

ROUTLEDGE REVIVALS

Design Intervention

Toward a More Humane Architecture

Edited by

**Wolfgang F. E. Preiser, Jacqueline C. Vischer and
Edward T. White**



Design Intervention

Design Intervention: Toward a More Humane Architecture, first published in 1991, intends to demonstrate that interest in social issues is alive and well in architecture, that there is a small but effective cadre of dedicated professionals who continue to commit themselves to solving social problems, and that architecture is being applied to the alleviation of the social ills of our time.

The editors and contributors in this book have all grappled with their own definitions of design innovation, and express in practical and useful ways their ideas for contributing to a better and less needy world through the architecture they describe.

This book will be of interest to students of architecture.

Page Intentionally Left Blank

Design Intervention

Toward a More Humane Architecture

Edited by

Wolfgang F. E. Preiser

Jaqueline C. Vischer

Edward T. White



Routledge
Taylor & Francis Group

First published in 1991
by Van Nostrand Reinhold

This edition first published in 2015 by Routledge
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN
and by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 1991 Wolfgang F. E. Preiser, Jaqueline C. Vischer and Edward T. White

The rights of Wolfgang F. E. Preiser, Jaqueline C. Vischer and Edward T. White to be identified as editors of this work has been asserted by them in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Publisher's Note

The publisher has gone to great lengths to ensure the quality of this reprint but points out that some imperfections in the original copies may be apparent.

Disclaimer

The publisher has made every effort to trace copyright holders and welcomes correspondence from those they have been unable to contact.

A Library of Congress record exists under LC control number: 90040999

ISBN 13: 978-1-138-88679-7 (hbk)
ISBN 13: 978-1-315-71430-1 (ebk)
ISBN 13: 978-1-318-88679-7 (pbk)

DESIGN INTERVENTION

Toward a More Humane Architecture

Edited by

Wolfgang F. E. Preiser
University of Cincinnati

Jacqueline C. Vischer
Institute for Building Science, Boston

Edward T. White
Florida A&M University

“ . . . Buildings may be less solid than they seem, existing invisibly in the mind of the architect before they are born, remembered invisibly through the ages in the memories of the generations.”
—Yates, 1980

Copyright © 1991 by Van Nostrand Reinhold

Library of Congress Catalog Card Number 90-40999
ISBN 0-442-27333-9

All rights reserved. No part of this work covered by the copyright hereon may be reproduced or used in any form by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—without written permission of the publisher.

Printed in the United States of America

Van Nostrand Reinhold
115 Fifth Avenue
New York, New York 10003

Chapman and Hall
2-6 Boundary Row
London SE1 BHN, England

Thomas Nelson Australia
102 Dodds Street
South Melbourne 3205
Victoria, Australia

Nelson Canada
1120 Birchmount Road
Scarborough, Ontario M1K 5G4, Canada

16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Library of Congress Cataloging-in-Publication Data

Design intervention : toward a more humane architecture / edited by Wolfgang F. E. Preiser, Jacqueline C. Vischer, Edward T. White.

p. cm.

Includes bibliographical references and index.

ISBN 0-442-27333-9

1. Architectural Design. I. Preiser, Wolfgang F. E.

II. Vischer, Jacqueline. III. White, Edward T.

NA2750.D399 1991

729—dc20

90-40999

CIP

Contents

Preface v

Contributors viii

**An Introduction to Design Intervention:
A Manifesto for the Future of Environmental Design** 1
Wolfgang F. E. Preiser and Jacqueline C. Vischer

PART I. HOUSING DESIGN AND SOCIAL CHANGE 9

1. **Housing the Single-parent Family** 11
Kathryn H. Anthony
2. **Brookview House: A Home for Mothers and Children** 37
Anne Gelbspan
3. **Housing Pregnant Women in Conflict with the Law:
A Massachusetts Model and Miracle** 51
Joan Forrester Sprague
4. **Design for the Homeless** 75
Nora Richter Greer
5. **High-rise Rehabilitation for the Elderly: The Case of the Pink Palace** 93
Clare Cooper Marcus
6. **NOFIM: The Beautiful Vision of a Retirement Community in Israel** 111
Robert B. Bechtel
7. **The Best of Design for the Elderly** 121
Paul John Grayson

PART II. DESIGNING FOR PERSONS WITH DISABILITIES 153

8. **Accessible Environments: Toward Universal Design** 155
Ronald L. Mace, Graeme J. Hardie, and Jaine P. Place
9. **The Westside Ambulatory Care Center in Chicago** 177
Thomas G. Deniston

- 10. A Multiple Sclerosis Center Program and Post-occupancy Evaluation** 197
Robert Gifford and Mark Martin

- 11. Group Homes and Groups of Homes: Alternative Housing Concepts and Their Application to Elderly People with Dementia in Sweden** 223
Catarina Almberg and Jan Paulsson

- 12. Design for Dementia** 239
Margaret P. Calkins

- 13. Familiar Design Helps Dementia Patients Cope** 255
Rikard Küller

- 14. The Difficult Dimension of Accessible Design: Confronting the Family** 269
Raymond Lifchez

PART III. DESIGN INNOVATION 283

- 15. Organic Design in the Netherlands: Case Study of an Innovative Office Building** 285
Jacqueline C. Vischer and Wico C. Mees

- 16. Design Innovations in Office Environments** 301
Alan Hedge

- 17. Innovation in the Design of the Working Environment: A Case Study** 323
Michael Corcoran and John Ellis

- 18. Design Innovation and the Challenge of Change** 335
Wolfgang F. E. Preiser

- Epilogue: Summing Up Opinions on Architecture and Social Change** 353
Jacqueline C. Vischer

- Index** 367
-

Preface

This book has gone through several important evolutions in the process of its conception and birth. It started out as a series of case studies and analyses of building design for accessibility to the disabled. It has become a compendium of thoughts, ideas, and examples of the relationship between design innovation and social change. As the mandate has broadened, so has the challenge of defining design intervention.

