unit handicraft stage. . . .It seems to be not so much a lack of raw materials or skill that creates the "social problem" of a housing shortage as this intricate network of institutional devices through which a citizen of Middletown must pick his way in undertaking the building of houses for others or in trying to secure a home for his own use. (Lynd & Lynd, 1956, p. 107)

The disparaging increase in "institutional devices" which they referred to did not concern building regulations *per se* (zoning, for example, had not yet come to Muncie, though it had been rapidly spreading across the country since its inception in New York City in 1916) but, rather, the financial complexities which now surrounded home construction and ownership. It may be inferred from their data that between 1886 and 1924, the swing toward increased home ownership through the increased use of mortgage financing helped to foster a change in the conception of home ownership from one of securing shelter to one of providing an investment opportunity. The federal

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

government's support of home mortgages had a significant effect in supporting this conception (Dean, 1945).

Many of the housing investments of the 1920's became the foreclosures of the 1930's. Building activity slowed to a trickle, a trend which continued through the Second World War. After almost two decades of reduced building activity, the shortage of housing perceived in the 1920's had grown considerably more severe. In meeting this shortage, a new type of housing was being experimented with. Like that envisioned by the Lynd's, it was produced through industralized techniques. In 1949, for example, the Lustron Home Corporation was producing prefabricated metal houses in a converted aircraft plant in Columbus, Ohio. Two Lustron homes were erected in Muncie before the company went bankrupt in 1950. A more significant source of housing was provided by National Homes. Founded in Lafayette, Indiana in 1940, today it is the nation's largest producer of prefabricated housing. The National homes built in Muncie are modest, rectangular single family structures. They were constructed of panels delivered to the site and erected on a slab by local builders. The builders also served as the dealers for the units. Surrounded now by matured landscaping, the houses are indistinguishable from site built structures of the same period.

Following the War, the first mobile home parks were established in Muncie (or, more precisely, outside the city limits) on agricultural land. Presumably mobile homes, or house trailers, were also being used on privately owned lots at this time. Some of the units finding their way into Muncie were undoubtedly manufactured in the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

state. Historically, northern Indiana has been a center for mobile home manufacturing. Some of the first commercial manufacturers established here in the early 1930's. The current leader in the industry, Skyline Corporation, is headquartered in Elkart. Located in the confluence of steel, auto parts and lumber manufacturing areas, northern Indiana was ideally suited for travel trailer and house trailer production. With the development of larger units, however, it has become increasingly important for factories to be located near their markets rather than near suppliers.

Although the economy of Indiana has benefited from the production of mobile homes, its municipalities and counties have not been overly receptive to their use. One survey, conducted in the early 1970's, found that 25% of the municipalities polled restricted the use of mobile homes to parks. Another 10% excluded them entirely (Bernhardt, 1980). For the same period the files of the Indiana Mobile Home Association (IMHA) indicate that out of 57 counties for which information was available, only three allowed mobile homes as a specific use, three restricted units to parks, 11 allowed use but only under ambiguous conditions, while 41 did not permit mobile homes at all. Ironically, Elkart County (center of the industry) was among those excluding mobile homes. Most counties which excluded mobile homes did so on the basis that they were not "dwellings" and, therefore, not a permitted use in either residential or agricultural zones. Special permits could be issued for their use, but usually for a short duration; 90 days to two years (Blomgren, n.d.).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In 1971, the State construction code was amended to include mobile homes, thus preempting the use of local building codes as a method of exclusion. In 1976, the federal codes developed by HUD, in turn, preempted the state code (Blomgren, n.d.). As the distinction between mobile homes and modular housing grew thinner, the issue of exclusion seemed to focus on factory built housing in general. In 1977, a bill was introduced into the State House of Representatives (HB1213) with the purpose of removing local restrictions against factory produced housing. The proposal read in part:

> The powers of land-use planning and control delegated by this chapter may not be used for the purpose of excluding the placement of residential dwellings on land within the jurisdiction of the plan commission except for failure to meet health, safety, engineering or design standards or specific actions which are duly adopted and uniformly applied within that zoning jurisdiction without distinction as to whether such dwellings are solely or partially factory-constructed. (underline added)

The proposed bill was soundly defeated. In a summary of the legislative debate, the IMHA observed:

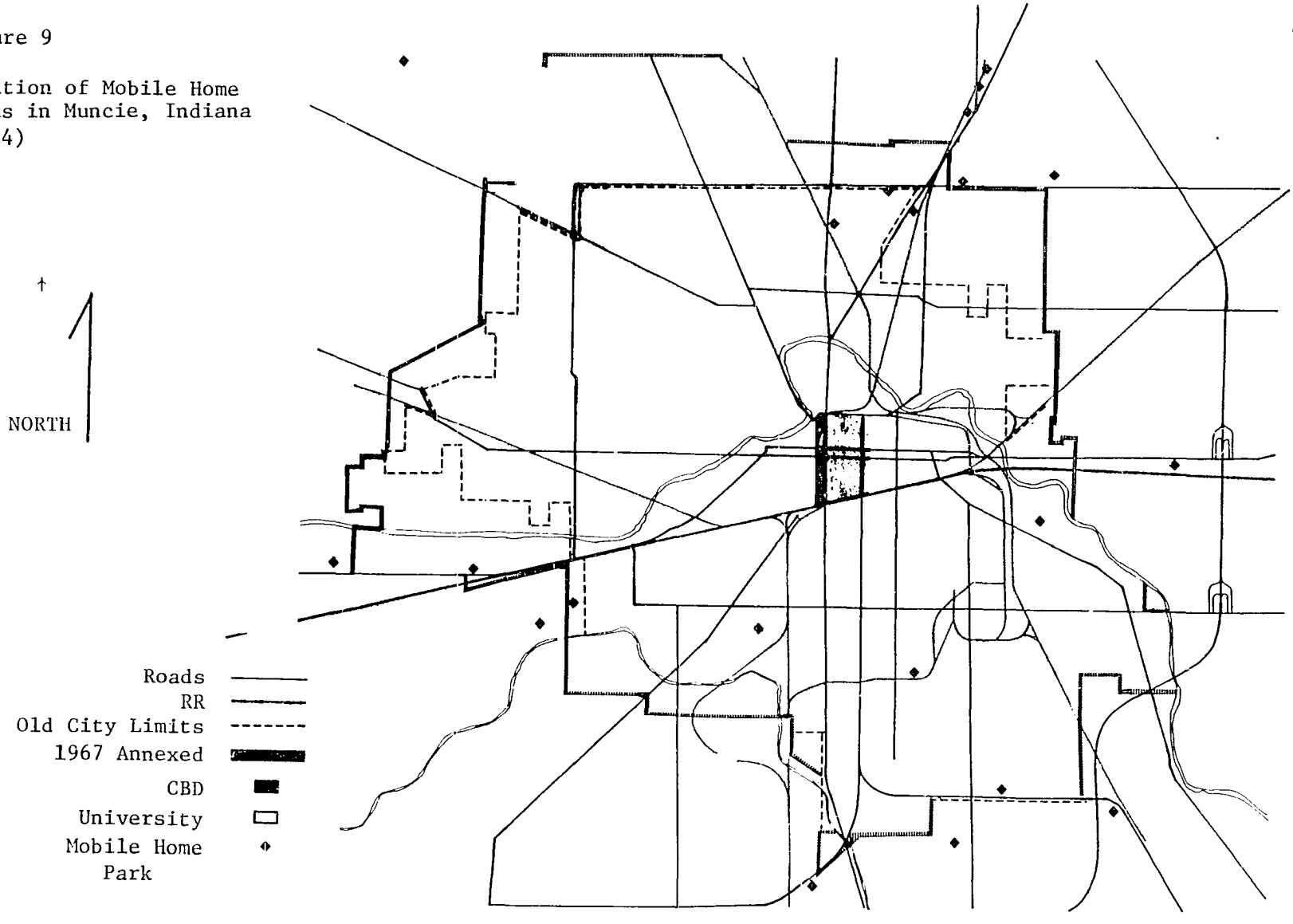
> The overwhelming opposition to HB1213 appeared to rest primarily not on objective analysis of the bill's wording, but rather upon emotional bias and a fear that passage would result in placement of unsightly "trailers" promiscuously throughout Indiana's landscape. . . . ("Legislative Update," n.d.)

One of three counties in Indiana which, in the mid-1970's, permitted the mobile home as a specified land use (i.e. with specific zoning requirements established for mobile homes in parks and on individual home sites) was Delaware County, for which Muncie is the county seat. By contrast, adjacent Blackford County, which is primarily agricultural, excluded mobile homes. The joint Delaware-Muncie

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Figure 9

Location of Mobile Home Parks in Muncie, Indiana (1974)



Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Zoning Ordinance was established in 1971, after which specific building permits for mobile homes were recorded. In 1971, 11% of the dwelling permits issued in the County were for mobile homes (located on private lots); in 1973, it was 15%, and by 1974, it had climbed to 29% (Annual Report of the Delaware-Muncie Planning Commission 1972, 1974, 1975). It should be noted that 1974 was a recession year for housing and, while the number of permits issued for conventional dwellings dropped by 26% from the preceding year, the number of mobile home permits increased by 61%.

A survey of mobile home parks conducted by the Planning Commission in 1971 recorded 32 parks in Delaware County, providing 1,221 lots. An additional 777 lots were planned or under construction. The average lot rent was $31.87, and the average age of the head of household was between 21-35 years (Annual Report of the Delaware-Muncie Planning Commission, 1972). Of the 32 parks in the county, 10 were inside the city limits of Muncie (most of these were annexed by the City when it extended its corporate boundaries in 1967, another 11 were within the Center Township but outside the city.

A review of zoning appeal cases (for 1971, 1973 and 1974) suggests that appeals to locate individual mobile homes on lots outside of the city were acted upon positively more often than appeals for city locations. It is not clear if this difference reflects the attitudes of the commissioners or protests from owners of adjacent properties. There are, however, many mobile homes located in residential areas in the blue collar sections of the city. Their

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

placement, in most cases, predates the enactment of the current zoning ordinance.

From the preceeding description of the city, it is evident that there are several characteristics of Muncie that make it a good place to study the adoption of mobile homes as a housing alternative. The use of mobile homes here is characteristic of the pattern identified for the U. S. in general. Since the mobile home is a well-established housing alternative in Muncie, the population, in general, is familiar with it. As assessment of attitudes towards mobile homes should reflect this degree of knowledge. There is, as well, some knowledge of how mobile homes are made. If there is a bias for or against mobile homes to be found here, it is at least a bias based on familiarity.

The Park

The majority of parks (63%) in and around Muncie are small (less than 40 lots) and laid out in the old pattern of parallel lots and units. Some were once out of the city, but the city has since grown around them, leaving an occasional park amid a commercial strip looking rather like a sales lot. The new parks are larger (100-230 lots), with lots designed to accommodate double-wide and expandable units. The majority of units sold in Indiana, however, are single wide (Bernhardt, 1980). The typical unit in Muncie is a 12' x 60' single wide (Delaware-Muncie Metropolitan Plan Commission, 1971).

Of the 24 parks in or adjacent to the city, 14 are listed in the Woodall's Guide (1974). The guide lists all parks which meet certain

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

minimum standards (only half of the parks in the nation meet this standard). Woodall's also rates the quality of parks with one to five stars. There are no five star parks listed for all of Indiana, and only a handful of four star parks. The five star parks tend to be located in retirement areas where the residents' choice of mobile home living is predicated less on cost and housing supply factors, than upon the desire for a planned leisure oriented community. While there are no such parks in Muncie, there is one adult only park (a small one with 16 sites, rated at three and one-half stars). There are three parks with family sections, intended exclusively for units with children. Of the parks in Muncie rating stars: one is rated at 1 star, three at 1 1/2, one at 2, four at 3, and three at 3 1/2 stars.

Freedom Acres, the park selected for participant observation in this study, is in the southwestern quarter of the city. Farm fields remain to the south of it, but to the east the city has moved to its edge with apartments and tract housing. A school yard bounds it in part to the north, where the railroad tracks also run. The boxcars which sometimes sit on the tracks seem to mimic the nearby single wide units. To the west, a new highway overpass carries traffic to a by-pass yet to be constructed.

Freedom Acres is one of the larger and better parks in Muncie. It has 158 lots, plans for the addition of 43, a pool (if one cares to join), a family section, laundry room and storage facilities. Woodall's rates it at 3 1/2 stars. Unlike most of the larger parks in Muncie, Freedom Acres has expanded to its present size, rather than being built at one time. The original park, with 36 lots, was built

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

in 1951. It has some of the older units and residents. The park, then called Muncie Trailer Park, was run in conjunction with a sales operation. The owners, Paul and Phyllis Yohey, have lived in the park since it was started. It could be considered a "Mom and Pop" park, although the Yohey's do not like that term (feeling that it applies only to smaller parks).

Paul Yohey laid out the original park and its additions. He recalls:

> When we came in there wasn't any kind of planned park in this area. There wasn't even a place where anyone cared what it looked like. When we started we were the first place where anyone even cared what it looked like. I have pictures of the park that go way back, and even then we had little white picket fences.

In the early sixties, the demand for the larger mobile homes and a shortage of park space encouraged the expansion of the park. It allowed the dealership to offer space to its customers. The addition had larger lots, some provided with an alley and carports. The new sites were laid out on a diagonal to the road. The Yohey's moved their own household to a modular H-plan structure, complete with basement, placed at the center of the new addition.

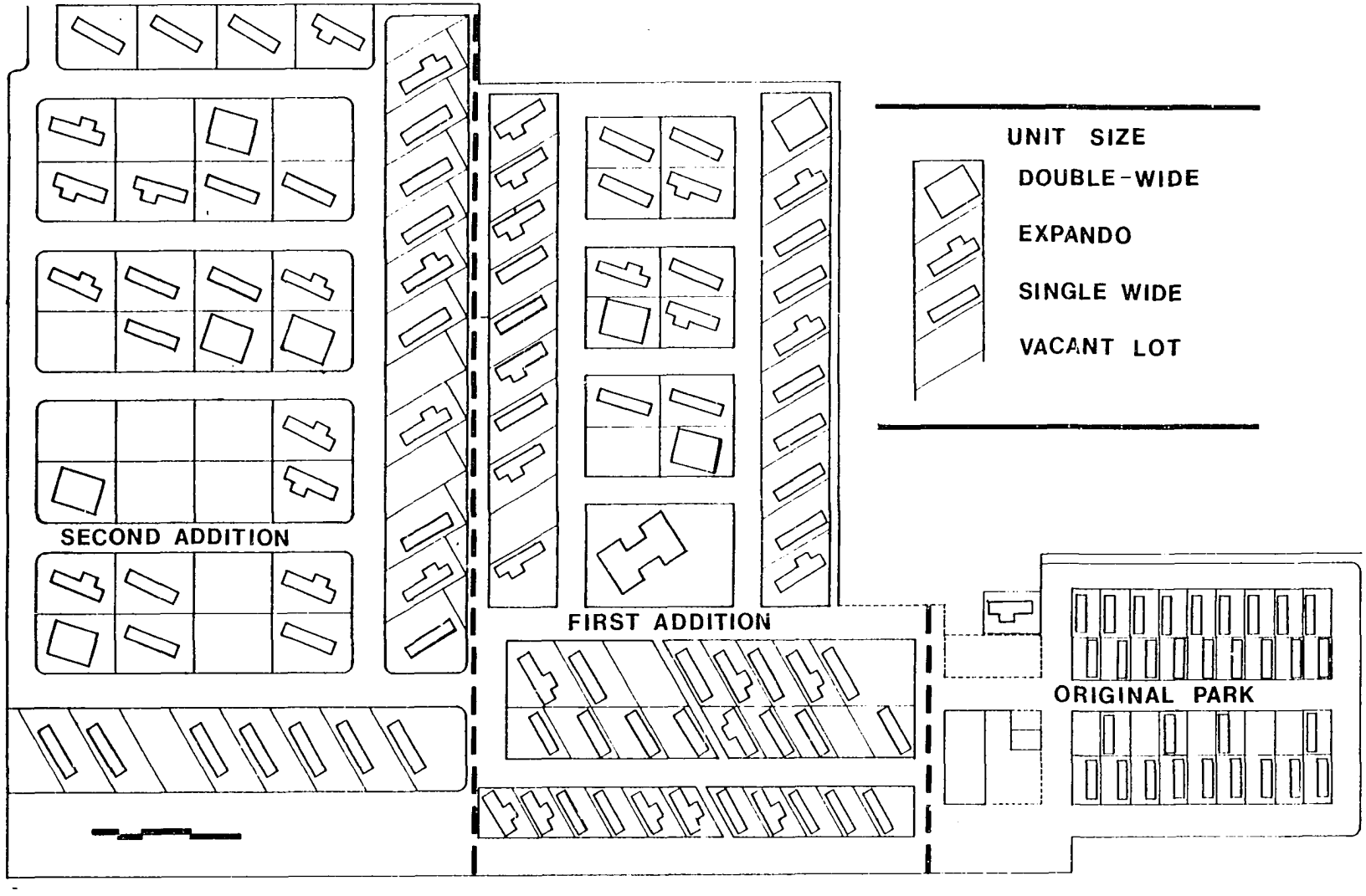
The last addition to the park, constructed in the early 1970's, was designed to accommodate double-wide and modular units. Many of these lots are still vacant. At present there is no shortage of park spaces in Muncie. There are only a few double-wide units in place, but they have been set up with their entry facade parallel to the street. One such unit has a shingled, saddle roof, eaves with gutters, an enclosed porch, and an entry porch.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Figure 10

Freedom Acres Mobile Home Park



From the outset, Paul Yohey states, his objective was to sell "quality permanent homes, and not just temporary housing." The problem was to create an appropriate setting for the units which he sold. Today he reflects: "As far as I'm concerned, what this [park] is, is a housing development. It's just like a builder would come out here and build a housing development." Since Mr. Yohey sells and sets up most of the units in the park, he is very much like a developer. One important difference, however, is that he retains control of the development. "If your neighbor raises too much hell, why we'll get rid of him." Mr. Yohey means this literally, as one resident recalls:

> There was a couple of kids moved in there [to a lot next to the subject] and they'd leave the stereo on so loud that everybody in the neighborhood could hear. Paul got out of bed four times and went down and told them. Then he just hooked the front of that trailer to his tractor while the guy was sleeping and set it right over here on Clark Street, and he said "now it's up to you to put it wherever you want." (Subject 8)

At one time the Yohey's ran a "closed" park; so that a purchase from their dealership was necessary to get a space. With the increased availability of park space today, they have not continued the practice; though they still screen residents carefully and require them to abide by all park rules (see Appendix Two).

Park Management and Rules

The Yohey's attitude toward their park is ambiguous. On the one hand, it is a business, but on the other, it is the neighborhood in which they live. They are renting homesites to people whom they expect

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

to have the same sense of pride in home that they display, but it remains their property. Their ambiguity is expressed in the language of the park rules:

> •Your lot is yours. . .
>
> •It is expected that you cut your grass.
>
> •Cars are to be washed on the wash rack ONLY.
>
> •Remember, these are your facilities [laundry].
>
> •Each resident has a job to do in helping to keep the park clean and neat at all times. Each person is expected to do his share. After all, it is your home.

Not surprisingly, some tenants find the rules excessive. One particular incident which annoyed a lot of them concerned the installation of cable T-V. All residents were polled regarding their desire for this service. When the majority expressed approval, it was installed with all units being assessed for the service, regardless of whether they used it. One family left in protest. In general, however, most residents see the rules as a safeguard against a decline in the physical and social quality of the park.

> Q. Do you think that the rules and regulations are good?
> A. Oh yes, because it keeps the rowdy people out. (Subject 4)
>
> Q. Did you have rules and regulations in the other park where you lived?
> A. No. You had a lot of riffraff and transients living there. The woman that owns it doesn't live in the park. (Subject 1)

There seems to be a clear recognition in these statements that parks can and do attract "undesirable people." The presence of the park rules acknowledges the management's concern, and assures that there are mechanisms available to alleviate problems.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Supplementing the formal management of the park are informal managers. The informal managers are people who have a proprietary function in the park which is acknowledged by its management. One such informal manager is a man who lives in the park and owns four other units which he rents out. In effect, he runs a business within the park with the permission of the management. He maintains a proprietary attitude toward his own units and to the park as a whole. Another informal manager is a retired auto assembly foreman who does odd jobs around the park just to keep busy. His unit is set on the old manager's lot that commands the entrance to the park. From his porch he can monitor the speed of entering cars and shout out a warning. He is also adjacent to an area which he calles "widows row" (to be described shortly), and is available to help the widows with any mechanical difficulties with their units.

Social and Physical Organization of the Park

The three distinct physical areas of the park, corresponding to its expansion, have a somewhat different social composition. The original section of the park has become the "widows row" partly by accident, because it has the smallest lots; and partly through design, as to where the Yoheys locate people. Out of 29 occupied lots, 12 are used by widows, one by a widower, one by an elderly woman and two by elderly couples. There are 17 other widows and widowers in the park (23% of the units), as well as seven retired households. The Yohey's feel that because they deal in the more expensive units, they have

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

appealed to an older market, but "widows row" contains many used and older units purchased at $2-3,000.