In its first draft, this book intended to illustrate how architectural design could respond to the challenge of accessibility with examples of buildings that had successfully become accessible to disabled persons. In doing this research, we encountered many interesting stories about building design, rehabilitation, and renewal in relation to a wide range of social needs *in addition to* physical disability. We could not resist including such valuable examples of innovative architecture, and our mandate expanded to include a broader definition of design intervention that incorporated home and work environments for special needs and for all people.

Many of our examples do not make it into the glossy architecture magazines; the design innovations in this book do not celebrate corporate headquarters buildings in foreign capitals designed by big-name architects. The heroes and heroines of our stories are unsung and unacclaimed by the “power structure.” The users of these buildings are the poor and disenfranchised, ordinary workers, and other representatives of the unempowered groups of our society. The architects and planners of these buildings are people who care more about alleviating human misery and improving the human condition than they do about seeing their names in lights.

By the third draft of this volume we realized that we were really interested in the generic issues of architectural design and social change. Thus “An Introduction to Design Intervention: A Manifesto for the Future of Environmental Design” opens with a challenge to the social responsibility of architecture and a manifesto for more socially responsible design in the future. This chapter presents a rationale for innovative thinking in design and a more humane orientation toward architecture that is based on responding to new social challenges, such as universal access for people with disabilities.

Part I, Housing Design Intervention, focuses on case studies of innovative environments for user groups that are not architecture’s traditional clients. In modern urban society, new user groups for buildings include the homeless, single-parent families, pregnant women in the correctional system, low-income people, and the welfare elderly. The design intervention in these case studies is wide-ranging and by no means uniform. It includes the process used for making planning and design decisions, or the ways building users became involved, or the financing of the project, or the social and behavioral research that was done to inform design. The inescapable conclusion to be drawn from delving into these experiences through our contributors is that architectural intervention is expressed in a variety of ways and with a variety of goals and outcomes: It is more far-reaching than the shape, color, and ornament of a building.

Part II, *Designing for Persons with Disabilities*, is where our book started out. We feel that “barrier-free architecture” should live up to the dictum that “designs that work for persons with disabilities are good for all.” The contributions to this section demonstrate ways in which barrier-free architecture is visually exciting and attains high visual quality as well as offering successful examples of accessibility.

This section focuses on successful examples of integrative design concepts and philosophy, where barrier-free architecture is not an end in itself but is an essential part of the built environment. We have tried to avoid comprehensive listings of design requirements for the disabled because these are available in the form of standards (such as the Federal Accessibility Standard). The contributors to Part II represent countries on either side of the Atlantic Ocean, and we have encouraged a range of viewpoints and philosophies that reflect various cultural biases and perspectives on definitions of disability and the needs of disabled persons.

In Part III, *Design Innovation*, the unifying theme is the improvement of the design of modern office buildings. The implication of Part III is that the goals of more humane and responsible environments that meet human needs and increase human comfort are paramount. This section closes with a “debate” among architectural educators and practitioners, which is loosely based on interviews about current ideas in the architectural profession, social change and architecture, and the implications for the future of architecture.

There are three types of chapters from the contributing authors, and examples of each type are spread throughout the three parts of the book. In one group are theoretical and philosophical discourses about design intervention and design innovation. In the second group are case-study descriptions of buildings such as offices, housing, and hospitals that represent new design concepts and strategies. The third group contains research studies on such phenomena as designing residential environments for people suffering from dementia or formulating the environmental needs of impoverished homeless women with children. Authors in all three groups have grappled with their own definitions of design innovation, and express in practical and useful ways their ideas for contributing to a better and less needy world through the architecture they describe.

Architects and other professionals appeared to stop talking and thinking about the needy groups of our society as the world moved into the 1980s. Educated people seemed to lose touch with their social consciences and commitments to social change as they abandoned the ideals of the '60s and '70s in which they grew up. Of course, this does not mean that there are fewer unmet needs in our society, or that the social problems that once concerned us all have been solved. In creating this book, we were therefore encouraged to see how much quiet, effective, social problem solving continues to take place under the architectural umbrella. The examples in this book show, repeatedly, that there are planners, architects, and others at work in the world who both care about and take responsibility for meeting the needs of the “have-nots” of our society. Even though they may be a smaller and quieter group than the social protesters of a decade ago, they are nonetheless effective. In fact, in those countries where public funding for nonprofit projects has slowed to a trickle, these professionals’ achievements are even more notable, having been achieved with fewer resources.

In a recent article in *Architecture* magazine, the author asks what has become of “social architecture”—the social consciousness movement in architecture that moved the profession in the late '60s and early '70s (July 1989, p. 50). She reports some of the answers proffered by researchers, academics, and practitioners in architecture today, and concludes that “interest in social issues” is coming back, and that the profession is “slowly beginning to assume responsibility for untended social problems.”