In addition to the surprising number of widows, there is a strong network of friends and relations in the park. Indeed, several of the widows moved to the park to be close to relatives or friends. There are 27 households with family and 24 households with friends in the park. Approximately half of these people live in the same section of the park. An important part of the friendship network is membership in a sorority (high school) or fraternal order (e.g. Knights of Pythias). People hear about the park through these sources, and are referred by the current residents. If they are unfamiliar with mobile home living, they have the opportunity, through these contacts, to see what it is like.

The second section of the park, where the Yohey's live, is more heterogeneous (physically, as well as socially) than the first. In addition to single wides, it contains expandable units with fold out, telescoping or tip out sections, and some double-wides. The lots in this section are considerably larger and have more extensive landscaping. Twenty-one percent of the residents in this part of the park are widows; twelve percent are divorced persons. All of the divorced residents moved to the park after their separations. Some of the previously divorced residents found their current spouses in the park. Only five percent of the residents are married couples with children, but in the whole park only 11% of the units contain families with children. The majority of residents are working individuals or couples.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The newest section of the park has been designated a "family section." It has the largest lots, able to accommodate the new double-wide units and modular homes. The objective of establishing the family section was to provide an environment for children, as well as to keep children away from single adults and the elderly. While there are some families with children in this section of the park (18%), there are also several retired couples who are there because they desire and can afford to own the larger units. The family section has no special facilities for children (e.g. playground).

The physical layout of the park, together with management practices, seems to have a significant influence on the development of the social areas suggested above. "Widows row," with its smaller lots, is best suited for the older units which these women are able to afford. The family section contains larger lots required by the larger units which can provide adequate living area for a family with children.

An important characteristic of the relationship between the physical and social structure of the park is the options for social organization which it provides. The network of relatives and friends in the park, for example, is supported by the comparatively low cost of lot rental and by the range in the cost and size of units. In the typical suburban addition, there is relatively little variation in housing prices. If one is living in an area designed for families with children, it is usually prohibitive to have a recently widowed, elderly aunt move into the neighborhood. By contrast, a couple with

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

a double-wide unit costing $15,000 might have that aunt move into their park in a used unit costing $3,500. Similarly, a newly married couple can move into the same park as their parents. There are examples of both cases in Freedom Acres. The age heterogeneity evident in Freedom Acres is encouraged by the Yoheys; but it also demonstrates the options, or flexibility, in social organization inherent in park living. Unfortunately, the management of many parks does not work to achieve such heterogeneity.

The social options provided by mobile home living are also demonstrated in the movement of units from one part of the park to another. In several cases households have moved their units to different lots in the park. Intra-park moves are inexpensive (approximately $100), and can be done by the management in less than one day.

The flexibility of the mobile home, then, relates to both its low cost and physical mobility. A third demonstration of this flexibility occurs in the form of "miniaturization." The utopian architect, Paolo Soleri (1969), observes that as technology advances, the artifacts which it produces to satisfy the same need get smaller. Buckminster Fuller refers to this trend as "ephemeralization." In Freedom Acres one not only sees miniaturized homes, but miniaturized second homes. At the entrance to the park stands a row of R.V.'s owned by tenants. In one case the owners have used their R.V. to house relatives who were visiting for a family reunion. Another party keeps its 8' x 32' R.V. permanently parked at a campground outside of the city, where

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

it serves as their summer home. Their winter housing is a 10' x 40' mobile home at the park.

The physical organization of lots and units provides the basis for important trade-offs which characterize mobile home living. Most residents regard safety as an advantage to being located in the park, especially when compared with apartment living.

> In mobile home living you feel safe because there are always people around. People are always walking around and they usually know where you live so they can check it out. If you can make a few friends, they'll watch out for you, but in an apartment downtown that just isn't so. I've had drunks at my door at three and four in the morning. (Subject 6)

The sense of safety which people express is partially a consequence of the proximity of the units, but it is also a reflection of the resident managers and informal managers enforcement of park rules. The same proximity, however, can encroach on privacy. Because of the way most mobile homes are laid out, with units sited parallel to their long side, the large windows in the living room-dining area often line up. On a warm summer night, when windows and drapes are open, it may be possible to see the television set in a unit three lots away. The diagonal placement of units helps to alleviate this somewhat, as do larger lots. In addition to problems in retaining visual privacy, there are problems of accoustical privacy which result from the siting and construction of the units. The mobile home wall section is very thin: 3"-3 1/2". The corridor wall in a single wide unit may run 40' before being stiffened by an interior partition. Consequently, the wall may act as a diaphram, translating the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

vibrations from people walking in one unit into the wall, and then across the lot where it can be heard in the next unit. In the old section of the park, where units may be only 17'-18' apart, and where the floors are partially linoleum covered, the transmission of noise is so vivid that it can sound like someone is walking in your unit, when they are walking down the hall to the bathroom in their own unit.

> I can't think of a thing that I don't like about a mobile home. The only thing that I can say that I don't really like, but it doesn't bother me, is that when you fellas walk I can hear you in my unit. I think if we had larger lots that wouldn't be a problem. (Subject 1)

The problems of maintaining visual and accoustical privacy may act as a disincentive to neighboring. If you can easily see into a neighbor's unit, it may be easier to ignore the occasional eye contact that will result if one does not normally exchange courtesies. At the same time, it is possible to feel safer in this situation, because casual surveillance is so easily achieved.

Patterns of Physical Improvements

In view of the close proximity of units in the park, it might be expected that physical improvements to the outside of units and lots would, as several sociological studies have concluded (see review in Michelson, 1970), cluster around visually and functionally adjacent units. In the mobile home park, then, well landscaped lots might not occur randomly, but in clusters.

In order to test this assumption, an inventory was made of landscaping improvements on each lot. Four levels of improvement were distinguished: a score of "one" indicated no improvement; "two"

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

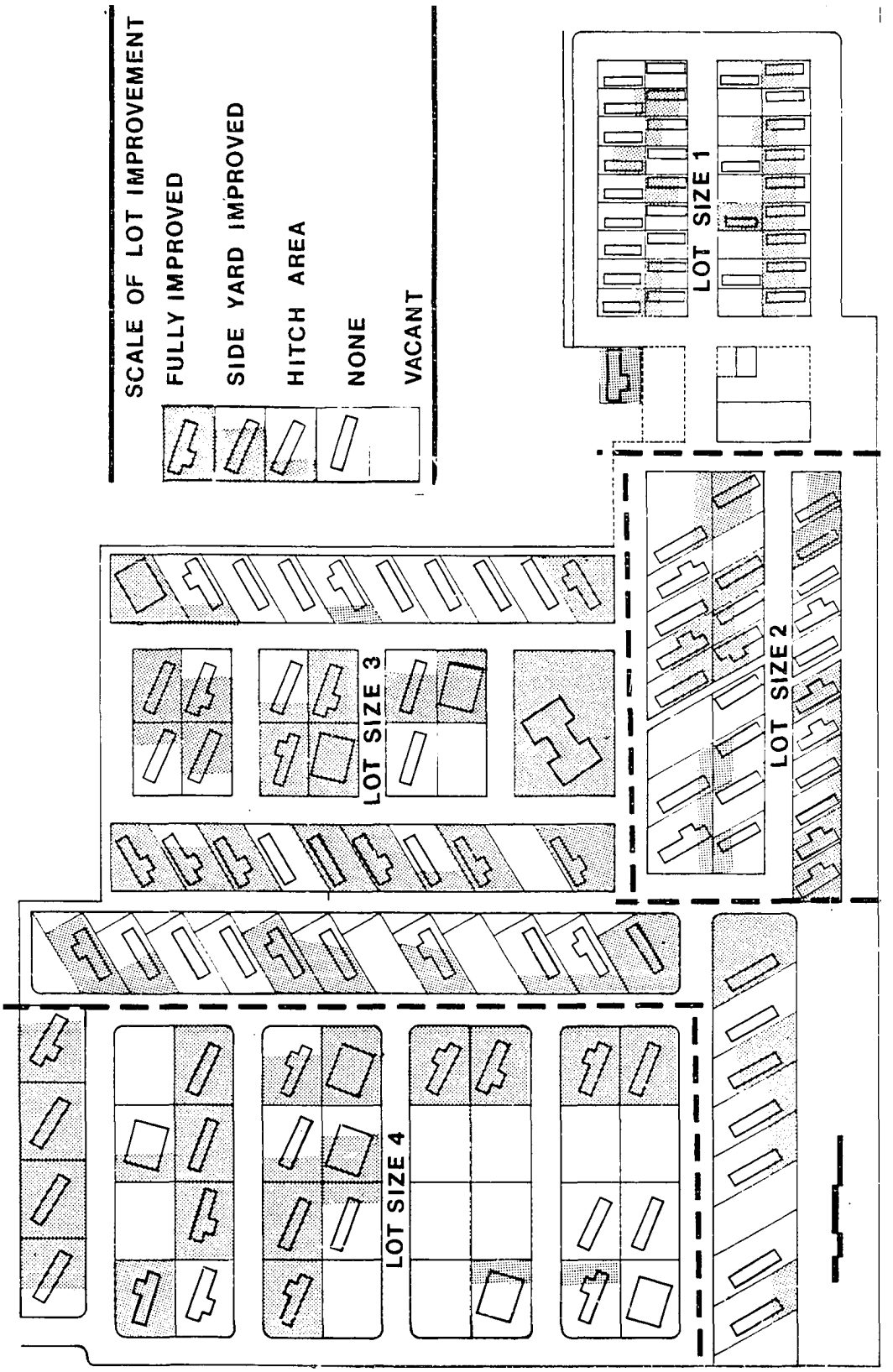


Figure 11

Pattern of Lot Improvements

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Table 6

Analysis of Variance

```
* * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * *
              LANDSP   LANDSCAPING
           BY LOTSZ    LOT SIZE
              UNTSZ    UNIT SIZE
              RENOWN   RENT OR OWNER
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	42.324	5	8.465	8.202	.001
LOTSZ	3.797	3	1.266	1.226	.303
UNTSZ	22.099	1	22.099	21.412	.001
RENOWN	1.577	1	1.577	1.528	.219
2-WAY INTERACTIONS	16.821	6	2.803	2.716	.016
LOTSZ UNTSZ	8.332	2	4.166	4.037	.020
LOTSZ RENOWN	5.723	3	1.908	1.849	.142
UNTSZ RENOWN	.097	1	.097	.094	.760
EXPLAINED	59.144	11	5.377	5.210	.001
RESIDUAL	123.848	120	1.032		
TOTAL	182.992	131	1.397		

133 CASES WERE PROCESSED.
1 CASES (.8 PCT) WERE MISSING.

Table 7

Cell Means for Lot Size by Unit Size

LOTSZ \ UNTSZ	1	2	3
1	1.93 (29)	0 (0)	0 (0)
2	2.06 (18)	2.78 (9)	0 (0)
3	2.00 (29)	3.57 (21)	0 (0)
4	3.00 (11)	3.00 (15)	0 (0)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Table 8

Effect of Proximity on Lot Improvement
(all sectors)

* * * * * * * * A N A L Y S I S O F V A R I A N C E * * * * * * * *

LANDSP LANDSCAPING
BY SCTR SECTOR

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	44.035	14	3.145	2.712	.002
SCTR	44.035	14	3.145	2.712	.002
EXPLAINED	44.035	14	3.145	2.712	.002
RESIDUAL	134.560	116	1.160		
TOTAL	178.595	130	1.374		

133 CASES WERE PROCESSED.
2 CASES (1.5 PCT) WERE MISSING.

* * * * * * * * * * * * * * A N O V A T A B L E * * * * * * * * * * * * * * *

	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE
BETWEEN GROUPS	48.6730	(16)	3.0421
WITHIN GROUPS	134.5601	(116)	1.1600
TOTAL	183.2331	(132)	

F = 2.6225 SIG. = .0016 ETA SQRD = .2656

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Table 9

Proximity and Lot Improvement
(less sectors with 30% vacant lots)

FILE NONAME (CREATION DATE = 31/07/11.)

* * * * * * * * ANALYSIS OF VARIANCE * * * * * * * *
LANDSP LANDSCAPING
BY SCTR SECTOR

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	47.483	11	4.317	2.883	.002
SCTR	47.483	11	4.317	2.883	.002
EXPLAINED	47.483	11	4.317	2.883	.002
RESIDUAL	161.717	108	1.497		
TOTAL	209.200	119	1.758		

120 CASES WERE PROCESSED.
0 CASES (0 PCT) WERE MISSING.

* * * * * * * * * * * * * ANOVA TABLE * * * * * * * * * * * * * *

	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE
BETWEEN GROUPS	47.4833	(11)	4.3167
WITHIN GROUPS	161.7167	(108)	1.4974
TOTAL	209.2000	(119)	

F = 2.8828 SIG. = .0023 ETA SQRD = .2270

indicated improvement to the front yard, or the area around the hitch; "three" indicated improvement of the larger side yard; and "four" indicated that both front and side yards had been improved. The park was divided into sectors consisting of units facing onto a common road. It was assumed that the occupants of these units would see each other more often and that their paths would cross frequently during daily activities. The mean score of landscape improvements was calculated for each sector, and then compared through a one way analysis of variance. The differences in levels of improvement between sectors proved to be significant ($p > .002$).[3]

In looking at the pattern of means of landscaping improvements across sectors, it appears that the level of improvement rises as one moves from the older to the newer sections of the park; or, more precisely, as one moves from areas with smaller lots to areas with larger lots. Since the newer sections of the park also have the larger units, it might be the size of the units which is correlated with the level of lot improvement. There are at least two factors then, possibly interacting with each other, which may help to explain the pattern of landscape improvements in the park.

A two way analysis of variance was used to test if lot size, unit size, and whether units were rented or owner occupied, had an affect on the degree of landscape improvement. Four lot sizes were distinguished: "widows row" with lots of 1260 square feet; an area in the first addition with lots of 1800 square feet; the remaining lots in that addition and some in the newest addition at 3,000-3,360 square feet; and the largest lots in the new addition at 4,880 square feet.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Unit size was defined in two categories: the first included all single wides, and the second included all expandos, double wides and modular units. The results of the test indicate that unit size has a significant effect on landscape improvement ($P > .001$), but there was no significant effect for lot size. There is, however, a significant interaction between lot and unit size ($P > .02$). This is not surprising since larger units are located on larger lots. While this interaction is not directly linear, the curves do not cross.

There appear to be other factors operating in the interaction between lot size and unit size. One such factor may be recency: i.e. how long a unit has been in the park. A test of landscape improvements by recency (t-test of the means of improvements by two degrees of recency), did not support the assumption that landscaping was influenced by the length of tenancy in the park. Another factor influencing improvements might be adjacency to vacant lots (there are many vacant lots in the newest section of the park). Testing the degree of improvement by adjacency, however, indicates no significant difference.

The Mobile Home Park as a Neighborhood

The pattern of socializing in the park may be influenced by its physical organization, its management policy and the interaction between other aspects of its physical and social structure. It has been suggested that the mobile home park provides some unique opportunities for neighboring; and that this uniqueness may be described, in part, by the flexibility or options for social organization

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

inherent in this form of housing. On a broader scale, it is appropriate to consider whether the park as a whole constitutes a type of neighborhood.

Some analysts have argued that the mobile home park is the last true community in America (Bair, 1961). One study concludes that there is, in fact, a higher incidence of neighboring in mobile home parks than in suburban additions with a socio-economically equivalent population (Carnevale, 1961). When the question of whether Freedom Acres is a neighborhood is posed to its residents, the typical response is--"this is not a neighborhood, it is a park." Some of those familiar with retirement parks in the sun belt qualify their response by admitting that, that type of park can and does function as a kind of neighborhood (one focused on leisure time activity.) If we consider some of the operational characteristics of neighborhoods, however, it may be concluded that even the housing-type park can function as a kind of neighborhood.

Keller (1966) identifies some of the characteristics of neighborhoods as: a face to face or name basis acquaintance with the people living around you, a minimal sense of responsibility and commitment to the physical area (e.g. a concern for its maintenance), and a physical sense of boundedness which may be provided, in part, by a distinctive architectural character. The large mobile home park certainly qualifies as a neighborhood on all of these dimensions (though most parks are considerably smaller than that which sociologists, geographers and planners tend to define as a neighborhood). It is, however, a kind of hybrid neighborhood. To the extent that it operates under a single

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

management, it is not a group of freely associated people. The housing which belongs to the residents is not permanently attached to the land, so there is a question of how socially committed they can be when they are not physically committed. The physical and social distinctiveness of the parks, which help to identify them, may be regarded as negative characteristics by outsiders. The park residents are set off, in effect, by virtue of the type of housing that they live in. Social heterogeneity (at least by age group) which is regarded by some analysts (e.g. Mumford) as the hallmark of the true neighborhood, is not particularly valued by the park's residents. Just as the question of whether a mobile home can be a legitimate home forces a clarification of our cultural assumptions regarding the ideal of house and "home," so the question of whether the park is a neighborhood may force a clearer definition of what constitutes a neighborhood.

In general, there appears to be a complex relationship between the physical and social structure of the park at several levels. Certain physical features of the park (such as the siting of units), and social aspects (such as the network of friends and relatives), provide a framework for life in the park. The effect of each, as well as their interactions, seems to be mediated by various images and expectations regarding their form of housing. Frequently it is the perceived potential of this form of housing, rather than how it is actually used, that forms a basis for an image or expectation. For example, the potential of moving the unit if you don't like your neighbors is regarded as a significant asset, even though few people

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

will move their unit for this reason. Similarly, the expectations which management has, as codified in the park rules and objectified in its layout, help to mediate the physical modifications which tenants make to their units. These modifications are guided, in turn, by cultural expectations concerning what appropriate housing should look like. Finally, these expectations are embodied in zoning ordinances which define what is necessary for the "health and safety" of the community.

Living in a Mobile Home

The Choice of a Mobile Home

In the mid-1970's, there was a good deal of conventional single family housing available in Muncie. A small tract house could be purchased for between $15-20,000, with an 8.5% mortgage. Available apartments in multifamily dwellings (four units or more) were, by contrast, scarce (with a vacancy rate of less than two percent). Mobile home park space was fairly plentiful, relative to demand. Many parks had recently expanded and two new parks had opened. A person could purchase a used mobile home for $3,000 and set it up on a lot for a rent of $30-40 a month.

The mobile home is not an exotic housing alternative in Muncie. The majority (77%) of mobile home owners surveyed were familiar with mobile home living either because they had family (54%), friends (29%), or acquaintances (17%) who had lived in a mobile home and who they were able to visit. All of the conventional home owners and a

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

majority of the apartment dwellers (85%) were also familiar with mobile home living on the same basis. Indeed, almost a third of the conventional home owners and a sixth of the apartment tenants had previously lived in mobile homes. When people look for housing in Muncie, then, it may be assumed that most are at least acquainted with the mobile home as a housing alternative.

The two most common reasons that people give for choosing mobile home living are economy and ease of maintenance. Both reasons are related to the ideal of home ownership. When people state that mobile homes are an economical form of housing, they often qualify the statement by indicating that it is not cheap living. In terms of average monthly costs (including P.T.I. and utilities), the mobile home owners in my sample paid 14% less for their housing than apartment dwellers and 23% less than conventional home owners. They also spent a smaller percentage of their monthly income for their housing. The monthly cost of housing is a major concern for the elderly and retired mobile home owners.

For the younger mobile home owners, the perceived economy of the mobile home extends beyond monthly costs. They feel that their monthly payments are building up equity. The notion of building up equity, however, is more like that associated with financing a car than buying a house. It is understood that the units generally depreciate unless located on a private lot or sold with rights to a park space in an area where space is scarce. This depreciation is highest in the first two years. The majority (90%) of my sample had purchased a used mobile home, and those who had not, felt that it

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

would have been a better investment. They were also trying to pay off their units as quickly as possible, even though this raised monthly payments. In effect, they seemed to be trying to balance the build up of equity against the depreciation of their units. This sense of the economics of mobile home ownership may explain why relatively few people take advantage of the longer term VA and FHA mortgages which were available on mobile homes. I suspect that those who do use these loans, purchase their units in their mid-30's and expect to live in them through middle age.

Together with economy, ease of maintenance is the most common reason for choosing mobile home living. For the young households, ease of maintenance was related to work. In 85% of the mobile home households sampled, the wife worked, as compared with 45% for the apartment dwellers and 40% for those living in conventional housing. Middle aged subjects spoke of the ease of maintenance, in terms of preferring less house work, while the elderly saw it in terms of the physical ability to maintain a single family house. Indeed, for them, particularly elderly widows, the mobile home may be selected as a way of reducing difficult, and perhaps dangerous, housework.

> One thing, I don't have very much lawn to mow. I can mow this one. That was a bigger yard there [in my house] and I finally got to the place where I couldn't mow it. I had to hire to have it done. I can mow this little patch. It don't take very long to do. (Subject 5)

Ease of maintenance is considered a virtue of apartment living as well as a virtue of mobile home living. What provides the additional advantage in the mobile home is that ease of maintenance is allied with the ideal of ownership. Individuals maintaining their own mobile

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

homes are preserving the value of the unit. The importance of ownership, then, is related to both the perceived economy and ease of maintenance of the mobile home as compared with the apartment. Ownership is also perceived as an advantage to mobile home living because it provides greater privacy and freedom than apartment living. Privacy is referred to in terms of accoustical, as well as social control of the dwelling.

The least frequently cited reason for choosing mobile home living is mobility. Owners, however, are aware of and appreciate the fact that they can move their units if they don't like their park or the tenants near them. Indeed, 40% of the survey sample had moved their units, and most of these moves were local. The mobile home population was also more mobile than either the apartment or conventional home populations; averaging 3.25 moves since married, verses 2.60 moves for apartment dwellers and 2.85 moves for conventional home owners.[4]

A final reason offered for mobile home ownership is safety. As indicated in the discussion of the park, residents generally feel that they are under better surveillance by their neighbors in parks than when living in apartments. The safety factor is particularly important to older single women.

One analyst, quoted earlier, has suggested that mobile home owners may have adopted their form of housing either out of necessity or because they have altered their ideal of housing. The mobile home owners in the present study fit neither description. All but one had been raised in a conventional home for at least part of their

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

childhoods. All felt that the conventional house was the best form of housing and the one that they preferred.

In the comparative survey of mobile home, conventional home and apartment dwellers, subjects were asked to rate their agreement with nine statements regarding what home meant to them:

1. I look at "home" as a reflection of me: how I see myself.
2. To me "home" is being near family and close friends.
3. "Home" is having good neighbors and feeling like part of the community.
4. "Home" is a place where I can do what I want: that I can fix up the way I want to.
5. "Home" is a place where I can feel relaxed and comfortable.
6. I think of "home" as some place permanent and familiar.
7. "Home" is primarily the physical place I live in: a shelter.
8. "Home" is a place where I feel physically safe and secure: safe from natural elements and hazards.
9. "Home" is a place that I would want my children to remember they grew up in.

There was no significant difference in their ratings on eight of the statements. Only on statement two was there a significant difference ($P > .05$), with mobile home occupants indicating that this meaning of "home" was less important to them than it was for conventional home and apartment dwellers. All respondents, regardless of their present

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

form of housing, felt that the conventional home was the best means of achieving the ideals of home indicated.

The major difference between mobile home occupants and those in apartments and conventional homes rests, not in their housing goals and ideals, but in the perceived place of the mobile home in relation to the attainment of these goals. The mobile home owners see their units as a preferable alternative to apartments or house rentals. After asking each of the above statements on "home," respondents were asked to indicate how satisfactory each form of dwelling (i.e. mobile home, single family house and apartment) would be in supporting or facilitating each ideal. Not surprisingly, mobile home owners evaluated the appropriateness of the mobile home more favorably than did either conventional home owners or apartment dwellers, with significant differences on items 1, 2, 4, 5, 6, 8, and 9. Moreover, when respondents were asked whether they considered their present place of residence a "home" or "a place to live," 65% of the apartment dwellers saw it as just a place to live, while only 10% of the mobile home and conventional home owners would describe their units that way ($P > .01$).

The ranking of the three housing alternatives in meeting each ideal was compared. In five of the eight ideals of "home," the conventional home owners agreed with apartment dwellers that apartments were a preferable alternative to the mobile home (items 1, 2, 3, 5, and 6). On item 4--"home" as a place that I can fix up," all felt that apartments were the least favorable alternative; while on the ideal of safety (item 8), all agreed that the mobile home was the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

least desirable housing alternative. In short, neither conventional home owners nor apartment dwellers seem to perceive the advantages of mobile homes that their owners see; even though they have at least some familiarity with that form of housing. The differences in perceptions seem to reflect, in part, differences in either the importance given to, or the interpretation made of the economy and ease of maintenance of mobile home living, and the perceived advantage of mobile home ownership over apartment rental.

Perception of the Mobile Home as an Innovation

Is the mobile home an innovation for its users? When that question is asked directly to mobile home owners, the answer is typically--"no." For example:

> Q. Are mobile homes an innovation?
> A. Well, there's nothing daring about living in a mobile home. There's no big financial outlay by making the purchase. With the changes that they have made in the exterior and interior, it's no longer considered like a gypsy's home. (Subject 7)
>
> Q. Do you think that mobile homes are an innovation?
> A. No, but I think that it's nice that there is such a thing. A home is a very expensive thing to buy in the beginning, and there's a lot of upkeep. (Subject 4)

Such a direct question assumes that the users have a clear and consistent definition of innovation; an assumption which appears to be doubtful.[5] The question, however, may be approached indirectly by considering whether owners feel that their life style is different from those living in apartments or conventional houses, whether they had adjustments to make to their units, and whether others see them

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

in some particular way by virtue of the fact that they live in a mobile home.

One of the statements which has followed the mobile home since its inception as a travel trailer is--"all things in their place and a place for everything." It is a statement which suggests that although the mobile home is typically small, intelligent design can make it convenient and adequate. Owners will point to such features as a room divider which contains a compartment for storing storm windows as a clever use of space. They see the "compactness" of their units as a principal reason why mobile homes are so easy to maintain. The use of materials such as paneling on the interior and aluminum on the exterior also add to the ease of maintenance. In short, there are aspects in the design of mobile homes which make them more convenient. The same people who refer to the virtue of compactness, however, also express dissatisfaction with the smallness of the rooms in their units, and with the fact that family spaces (e.g. living room and dining room) are not partitioned.

> Q. Was there anything about the size of the mobile home that you needed to get adjusted to?
> A. (Mr.) Well yes. In a mobile home, when you come in they've got things pretty well set up, and if you don't put things where they have to go, it gets cluttered pretty fast.
> (Mrs.) In a mobile home, if one thing is out of place it messes up the whole place. Especially in a place like ours, where the living and eating area is all combined. (Subject 1)

There are, by contrast, relatively few complaints about the size or adequacy of the kitchen or bathrooms.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

What appears to be a contradiction between the perceived virtues and vices of the mobile home (i.e. between compactness and inadequate space) may be the evaluation of two distinct aspects of the units. One aspect involves the equipment or service mechanisms of the unit: e.g. the bathroom, storage areas. It also involves the unit as a physical artifact which needs to be routinely maintained. The other aspect involves the activity spaces themselves. Designers who have considered the requirements for a minimal dwelling have often treated these two aspects (appliances and space) as one; but for the mobile home occupants, at least, they appear to be distinct. Activity spaces need to be large enough to accommodate clutter, because one of the qualities of a home is that it is a place to relax and "get loose."

Related to the issue of the availability of space to clutter, is the ability to alter the interior of the mobile home. Such alteration would include decorating (e.g. painting, papering, adding shelves, etc.), as well as rearranging or changing furniture. The materials of the mobile home which make it easy to maintain also inhibit many typical forms of decoration. The shallowness of the windows, for example, make the use of venetian blinds difficult. The layout of heating ducts also significantly influences how furniture can be arranged. One owner observed: "The way my furniture is, is pretty much the way it has to be" (Subject 3). Some owners even feel that it is inappropriate to paint or paper paneling. One owner suggested that decoration may reduce resale value.

> The one thing about a mobile home is that people don't want it decorated. . .If you want to sell this someone doesn't want to come in here and find wallpaper on this

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> wall. They want it however you got it. I had some ideas for change, but it would hurt resale value. (Subject 7)

The same limitations imposed by the materials on the interior of the unit impose restrictions on altering the exterior. The color of the unit cannot be changed, because it is baked on. Awnings can be applied; but the application of shutters or even attached window boxes is rare.

As indicated earlier, one of the perceived virtues of the mobile home is ownership. That sense of ownership includes the ability to change your unit in any way you liked: i.e. to personalize it. In fact, the opportunities for personalization are rather limited. Newer units which use plaster board on the interior and wood or composition board on the exterior were being produced in the mid-1970's, but there were none at Freedom Acres. Moreover, when these owners were questioned about the desirability of such features, they felt that they would be less durable and require more maintenance. In short, there appears to be a conflict between the desire for low maintenance and the desire to personalize one's unit.

There are other factors operating against the personalization of units. One, as indicated earlier, consists of the rules imposed by the park. In Freedom Acres, for example, storage sheds are supposed to be rented from the park rather than purchased or constructed by the individuals. All underpinning or skirting around the units must be put in by the management. The Yohey's argue that without such rules, there would be an unsightly array of every imaginable shed and skirting. They feel that the appearance of the park requires a