Our intention in this book is to demonstrate that interest in social issues is alive and well in architecture, that there is a small but effective cadre of dedicated professionals who continue to commit themselves to solving social problems regardless of the vagaries of the spirit of the times, and that architecture—whether through innovation in design, in process, or in applications of technology—is being applied to the alleviation of the social ills of our time.

ACKNOWLEDGMENTS

First, we would like to thank all our contributors for working so hard and for telling such interesting stories. We thank all those individuals who helped shape this volume through their ideas and constructive criticism. They include colleagues in government and the private sector, as well as client organizations, or in many cases very special clients, many of whom are acknowledged in the individual chapters.

Thanks are owed to Architectural Research Consultants and the School of Architecture and Planning at the University of New Mexico, both in Albuquerque, New Mexico, for their support and encouragement in this project. Special thanks go to the late Tina Taylor, whose dedication and important contributions to this book will be forever remembered.

Contributors

Catarina Almberg is an architect and researcher at the Division for Housing Design, School of Architecture, Chalmers Institute of Technology in Göteborg, Sweden. Current work includes the development of services and housing alternatives in older, small-dwelling areas in cooperation with the municipality of Göteborg.

Kathryn H. Anthony is Associate Professor in the School of Architecture and in the Housing Research and Development Program at the University of Illinois at Urbana-Champaign. She recently co-edited *Coming of Age: Proceedings of the 21st Annual Conference of the Environmental Design Research Association (EDRA)* and is currently a member of EDRA's Board of Directors and co-chair of EDRA's Post-Occupancy Evaluation Network.

Robert B. Bechtel is Professor of Environmental Psychology in the Department of Psychology, University of Arizona at Tucson. He is editor of *Environment and Behavior* and his latest book, *Methods of Environmental and Behavioral Research*, was just reprinted by Krieger.

Margaret P. Calkins is an architectural consultant and researcher specializing in environments for people with dementia. She was part of the design team for the Corinne Dolan Alzheimer's Center at Heather Hill in Chardon, Ohio—the first Alzheimer's facility specifically designed for environmental research. She is now part of the research team evaluating the impact of a range of environmental characteristics on this population. She has presented papers internationally and is author of *Design for Dementia: Planning Environments for the Elderly and the Confused*.

Michael Corcoran is Director of BDP Energy & Environment, a multidisciplinary studies group within Building Design Partnership based in Manchester, England. He is a building services engineer by training but also has a master's degree in Architectural Science from University College, London. His interests center on passive design principles and on the application of appropriate technology.

Thomas C. Deniston directs the Barrier Free Design Staff of the Office of Architecture and Engineering, Department of Veteran's Affairs in Washington, D.C. He frequently lectures at schools of architecture.

John Ellis is a professional engineer and Chairman of the mechanical and electrical services engineering profession of Building Design Partnership (BDP). BDP is one of Europe's largest practices of architects and engineers. His design interests center on integrated low energy buildings and high technology facilities for pharmaceutical and microelectronics companies.

Anne Gelbspan is a principal of the Homeless Women's Housing Initiative, a nonprofit development corporation in Boston that develops housing designed for single mothers and children. She has managed a limited equity housing cooperative and is the author of *The Affordable Housing Challenge*, a report on well-designed housing.

Robert Gifford is a professor in the Department of Psychology at the University of Victoria in British Columbia. He is also a principal in Optimal Environments, Inc., a firm that specializes in planning and design research. He teaches environmental psychology and is the author of *Environmental Psychology: Principles and Practice* (1987) and the editor of *Applied Psychology: Variety and Opportunity* (1991). He is also special issues editor of the *Journal of Environmental Psychology* and serves as a consultant to nonprofit and government agencies concerned with housing, schools, support for the disabled, offices, and outdoor recreation.

Paul John Grayson, president of Environments for Living, is an architect and consultant in barrier-free design. He lectures extensively on housing issues and promotes the application of products of universal design. He is co-author of the book *Life Care—A Long Term Solution?* and is a research affiliate with Boston University's Institute of Gerontology.

Nora Richter Greer, a freelance writer in Washington, D.C., is author of *The Search for Shelter* and *The Creation of Shelter*, two American Institute of Architects publications that examine housing for the homeless and those with little means. She formerly was senior editor of *Architecture*.

Graeme J. Hardie, architect and anthropologist, is a specialist in housing-related issues with a particular emphasis on the impact of cultural change. He is Director of Research at the School of Design at North Carolina State University, and Co-Director of the Research and Training Center for Accessible Housing in Raleigh, North Carolina.

Alan Hedge is an associate professor in the Department of Design and Environmental Analysis at Cornell University. He teaches and directs research on human factors and environmental design issues, especially office lighting, ventilation, and indoor air quality. He is an Honorary Research Fellow of the Institute of Occupational Health, Medical School, Birmingham University, Birmingham, U.K., and is actively involved in a number of professional organizations. He also directs Facilities Diagnostics International, a U.S.A./U.K. based consulting corporation specializing in computer applications in facilities management.

Rikard Küller is Director of the Environmental Psychology Laboratory, School of Architecture, Lund Institute of Technology, Sweden. He was one of the founders of environmental psychology research in Sweden in the mid-sixties, and later became the first chairman of the international association, IAPS. His present research interests include environments for the elderly, traffic environments, color and arousal, and seasonal affective disorder.

Raymond Lifchez is Professor of Architecture at the University of California, Berkeley. His most recent book *The Dervish Lodge: Architecture, Art, and Sufism in Ottoman Turkey*, is forthcoming.