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

certain degree of uniformity; an opinion which most residents share, although they resent the constraint on their freedom of choice.

Another factor operating against the personalization of the mobile home is depreciation. The economics of mobile home purchase argues for acquiring a used unit. This acknowledges the fact that the unit will continue to depreciate, unless it is set permanently on a private lot. As a unit ages it starts to need more major repairs; carpeting and water heaters are the most frequently replaced items, followed by the furnace. As with car ownership, there seems to be a breakpoint at which repairs exceed the value of the unit and it becomes preferable to sell it rather than to maintain it. Styling changes also add to its obsolescence, as several owners observed.

> Q. Do you think that mobile homes age the way a house ages?
> A. Their styles definitely change. I would assume that a mobile home will show age as any conventional home. In a conventional home you would probably reside or repaint. If it reached the point where it needs that kind of work you'd probably trade it in and who knows where it would go from there. Maybe into a fishing cottage on some lake. (Subject 7)

> I think that the mobile home could last just as long as a house if you took care of it. Of course people in mobile homes want to change to different models. Like a car. You look at an old mobile home that was made years ago, it doesn't look anything like the ones that are made now. Mostly people would want to get rid of it, and get a new one, just like a car. (Subject 2).

While the conventional home owner can look at home improvements as a way of appreciating their property, the mobile home owner in a park cannot be assured that their lot will be passed on with the unit, and that exterior improvements can be retained. Putting an additional room on the unit, likewise, carries the liability of making it less

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

mobile and, therefore, less saleable. The types of additions which seem most appropriate, given these conditions, are awnings and other features which can easily be removed from the exterior. By contract, the number of improvements made to units on private lots are far more extensive.

Clearly, a major factor affecting the depreciation of units is their soundness of construction. The majority of mobile home owners felt that their units were not soundly constructed. There are particular features that they point to in drawing this conclusion: the quality of the paneling, bowing of walls in the wind, type of entry door and lack of a foundation. These features add up to a sense of living in a thin shell. "All trailers are built flimsy," observed one owner, "they're not on a foundation. It's just the outside and the inside--period" (Subject 4). The shell or wall of the less expensive mobile homes is indeed thin. "In the wind our walls give quite a bit. You can see it bowing 2-3 inches in the middle. This is 2 x 2 construction. When you shut the door or something, you can feel the wall shudder" (Subject 2). Features which provide a sense of sound construction are, in part, those that add to the sense of the depth of the shell: e.g. a slightly recessed doorway or a storm door/house door combination, windows with sills and storm windows which clip on rather than being screwed directly on to the exterior of the unit. Owners also regarded federal and state codes as an assurance of sound construction. They were not, however, aware of what aspects of their units the codes covered (e.g. electrical, plumbing) or which codes, if any, their units complied with.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

One measure of how soundly owners felt their units were constructed was how safe they felt they were. Two specific dimensions of safety are fire and high winds (including the annual tornadoes). All of the owners felt that their units were not as safe in a fire as a conventional home. They felt that the likelihood of fire was no greater, but that if one occurred it would be more devastating than in a conventional dwelling. Some acknowledged a concern over the oil furnace, and the fact that the furnace usually separates the bedrooms. In the event of a fire, all felt that they would be able to get out of their unit, but that they probably wouldn't be able to save anything.

> There are few fires now. That's something that has always frightened me about a mobile home. But that's something that I just don't worry about any more; I guess because nothing has happened to me. (Subject 2)

> A. If there was a fire do you think that you could get out of your unit?
> Q. Well, I guess by state or national law there have to be at least two doors. I've got adequate protection, I guess; about the same as everyone else. I don't worry about it too much. (Subject 3)

Current federal regulations require smoke detectors in mobile homes, but at the time the units in Freedom Acres predated this regulation. Only one household had, in fact, installed a smoke detector. The father of the owner was a volunteer fireman.

During 1975, there was a fire in one unit in the park, caused by a faulty furnace. There was also a wind storm which knocked two units off their blocks. Wind, like fire, is regarded as more of a hazard in mobile homes than in conventionally built structures; but again there is the feeling that such a hazard is not likely to hit one's unit. Special warnings are given to mobile home residents when there is a

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

"tornado alert" in the area (the actual sighting of a tornado). Owners feel that if a tornado is going to hit, it will take out anything they are in. The only real safety is in having a basement.

> There was a woman who bought a really nice unit just behind us here, and the first night she was here the wind blew, and she just had an attack and wouldn't live here again. It wasn't even a real bad windstorm. It's real interesting how people have phobias.
>
> I never go any place because of a storm. I always figure that if it's a bad storm and it's going to take this out, it will also take out all the little box houses in the subdivision too. (Subject 7)

As with fire hazards, there are precautions that can be taken against high winds. Tie down straps (metal straps which run over the unit and are anchored in the ground) were available, but only some of the units in the newest section of the park were using them. In short, while occupants acknowledge that there may be some increased hazards associated with mobile home living, they are not so great as to warrant taking precautionary measures. It might also be that to take such measures acknowledges the hazards and raises the question of why one is living in a mobile home (i.e. in a kind of cognitive dissonance).

In general, the mobile home owners in the comparative survey were satisfied with their housing. Indeed, their general satisfaction was close to that indicated by the conventional home owners. By contrast, apartment dwellers were significantly less satisfied ($P > .01$). The only aspect of their units about which mobile home owners expressed significantly less satisfaction than conventional home owners or apartment dwellers was in room size ($P > .05$). Apartment dwellers, however, were significantly less satisfied with the soundness of the construction of their units ($P > .05$), and with the availability of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

parking ($P > .01$). The earlier conclusion drawn by mobile home owners, that their form of housing is preferable to apartment living, seems to be at least partially confirmed by the expressed satisfaction of each group with their type of residence.

The Units and the Sites

In 1975 and 1976, when the in-depth interviews were being conducted, the mobile home industry was in the process of changing its name and, presumably its image, to the "manufactured housing industry." The name "mobile home" seemed to carry a negative association which lingered from the house trailer era. The new name might somehow serve to dispel this. Mobile home occupants, however, were still describing their units alternately as "mobile homes" and as "trailers." If the term "trailer" was used in the course of an interview, I might be corrected and informed that "this is a mobile home"; but the owners themselves would frequently refer to their units as "trailers." Part of the difference in use seems to rest in the context. If a person is describing the unit as their home, they will typically use the term "mobile home," but if they are describing it as an object (i.e. as a class of artifacts), there is an equal tendency to call it a "trailer."

The term "trailer" still conveys the image of a hybrid house and vehicle. While owners do not think of their units as vehicles *per se*, the vehicular metaphor frequently finds its way into their descriptions; particularly in terms of the logic of buying a unit.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> In the place where we are living, most people have done a lot with their yards. It doesn't look like a used car lot or anything like that, with units one, two, three in a row; with no space between them and no grass or shrubbery. We have a sort of neighborhood-like atmosphere. (Subject 7)

> We are really not very pleased with the exterior of this unit. When we purchased it, it was a very good buy; like a car--last year's model. (Subject 9)

> A new mobile home is like a car; you get so much more for your money if you take a chance on a used one. (Subject 7)

> It's just like I said to you the other day, you can buy a Cadillac or you can buy something else down here a lot cheaper. They have got trailers just like they got cars, and I say this [the subject's unit] is the Cadillac of a trailer and the Van Dale is a Cadillac of a trailer. (Subject 8)

The automobile analogy also finds its way into peoples' descriptions of maintaining their units: e.g. "We wash and wax our trailer twice a year (Subject 1). Is this statement really an analogy or simply a statement of fact? If an analogy is the carrying over of expectations from one field of activity (or object) to another, then an analogy does seem to be operating here. A person owning a single family conventional house with aluminum siding would not dream of waxing it, but the metal siding of a mobile home should be waxed. One other area in which the car analogy is suggested is in the description of the exterior of the unit. "I don't think I would ever buy another all white mobile home. I'd go to the darker color, and probably a two-tone, like a dark brown on the bottom and beige on top" (Subject 3).

The one feature of the mobile home which remains literally vehicular is the hitch. All of the owners with whom I had contact

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

felt that the hitch was unsightly, and would prefer one that could be removed. Many took steps to camouflage the hitch.

In the course of the in-depth interviews, subjects were asked to imagine describing their home in a letter. In almost every case their descriptions included the dimensions of their units.

> I would say it is 12 feet by 70. You walk in the front door, and the living room is on the right, the kitchen is in the middle, but it is divided by a counter. (Subject 10)

Since units are described for sales purposes by their dimensions, the use of dimensions in describing the unit to someone else does not seem out of place. Yet if the same question is posed to the owner of a conventional single family house, the equivalent response is a description of the square footage of the unit (e.g. "my house is 1800 square feet"). The appropriateness of describing the unit by its exterior dimensions seems to rest, in part, on the fact that the organization of the interior of the unit is integrally tied to these dimensions. If we know that the unit is a single wide, we already have a fairly good expectation of its floor plan. While there is also a great deal of uniformity in the floor plan of a ranch house, the sense of the connection between the interior and exterior configurations is not the same.

Two other common elements in peoples' descriptions of their mobile homes is a listing of appliances and a statement saying, in effect, that this is really my "home."

> Q. How would you describe your unit?
> A. I've written such a letter to my father. He was one of these old Kentucky Colonels who believed in owning property. . . .In my first marriage we had lots of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> property. We owned three homes, and when I got divorced I just gave it all up. I wrote my father, explaining to him why I would leave all that property and move into a mobile home. I wrote: Dad, you've never been in my mobile home. He thought mobile home living was gypsy living. I love my home. I told him that I have a large living room, a small kitchen and bedroom, but adequate. I have a beautiful patio, and a big porch; and I said: Dad, this is home. (Subject 1)

> Q. How would you describe your present home?
> A. I would have to start out by saying that it's a type of mobile home. Then I'd probably get into the number of rooms and probably even the square footage of the house. I'd want to convince him that it wasn't one of the 8' x 32' mobile homes. . . .I've done this verbally just talking to people when I say that I live in a mobile home, right away I defend it, without a doubt, by telling them about the size of the rooms and the appliances we have. (Subject 7)

Both statements seem to be related. The listing of appliances is a demonstration of the adequacy of the unit. Indeed, when people describe how visitors unacquainted with mobile homes respond to their units, it is often in reference to the appliances which are like those in a conventional house.

Mobile home owners were asked to consider what features they would look for in purchasing a unit that would make it more attractive. The most common elements are: a house type door, large windows (preferably double hung, with sills), shutters, a porch and a saddle roof. These features which are perceived to make the mobile home more attractive, also make it look more house-like. However, when owners were asked directly: "Do you think that mobile homes should look more like conventional houses, their opinions are split.

> Q. If mobile homes are getting away from the travel trailer look, do you think that they should look more like a conventional house?
> A. Not exactly. I think that they should look like something appealing for the size. Like if you see a little

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> home, it shouldn't have great big humongous pillars outside. (Subject 7)

Q. Do you think that mobile homes should try to look like conventional houses?
A. I don't think people want to live in something so ungodly different. You know, I see nothing wrong with a mobile home looking like a conventional home. (Subject 3)

Q. Do you think that mobile homes should be made to look more like conventional houses, or like something different?
A. I think that they should look different. I don't think that they should look like a regular house, because I mean that they're different. (Subject 4)

The basis for the differing attitudes expressed here is complex. Apparently it is not always house-likeness which is the basis of the preference, but a sense of what makes a unit look durable and permanent; a sense which is based, in turn, on experiences gained by looking at and living in conventional houses. Moreover, the attributes of durability and permanence are perceived to be related to functional, rather than to aesthetic, considerations. When a direct question regarding appearance is posed, there seems to be a desire to justify an opinion on a functional (and hence "rational") basis: e.g. house type (double hung) windows indicate that a unit is well constructed, a pitched and shingled roof will last longer and shed water better. Philippe Boudon (1969), in his evaluation of Le Corbusier's Quartier Moderne (in Pessac, France), found a similar pattern of response.

> In their explanations the occupants advanced functional, rational and aesthetic reasons for having changed the original windows. But, although they always had some such argument ready to hand, in actual fact they were often motivated by quite different considerations which were based on established standards of taste. (p. 81)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

He concludes that, while functional reasons are given to explain certain features of a house, the definition of the function is conflated with the forms that traditionally satisfy it.

If house-likeness is perceived to make a unit more attractive, it would seem to follow that forms which suggest a factory-made, mass produced product would be seen as undesirable.

> I don't want my home to feel like an office. When I come home I don't want to feel like I'm in a product of a factory. We're not the type of people that would want stainless steel glass contemporary things in a home. We prefer the look of handmade things that have clean lines, but not necessarily straight cut off. I see that my home has a different purpose than where I work. (Subject 9)

> Q. How about the idea of living in a home that's made in a factory? How do you feel about that?
> A. I don't appreciate it. I heard a guy really cutting down trailers. They can roll in two chaisees at eight in the morning and finish them by 4:00. They didn't make my trailer that way. It doesn't sound right, a production line home, it makes it sound cheap. (Subject 2)

Another owner who was proud of the fact that she had been to the factory when they were putting together her unit jokingly cautioned that it was a bad idea to buy a unit that was built on a Friday or Monday: either the workmen are getting drunk or recovering from their hangovers. While the perception of sobriety may be questionable, the fact that units can be built in one day may have an effect on the perception of their durability.

House-likeness and the features that are perceived to make a unit attractive are related to assumptions regarding what makes them look more permanent.

> Q. Do you think that mobile homes should look like conventional single family houses?

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> A. I really don't know, but they don't feel like a conventional home. In the first place, you have to climb to get in, because they are so high up. There is nothing about them that resembles a conventional home at all. They always look like a temporary affair. There's nothing permanent looking about a trailer. They look like a place to stop over and not a place to spend the rest of your days. (Subject 4)

I have already suggested that many of the improvements required by the city, under the aegis of protecting the health and safety of its citizens, have the effect of making the mobile home look more permanent and, in return, more houselike (e.g. the requirement that units be underpinned or skirted). The features which owners indicate make the mobile home look more permanent are: skirting, substantial stairs, porches, awnings and plants (particularly when used to hide the hitch). For the most part, these are features which visually (and to a certain extent functionally) mediate the relationship of the unit to its site. Conversely, the hitch is something which announces the vehicular character of the unit. In Freedom Acres, 62% of the units had some form of landscaping or decoration which attempted to either disguise or decorate the hitch.

There are more expensive features which people believe make the units more permanent. One is placing them on a permanent foundation. Another is to place the units in a shallow trench so that the grade is just a little below the door. This detail is found in some of the retirement parks in the southwest, but one park outside of Indianapolis also featured sunken sites. The effect of both is to bring the unit closer to the ground.

Mediating the relationship of the unit to the ground, as suggested above, involves simultaneously establishing a sense of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

permanence and house-likeness. A further issue in this relationship is establishing the orientation of the unit, in terms of identifying what is the front, back and side. If the conventional house is the model of this relationship, then the front may be defined either by the entry facade or the front yard. Both typically share the same orientation, facing the street. With the mobile home in a park (as discussed in chapter 4), the orientation of the site and the unit does not face the street. How do people label the various sides of their site and unit?

> Q. What do you consider the front of your unit?
> A. The short end. I guess we enter from the side. (Subject 9)
>
> Q. What do you consider the front of your unit?
> A. The front faces the road; why I don't know.
>
> Q. Then you enter through the side? What do you consider your backyard?
> A. That man's bathroom. No, I have no backyard, I just have a side yard here. (Subject 3)

The units for both of the above subjects are set perpendicular to the road (figure A). What becomes defined as the "front" of the unit seems to express a hybrid between house and vehicle associations. The front of the house faces onto the street, while the front of the vehicle is defined by the direction of movement (in this case by the hitch). By contrast, for many of the owners living in units placed diagonally on the site, the front becomes the side opening onto the entry.

> A. What do you consider the front of your unit?
> A. The side with the awning on it [entry side].
>
> Q. You don't consider the hitch side the front?
> A. No.

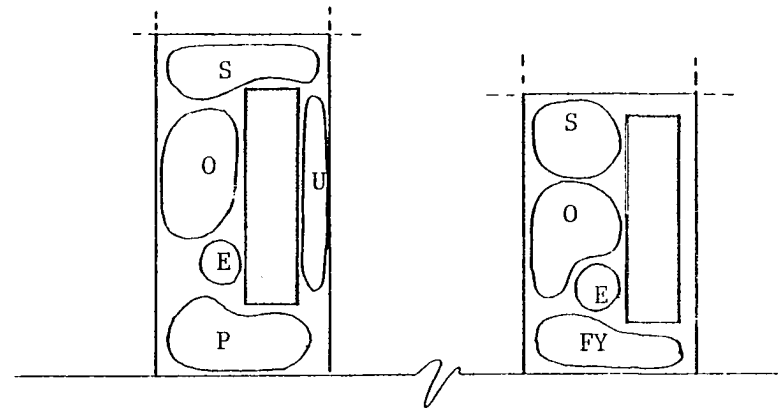
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Figure 12

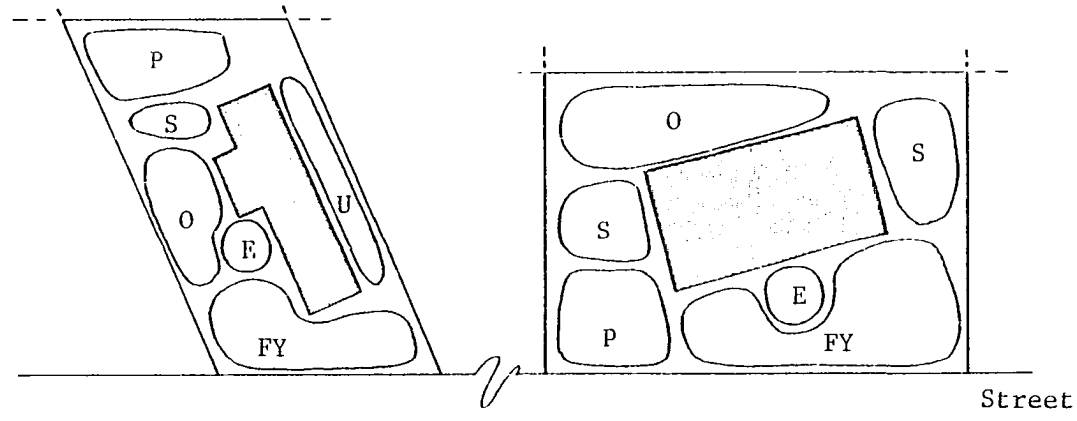
Configuration of Functional Areas on Different Lots

Key P - Parking
E - Entrance
O - Outdoor Living Area
FY - Front Yard
U - Utility
S - Storage



HUD GUIDELINES (1978)

"WIDOW'S ROW"



DIAGONALLY SITED UNIT

DOUBLE-WIDE UNIT ON CONVENTIONALIZED LOT

Q. Why do you consider this the front and not that?
A. Because that's what you come up to. Like you knock on the door at the front of the house. (Subject 2)

Q. Where would you say the front of your unit is?
A. I would way that the side facing the street is the front.

Q. How about in our part of the park, my unit? Where would you consider the front of that?
A. I would consider the front where the front kitchen windows are, as if you were pulling it down the street.

Q. Why wouldn't the front be where the hitch is on this unit?
A. Maybe it's the corner plot. Probably the way that it's sitting on the lot. (Subject 7)

The identification of the "front," "side," and "backyards" of a unit involve conventionalizing the form of the unit relative to the site: i.e. projecting the mobile home as a unit produced independent of a site, onto a site in the manner of a conventional detached house. This projection must be done while maintaining the economy of site development (e.g. keeping utility lines as short as possible), and the requirements for backing a unit into position or pulling it through the site. The importance of the various labels given to specific sides of the site and unit are the expectations which follow from those labels. A backyard is appropriate for certain activities; a front for others. The label helps to indicate where it is appropriate to barbecue, plant vegetables, put in a rose bush, or place a storage shed.

In some parks (not in Muncie) these relationships are established by the management. In a park in Florida, for example, there is a "set up fee" for being admitted into the park, which includes landscaping and a covered patio that steps down toward the street. In a park in Colorado, tenants are required to sod the "front" half

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of their lot (roughly from the entry door to the street) and seed the back. With the absence of such rules at Freedom Acres, the residents must determine the division of their lot. For people living in the parallel and diagonal lots, their front yard (in terms of where they locate activities) is the area roughly from the front door to the street. This is the place for planting flowers, putting up a token (one foot high) fence, putting up a name plaque, and the like. The backyard is the area behind this. In the case of a single wide unit, where both doors open on the same side of the unit, the second door can become the door into the backyard; though it is rarely used. The need for the tenant to actively participate in the definition of the various sides of the site is evidence that the mobile home remains a hybrid and an innovation.

Attitude of Others Toward the Mobile Home

Whether or not mobile home owners choose to identify their housing as innovative, others may place a label on it for them. As suggested in chapter four, the labels that they may apply suggest that it is "ritualized" rather than "innovative" housing. Part of the mobile home life style seems to consist of accounting for the decision to live in a mobile home. In a statement previously quoted, an owner recalled how she wrote a letter to her father telling him that she had moved into a mobile home after her divorce. He felt that she was being a gypsy and refused to visit her.

> They used to call people living in mobile homes camp bums. That is what they used to call them in my father's day. When I moved into the mobile home I begged him [my father] to come and visit me, which he

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> never did. I think that he went to his grave thinking I was living like a gypsy. I had sent him pictures because I really think he felt I was living like a bum. Back twenty years ago that is the way people who owned property felt about people who owned mobile homes. (Subject 1)

Most owners feel that the bad reputation which mobile homes have comes from the house trailer period when units were smaller. They also feel that these prejudices are based on a lack of knowledge.

> Q. Do you have any impression about the way your friends and acquaintances who don't live in a mobile home feel about mobile home living?
> A. Yeah. They wouldn't have one. They feel that it's like living in a cracker box.
>
> Q. Well, why do you think that people have this image?
> A. I don't know. I guess because they all look alike. Cause when people look at a trailer from the outside they think that it's littler than it is. When they come in they're real surprised at how big it is. I don't feel like I'm living in a cracker box at all. I've been in a lot of homes that are smaller than this trailer. (Subject 2)

Another owner recalls:

> . . .our friends accept it, but our acquaintances--it's always amusing to me because, well, where do you live? Well, we live out in Freedom Acres. Oh, you live in a. . . . They don't know whether to say trailer or mobile home. I think that until they come in it--then you get comments like, "This is much nicer than I thought," or something like--"They've really changed a lot." I don't think any of our friends think anything of it. (Subject 9)

The bad reputation which some owners feel that mobile homes have, also reflects their assumptions about the people living in them.

> I get the impression that people think that mobile homes are occupied by low income families with lots of children, which is absolutely incorrect. Another thing they think is that basically, because of national news, that they are not safe to live in. (Subject 7)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The stereotype which holds that only low income people and those with little aspiration would choose to live in mobile homes, seems to be fading. Mobile home owners themselves, however, seem to feel that it is not a proper kind of home for a professional or managerial person, whose home is a place to entertain clients or colleagues.

> Q. When you speak to people who don't live in mobile homes, like some people where you work, do you get any sense about how they feel about mobile homes?
> A. Generally the people that I'm talking to would not look down their nose if you made such a comment. I can remember a situation of driving a customer from Muncie to the Dayton airport and I mentioned a mobile home that we passed really had been set up very well. His comment was that a mobile home is a mobile home. Of course at that time I did not tell him that I was living in one. So I'm sure that it runs through everybody's mind. Why are you living in a mobile home? (Subject 7)

Here again, the explanation given for why a conventional home is necessary to a person with a particular status is functional: i.e. the need to entertain.

While mobile home owners rejected the stereotypes of the units and occupants, feeling simultaneously insulted and amused by these impressions, they share some biases themselves. As indicated above, they feel that the mobile home is not appropriate to upwardly mobile professionals. Many feel that it is not the best environment for raising more than one child. Most feel that it would be inappropriate to locate mobile homes on private lots in areas composed of conventional single family houses.

> Q. Would you locate your unit in an addition where everything around it was conventional housing?
> A. No. That would make the neighbors mad because they would feel that it would devalue their property. I would just buy a lot in the country. That way we could have a fairly large lot, and could do what we wanted to. (Subject 2)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Q. Do you personally think that mobile homes ought to be in parks or on a lot in a neighborhood of conventionally built houses?
A. If I was going out to build a fifty thousand dollar home or a thirty thousand dollar home and someone moved in next door and put in a four thousand dollar mobile home, I think, yes it would affect me. (Subject 9)

In the comparative survey of mobile home, conventional home and apartment dwellers, there was no significant difference in the opinions of each group on the issue of whether mobile homes should be allowed to locate in single family housing zones in the city. Surprisingly, the home owners were not especially negative nor the mobile home owners particularly positive about the idea. Indeed, on nine out of ten items regarding attitudes toward mobile homes, parks, and occupants, there was no significant difference between the ratings of the three groups.[6] On a negative statement--"mobile homes are cheaply built," all three groups tended to agree with the statement. While on the item--"People who live in mobile homes have less ambition than people who live in their own single family house,"--all three tended to disagree with the statement. For this particular sample, at least, there is not evidence of a strong bias against the mobile home; at least none that mobile home owners themselves would not share.

Part of the negative image of the mobile home seems to be based on the image established in the house-trailer period; but another bias is from the industry itself and the way it furnishes units. Many owners feel that mobile home decor is "cheap" and designed to appeal to bachelors, or to blue collar workers only.

> The type of people that the manufacturers are appealing to are blue collar workers. The women that wear beehive hairdos. They can afford to have their hair done, but they have it done that way. . . .The people who buy

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

> mobile homes are into bowling. They don't spend much time in their home. They like the units because they are easy to keep clean. (Subject 9)

Mobile home owners feel that there is a bias against their form of housing in the press, particularly with respect to the hazards of living in mobile homes.

> Q. Do you think there is any discrimination against mobile homes by governmental agencies or other institutions?
> A. Yes. I think the news media is a little hard. Anytime there is a problem like a fire, tornado or wind damage it's always in the headlines: "Mobile Home Destroyed." It's never just John Doe's home, but John Doe's mobile home. I don't know why they do it; maybe it's just a descriptive item. (Subject 7)

Some mobile home owners feel that lending institutions also discriminate against mobile homes; charging higher interest rates and making it more difficult to get a loan on a mobile home than a conventional home which is far less substantial.

In conclusion, mobile home owners frequently find themselves forced into a position of defending or explaining their choice of housing. While they feel that most biases are based on misinformation, and are dispelled when people become better acquainted with their form of housing, they themselves display some of those prejudices. They acknowledge that mobile home parks can attract riffraff, and that rules are necessary for this reason. They feel that the indiscriminate placement of mobile homes in single family housing zones can have a negative economic effect on homeowners; "regardless of the fact that the units can be brought up to all code requirements. They also feel that mobile homes are not for professionals; a family that can afford the $30-50,000 house should be living in one. The

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

industry seems to confirm this prejudice by furnishing homes which appear to be designed for the young working class individual or couple.

Conclusions: Strategies of Integration

Earlier in this chapter the question was raised: Is the mobile home an innovation for its users? Given the evidence presented here, the answer must be a qualified yes. This qualification rests in the recognition that the mobile home is a complex innovation. All innovations, it should be recalled, are hybrids of existing cultural elements. In the case of physical innovation, these elements include features, as well as expectations, drawn from two or more disparate areas of activity. Part of the complexity of the mobile home as an innovation lies in the fact that the object which it replaces, and the functions which it serves, are complex and multidimensional. The conventional house is not simply a physical shelter, but an economic enterprise, a symbol of the owner's position within the community, the setting for child rearing, and much more. The resistance which the mobile home encounters helps to reveal these functions, and to bring some into question.

Another dimension of the complexity of the mobile home as an innovation is that it consists of both the unit and the park. In addition, it is an innovation in which the adopter is important in defining and extending its nature. Living in it leads to the discovery of such aspects as: its economic character, the possibilities of personalization, and the character of park life. Mobile home

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

residents thus help to create and extend the hybrid character of their units.

The strategies of integration used by mobile home owners include conventionalization, as well as syncretism and structuralization. Mobile home owners feel that their units look best when they look house-like. This includes mediating the relationship of the unit to the site in a conventional manner. The problem, discussed earlier, of defining what constitutes the "front" of both the unit and the site illustrates the difficulty of projecting all aspects of the hybrid object onto the conventional model. In some instances, conventionalization works in reverse. The mobile home owner, for example, rejects the masonite siding intended to make the unit look more house-like, seeing instead that conventional homes also have metal siding.

Many of the syncretic aspects of the house trailer era have been rejected in the evolution toward the mobile home. Though rejection is usually explained on functional grounds, the resulting solutions may actually be less functional or dysfunctional. The basic syncretic element of the mobile home remains its ability to move. While there has been much press about the "immobile mobile home," in Muncie, at least, mobility is an important asset. Mobility, however, is not used as a means of following the job market, but to improve one's "neighborhood." It is also an important part of the economic cycle of trading-in the unit. The unit's wheels may be hidden, but they are not forgotten.

Although mobile home owners agree with the population at large that mobile homes are best placed in parks, suggesting a strategy

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of independence, in general they have followed a strategy of structuralization. They see the mobile home as a valid and significant alternative to the apartment, rather than shelter of the last resort. They also see it as responding to particular phases of the life cycle, because of both the cases of ownership and maintenance. Finally, there is structuralization evident in their attempt to merge the expectations of living in a park (i.e. on land owned by someone else) and the expectations associated with living in a dwelling which they own.

The strategies of integration being pursued by the various parties involved in the diffusion of the mobile home are not yet congruent. While the market mechanism operates in the choice of a park and a unit, helping to select out inappropriate alternatives, it is an ineffective mechanism of communication. Indeed, the future direction of the industry is far from clear; a situation which might be remedied if communication was improved.

One significant dimension of the communication between the various mobile home users consists of the images and models used to guide expectations, actions, and the further development and integration of the artifact. At this stage, different models seem to be held by different parties. The producers are pursuing a model of housing as product, the park developers a model of housing as service, and the unit owners a model of housing as process. These differences present difficulties to the extent that the overt actions of one party limit those of another. Consensus is not necessary to achieve congruence, but congruence is necessary to avoid conflict.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

It would not appear to be difficult for both manufacturers, and park developers and managers to reorient their actions to facilitate the users' model of housing as process. Manufacturers may continue to operate under the model of housing as product, but they might adjust that model by shifting their image from that of dwellings like cars to that of dwellings like a kit-of-parts. Indeed, if manufacturers can just recognize that the park and unit together form the foundation of a kit-of-parts, they may be able to redefine other aspects of their activities accordingly.

Park developers and managers may continue to see their function as one of providing a service, but a clearer distinction could be made between providing housing as a service, and providing a service to someone's housing (i.e. mobile home). This involves a clarification of the division of responsibility and control over the environment. The bottle and wine rack image discussed earlier is inadequate to produce this clarification. Neither party is likely to have the significant expectations of responsibility suggested by such an image. The approach of treating the park as a subdivision and a condominium removes some of the ambiguity in the relationship between management and tenants, but it also economically excludes many current mobile home users: e.g. the elderly on limited fixed incomes and the young without the financial resources to buy into such parks.

Finally, it must be realized that not all mobile home owners treat their housing as a process. For some it does function primarily as a service or a product, and for all it has each aspect to at least some degree. Owners could be encouraged to make fuller use of the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

ownership potential of their units if opportunities for personalization were more clearly offered by manufacturers and park developers. The very fact that the unit is not complete in itself, but must be mediated with the site, offers an important opportunity for encouraging the owners to alter their units and to explore the possibilities of personalization so evident in units located on private lots.

The foundation for all of the adjustments suggested above is already evident in the range of ways that people make and use housing, but these possibilities must be organized into a more congruent whole. The more self-conscious use of images and models may help to achieve this congruence and accelerate the dual revolution which constitutes the industrialization of housing.

Notes

1. There are some studies of the mobile home which have used participant observation. Carr and Steiner (1952) had a researcher live in a mobile home (house trailer) briefly during their investigation of boom towns. Johnson (1971) did some participant observation in her study of the elderly in mobile home parks. She attended community meetings, but did not actually live in the park. Andrachek (1971) reported on his personal experiences of living in a mobile home, but his was not a structured study.

2. Interview subjects are identified by number throughout this chapter. They are identified by their stage in the life cycle in the list below:

Subject 1 . . . . older couple
2 . . . . young couple
3 . . . . single young woman
4 . . . . elderly woman (widow)
5 . . . . elderly woman (widow)
6 . . . . single young woman
7 . . . . young couple with two children
8 . . . . elderly couple
9 . . . . young couple with two children
10 . . . . young couple

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

3. Since the presence of a large number of vacant lots in a sector could alter the effect of proximity, sectors with over 30% of their lots vacant were removed from a second analysis. In the anova run in this form, the level of significance remained .002.

4. This rate of mobility is not characteristic of the population as a whole. Moose (1973) reports that conventional home owners in 1970 moved on average every 5.1 years, while mobile home owners moved on average every 5.2 years.

5. The attitudes of subjects toward innovation suggests that an innovation is something which involves some kind of risk in using it, or something which is clearly different from and an improvement over established ways of doing something. It also seems to be something that one can't quite understand yet (e.g. how a microwave oven cooks).

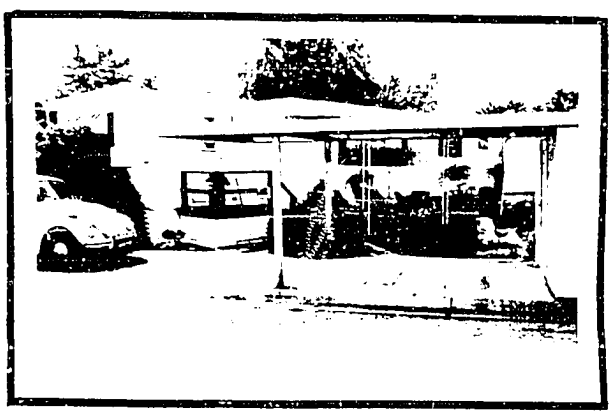
6. Although the attitude items used in the questionnaire were based on items from an instrument reported by Moose (1973), he found that there was a significant difference in the attitude of mobile home and nonmobile home residents regarding mobile home living. That study was done in the south, and it may be that a regional difference accounts for the difference in findings.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

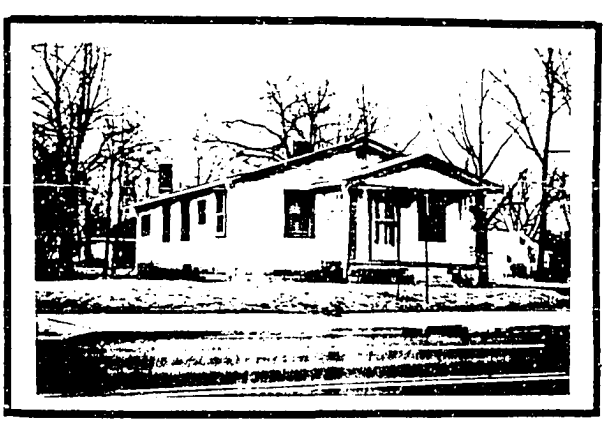
Illustrations: Mobile Homes in "Middletown"

65. The sense of home is conveyed, in part, by clutter--a demonstration of personalization, and by complexity of form.

66.



67. The frame of reference: a conventional single family home for under $15,000, in Muncie.



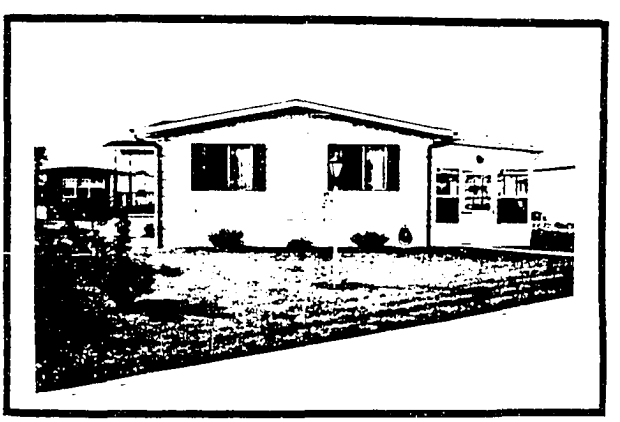
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

68. The features which add to the sense of the permanance of the mobile home are extensions, awnings, porches, skirting and a pitched roof line. These are also features which allow for the exercise of personalization.

69.

70.

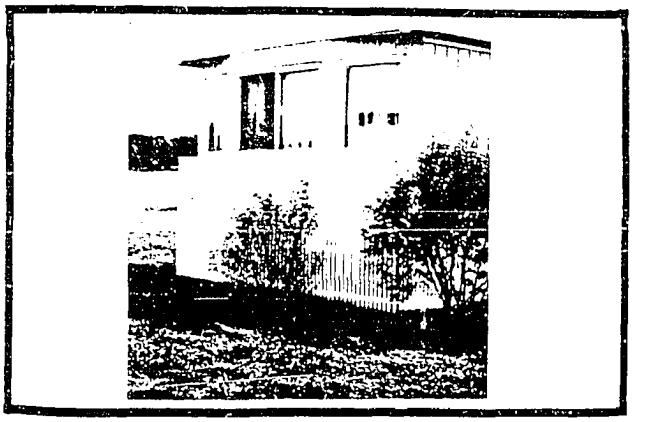
71.



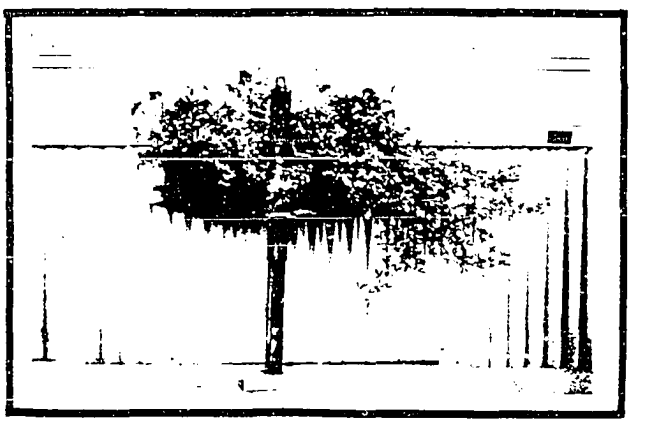
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Dealing With the Hitch and Wheels

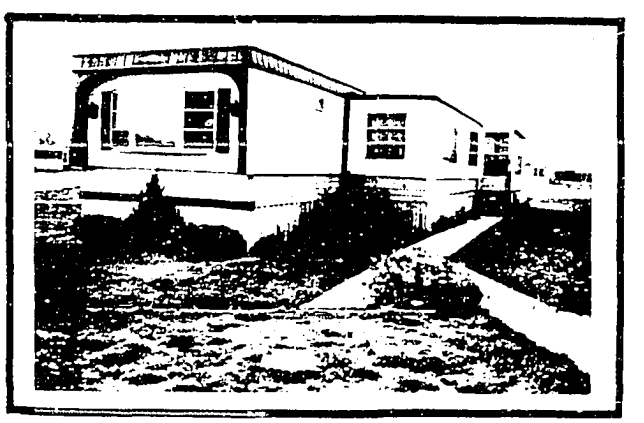
72. Picket fence skirting,



73. The hitch transformed into a planter.



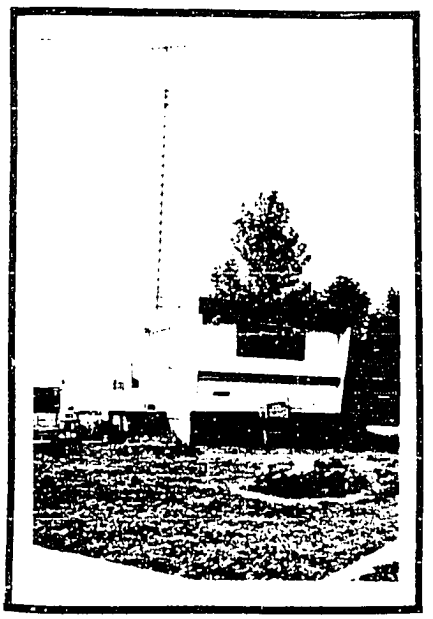
74. The hitch disguised by shrubs.



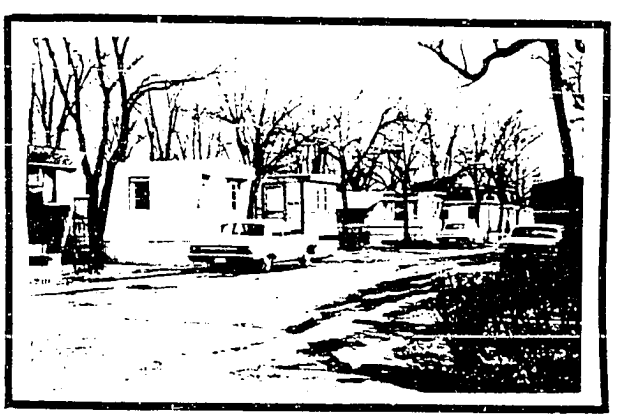
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Identifying the "Front."

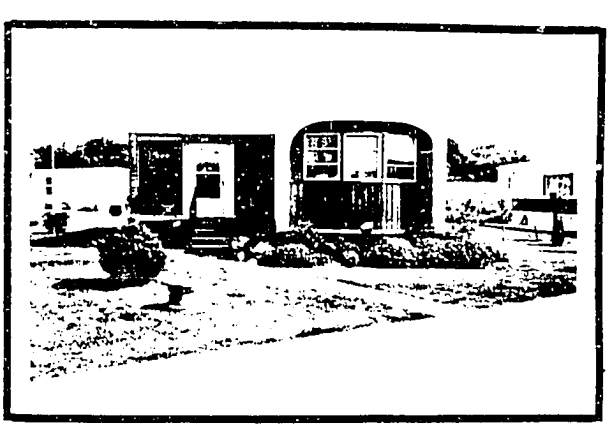
75. A unit sited diagonally on a corner lot provides equal prominence to front and back yards. There are flowered paths to entrances on both sides.



76. The old section of the park with units set perpendicular to the road.



77. A unit sited diagonally to the road. The entry porch creates a conventionalized relationship with the street.



Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Chapter Six

Thinness and Collage: Some Qualities of American Industrialized Housing

> One mobile home for sale in Virginia. . . featured a sunken living room which is sunken all of two inches. "The effect becomes totally two-dimensional, a paste-on look". . .but this thin and conspicuous veneering is, in itself, a tradition in American architecture. What appears to be stone facing on Mt. Vernon is, in fact, ground up oyster shells cemented to wood." (from an interview with Architect Steven Izenour by Henry Allen, 1978, p. 35)

> When we observe a piece of Victorian architecture we are struck by the overwroughtness of the "object." All too rarely do we consider that, for the nineteenth-century architects, eclecticism and plurality of expression was the proper answer to the multiple disintegrative stimuli induced by the new physical environment configured by technology's "universe of precision." (Manfredo Tafuri, 1976, p. 42)

The paradigm of industrialization presented in chapter one suggests that while innovation involves the introduction of something new into the inventory of cultural artifacts and actions, it also is a means of maintaining continuity with established goals. Indeed, no innovation can succeed unless it provides a basis for identification and continuity. The notion of innovation as a metaphor suggests that innovation is a way of exploring a new situation with something that is familiar, but which has not previously been associated with that situation. In this manner, a degree of continuity is inherent in the innovation. In the case of the mobile home, it is the category of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

things called "vehicles," which is used to see the nature of housing in a new way.

The success of the mobile home might be dismissed as a consequence of economic necessity. The contents of the preceeding four chapters, however, argue against such an interpretation. Economic factors alone could not account for its success unless there were some bases for establishing identification and continuity between the mobile home and the American tradition of housing. Some such bases have already been suggested; they include: the theme of the pioneer who tames the wilderness so that it can be made productive, the perception of physical mobility as a sign of social mobility (presumably upward), and a positive regard for technology at a personal level (such as the family car).

There are at least two qualities in the form and physical organization of the mobile home which seem particularly important as a basis for establishing continuity with the traditions of American housing; as well as for translating the practices of industrialization into housing. One is the quality of thinness: the physical thinness of the mobile home shell, and the literal thinness with which meanings are attached to features and form. The other is the quality of collage evident in the way that disparate features are assembled together in a single artifact (i.e. with features from the vehicle and those from dwellings). In this last chapter, I will explore the nature of these two qualities, and speculate as to their role in mobile home design and use, as well as in the further development of industrialized housing.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Thinness as a Quality of Mobile Homes

I had been observing mobile homes for over two years when something struck me one afternoon as I was returning home from work. It was that time of day in autumn when the leaves have already fallen; when the sun strikes the walls of houses almost perpendicularly, with an electric blue light. Then every lap of their siding, every reveal and batten etches a sharp shadow on their surface like a black ink line on a plate white board. It is a light that reveals the shallow relief of these stick built houses: a shallowness that I will call thinness. By the term thinness, I am referring to a literal quality of the structure of stick built houses. The quality of thinness, however, also has a figurative dimension which concerns the meaning attributed to various features of the house.

After observing mobile homes over an extended period, one develops a kind of after image effect when turning from them to look at conventional single family houses. When a single wide mobile home includes a mansard roof which is so shallow that it effectively consists of a change in the color of the siding, and so low that door and window heads must be smashed gracelessly through it, we may respond to it by dismissing the whole affair as bad taste and grossly naive design. At the same time, one may pass the recessed porch of a single family house on which the owner has carefully applied stone veneer. The illusion of weight which the stone might convey is utterly destroyed by being penetrated by windows and doors. The whole affair sits on wood decking which further destroys any illusion of weight. Again, such a pastiche might be dismissed as naive design.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Both of these examples can be regarded as insignificant, and yet they are commonplace, indicating what may be a general aesthetic sensibility which provides a basis for continuity between the design of the mobile home and the conventional single family house. The effect of the mansard roof and the stone faced porch is to produce a kind of unintended mannerism. The overall effect is one that I will call collage. Collage is the bringing into association of unrelated images and objects to form a different expressive identity. Collage describes the figurative dimension of thinness. I will consider both the literal and figurative dimension of thinness here, and consider how they may aid in the translation of the practices of industrialization into housing.

Literal Thinness