Ronald L. Mace is an architect and product designer. He is President of Barrier Free Environments, Inc., in Raleigh, North Carolina, a design firm that specializes in design for disabled and older people. He is also co-director of the Research and Training Center for Accessible Housing at the School of Design at North Carolina State University. Mr. Mace is a noted speaker and author of numerous books and articles on design for people of all ages and abilities.

Clare Cooper Marcus is a professor in the Department of Architecture and Landscape Architecture at the University of California, Berkeley. Among her publications in the field of environment and behavior research are the books *Easter Hill Village: Some Social Implications of Design*; *Housing As If People Mattered: Site Design Guidelines for Medium Density Family Housing* (co-authored with Wendy Sarkisian); and *People Places: Design Guidelines for Urban Open Space* (co-authored with Carolyn Francis).

Mark Martin is a graduate of the University of Victoria and completed his master's degree in human-environmental relations at Cornell University. He has worked as a consultant for the British Columbia Buildings Corporation and currently works with Dr. Gifford in Optimal Environments as the Research Director.

W.C. Mees is an architect who lives in the Netherlands. He is Senior Project Manager at MBO, the Dutch real-estate development company.

Jan Paulsson is an associate professor of Housing Design, School of Architecture, Chalmers Institute of Technology in Göteborg, Sweden, whose main interests are groups with special needs, and the development of housing alternatives for the elderly, the severely disabled, and persons with chronic diseases.

Jaine P. Place, owner and senior associate of Cooperative Strategies, Inc., is a planner, writer, and grantseeker for non-profit organizations, and has worked extensively with the Research and Training Center for Accessible Housing at North Carolina State University in Raleigh.

Wolfgang F. E. Preiser is a professor of Architecture at the University of Cincinnati. He was formerly Professor of Architecture and Director of the Center for Research and Development at the School of Architecture and Planning, University of New Mexico, and also Director of Research with Architectural Research Consultants, Inc. in Albuquerque, New Mexico. Dr. Preiser has extensive experience and has published numerous books and articles in the fields of post-occupancy evaluation, facility programming, and environmental design research in general. He has lectured worldwide on these and related topics.

Joan Forrester Sprague, a consulting architect and planner based in Boston, left private architectural practice in 1978 to pioneer the establishment of local initiatives dedicated to the housing and economic development needs of low-income women and children. Her nationally recognized advocacy and technical assistance includes creating, analyzing, and writing about innovative work in this area. Her book, *More than Housing: Lifeboats for Women and Children* will be published in 1991.

Jacqueline C. Vischer is Director of the Institute for Building Science in Massachusetts. She is an environmental psychologist who has published many articles in professional journals and is the author of *Environmental Quality in Offices*.

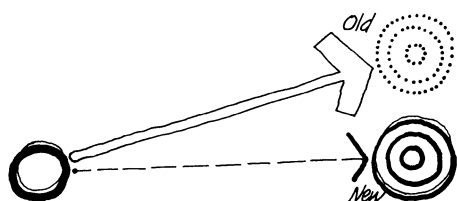
Edward T. White is Professor of Architecture and Director of the Graduate Program in the School of Architecture at Florida A.&M. University, where he teaches design, programming, and post-occupancy evaluation. He is a registered architect and has authored seven books and twelve monographs on architecture-related subjects.

An Introduction to Design Intervention

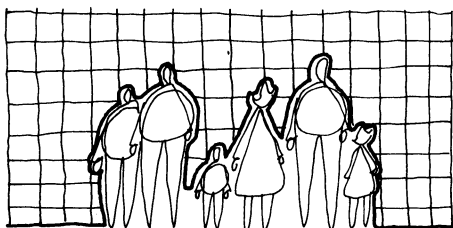
A Manifesto for the Future of Environmental Design

Wolfgang F. E. Preiser
Jacqueline C. Vischer

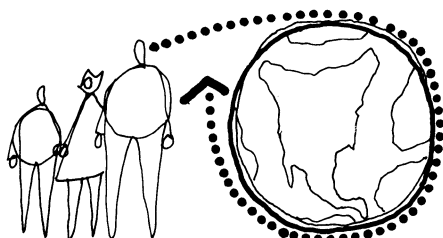
THE NATURE OF CHANGE



*Many institutions no longer serve their original purposes properly because the original **premises** on which they were based are no longer **valid**.*



*Socioeconomically **weaker** populations often can't afford the **safety-net** services of institutions.*



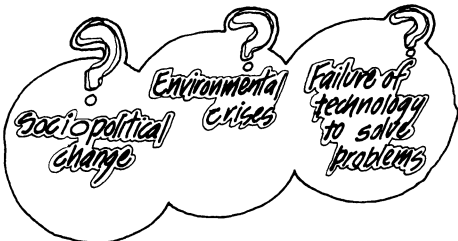
*We should adopt a **global** view of social problems rather than only having concern for our **local** problems.*

In a world of accelerated change, many of our social institutions are unable to keep up the pace or to serve their original purposes because the premises on which they were based are no longer valid. Similarly, many social and psychological needs that used to be met by arrangements within society, such as the family and the community, are now met only with governmental or other institutional support. Meeting the needs formerly met by the family has become the task of insurance companies, service organizations, senior centers, and day-care centers, to name but a few. The fragmentation of what might once have been cohesive socioeconomic systems has resulted in a plethora of services and institutions that, for a price, respond to society's needs without necessarily being connected to each other.

This book examines a wide spectrum of architectural solutions to problems of unmet social needs ranging from basic shelter to providing sensitive environmental design. Case studies illustrate architectural strategies and design solutions aimed at solving problems in the context of what our society can and will afford to pay.

The message of this book is the articulation of a multifaceted perspective in terms of how the designed and built environment can better serve the needs of human beings and different populations. For example, the need for housing in developing countries such as Brazil takes on a totally different dimension when one considers that more than 70 percent of existing housing is "informal" or illegal, not because the population wants it that way, but out of necessity. And although populations in highly industrialized and economically strong countries will endure hardship and crowding under emergency conditions, it can be argued that in Third- and Fourth-World countries this type of emergency exists all the time. Are we, the architects, designers, and building professionals of the Western world, going to shut our eyes and ignore the existence of such problems, or are we going to take a global view of the world and, considering that we are all in this together, attempt to assist in solving some of these problems?

OBSERVATIONS REGARDING CONTEXTUAL CHANGES



Basic value positions held by government, industry, and the general population were **challenged** in the 1960s.



These **changes** and **failures** led to **new ways** of resolving environmental problems such as **systematic study** of environment/behavior relationships.

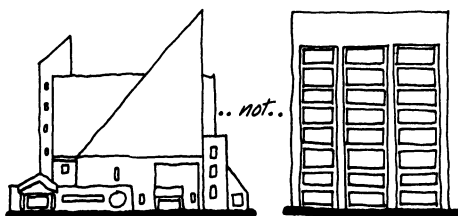
During our lifetime, the societal context of human problems has dramatically changed. In the 1960s and '70s, social movements, environmental crises, and the apparent failure of technology to solve human/environment problems caused people to challenge basic values concerning our environment. Research efforts, such as those the Navy mounted to improve the quality of built environments, were initiated (Heffron, 1982). Legislation followed, aimed at improving environmental quality from a health-and-safety point of view. The changing political and resource pictures forced certain value reorientations and stringent practices for conservation and preservation of the environment—measures that had not been considered seriously up until that time.

These developments precipitated action to correct apparent failures in the built environment, namely through the systematic study of environment/behavior relationships. New directions emerged in the fields of environmental design, architecture, and planning. In response to failures of "universal architecture" as propagated by the Bauhaus movement, theorists encouraged *differentiation*, not uniformity, in designing the built environment. To be effective in responding to social problems, such differentiation had to go beyond architectural style to a recognition that there are different building users, each with special requirements concerning the built environment. For example, access for the handicapped has affected modern building design, as well as the participation of building occupants in planning and design programming for new buildings.

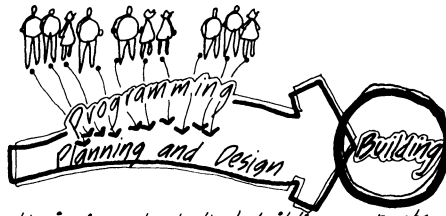
Time has become a critical factor in the context of social change, as well as the proliferating needs of different user groups and subcultures. The complex and lengthy building delivery process that exists in most countries often means that buildings planned for specific uses are dysfunctional by the time they are completed. Another effect of time is the increasing interest in adaptive re-use and recycling of older buildings in modern cities.

Design research has had a strong influence on definitions of the relationship between architecture and social change. Identification of problems in the built environment and qualitative assessments of users' needs are typical of current research. The process now formally called Post-occupancy Evaluation (POE) obtains systematic feedback from users of existing buildings. POE can also serve as the basis for litigation and court testimony in cases of design and planning malpractice. Environmental Impact Assessments are a specific kind of design research legislated to raise the level of public accountability and to ensure compatibility of natural and built environments.

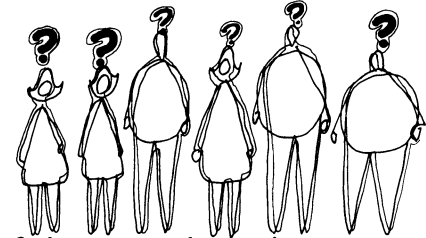
Conceptual and theoretical innovations and advances are on the horizon. The importance of the social impact of architecture is growing. The role and function of design as a guide to, a tool for, and a result of *change* in society is being driven and shaped by numerous contextual forces.



Failures of "universalist architecture" pointed to the need for greater **differentiation** of the built environment.

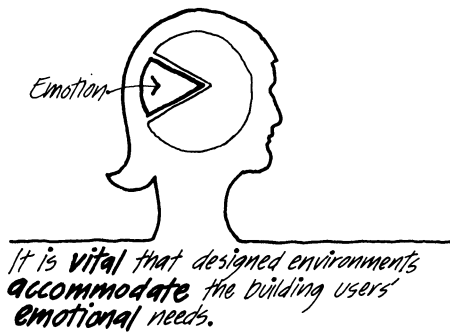


It is important that building occupants **participate**, through programming, in the **planning** and **design** of the built environment.



Designers sometimes **miscode** the environment, causing building occupants **confusion** and even **injury**.

TOWARD A MORE HUMANE ARCHITECTURE



When receiving patients in his sometimes-criticized primitive Lambarene Hospital in Gabon, Africa, Albert Schweitzer recognized the important effect of architectural images on acceptance by prospective building users. The humble and, by American standards, primitive hospital setting helped rural Africans feel “at home.” They were not afraid to seek help. This architecture was appropriate to local conditions, while a “health factory” in a western style would probably not have been accepted, and would have cost too much to build anyway.