"Stick built" architecture is a colloquial term for buildings of 2 x 4 frame construction (typically platform framing). Thinness is a literal property of such structures. Their walls are light and, until the recent concern over energy, hollow. Such construction is an early and significant American contribution to the industrialization of building. Developed in Chicago in 1833, it made it possible for relatively unskilled labor to erect a structure in an incredibly short period of time. Contemporary descriptions of Chicago marvelled at the speed with which buildings were erected (Boorstin, 1965). Despite the lightness of the frame and the frequent indifference in joining members, the final structure was remarkably strong. This strength results, in part, from the application of the wood cladding

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

which encloses the frame and also acts as a structural membrane; creating a true "skin and bones" architecture.

The literal thinness of this form of construction includes a temporal thinness. These were not structures meant to endure unchanged through the decades; but to quickly return the investment made in them, and then to be extended or demolished as new needs required. Here, then, is the basis for a disposable architecture; one which is cheap enough to promote the idea that it may be more economical to demolish a building than to engage in extensive maintenance and upgrading. It is also a structural system which provides the basis for a relatively flexible architecture. It is a simple task to add a shed extension onto the core structure when needed. Indeed, the "lived-in" form of such structures is a core house, often square, with a series of shed additions successively tacked onto the back.

Structural thinness has been regarded by many modern advocates of industrialization as an essential property of industrialized housing. R. Buckminster Fuller asks the question--"how much does your building weigh?"--to underscore the importance of weight as a consideration when units or components must be transported from the factory. Fuller speaks of the technological evolution of buildings in terms of structural ephemeralization: the trend toward developing ever lighter, yet more efficient structures. In comparison with its predecessors, stick built architecture is lighter and stronger. Moreover, its individual structural members are small enough and light enough to facilitate transportation and fabrication. Gropius and

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Wachsmann (1961), in the General Panel System, have basically extended and rationalized the fabrication of stick built structures. Whereas in on site construction, the frames for individual walls are fabricated on the ground and then raised into place and sheathed; in the general Panel System, they are fabricated and sheathed at the factory and simply joined at the site. Stick built construction, then, may serve as the basis for more sophisticated forms of industrialization.

It is not difficult to identify the literal thinness of the mobile home. While this is often regarded as a sign of flimsiness (frequently with justification), it is not so inherently. The mobile home is essentially a stick built structure, both in terms of its fabrication and type of construction. The construction of a mobile home begins with the fabrication of the floor frame. Ducts, wiring and plumbing are installed along with the insulation and subflooring. The completed frame is then bolted to the metal chassis. Before the 1976 HUD standards, the entire floor might be covered with a single sheet of vinyl floor covering or carpeting.

Large plumbing fixtures, such as the tub and toilet, are usually installed first on the finished frame. Kitchen sinks in self standing cabinets may also be introduced. Each wall frame is then constructed as a unit with its interior plywood sheathing. They are bolted through the flooring or strapped to the frame. Batt insulation is applied to the exterior walls, once in place. The roof is assembled as a single unit. Accoustical ceiling tiles are attached to it, and then the entire roof section is fastened to the walls. Aluminum sheathing is then taken off of a long roll and wrapped around the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

exterior. Window openings are cut through the sheathing and prefabricated windows and storm sashes fastened to the frame. A single sheet of aluminum is drawn over the roof.

Once the basic shell of the unit is complete, cabinets and closets are installed and, finally, furnishings are added. This entire process of fabrication will consume some 250 person hours of labor (less than a quarter of that which goes into a site built house), and the unit will roll out of the factory on the same day that it rolled in. No other form of industrialized housing can match this record of speed.

Figurative Thinness: Collage

The need for building quickly and cheaply, which served as a motivation for the diffusion of stick built architecture, resulted not only in structures which were literally thin, but figuratively thin as well. Figurative thinness, as suggested earlier, has to do with the way meanings are related to the features and form of a structure. Meanings are applied to and associated with form as signs and signals, rather than forms serving as indicators. The figurative thinness of stick built architecture is most simply expressed in what Venturi, Brown and Izenour (1977) call the "decorated shed." The decorated shed occurs "where systems of space and structure are directly at the service of program, and ornamentation is applied independently of them" (p. 85). The appliques of the shed may consist of expensive materials or they may be painted on. They may suggest a monumental scale while hiding a modest structure.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The simplest form of the decorated shed is the Main Street building of the Western town. Its tall, false facade suggests a structure much larger than would be found behind it. The decorated sheds of Main Street were satirized in a scene in Mel Brook's Blazing Saddles. In it, cowboys and Indians are shown racing through a town. As the camera pans back we can see that the entire town is composed of a series of stage flats held up by braces. The decorated shed has its own architectural lineage, particularly in urban design. When the Duc de Vendôme, for example, wanted to improve some property which he owned near the Louvre, he had a grand facade erected around a square placed in the middle of it to enhance its uniformity, as well as its sale (Zucker, 1959). Individuals could buy lots behind the facade and develop it as desired. The decorated shed of American architecture, however, is probably a vernacular reinvention of this building form rather than an intentional application of it.

Main Street's decorated sheds are just one technique for applying meaning to stick built architecture. The houses of Walnut and Elm Street required a somewhat different approach. This approach consists, in part, of using some of the structural elements of the house decoratively. The shingles which might be applied to enclose the frame, could, for example, be set in various geometric patterns. The trim facing over rafters and purlins might be cut with a scroll saw into gay curves. Pattern books were available and commonly used as a source of such designs. One function of the decorations was simply to bring some articulation to the surface of the building.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The use of decoration on the house/shed could also be based on evoking particular associations. The house of a pastor might be decorated with Gothic appliques; a banker, perhaps, with Italianate. Just as pattern books were available as a source of decorative carpentry, books were available with exemplary floor plans and elevations. The most influential of such texts was Downing's Architecture of Country Houses, published in 1850. In sections of the book, Downing shows a single architectural mass (the basic "shed," if you will) with a variety of decorative motifs applied to it.

George Hersey (1972) described the approach of Downing and his counterparts as one which treats the house as essentially "an appliance wrapped in a jacket." The philosophical (and proto-psychological) foundation for this approach to design is based on the Eighteenth and Nineteenth Century idea of association. Archibald Alison's Essays on the Nature and Principles of Taste, published in 1790, provides a concise expression of this philosophy, here summarized by Collins (1967):

> . . .the association of ideas is the essential source of what he calls "the emotion of Taste," and the primary cause by which all aesthetic emotions are to be ultimately explained. Matter itself, he insists, is unfitted to produce any kind of emotion, yet material objects may produce this effect from their associations with other qualities, of which they become signs or expressions. (p. 46)

Thus, if the Gothic style has become associated with Christian morality, the application of features derived from that style to a house might evoke the association of that morality with its occupants. The relationship here is not assumed to be causal, but simply evocative: i.e. the features are not assumed to produce the moral

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

behavior, but their presence may suggest the appropriateness of that kind of behavior in the structure at hand.

While associationism in the Nineteenth Century is tied to particular movements and styles (e.g. romanticicism, exoticism and the picturesque), the general idea of associationism provides one of the fundamental approaches to the understanding of meaning in architecture and all other areas of human communications. Associationism may be understood in terms of the structure of significant features. The significant feature, it will be recalled, consists of some discriminable aspect of an artifact (i.e. a feature) and an expectation (i.e. significance) related to that aspect. There are at least two types of bonds joining features and expectations. These bonds can be distinguished as associational and identificatory; arbitrary and necessary; conventional and natural. This distinction in bonds corresponds to the distinction made in semiotics ("the science which studies the life of signs within society"--Bonta, 1979, p. 26), between signal and indicators. Indicators are features spontaneously produced in the course of an action which come to stand for a particular aspect or expectation resulting from that action. A signal is a feature intentionally introduced or singled out of a situation in order to communicate something about that situation.

Communications through signals are facilitated by convention. If, for example, a society agrees that a red light at a road intersection means "stop," it evokes that expectation; but there is nothing inherent in the red light which automatically suggests that it means "stop." Indicators, by contrast, are presumed to be universal to

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

anyone who engages in the action which produces them (an infant's cry of hunger, for example).

One level of the idea of figurative thinness relates to the notion of an associative bond between features and significance. If this relationship is arbitrary, then, it may be subject to change. Resistance to change, in turn, may be understood as the strength of the convention which supports the association. If society recognizes this association as arbitrary, however, then change may be more readily facilitated. Such a condition would seem to exist when a society has a theory of association, and uses it as a basis for design. The designer, then, intentionally introduces signals into a design for the purpose of evoking a particular association or response. For example, a designer feels that Egyptian features will be associated with death and, therefore, chooses to use them in the gateway to a cemetery.

If the bond between feature and significance is arbitrary, yet reinforced by convention, then it may become exhausted through use. Lévi-Strauss (1969) refers to such exhaustion as "desemantization." Consequently, novelty (as in some of the Nineteenth Century movements based on associationism) becomes a desirable and even necessary quality. Moreover, ambiguity (the tension between recognition and meaninglessness) as a dimension of novelty, becomes recognized as a particular aspect of the aesthetic experience.

If the bond between feature and significance is arbitrary, then the distinction between natural and artificial in the description of materials loses its foundation. If one wishes to create an aesthetic

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

based on the "nature of materials" (as Hitchcock, 1942, described Wright's intention), then it must be assumed that there is an intrinsic and unequivocal "nature" that can be identified and recognized by all. But if the "nature" of materials is ambiguous and open to multiple interpretation, then selection of particular characteristics as natural is simply arbitrary and effective only to the extent that it is supported by convention. What matter then if one takes a brick pilaster, covers it with plaster and then paints it to look like marble? Is it the marble per se that is important in the execution of the design, or the fact that the particular pilaster evokes the same expectations or significances associated with marble? And if one gets tired of my marblized wall, perhaps it can be painted white or, better yet, painted in a brick pattern. Thinness, then, self-conscious and intentional, is a property of meaning made for change. In a culture made for change, it is an essential property.

A second level of the idea of figurative thinness relates to feature clusters. The feature cluster, as defined earlier, is a pattern or complex of features which are perceived to be highly interrelated, usually by association in the execution of a specific act. The notion of a feature cluster is analogous to Alexander's idea of "pattern" (1977). Even though the link between individual features and significance is arbitrary, the significant features making up a cluster may be so complexly bound to each other that it is difficult to change any one element without sending shock waves through the whole cluster. Examples of such clusters and forms are found in folk architecture (e.g. Claude Levi Strauss' description of the Bororro

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Village, 1973). By contrast, thin meaning assumes the interchangeability of elements within a cluster (e.g. a Gothic door detail can be replaced by one which is Italianate without altering the integrity of the whole composition). This kind of interchangeability of features, as well as significance, would seem to be the essential counterpart of the mechanical interchangeability of parts characteristic of industrialization.

The notion of figuratively thin form on both of the levels described here may suggest artifacts and environments that are superficial and incapable of producing complex and rich meaning. It may suggest a nightmare world of advertising adjectives applied to imitation products, each so far removed from the other, and any semblance of the original which they are intended to emulate, that everything becomes totally meaningless. Nevertheless, the very idea of thinness suggests its own form of complexity: a form of complexity described earlier as collage.

The folk origins of collage in the West are in decorative techniques, like découpage. By this technique, an ordinary sewing box might be embellished with clippings from a magazine, applied and sealed in lacquer. There is, however, little if any embellishment of meaning generated by such decoration. The more profound application of collage emerges in early Twentieth Century art; e.g., in Braque's papier collé, in Picasso's found object sculptures and in Max Ernst's illustrations, to name but a few. This use of collage is informed by several different ideas, but one which is central is that, by using ready-made elements and incorporating them into a composition, a

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

tension is created between their conventional meaning and their new associations. In turn, the artistic composition becomes the product of selection and organization, rather than of the manipulation of basic materials (e.g. pigments, clay, etc.). Just as modern art and architecture can be identified by the collapse of hierarchical deep space (Slutsky & Rowe, 1963), it can be identified by the collapse of semantic space. Associated meanings are peeled away from their conventional context and juxtaposed to create new associations. Novelty and complexity result from the richness across, rather than the depth of, these associations. This idea was well expressed by the Pop Artist Richard Hamilton in 1957:

> We reject the notion that tomorrow can be expressed through the formal presentation of rigid formal concepts. Tomorrow can only extend the range of the present body of visual experience. What is needed is not a definition of meaningful imagery, but the development of our perceptive potentialities to accept and utilize the continual enrichment of visual material. (in Wolfram, 1975, p. 159)

Collage is not simply the arbitrary heaping together of features; it has compositional properties of its own. Some collages are designed to be read iconographically (i.e. decoding the various features like clues in the solving of artist's message); some have no "story line," but invite simultaneous levels of association. Others create a tension between meanings which extend beyond the elements included in the composition into the environment in which the composition is viewed. Collage takes elements of the environment and, in Ezra Pound's phrase, transforms them into an "anti-environment."

An important property of collage is that it invites pluralistic interpretation. Since it utilizes objects from everyday life, it has

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

the potential of forcing the meaning of these objects into question, and thus transforming them. Indeed, in Pop Art this potential was exploited to the point that the distinction between the art gallery and the supermarket was obliterated; thus, indirectly making the advertising executive the supreme master of the medium. Recent experiments in collage have invited not only intellectual participation, but physical participation as well. Groups like Archigram, Haus Rucker Haus and Lawrence Halprin have experimented with the environmental happening as a composition which requires participation as part of its execution. It is against these experiments in collage that a new understanding of the nature and structure of the meaning of the popular environment may emerge.

Just as literal thinness is demonstrated in the mobile home, figurative thinness, on both levels, is demonstrated as well. The mobile home is an environment composed almost completely of materials making allusions to other materials: metal siding with a wood grain pattern printed on it, interior wood paneling laminated with the photographic image of a superior wood, a ceiling material which looks like stucco but is actually foam rubber, plastic hardware painted to look like brass, and so on. As transparent as these allusions are, they seem necessary to the acceptance of the object as a whole. In their transparency, however, they may also attain a peculiar kind of honesty (like a man with a toupé so poorly made that it is clear that it is a toupé). The qualities that can be seen in the mobile home can be seen in other artifacts and in the popular environment of America as a whole.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

DeTocqueville (1946) observed over a century and a half ago:

> The handicraftsmen of democratic ages endeavor not only to bring their useful productions within the reach of the whole community, but they strive to give all their commodities attractive qualities which they do not in reality possess. . . .To mimic virtue is of every age; but the hypocrisy of luxury belongs more particularly to the ages of democracy. (Vol. 2, p. 51)

He observes elsewhere, however, that the allusion to luxury may be necessary to a mass production/mass consumption society.

> When none but the wealthy had watches, they were almost all very good ones; few are now made which are worth much, but everybody has one in his pocket. Thus the democratic principle not only tends to direct the human to useful arts, but it induces the artisan to produce with greater rapidity a quantity of imperfect commodities and the consumer to content himself with these commodities. (Vol. 2, p. 50)

Indeed, this figurative thinness of form may constitute a genuine industrial vernacular; a style expressive of the disposable commodity and recyclable meaning; open, therefore, to mass media manipulation, but equally open to a genuine pluralism.

The mobile home also illustrates thinness at the level of feature clusters. Since it is a hybrid containing features of both the vehicle and the dwelling house, its integration raises the problem of whether the final artifact (after diffusion) will remain a hybrid with feature clusters carried over from each domain, or whether the features and organization of only one will dominate. While the clear trend today in both the industry and among users is toward conventionalization with the traditional house as a model, this approach seems to lose a good deal of the aesthetic richness that the earlier travel trailer and house trailer possessed.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In the house trailer, there is a marvelous tension established through the simultaneous presentation of house and vehicle features. It is a tension which might be likened to the attempt to see the Gestalt young/old woman illusion simultaneously in both readings. This tension is heightened precisely because features occur in clusters, reinforcing their mutual associations. The wheel, for example, is exposed under its housing, which has been cut in the form of an action line; while above it sits a metal frame awning type window with rounded corners, behind which can be seen lace edged curtains and a statuary lamp. The same kind of juxtapositions are evident at the scale of the trailer in the park and the park in the city. It is a tension which, as evidenced in the review of legal cases, provokes some heated debates over the character of the artifact and its environment.

The tension generated by the innovation, which is an artifactual hybrid, demonstrates the power of environmental collage: a power to bring together expectations from two separate domains requiring the observer/user to consider each afresh. This tension further provides the opportunity for understanding the environment which, for the most part, remains hidden in a structure of conventions. This power, however, is lost when form is conventionalized. The aesthetic of environmental collage, then, potentially encourages pluralism and a more truly collective participation in and control over the built environment.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Toward a Set of Rules for the Meaning of Industrialized Housing

I have argued that literal and figurative thinness are indigenous characteristics of American housing. They are characteristics made for change in a country founded in the Industrial Revolution, and predicated on the ideal of change (i.e. progress). One of the lessons which the case of the mobile home may be able to teach us is the meaning of these characteristics as applied to industrialization. This lesson can be made more specific by focusing on the model of housing-as-process and the image of the house as a kit-of-parts.

In the conclusion to chapter four, I suggested that the mobile home/park ensemble has the potential of functioning as a kit-of-parts. The users, at least, treat it this way, although park owners and the manufacturers of mobile homes are operating under different images. Earlier it was suggested that the advantage of the kit-of-parts approach is that it potentially allows the users to participate in the design (i.e. in the selection and organization of components) of their housing and, thereby, to exercise greater control over it. Presumably, this will lead to greater satisfaction.

The development of the kit-of-parts approach among architectural theorists (e.g. Habracken, Eberhard, Ehrenkrantz) focuses almost exclusively on a concern for defining the components and creating the rules governing the physical interface between components (i.e., the problem of modular coordination and mechanical compatability). Relatively little attention has been given to the social aspect related to problems like: who is responsible for what? Practically no attention has been given to the question of meaning, even though this

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

dimension is inextricably tied to decisions regarding the "appropriateness" of the forms which may be realized through the kit-of-parts.

The dimension of meaning may have been ignored in the development of the kit-of-parts because of the "background" of assumptions regarding technology. It may be assumed by some that simply achieving the technological capacity to produce a system of interchangeable parts in itself creates the incentive to utilize that capacity. Or it may be assumed that the issue of meaning exists, but is essentially independent of the mechanical problem of producing a kit-of-parts (i.e. those who would choose to be guided by convention will simply use the parts in that way). Bonta (1979) calls this the assumption of "meaning free process."