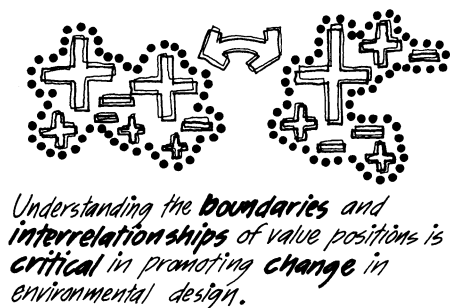
There is no question that our mental habits and attitudes are profoundly affected by our physical environment. As Drucker (1969) indicated, “we see largely what we expect to see,” and von Foerster (1973) wrote that “things which we construct in our minds are the *only* realities that count.” Unfortunately, these realities can often be unhappy ones because designers frequently miscode the environment and project ideas through architecture that users interpret incorrectly. For instance, poorly marked glass doors and windows cause approximately 100,000 bloody injuries each year in the United States alone. It is possible that in striving to design buildings to be functional, rational, economical, and accountable, architects forget that environmental design must also accommodate people’s need for emotional expression, the need to relate to other human beings, and the need to experience wholes rather than segments of existence. The “architecture of humanism,” as Scott (1974) described it, has many interpretations, as have the goals of humanity. Humane architecture, some assert, appears to be an invention of (and is limited to) the industrialized countries of the world. In this context, Norberg-Schulz (1986) asked:

What, then, must we demand from architectural space in order that man may still call himself *human*? Primarily we must demand an imageable structure that offers rich possibilities for identification.

He charges the environmental designer with the task of finding “an existential foothold by concretizing his images and dreams.” And Jencks (1971) adds that “in a pluralist society the obligation is to recognize the variety of conflicting claims and to articulate the social realm for every different person in every different social situation,” a job Venturi (1971) fulfills by “incorporating contradictory material without compromising one part with another.”

In spite of these “calls to arms,” many consider architecture to have failed to be humane, and to have failed to provide a socially responsible and responsive environment. Those concerned with redeeming the “architecture of humanism” will have to begin with a shared definition of widely held value positions whose boundaries of applicability and interrelationships with other possibly conflicting values can be identified. The constraints operating in a given cultural system at this particular time in history must be taken into account.

This renewal of interest in humanism in architecture is expressed in part through the adoption of the concept of “habitability.” The ultimate habitability of the built and natural environments is a goal on which social and cultural groups agree. Habitability is context-related but not context-dependent. It implies a pragmatic approach to implementation through such processes as facilities programming and evaluation (Vischer, 1989). A suggested “habitability framework” is presented in Chapter 18. For the remainder of this chapter, we will explore some of the new social values and discard some of the old in an effort to reach consensus on a “manifesto” for the future of environmental design.



THE VICIOUS CIRCLE: SOME VALUE IMPLICATIONS OF TECHNOLOGICAL PROGRESS

Not all social values that are widely held regarding the built environment are equally desirable in the modern world. Society needs to replace some and promote others. Technological progress and innovation are not always beneficial to humanity, even if they appear so at first. Jencks (1971) described the merging of nature and culture, based on emerging technological possibilities, as far as environmental design is concerned:

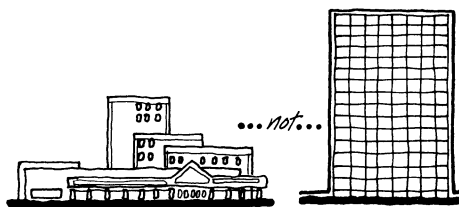
With modern techniques the indoors and outdoors are merging, as are the qualities of day and night, summer and winter, and north and south. Soon, large portions of the population will inhabit a city-country which is air-conditioned, lit for the twenty-four hour cycle, and fully serviced and alive with activity for a continual period.

Jencks agrees that existing social values and attitudes are not prepared for this environmental development. He stresses the importance of design as *communication* (e.g., through the theory of signs, or semiology, in that design deals with all communicating systems, of which architecture is one. Jencks discusses "... forming understandable areas of signification," and notes, further, that "the Semiological School, in its attempt to make a complex environment significant, will emphasize the appropriateness and plausibility of form within a social continuum."

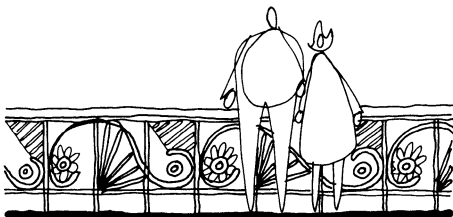
Some major changes in the treatment of building exteriors are likely to occur in the near future as architects become more aware of the "semiology of design." For example, the bland, boxlike anonymous architecture of mass housing has become discredited in recent years. These expressionless, nocturnal storage places in the wastelands of cities are often located on undesirable lots next to railroad tracks or heavily traveled highways. Most city dwellers (not just low-income residents) are quick to point out the well-articulated elevations of older apartment buildings as reasons for preferring them over their modern counterparts. More recent urban residential architecture exhibits a significant diversity of style and materials, even in low-income housing. It is conceivable that a modern movement analogous to the Vienna art-nouveau style of the early 20th century will be reviving the ornament as an essential part of the language of architecture and environmental design.

Because of the need for diversity, a more current social value regarding architecture is that buildings should be designed to express their functions *and* encoded messages to the perceiver-user, who will decode the culturally bound meanings. The pallbearers of the modern movement, including Tom Wolfe (1981) and Peter Blake (1977), saw little that was good in the Bauhaus-initiated "Universal Architecture." The urban renewal of the 1950s and '60s was clearly proof of its failure, and the downfall of the infamous Pruitt-Igoe housing project in St. Louis in 1972 was the point in time when Jencks (1987) believed that the modern movement had died.

The new values are evident in the conservationist care now being taken of older architecture, and there are many encouraging signs that people are trying to find new uses for buildings previously considered obsolete. Today's society requires continuity of experience in the designed environment, and strong moves are under way to retain buildings instead of tearing them down. Consequently, cities' images and skylines may change less dramatically in the future in favor of *incremental* phasing-in of new uses and designs. As Lindheim (1975) and others have stated, a society's buildings are the concrete expression of its values and priorities in a direct way that is not in its control. As the values of a society change, so will its architecture, and as the social groups about which society is concerned change, so will the form and appearance of the buildings built to accommodate them.



*Many apartment residents prefer older buildings with **well-articulated** forms over **new, characterless** apartments.*



*One possible **response** to the need for more **articulation** in design may be the **revival of ornament**.*

MANIFESTO: GUIDELINES FOR THE FUTURE OF ENVIRONMENTAL DESIGN

In an attempt to articulate a “new age” of social concern and humane values, this manifesto is directed toward the design of environments that support quality and richness of life. The guidelines are based in part on past manifestos (Conrads, 1970), including that issued in 1977 at Machu Picchu (JAR, 1979; Preiser, 1979). They constitute a biased and idiosyncratic perception of the world at this particular point in time. Additional thought and debate will result in their elaboration and refinement into a more complete and articulate statement of values for building-related professions.

MANIFESTO

OVERALL GOALS AND LONG-TERM ASPIRATIONS

1. *A holistic systems approach* is required to overcome the current, primarily economically oriented basis for environmental design, and to put other cultural and sociopsychological factors into a more pronounced perspective.
2. *Small is better.* System size at any scale of environmental design must be kept as small as possible, relating to dimensions that are appropriate to human cultural and evolutionary conditions.
3. *Incrementalism*—coherent rather than disjointed—is recommended as a planning approach to help cope with inevitable environmental change and to provide gradual transitions and continuity of experience for people affected by change.
4. *Functional integration* of user groups, needs, and expectations will come about based on a reduced emphasis on communal *versus* individual rights and values. We need a response to current segregationist trends in environmental design that integrates communal and individual needs.
5. *Better regulatory devices* that take diverse viewpoints into consideration are needed in lieu of conventional land-use controls, aesthetic guidelines, and various zoning limitations. These are needed to cope with increasing population densities and potential conflicts among groups having different aspirations and priorities.
6. *The human being as the measure of all things* should be renewed as the guiding principle of environmental design. Human dimensions and capabilities as an evolving species—such as locomotion, sensation, expression of self, and territorial requirements—and all the physiological, biological, and sociopsychological limitations of humankind must be established as the basis for design.
7. *Natural and human-made environments* should be integrated in the human experience. People use perceptual clues such as the visual, acoustic, olfactory, and tactile aspects of everyday environments (including views and windows, natural ventilation of buildings, etc.) to improve their experience of environmental equality.
8. *Cultural identity and the fit* between users and their environment must be a priority of good environmental design. Today’s architecture exhibits universalistic trends that negate subcultural differences. Special-needs constituencies should be recognized and supported by environmental design.
9. *The process of environmental design* must directly involve those affected by the outcome. User participation at some level of design decision making, and users’ planning involvement, will achieve more satisfactory solutions if properly managed. Choice in design lies with the users; control lies with the designers.

SETTING-SPECIFIC REQUIREMENTS AND SHORT-TERM ASPIRATIONS

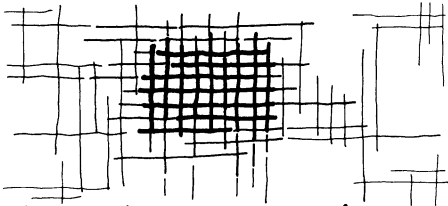
1. *Public places and spaces* must be usable free of charge and easily accessible to all segments of the population. Economic and other sorts of discrimination must be avoided, as, for example, with shopping malls that are privately owned and

- controlled and not really public spaces. Comprehensive services must be provided in public places like airports, for traveling children, the elderly and disabled, working businessman, etc.
2. *Public parks* must be accessible to all, particularly in high-density urban areas. They must be kept up and subsidized by the community.
 3. *Sidewalks in residential streets* should enable safe walking instead of encouraging total reliance on the automobile.
 4. *Gas stations, fast-food places*, and similar car-dependent drive-in establishments should be banned from prominent locations on major roads and thoroughfares, and the space thus recovered should be used for people-intensive purposes.
 5. *Recycling of buildings* should be supported not only from the economic point of view but for the preservation and continuity of the image of a neighborhood setting or town. Material choice and construction methods should take into account the future modifiability of buildings.
 6. *HIGHRISES* have been "outlawed" for low-income families with children in Denmark. The appropriateness of built forms for certain socioeconomic groups and phases in the life and family cycles must be reassessed.
 7. *Alternatives to institutional settings* that better serve the needs of certain groups in institutional populations should be more energetically developed (e.g., for the mentally ill in prisons, birthing women in hospitals, or sexually abused children in homes).
 8. *Locational choices for institutional settings* must be reassessed, for example, for retirement homes, half-way houses, and mental institutions. They are often isolated from communities instead of being integrated, often without public transportation.
 9. *The scale of buildings* must be related to group-specific conventions and requirements of the surrounding environs.
 10. *Responsive environments* must be created to allow for control, identification, and personalization by the occupants. Materials, surfaces, and spatial and furniture arrangements must lend themselves to modification and change to fit changing occupant needs.
 11. *Environmental coding*, such as signage, marking of dangerous areas, etc., must be in accordance with culture-specific conventions of the use of space and design objects in order to minimize disorientation and accidents.
 12. *Interiors of buildings* such as nonstructural walls and partitions should be made more flexible and exchangeable through part kits that can be put into high-cost, more permanent superstructures.
 13. *The semiotic content of design* must again become part of the design task in order to repair the damage Bauhaus functionalism has done to environmental experience. Possibly, the *ornament*, if appropriately used, will be back in environmental design, along with sensitive articulations of building volumes and facades, in order to counteract the monotony of today's sterile glass boxes and expressionless concrete cubes.
 14. *Stimulus deprivation and overstimulation* in environmental design must be minimized (e.g., in the case of sign proliferation or so-called "hard architecture").
 15. *Do-it-yourself-ism* should be encouraged in the environmental design process involving the ingenuity and hands of the would-be users of environments, such as in self-help construction for housing the poor in developing countries.