If the virtue of the kit-of-parts model is in the users' ability to exercise greater control over the environment, it is naive to think of this control as physical manipulation without the simultaneous control of meaning. This fact is clearly illustrated by the problem of the mobile home owners who must struggle to wrest the definition of their units as housing from the indirect users, who can and do impinge on their control over it by the definitions which they apply.

Together with the creation of a set of rules for the assembly of the physical components of the kit-of-parts, it is necessary to have a set of rules for the assembly of meaning: a syntax for the construction of environmental change. The mobile home owners living in parks have invented such rules ad hoc in their attempt to project their housing expectations into the artifact at their disposal. As

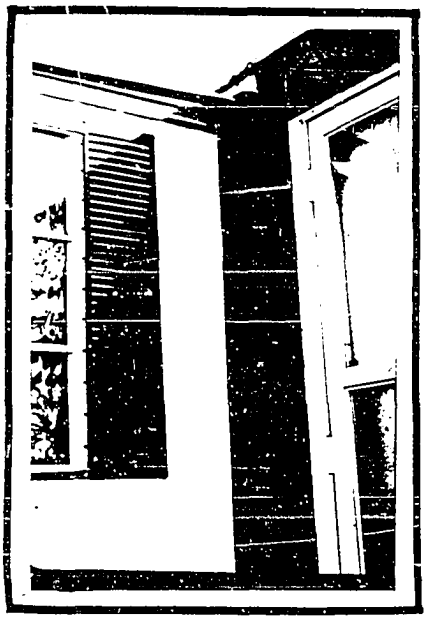
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

such, they have engaged in a kind of unintentional ethnomethodology; violating the norms of housing and, thereby, making them conscious and explicit. Perhaps the most important thing that could be done to further the development of the industrialization of housing is to pursue the investigation of the rules of meaning. We might begin by applying such rules toward advancing America's most successful form of industrialized housing--the mobile home.

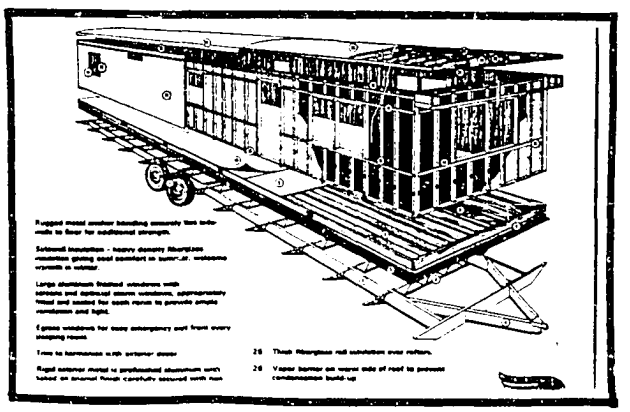
Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Illustrations: Thinness and Collage

78. Details which are so thin that they barely break the line of a shadow.

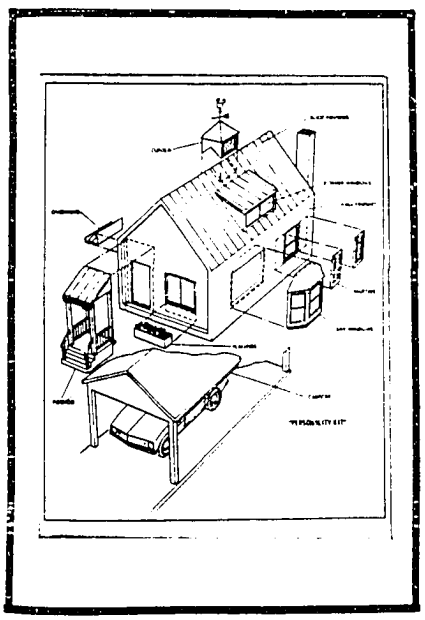


79. Blow apart drawing showing the construction of a mobile home.

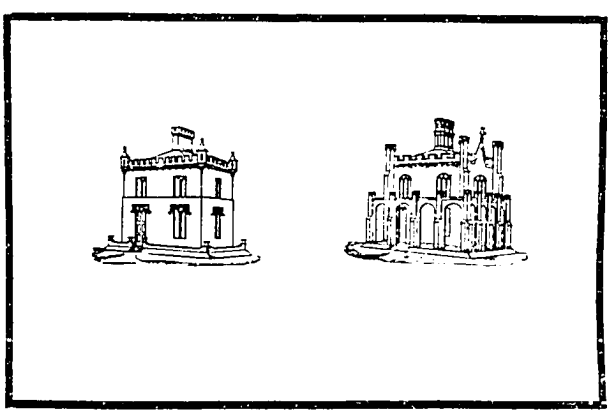


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

80. The kit-of-parts house in the 1960's.



81. The kit-of-parts house in the 1860's.



82. The ad hoc kit-of-parts house: a mobile home in/ with shed extensions.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

APPENDIX ONE

Comparative Survey of Mobile Home, Conventional Home and Apartment Residents*

Hello. My name is Allan Wallis. I teach at Ball State. I'm doing research on how people feel about the place they live in. I'm particularly interested in the opinions of mothers with young children. (For conv. hm. & m.h. - If you own your own home, and). . .if you can spare about 30 minutes of your time to help me with this work, I would really appreciate it. All of your answers will be held in strictest confidence. If you don't have time now, I would be glad to make an appointment for anytime convenient for you.

I. RESIDENTIAL HISTORY

1. First, would you tell me the name and sex of your children?

Type of Residence	Average Number of Children
Mobile Home (MH)	1.61
Conventional (CH) Home	2.6
Apartment (APT)	1.75

2. How long have you lived in your present unit?

MH. . . . . 2.45 years
CH. 5.81
APT 1.64

FOR MOBILE HOME OWNERS ONLY

3. Have you ever moved your unit?

40% had moved their unit at least once

4. Where did you move your unit from? (to be coded)

62% of the moves were with Muncie, Indiana
The remainder were out of town or out of state

---

*Raw totals on uncoded items are shown in brackets following questions.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

5. What was the reason for moving your unit? (to be coded)

_____

_____

6. If this is not the first dwelling you have lived in since you were married, would you tell me what other types of housing you have lived in, and for how long? Start with the place you lived in when you first got married.

Current Residence	Previous Residences MH	CH	APT	Ave. Moves
MH	6	11	12	1.75*
CH	6	13	12	1.85
APT	3	13	11	1.6

*If moves made with the same mobile home are included, the average is 2.25.

7. Including the time before you were married,

A. Have you ever lived in a single family house? For how many years?

B. Have you ever lived in multifamily apartment houses? For how long?

C. Have you ever lived in a mobile home? For how long?

D. Are there any other types of housing you've lived in as your primary place of residence: for example, a boarding house, travel trailer, etc.? (code type)

FOR C.H. AND APT. ONLY

8. Have you ever known anyone who lived in a mobile home, with whom you visited and were acquainted with their unit?

	% with previous knowledge
CH	100
APT	70

FOR M.H. ONLY

Before you bought your mobile home, did you know anyone who lived in a mobile home with whom you visited and were acquainted with their unit?

MH	60

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

II. ATTITUDE TOWARD "HOME"

1. Think about your present place of residence. Would it be accurate to call it "home" or "a place to live?"

Answering "A PLACE TO LIVE"	
MH.	10%
CH.	10
APT	65

2. What makes you describe it in that way? (CODE)

People have different feelings about what the word "home" means to them. I'm going to read some statements to you about the word "home." I would like you to think about each statement and to tell me how much that statement agrees with your own feelings about what home is to you.

(SHOW CARD) For example, on this card is the statement: "I look at home as a reflection of me: how I see myself." Beneath the statement is a scale from 1 - 5.* (READ SCALE). You should pick the number on the scale that comes closest to your agreement with the statement.

[*"1" is strongly agree with concept]

(SHOW NEXT CARD) After rating each statement in this way, I would like you to tell me how well each of three different types of housing: a mobile home, single family house and conventional home, fit your idea of "home" as described in the statement. (READ SCALE) Give me the number on the card which describes how satisfactorily the kind of housing considered would be as "home."**

[**"1" is best type of housing on five-point scale]

Let's try the first card. Please stop me if you have any questions about what I would like you to do. (SHOW CARDS FOR EACH STATEMENT & HOUSE TYPE).

3. I look at "home" as a reflection of me: how I see myself.

Question	Type of Residence MH	CH	APT	Significance
Concept of home	1.85	1.7	1.85	none
Suitability of				
MH	2.70	3.65	3.75	P > .01
CH	1.35	1.30	1.30	none
APT.	3.75	3.55	2.45	P > .01

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

4. To me "home" is being near family and close friends.

	MH	CH	APT	
Concept	2.00	1.35	1.45	P > .05
MH	2.25	3.40	2.75	P > .01
CH	1.85	1.60	1.70	none
APT	2.66	3.15	2.30	P > .05

5. "Home" is having good neighbors and feeling like part of a community.

	MH	CH	APT	
Concept	2.05	1.45	1.85	none
MH	21.5	2.55	2.35	none
CH	1.60	1.40	1.60	none
APT	2.50	2.50	2.15	none

6. "Home" is a place where I can do what I want: that I can fix up the way I want to.

	MH	CH	APT	
Concept	1.10	1.15	1.20	none
MH	2.00	2.95	2.50	P > .05
CH	1.05	1.15	1.25	none
APT	3.30	3.05	2.85	none

7. "Home" is a place where I can feel relaxed and comfortable.

	MH	CH	APT	
Concept	1.15	1.10	1.15	none
MH	1.55	2.55	2.90	P > .01
CH	1.20	1.25	1.25	none
APT	2.20	2.45	2.10	none

8. I think of "home" as some place permanent and familiar.

	MH	CH	APT	
Concept	1.50	1.20	1.50	none
MH	2.25	3.35	3.30	P > .05
CH	1.20	1.30	1.35	none
APT	3.20	3.20	2.85	none

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

9. "Home" is primarily the physical place I live in: a shelter.

	MH	CH	APT	
Concept	2.65	3.15	2.95	none
MH	2.60	2.95	2.55	none
CH	2.20	2.15	1.90	none
APT	2.15	2.15	2.00	none

10. "Home" is a place where I feel physically safe and secure: safe from natural elements and hazards.

	MH	CH	APT	
Concept	1.70	1.60	1.55	none
MH	2.45	3.60	3.90	P > .01
CH	1.60	1.40	1.40	none
APT	2.05	2.10	1.95	none

11. "Home" is a place that I would want my children to remember they grew up in.

	MH	CH	APT	
Concept	1.15	1.05	1.20	none
MH	2.10	3.35	3.35	P > .01
CH	1.15	1.20	1.30	none
APT	3.25	2.95	2.70	none

12. Is there anything not mentioned before, that the word home means to you? (to be coded)

III. USE OF TIME

1. There are a lot of ways to spend your income: clothing, shelter, food, cars, vacations, and the like. If your husband received a nice raise, what would you use it for? (to be coded)

Percentage of responses indicating that money would be used to change housing

MH. 60%

CH. 10

APT 50

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

2. (If nothing having to do with housing has been indicated above ask. . .) Would you use part of a raise to do something with your housing?

Now I'd like to find out a little about the way you spend time around the house. For example: "How often do you spend time alone doing things with your children?" (SHOW SCALE) Your answer will be one of the numbers on this scale* (READ). Do you understand? Alright, here is the first question:

Responses to questions III3-11 are shown in table following last question.

*"1" is most frequently on eight-point scale.

3. How often do you spend time alone doing things with your children?

4. How often do you engage in do-it-yourself or decoration projects around the house?

5. How often do you spend time alone with your husband at home?

6. How often do you entertain friends or relatives at home?

7. How often do you clean house?

8. How often do you work in the garden?

9. How often do you do special things as a whole family around the house?

10. How often do you just lounge around and relax in the house?

11. How often do you do social things away from the house (like go to social clubs or church groups)?

Comparison of Use of Time by Type of Residence

Question	MH	CH	APT	Significance
3	2.50	3.15	2.55	none
4	6.00	5.00	6.25	.10 > P > .05
5	3.90	5.25	5.25	none
6	6.30	6.10	6.65	none
7	4.50	3.55	4.10	none
8	6.25	5.90	7.55	P > .01

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Comparison of Use of Time by Type of Residence (cont.)

Question	MH	CH	APT	Significance
9	5.70	5.45	5.75	none
10	4.85	4.40	4.90	none
11	6.20	6.35	6.50	none

IV. HOUSING SATISFACTION

People consider a lot of things when choosing a place to live. I'm going to read a list of some of these considerations to you. I'd like you to tell me how important each of these considerations is, by indicating a number on the scale beneath the question. (SHOW FIRST CARD).

After rating the importance of a consideration, I'd then like you to tell me how satisfied you are with your present housing in meeting this concern. (SHOW SECOND CARD AS EXAMPLE) Tell me the number that correspond with how satisfied you are with your present housing on the point being considered.

1. In choosing a place to live, how important are the sizes of the rooms?

2. How satisfied are you with the size of the rooms in your present dwelling?

	MH	CH	APT	Signif.
Consideration	1.40	1.25	1.55	none
Satisfaction	3.15	2.35	2.50	none

3. In choosing a place to live, how important is the number of rooms in the dwelling?

4. How satisfied are you with the number of rooms in your present dwelling?

	MH	CH	APT	Signif.
Con	1.50	1.40	1.65	none
Sat	2.85	2.05	2.70	none

5. In choosing a place to live, how important is the soundness and quality of the construction?

6. How satisfied are you with the soundness and quality of construction of your present dwelling?

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

	MH	CH	APT	Signif.
Con.	1.15	1.25	1.25	none
Sat.	2.65	2.00	3.15	P > .01

7. How important is the arrangement of rooms in choosing a place to live?

8. How satisfied are you with the arrangement of rooms in your present dwelling?

	MH	CH	APT	Signif.
Con.	1.65	1.60	1.75	none
Sat.	2.25	2.35	2.15	none

9. How important is the monthly cost of a unit, including utilities, in choosing a place to live?

10. How satisfied are you with the monthly cost of your unit?

	MH	CH	APT	Signif.
Con.	1.25	1.0	1.25	none
Sat.	2.10	1.75	2.55	none

11. In choosing a place to live, how important is the outside appearance of the unit?

12. How satisfied are you with the outside appearance of your present unit?

	MH	CH	APT	Signif.
Con.	1.45	1.50	1.40	none
Sat.	2.25	1.95	2.20	none

13. In choosing a place to live, how important is the appearance of the interior of the unit?

14. How satisfied are you with the appearance of the interior of your present unit?

	MH	CH	APT	Signif.
Con.	1.45	1.40	1.15	none
Sat.	2.00	2.15	2.35	none

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

15. In choosing a place to live, how important is the reputation the area or neighborhood has?

16. How satisfied are you with the reputation which the area in which you are now living has?

	MH	CH	APT	Signif.
Con.	1.15	1.50	1.30	
Sat.	1.70	1.65	2.25	none

17. In choosing a place to live, how important is the amount of maintenance, yardwork and the like?

18. How satisfied are you with the amount of maintenance your present unit requires?

	MH	CH	APT	Signif.
Con.	2.15	1.65	1.85	none
Sat.	1.65	1.80	1.95	none

19. In choosing a place to live, how important is the lot size and the placement of the unit on the lot?

20. How satisfied are you with the lot size and placement of your present unit?

	MH	CH	APT	Signif.
Con.	1.70	1.45	1.75	none
Sat.	2.10	1.75	2.15	none

21. In choosing a place to live, how much importantance does the general environment, unit and neighborhood, as a place to raise children have?

22. How satisfied are you with your present housing environment as a place to raise children?

	MH	CH	APT	Signif.
Con.	1.05	1.15	1.05	none
Sat.	2.20	1.70	2.60	.05<P<.01

23. In choosing a place to live, how important are the provisions for parking?

24. How satisfied are you with the provisions for parking at your present dwelling.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

	MH	CH	APT	Signif.
Con.	1.80	1.85	1.75	none
Sat.	1.85	2.15	2.90	P > .01

25. With all things considered, how satisfied would you say you were in general with your housing now?

Gen. Sat. 1.90 1.80 2.60 P > .01

26. Are there other factors which you feel are important to you in choosing housing, which have not been mentioned already? Could you please tell me about them? (CODE)

(MOBILE HOME ONLY)

27. Are there anythings about mobile homes that you particularly like or dislike that you didn't know about till moving into one?

(MOBILE HOME ONLY)

28. Can you remember how you felt about mobile homes before you bought one or first rented one? If yes. . .please tell me about it.

(MOBILE HOME ONLY)

29. If your feelings are different now then they were then, can you tell me how they have changed?

V. SIGNIFICANCE OF APPEARANCE IN HOUSING CHOICE

1. What features on the outside of your unit did you, and in the future, would you look for in choosing a place to live? (CODE)

---

2. What changes or additions have you made to the outside of your unit to improve its appearance?

---

3. What features on the inside of your unit do you look for in choosing a place to live?

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

4. What changes or additions have you made to the interior of your unit?

---

5. What are some of the things that make a house look like home to you? (CODE)

---

6. Some people feel that mobile homes look better when they are made to look like single family houses. Do you agree? ["1" is strongly agree.]

Mean by Type of Residence	
MH . . . 2.0	(no significance)
CH . . . 1.85	
APT. . . 1.95	

VI. ATTITUDE TOWARD MOBILE HOMES AND THEIR OWNERS

There are a lot of mobile homes in Muncie, and I have been wondering what people think about them. People I talk to while developing my questionnaire made a number of comments. I would like to find out how you feel. I am going to read you some statements about mobile homes. I would like you to indicate whether you agree or disagree with these statements by indicating a number on this scale (SHOW SCALE).* If you feel you don't know or have no opinion on the statement, answer #3.

Responses to questions VI1 - 10 follow question 10.

*"1" is strongly agree on five-point scale.

1. There's no reason why mobile homes shouldn't be allowed on lots zoned for single family housing in Muncie.

2. People living in mobile home parks are more neighborly than people living in their own houses.

3. Most mobile homes look alike.

4. People who live in mobile homes are more practical and flexible in their attitude toward housing.

5. The way mobile homes are manufactured is setting the trend for the housing industry.

6. People who live in mobile home parks take just as much care of their lots and units as people living in single family houses.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

7. Mobile home parks are safe and attractive places in which to live.

8. People who live in mobile home parks move more frequently than people who live in single family houses.

9. Mobile homes are generally cheaply built.

10. People who live in mobile homes have less ambition than people who live in their own single family houses.

Question	Type of Residence MH	CH	APT	Signif.
1	2.75	3.25	2.90	none
2	3.20	3.30	3.15	none
3	3.25	2.85	2.45	none
4	2.85	3.35	3.00	none
5	2.75	3.00	3.05	none
6	2.35	2.20	2.80	none
7	2.15	2.55	3.25	P > .01
8	2.40	2.50	2.85	none
9	2.35	2.45	2.60	none
10	4.00	4.00	3.80	none

VII. MISCELLANEOUS DEMOGRAPHICS

I have just a few more questions for you.

1. Are you planning to move in the near future?

Percentage Answering "Yes"

MH 50%

CH 10

APT. 60

2. What kind of a dwelling do you hope to move into?

Percentage who plan to move who want to move to a conventional home

MH 100%

CH 100

APT. . . . 80 (20% to apartments)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

3. Could you tell me your age?

Mean Age of Respondents	
MH.	26.5
CH.	31.25
APT	27.95

4. Looking at this card, could you tell me the number corresponding to the amount of schooling which you have finished?

Percentage of respondents who have completed high school	
MH.	40%
CH.	50
APT	50

5. Are you currently working or have you worked since you were married?

Percentage of respondents currently employed part or full time	
MH.	85%
CH.	40
APT	45

6. (IF YES) What was your occupation?

_____

7. What is your husband's age?

Mean age of husbands of married respondents	
MH.	30.0 years
CH.	33.3
APT	30.0

8. Is he currently employed?

All responses were "Yes"

9. What is his occupation?

_____

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

10. Looking at this card again, could you give me the number which corresponds to your husband's highest level of schooling?

[All respondents had completed high school]

(MOBILE HOME AND SINGLE FAMILY ONLY)

11. Would you mind telling me about how much you paid for your housing?

MH	$6,210
CH	17,090

12. What would you estimate is your average monthly payment for housing including such things as utilities, mortgage, insurance, etc.?

MH	$180
CH	231
APT.	207

13. (SHOW SCALE) Would you please tell me the number on this scale which corresponds to your income from all sources (salary, investments and the like)?

MH.	$9-10,000
CH.	8- 9,000
ATP	9-10,000

Those are all the questions I have. I'd like to thank you for all the help you have given. If you have any questions for me, I would be glad to try and answer them.

NOTE: Certain items were cross-tabulated by:

- wife working
- marital status
- level of education
- familiarity with mobile home living

Any significant findings in these comparisons are reported in Chapter Five.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

APPENDIX TWO

FREEDOM ACRES

RULES AND REGULATIONS

Revised - February 1974

The rules and regulations of FREEDOM ACRES are for your interest and protection. We expect them to be adhered to. Together we have the best Park in this area and the reason being the high caliber people in here. We hope you will continue to be friendly and courteous, but request that you always be considerate of your neighbors and that we can always maintain the close community feeling which we have all so enjoyed. We would be glad to have any suggestions or help you might have to offer. If you have a problem, PLEASE TELL US PERSONALLY. We will be glad to help in any way that we can. We also request that if you and your guests do not wish to live as we do and adhere to our speed limits and rules that you save us both problems and find other accommodations for yourself and yours.

GENERAL

1. Your lot is yours--plant flowers, shrubs, or anything you wish as long as it is kept neat. Remember, the electric wires are underground, so if you wish to dig but aren't sure where they are, check with us. Any type of building or masonry work such as porches, sheds or any other additions must first be approved.

2. It is expected that you cut your grass and trim at least once a week.

3. Keep your lot clean and neat. Do not let the odds and ends accumulate around your home.

4. Pets will not be brought into the park prior to checking with us. Dogs must be of small house type ONLY. All pets must be kept on a leash, never be allowed to run loose in the park area.

5. Garbage and Trash is picked up early on Thursday morning. Each home must have a garbage can with a good fitting lid. Cans must be kept clean, garbage must be wrapped. If one can will not take care of your family needs, get two, but KEEP YOUR OWN GARBAGE IN YOUR OWN CONTAINERS. These cans are to be kept at the BACK OF YOUR LOT. Papers or anything you want the man to pick up must be in those cans.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

6. Children must be kept out of other yards and must not play in other areas of the park without supervision. AT NO TIME WILL CHILDREN RIDE, SKATE OR PLAY ON THE FRONT STREETS OF THE PARK. If anyone wants to play ball, croquet, or anything that requires more room, please use the area northwest from the pool, which we try to keep mowed just for that purpose.

7. Cars will be washed on the wash rack ONLY. Automotive repairs will not be done in the park; current licensed vehicles ONLY will be parked here.

8. If your automotive equipment has toned mufflers or those producing an unusual sound, please be particularly careful as the noise becomes quite annoying to those of us who value our peace of mind.

9. We will permit the use of motorcycles or minibikes within the park, but only for direct route travel in and out. DO NOT RIDE THEM AROUND THE GENERAL PARK AREA FOR AMUSEMENT.

10. WE ARE ALL DRIVING TOO FAST .... SLOW DOWN. AT NO TIME ARE YOU TO DRIVE OVER 10 MILES PER HOUR IN THIS PARK FROM ENTRANCE TO EXIT. SOMEONE IS GOING TO GET HURT. IT SEEMS THAT ANYONE IN THE WEST END THINKS WHEN THEY HIT THE ROAD AT THE GARAGE, THAT IS A SIGN TO GO AS FAST AS THEY CAN. THOSE COMING IN FROM THE EAST END THINK THAT IS WHERE YOU TAKE ONE LONG SHOT TO THE WEST END. WE DO HAVE INTERSECTING ROADS. We insist you remind your guests or anybody you may be riding with who exceeds this speed. If you are reminding a stranger about their speed or any other error they are making in the Park--BE COURTEOUS. It would be less embarrassing for you if you remind your guests, than if it becomes necessary for us to.

11. Trash, papers, cardboard boxes and other foreign objects will not be strewn around the general area of the Park. Facilities have been provided to take care of all of these. Do your part and take proper care of your trash.

12. No one will remove his home from the Park without first having notified us of his exact time of departure and clearing with us.

13. All sewer connections will be so constructed so as not to leak. Garbage, sanitary napkins or other foreign objects will not be put down these sewers. All cleaning of sewers caused by stoppage due to your negligence will be charged to you.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

14. All TV and Radio will be tuned as to not be audible outside of your own home after 10:00 P. M.

15. All rent and other bills are due as of the 7th and 8th of each month. Upon receipt of your statement which, because of necessity, is usually later than that, a date is posted as the last paying date before the 5% preferred late charge is added. Rent is payable in advance and is not refundable.

16. All outgoing mail is to be placed in the mailbox at the mail building. It will be picked up each morning by the postman. Be sure I am notified if mail is coming to your house for someone else. If this is not done it will be returned. Everyone here must be registered in my office.

17. All homes must be underpinned. It is understood that we do the work.

18. In the event that you sell your home, please remember that the space does not go with the sale of it. In all probability the home will have to vacate the space. Renting your home for even a short period of time is not permitted.

19. An IMMEDIATE eviction notice will be given for drunkeness or any acts of immoral or nuisance conduct.

20. PLEASE GLANCE AT THE BULLETIN BOARD JUST INSIDE THE MAIL ROOM FREQUENTLY, AS NOTICES WILL BE POSTED THERE FROM TIME TO TIME.

21. The Swimming Pool is a separate Corporation however, anyone residing in the Park can become a member of the Wheel Estate Penguin Club.

22. We have complete service facilities. If we do not have what you want or need, we will get it for you or suggest where to get it.

LAUNDRY ROOM

1. The laundry room is for your convenience and is not a play room. Please keep children out unless accompanied by an adult.

2. Do not dye anything or wash rugs, bedspreads or blankets in the automatics. We have soft water therefore please do not use more than 1/3 cup of soap as you will oversuds the washers. The complete cycle on the washers is 12 minutes. Please stay with your laundry in case your washers get out of balance and so that you will not hold the next person up in doing their laundry.

3. The inside lines are to be used only for those few pieces which you may not want to put in the driers or hang outside. Do not use them all as someone else may have a need for some space

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

4. Washing may be done on Sunday, if necessary, however, nothing will be hung outside.

5. CLEAN THE WASHERS WHEN YOU FINISH. Put your empty cartons in the waste box provided.

6. Laundry tubs are for clothes only.

7. All controls and thermostats on furnaces, water heater and driers will be left alone. Report any difficulty to us.

8. Remember, these are your facilities. It will be of benefit to you to keep them clean and in good working order.

9. It is your responsibility to notify us if you install a washer in your home.

10. When leaving the building, please turn out the lights and during the heating season, close the doors.

PARKING

1. The curb line in front of your home is yours to use for parking. Please do not park in front of someone elses home. You are responsible for the parking of your visitors cars. There are some free areas around the Park which you may use, such as, by the laundry and the cross streets at the ends of the blocks.

2. Garage doors are to be kept closed except when actually being used. We are not responsible for any lost articles. If you do not have a garage or carport but would like one, please let us know and you will be notified when one is available.

EACH RESIDENT HAS A JOB TO DO IN HELPING TO KEEP THE PARK CLEAN AND NEAT AT ALL TIMES. EACH PERSON IS EXPECTED TO DO HIS SHARE. AFTER ALL, IT IS YOUR HOME.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Bibliography

Alexander, C. Notes on the Synthesis of Form. Cambridge: Harvard University Press, 1964.

Alexander, C., Ishikawa, S. & Silverstein, M. A Pattern Language. New York: Oxford University Press, 1977.

Allen, H. "That's No Trailer, That's My Home!" Washington Post Magazine, September 24, 1978, pp. 30-31, 33-35, 38, 41-42.

American Municipal Association. House Trailers' Comparative Provisions of 53 Municipal Ordinances. Bulletin No. 3, Chicago: American Municipal Association, July 1937.

Andrachek, S. E. "Two Years and Eight Months in a Mobile Home: A Personal Case Study," Housing Crisis and Response, ed. E. Morris & M. Woods, pp. 27-32. Department of Consumer Economics and Public Policy, Ithaca, New York: Cornell University, 1971.

Andrews, J. B. Personal communication, October 23, 1976.

Babson, R. W. "We'll Soon Be Living on Wheels." Trailer Travel Magazine, Vol. 1, 1 (January-February 1936), pp. 10-12, 26.

Baghestani, A. The Muncie Mobile Home Study. Unpublished masters dissertation, College of Business, Ball State University, January 1978.

Bair, F. H. Local Regulation of Mobile Home Parks, Travel Parks and Related Facilities. First edition, Chicago: Mobile Home Research Foundation, 1961.

Banham, Reyner. The Architecture of the Well-tempered Environment. Chicago: University of Chicago Press, 1969.

Barnett, H. Innovation: The Basis of Cultural Change. New York: McGraw Hill, 1953.

Barthes, R. Elements of Semiology. Trans. J. Cape. Boston: Beacon, 1967.

Bartlett, F. C. Remembering: A Study in Experimental and Social Psychology. London: Cambridge University Press, 1936.

Baver, C. Modern Housing. Boston: Houghton Mifflin Co., 1934.

Becker, F. D. Housing Messages. Stroudsburg, Pa.: Dowden, Hutchinson & Ross, 1977.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Beecher, C. & Stowe, H. B. American Woman's Home. Hartford, Conn.: Stowe-Day Foundation, 1975.

Belasco, W. J. "Americans on the Road: Autocamping, Tourist Camps, Motels, 1910-1945." Mimeo, no date.

Bender, R. A Crack in the Rear View Mirror. New York: Van Nostrand Reinhold, 1973.

Bender, R. & Parman, J. "A Framework for Industrialization." The Form of Housing, ed. S. Davis, pp. 173-189. New York: Van Nostrand Reinhold, 1977.

Berger, P. L., Berger, B. & Kellner, H. The Homeless Mind. New York: Random House, 1974.

Berger, P. L. & Luckmann, T. The Social Construction of Reality. New York: Doubleday, 1966.

Bernhardt, K. L. "Recent Research on Consumer Attitudes Towards Industrialized Housing." Unpublished paper delivered at Conference on Housing in the 1970's, Ann Arbor, Michigan: University of Michigan, April 11, 1972.

Bernhardt, K. L. The Mobile/Manufactured Housing Industry. Cambridge: MIT Press, 1980.

Bernstein, R. Praxis and Action. Philadelphia: University of Pennsylvania Press, 1971.

Bettelheim, B. A Home for the Heart. New York: Knopf, 1974.

Black, M. Models and Metaphors. Ithaca, N.Y.: Cornell University Press, 1962.

Blomgren, L. Mimeo letter, n.d.

Bonta, J. P. Architecture and It's Interpretation. New York: Rizzoli, 1979.

Boorstin, D. J. The Americans: The National Experience. New York: Random House, 1965.

Boudon, P. Lived-in Architecture. Trans. G. Onn. Cambridge: MIT Press, 1969.

Boulding, K. The Image. Ann Arbor, Mich.: University of Michigan Press, 1969.

Brolin, B. C. The Failure of Modern Architecture. New York: Van Nostrand, 1976.

Brown, J. L. "TCMA Goes on Record in Favor of Regulation." Trailer Travel, Vol. 4, 5 (May 1939), p. 37.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Bush, D. The Streamlined Decade. New York: Braziller, 1975.

Butner, R. J. Mobile Homes in Transition. Unpublished masters dissertation, Maxwell School, Syracuse University, May 1972.

Callahan, W. G. The Mobile Home as a Filtering Process: Implications for Poverty Mitigation. Unpublished doctoral dissertation, Department of Geography, Boulder: University of Colorado, 1976.

"Camouflaging the Draw Bar," Trailer Topics, Vol. 30, 8, p. 38.

Canter, D. Presentation to the Environmental Psychology Program, December 4, 1974, City University Graduate Center.

Carnevale, J. B. A Comparative Study of Neighboring in a Mobile Home Neighborhood and a Fixed-Home Neighborhood. Unpublished masters thesis, Flagstaff: University of Arizona, 1961.

Carr, L. & Steiner, J. E. Willow Run: A Study of Industrialization and Cultural Inadequacy. New York: Harper & Bros., 1952.

Carter, A. "Anatomy of Mobile Home Architecture." Architecture/ Midwest, Vol. 1 (September 1970).

Center for Automotive Safety. Mobile Homes: The Low-Cost Housing Hoax. New York: Grossman, 1975.

Clark, C. & Wilcox, C. E. "The House Trailer Movement." Journal of Applied Sociology, Vol. 22 (1939), pp. 503-516.

Collins, P. Changing Ideals in Modern Architecture. Montreal: McGill University Press, 1967.

Cooper, C. "The House as Symbol of Self." Architecture and Human Behavior, ed. J. Lang, et al. Stroudsburg, Pa.: Dowden, Hutchinson & Ross, 1974.

Cowgill, C. O. Mobile Homes: A Study of Trailer Life. Washington, D. C.: American Council of Public Affairs, 1941.

Cramer, R. "Images of Home." AIA Journal, Vol. 46 (1960), pp. 41-49.

Davis, S. "Mobile Homes." The Form of Housing, ed. S. Davis, pp. 217-242. New York: Van Nostrand Reinhold, 1977.

Dean, J. Home Ownership. New York: Harper Brothers, 1945.

Deck, J. Rancho Paradise. New York: Harcourt, Brace, Jovanovich, 1972.

"Defense Housing: A Look at the Lessons of World War II," Architectural Forum, Vol. XCIV (April 1951), pp. 122-127.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

"Defense Housing Fiasco." Architectural Forum, Vol. XCIV (July 1951), pp. 36-37.

Delaware-Muncie Metropolitan Plan Commission. Annual Report, 310 County Building, Muncie, Indiana: 1971, 1973, 1974.

De Tocqueville, A. Democracy in America, Volume I & II. Trans. H. Reeve. New York: Alfred A. Knopf, 1946.

Dewey, J. & Bentley, A. F. Knowing and the Known. Boston: Beacon, 1949.

Drury, M. Mobile Homes: The Unrecognized Revolution in American Housing. Second edition. New York: Praeger, 1972.

Dunn, C. L. The Trailer Coach Industry and the Trailer Coach Population of Southern California. Los Angeles: C. L. Dunn & Co., 1948.

Durkheim, E. The Division of Labor in Society. Trans. G. Simpson. New York: Free Press, 1964.

Eberhard, J. P. "Housing is a Process." Social Speculations, ed. R. Kostelanetz. New York: William Morrow & Co., 1971.

Edwards, C. M. Homes For Travel and Living. East Lansing, Michigan: Carl Edwards & Assoc., April 1977.

Ehrenkrantz, E. "BSD: Fibershell Kit-of-Parts." Company brochure, n.d.

Elliot, T. S. "Little Gidding." The Complete Poems and Plays. New York: Harcourt, Brace & World, 1969, pp. 138-145.

Feldman, S. Cognitive Consistency: Motivational Antecedents and Behavioral Consequences. New York: Academic Press, 1966.

Flink, J. J. America Adopts the Automobile: 1895-1910. Cambridge: MIT Press, 1970.

Foote, N., et al. Housing Choices and Constraints. New York: McGraw Hill, 1960.

Ford, H. "Mass Production." Encyclopedia Britannica, 22d ed., Vol. 15, pp. 38-40.

Foster, G. Traditional Cultures: And the Impact of Technological Change. New York: Harper & Brothers, 1962.

French, R., et al. "An Analysis of the Distribution Characteristics of Mobile Homes in America." Land Economics, Vol. 41, 2 (March 1965), pp. 131-139.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Fuller, R. B. Nine Chains to the Moon. Carbondale, Ill.: Southern Illinois University Press, 1963.

Giedion, S. Mechanization Takes Command. New York: W. W. Norton, 1969.

Gillies, J. An Appraisal of Mobile Home Living—The Parks and the Residents. Mimeo, Trailer Coach Association, 1960.

Guy, R. B., et al. The State of the Art of Prefabrication in the Construction Industry. Columbus, Ohio: Battelle Memorial Institute, September 29, 1967.

Habracken, N. J. Supports. New York: Praeger, 1972.

Hager, D. "Trailer Towns and Community Conflict in Lower Bucks County." Social Problems, Vol. II, 1 (1954), pp. 33-38.

Hall, E. T. Beyond Culture. New York: Doubleday, 1976.

Handlin, D. P. "The Detached House in the Age of the Object and Beyond." Environmental Design: Research and Practice, ed. W. Mitchell, pp. 7.2.1-7.2.8, UCLA, Los Angeles: EDRA, 1972.

Havighurst, R. & Morgan, H. G. The Social History of a War-Boom Community. New York: Longmans, Green & Co., 1951.

Hersey, G. L. High Victorian Gothic. Baltimore: Johns Hopkins University Press, 1972.

Hightower, R. S. "Mobile Home Park Practices: The Legal Relationship Between Mobile Home Park Owners and Tenants Who Own Mobile Homes." Florida State University Law Review, Vol. III (1975), pp. 102-126.

Hitchcock, H. R. In the Nature of Materials. New York: Dvell, Sloan & Pearce, 1942.

Hodes, B. & Roberson G. The Law of Mobile Homes. Washington, D. C.: Bureau of National Affairs, 1974.

Hodes, D. A. & Jensen, G. F. The Case for Industrialized Housing Reexamined. Housing Research Corporation, 1973.

Hood, W. "The Aristotelian Versus the Heideggerian Approach to the Problem of Technology." Philosophy and Technology, ed. C. Mitcham & R. Mackey, pp. 347-378. New York: Free Press, 1972.

H.U.D. (U. S. Department of Housing and Urban Development) Housing Survey: Parts 1 and 2 (Occupants of New Housing Units, Mobile Homes and the Housing Supply). Washington, D. C.: USGPO, November 1968.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

H.U.D. Mobile Home Standards. Washington, D. C.: HUD, 1976.

Ittelson, W. H. Visual Space Perception. New York: Springer Publishing, 1960.

Ittelson, W. H., et al. Toward a Theory of Environment and Behavior. Environmental Psychology Program, City University Graduate Center, 1975.

Jackson, J. B. "The Westward Moving House: Three American Houses and the People Who Lived in Them." Landscapes, ed. E. Zube, pp. 10-42. Amherst, Mass.: University of Massachusetts, 1970.

Jeanneret, C. E. Towards a New Architecture. Trans. F. Etchells. New York: Frederick A. Praeger, 1946.

Jeanneret, C. E. The Marseilles Block. Trans. G. Sainsbury. London: Harvill Press, 1953.

Johnson, S. K. Idle Haven. Berkeley: University of California Press, 1971.

Jones, E., et al. Attribution: Perceiving the Causes of Behavior. Morristown, N.Y.: General Learning Press, 1972.

Kaiser Committee. A Decent Home. Presidential Commission on Urban Housing. Washington, D. C.: USGPO, 1968.

Keller, S. The Urban Neighborhood: A Sociological Perspective. New York: Random House, 1966.

Kendall, E. The Happy Mediocrity. New York: G. P. Putnam, 1971.

Kendig, F. "Facelift for Mobile Homes?" Design and Environment, Vol. 3, 1 (September 1972), pp. 42-51.

Koch, C. & Lewis, R. K. Roadblocks to Innovation in the Housing Industry. A report to the National Commission on Urban Problems, Washington, D. C., 1968.

Kuhn, T. S. The Structure of Scientific Revolutions. Chicago: University of Chicago Press, 1970.

"Legislative Update." IMHA Weekly News, Indiana Mobile Home Manufacturers Association, n.d.

Lévi-Strauss, C. Structural Anthropology. New York: Doubleday Anchor, 1967.

Lévi-Strauss, C. Tristes Tropiques. Trans. J. & D. Weightman. London: Jonathan Cape, 1973.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Lewin, K. Field Theory in Social Science, ed. D. Cartwright. New York: Harper, 1951.

Lynd, R. S. & Lynd, H. M. Middletown. New York: Harcourt, Brace & World, 1956.

Lynd, R. S. & Lynd, H. M. Middletown in Transition. New York: Harcourt, Brace & World, 1965.

Lynes, R. Domesticated Americans. New York: Harper & Row, 1963.

McLuhan, M. Understanding Media. New York: McGraw Hill, 1964.

Mandelker, D. & Montgomery, R. Housing in America. Indianapolis: Bobbs-Merrill Co., 1973.

Mannheim, K. Man and Society in an Age of Reconstruction. New York: Harcourt, Brace & World, 1940.

Marris, P. Loss and Change. Garden City, N.Y.: Anchor Doubleday, 1975.

Mayer, M. The Builders. New York: W. W. Norton, 1978.

Mead, G. H. The Philosophy of the Act. Chicago: University of Chicago Press, 1972.

Mead, M. New Lives For Old. New York: Morrow, 1966.

Meloan, T. Mobile Homes. Homewood, Ill.: Richard D. Irwin, Inc., 1954.

Merton, R. K. Social Theory and Social Structure. New York: Free Press, 1968.

Meyer, W. T. The Building Trades Versus Building Prefabrication. Working Paper 10, Princeton University Center for Urban and Environmental Planning, School of Architecture, 1974.

Michelson, W. Man and His Urban Environment: A Sociological Approach. Reading, Mass.: Addison-Wesley, 1970.

"The Mobile Home is the 20th Century Brick." Architectural Record, Vol. 143, 4 (April 1968), pp. 137-146.

Moose, M. (ed.). The Immobile Home Syndrome. Second edition. Fayettesville, Arkansas: University of Arkansas, 1973.

Morison, E. From Know-how to No Where. New York: Basic Books, 1975.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Morris, E. & Woods, M. Housing Crisis and Response. Cornell University, Department of Consumer Economics and Public Policy. Ithaca, N.Y.: 1971.

Mumford, L. Technics and Civilization. New York: Harcourt, Brace & World, 1963.

Nash, C. E. Trailer Ahoy. Lanchaster, Pa.: Intelligencer Printing Co., 1937.

Nash, R. Wilderness and the American Mind. New Haven: Yale University Press, 1973.

Nelkin, D. Politics of Housing Innovation. Ithaca, N.Y.: Cornell University Press, 1971.

Ortony, A. (ed.). Metaphor and Thought. New York: Cambridge University Press, 1979.

Packard, V. A Nation of Strangers. New York: David McKay, 1972.

Pawley, M. Architecture Versus Housing. New York: Praeger, 1971.

Perin, C. With Man in Mind. Cambridge: MIT Press, 1970.

Polanyi, M. & Prosch, H. Meaning. Chicago: University of Chicago Press, 1975.

"Prebuilt Homes Aren't Trailers, Says Pa. Court." Mobile Home Merchandiser, February 1967, p. 26.

Pye, D. The Nature and Art of Workmanship. New York: Van Nostrand Reinhold, 1971.

Rapoport, A. "The Personal Element in Housing: An Argument for Open-Ended Design." RIBA Journal, July 1968, pp. 299-307.

Rapoport, A. House Form and Culture. Englewood Cliffs, N. J.: Prentice-Hall, 1969.

Redfield, R. The Primitive World and Its Transformation. New York: Cornell University Press, 1953.

Rogers, E. The Diffusion of Innovations. New York: Free Press, 1962.

Roscow, I. "Home Ownership Motives." American Sociological Review, Vol. 13, 6 (December 1948), pp. 751-763.

Roseberry, C. R. Glenn Curtiss: Pioneer of Flight. Garden City, N.Y.: Doubleday, 1972.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Rowe, C. "Introduction." Five Architects, Eisenman, et al. New York: Wittenborn, 1972.

Schon, D. Displacement of Concepts. London: Tavistock, 1963.

Schon, D. Technology and Change: The New Heraclitus. New York: Delacorte Press, 1967.

Schon, D. Beyond the Stable State. London: Temple Smith, 1971.

Schon, D. "Generative Metaphor: A Perspective on Problem Setting in Social Policy." Metaphor and Thought, ed. A Ortony, pp. 254-283. New York: Cambridge University Press, 1979.

Scott, G. The Architecture of Humanism. New York: Charles Scribner's Sons, 1924.

Shepard's Mobile Homes and Mobile Home Parks: Cases, Statutes, Ordinances, Regulations, Opinions, Tables and Cases. New York: McGraw-Hill, 1975.

Silbar, R. "The Unmentioned Debt to the Yacht." Travel Trailer, Vol. 4, 6 (July 1939), pp. 14-15.

Sims, B. The Trailer Home: With Practical Advise on Trailer Life and Travel. New York: Longmans Green and Company, 1937.

Sketler, L. "Exploding Trailer Fallacies." Trailer Life, Vol. II, 7 (July 1951), pp. 47.

Slater, P. The Pursuit of Loneliness. Boston: Beacon, 1976.

Smith, W. Housing: The Social and Economic Elements. Berkeley: University of California Press, 1970.

Soleri, P. Arcology: The City in the Image of Man. Cambridge: MIT Press, 1969.

Spicer, E. Human Problems in Technological Change. New York: Russell Sage, 1952.

Steinbeck, J. Travels With Charley. New York: Curtis Publishing, 1961.

Stonebraker, G. Building Systems Development Incorporated. The Impact of Social and Technical Change in Building. Washington, D. C.: U. S. Department of Commerce Clearing House, 1967.

Stout, W. "The New Roll-Your-Home Era." Travel Trailer, Vol. 1, 3 (July 1936), pp. 15-16.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Stutsky, R. & Rowe, C. "Transparency: Literal and Phenomenal." Perspecta. New Haven: Yale University, 1963.

Sullivan, B. Industrialization in the Building Industry. New York: Van Nostrand Reinhold, 1980.

Tafuri, M. Architecture and Utopia: Design and Capitalist Development. Trans. B. Luigia La Penta. Cambridge: MIT Press, 1976.

Thoreau, H. Walden. New York: Thomas Y. Cromwell Co., 1961.

Time, "Trailer Test." Vol. XXVIII (November 23, 1936), p. 66.

Tomfohrde, K. Special Report of Trailers and Trailer Camps. State Planning Board: Boston, Mass., State House Room 24--Mimeo, WPA Project #15245, June 1939.

"Trailerite is a Typical American." Travel Trailer, Vol. 10, 7, p. 5.

"Tyranny in Mobile-Home Land." Consumer Reports, Vol. 38, 7 (July 1973), pp. 440-442.

Unseld, C. "Transactionalism: A Theoretical and Empirical Perspective." Toward A Theory of Environment, Behavior and Experience, Ittelson, et al., pp. 162-182. Environmental Psychology Program, City University Graduate Center, 1975.

Urban Research and Development Corporation. Guidelines for Improving the Mobile Home Living Environment. Washington, D. C.: H.U.D., May 1978.

Urwick, L. The Meaning of Rationalization. London: Nisbet & Co., 1929.

Venturi, R., Brown, D. S., Izenour, S. Learning From Las Vegas. Cambridge: MIT Press, 1977.

Wachsmann, K. The Turning Point in Building. New York: Reinhold, 1961.

Wallis, A. Privacy and Technology. Paper delivered at APA Convention, Montreal, Canada, August, 1974. Environmental Psychology Program, City University Graduate Center, New York.

Wellington, A. C. "Trailer Camp Slums." Survey, LXXVII, 10 (October 1951), pp. 418-421.

"Why I Like Trailer Living." Trailer Travel, Vol. 15, 4 (April 1950), p. 48.

Wolfram, E. History of Collage. New York: Macmillan, 1975.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Woodall's Mobile Home and Park Directory. Chicago: Woodall's Publishing, 1974.

Zucker, P. Town and Square. Cambridge: MIT Press, 1959.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Sources of illustrations*

1. Trailer Travel, Vol. 1, 1 (January-February 1936).

2. Advertisement for the Covered Wagon Company, Detroit, Michigan; appearing in Trailer Travel, Vol. 1, 1 (January-February 1936), p. 21.

3. Club-Car Trailer advertisement in Trailer Life, August 1938, p. 35.

4. Hayes Trailer advertisement in Trailer Life, March 1937, p. 5.

5. Kozy Coach advertisement in Trailer Travel, Vol. 1, 1 (January-February 1936), p. 35.

6. Kozy Coach advertisement showing heating system, in Trailer Travel, Vol. 5, 12 (December 1940), p. 16.

7. Aladdin Trailer advertisement in Trailer Travel, Vol. 1, 2 (March-April 1936), p. 33.

8. Vacation Trailer Coach advertisement in Trailer Travel, Vol. 1, 2 (March-April 1936), p. 23.

9. Batavia Trailer advertisement in Trailer Life, March 1937, p. 50.

10. Photograph published in Trailer Travel, Vol. 2, 3 (March 1938), p. 14.

11. Cartoon appearing in Trailer Life, March 1937, p. 24.

12. Cartoon appearing in Trailer Life, March 1937, p. 36.

13. Plan published in Trailer Travel, Vol. 3, 8 (August 1938), p. 79.

14,15. Drawings by Corwin Willson, published in Architectural Record, July 1936, p. 64.

16. Drawing by Royal Barry Wills, published in Pencil Points, January 1937, p. 43.

17. Photograph in Trailer Travel, Vol. 1, 5 (October 1936), p. 19.

---

*The illustrations cited here, which are not by the author, are either from materials on which the copyright has expired, from magazines no longer being published, or from uncopyrighted advertisements and brochures.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

18,19. Drawings of Durham Houses, in Trailer Travel, Vol. 3, 6 (June 1938), p. 12.

20,21. Drawings in "Low Cost Homes," H. E. Wickers, Kansas State College Bulletin, Vol. XXIII, 38 (September 1939), p. 21.

22. Advertisement for the Liberty Coach Company; Bremen, Indiana, in Trailer Topics, Vol. II, 10 (November 1947), p. 6.

23. Advertisement for the Leisurama model, by the Magnolia Company; in Trailer Life, November 1964, p. 21.

24. Advertisement for Clipper Model trailer in Trailer Life, Vol. 10, 7 (July 1950), p. 68.

25. Floor plan of Ambassador Delux from an advertisement in Trailer Travel, Vol. 5, 1 (January 1940), p. 29.

26. Cut away drawing from an advertisement in Trailer Life, January 1954, p. 38.

27. Floor plan from an advertisement for the Anderson Coach Company in Trailer Life, Vol. 10, 4 (April 1950), p. 67.

28. Photograph from Trailer Life, Vol. 10, 1 (January 1950), p. 23.

29. Photograph from Trailer Topics, Vol. II, 10 (November 1947), p. 13.

30. Advertisement for Continental Trailer Company; Chicago, Illinois; in Trailer Topics, Vol. II, 4 (April 1947), p. 37.

31. Photograph from an advertisement in Trailer Life, January 1954, p. 46.

32. Advertisement for Curtis Wright Industries; Puente, California; in Trailer Topics, Vol. II, 1 (January 1947), p. 29.

33. 1953 Spartan Aircraft trailer; photograph by author.

34. Perspective drawing from advertisement for Elcar Coach; Chicago, Illinois; in Trailer Topics, Vol. II, 6 (June 1947), p. 75.

35. Perspective drawing from advertisement for Elcar Coach; Chicago, Illinois; in Trailer Topics, Vol. II, 6 (June 1947), p. 75.

36. Advertisement for Cabin Car by R. S. Evans Associates, New York, New York; in Trailer Topics, Vol. II, 2 (February 1947), p. 26.

37. Advertisement for Indian Trailer in Trailer Travel, Vol. 5, 1 (January 1940), p. 28.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

38. Photograph of Travelite Trailer in Trailer Travel, Vol. 10, 6 (June 1945), p. 24.

39. Photograph in Trailer Life, April 1953, p. 28.

40. Photograph in Trailer Topics, Vol. II, 4 (April 1947), p. 19.

41. Photograph in Trailer Travel, Vol. 5, 12 (December 1940), p. 14.

42. Advertisement for the Ventoura Travelaire in Mobile Life, 1957, p. 91.

43. Photograph of Ventoura model in Trailer Life, May 1957, p. 39.

44. Advertisement for Herrili mobile home in Mobile Life, 1957, p. 87.

45. From an advertisement in Trailer Life, June 1957, p. 52.

46. Photograph from the article "One Queen Among Many," by Diane N. Starr; in Mobile Life, 1957, p. 9.

47. Advertisement for Supreme Victor mobile home in Mobile Life, 1957, p. 87.

48. Advertisement for Ventoura Model 48, in Mobile Life, 1957, p. 91.

49. Advertising brochure for Marlette Mobile Homes; Marlette, Michigan, 1963.

50. Photograph in Mobile Life, 1957, p. 6.

51. Photograph in Trailer Life, May 1954, p. 38.

52. Advertisement for Trailorama in Mobile Home Trailer Dealer, April 1955, p. 72.

53. Drawing from advertisement for Trail-Wide Corp.; Oxnard, California; in Trailer Life, September 1964, p. 42.

54. Advertisement for Trailer Life, September 1964, p. 42.

55. Advertisement for Pacemaker Trailer Company; Elhkart, Indiana; in Trailer Life, 1957, p. 78.

56. Advertising brochure, Bendix Home Systems, Inc.; Bourbon, Indiana, 1975.

57. Advertising brochure, House of Architecture Company; Elhkart, Indiana, 1975.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

58. A double-wide unit by the Skyline, Company, shown in South Bend, Indiana, 1975. Photograph by author.

59. Floor plans from brochure by Highland Homes Inc.; Swayzee, Indiana, 1975.

60. Perspective from advertising brochure by Marlette Coach Company; Marlette, Michigan, 1963.

61. Design by Philip L. Dangerfield in "Reynolds Creative Design Award Program for Mobile Homes," published by Reynolds Aluminum, 1976.

62. Photograph in Mobile Life, 1957, p. 19.

63. Photograph of R.V. rally in San Jacinto mountains, from Mobile Life, 1957, p. 41.

64. From Trailer Life, October 1964, p. 52.

65. Mobile home in "widows row," Freedom Acres mobile home park: Muncie, Indiana. Photograph by author.

66. Mobile home with carport and expando room in first addition to Freedom Acres. Photograph by author.

67. House one block from Freedom Acres in the blue collar section of Muncie. Photograph by author.

68-78. Freedom Acres, photographs by author.

79. Drawing from a brochure by the Schult Mobile Home Company, 1975.

80. Drawing from a brochure by Building Systems Design, Inc., n.d.

81. Drawings from Encyclopedia of Cottage, Farm and Villa Architecture, J. C. Loudon; London: Longman, 1863.

82. Photograph courtesy of Donna Morganstern.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.