We invite readers to add their own priorities and concerns to this manifesto. Professionals and other social groups must work together to adopt new conceptual approaches to environmental design that include a long-term planning attitude, recognition of transcendental forces that shape human life, attempts to increase

environmental differentiation and choices, support of environmental simplicity, and human-scale thinking.

CONCLUSIONS



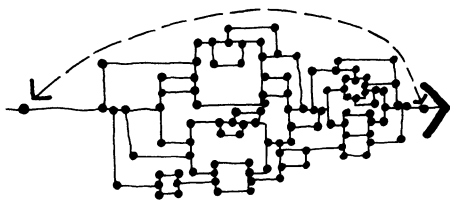
As the sizes of systems increase, there tend to be more gaps in the qualitative aspects of the communication network.

The built environment continues to grow in scale and complexity due to increasing communications and interdependencies among all parts of the world. Consequently, environmental design ties into all social systems: Organizational units, cities, states, countries, and alliances of countries are on too massive a scale to allow them to be neatly separated from each other any more. System sizes, and their inherent resistance to change, are the real culprits of environmental design problems today, in a paradoxical way. While *quantitative* growth in communication linkages has created interconnecting networks among formerly disconnected entities, *qualitative* communication gaps emerge as system sizes increase.

In the context of environmental design, communication gaps refer to the fact that ever-larger sponsoring organizations and agencies plan, program, and design environments for "remote" or "unknown" patrons/occupants whose needs and value positions may differ from those of the often well-meaning decision makers. Catrill (1976) argues that:

Cultural values cannot be synthesized by committees any more than music can be composed by a football team. The design process can, however, be modified to respond to the needs of the formal organization without detriment, and indeed, with great benefit to the ultimate product of the process. Since formal organizations function on the basis of the diversion of responsibility, then the articulation of a set of pre-design criteria categorized in terms of differing functional interests will facilitate the coordinated input of these organizational specialists.

This can be done in the form of the Design Brief or Program of Performance Specification in which "performance" includes standards for the social, cultural, and aesthetic performance of the project. What is changed is the designer/client relationship: the design brief becomes, in effect, a surrogate patron.



Fewer interdependencies among systems elements would simplify design problems and reduce the information overload for designers.

Information overload inhibits the innovative designer. It can be argued, then, that not more but fewer interdependencies among system elements are required for the future in order to improve environmental design solutions to social problems. Anti-communication devices and means of breaking up large entities into smaller ones and guaranteeing their independence from each other are ways of limiting environmental-design problem domains. However, this position could be construed to be reactionary and counter to emerging worldwide trends. An isolationist stance potentially serves to maintain the status quo as far as sociopolitical and economic resource conditions are concerned, whereas the heterogenistic-symbiotic position necessarily results in a balancing of differences between the Western-industrialized world and the so-called Second, Third, and Fourth Worlds, causing a shared, lowered level of consumption of material goods and altered lifestyles for Western populations. As Caldwell (1973) points out, the struggle for priorities in environmental politics is going on, and there may be few choices, if any, to be made without delay.

REFERENCES

- Blake, P. 1977. *Form Follows Fiasco*. Boston: Little, Brown and Company.
- Caldwell, L. K. 1973. Struggle for priorities: Changing contexts of environmental politics. In *Environmental Design Research* Vol. 2, edited by W. F. E. Preiser. Stroudsburg, PA: Dowden, Hutchinson & Ross.

- Conrads, U. 1970. *Programs and Manifestos on 20th Century Architecture*. Cambridge, MA: MIT Press.
- Drucker, P. 1969. *Information, Communications and Understanding*. Paper read before the Fellows of the International Academy of Management, Tokyo.
- Gatril, A. 1976. Professional value positions and conflict in the large organization. *Journal of Architectural Education* 29: 35–36.
- Heffron, M. H. 1982. Habitability programming for U.S. naval ships. In *Facility Programming: Methods and Applications*, edited by W. F. E. Preiser. New York: Van Nostrand Reinhold.
- Jencks, C. 1971. *Architecture 2000*. New York: Praeger.
- Jencks, C. 1987. *The Language of Post-Modern Architecture*. London: Academy Editions.
- Lindheim, R. 1975. "A Future-Oriented Design for Living." Paper presented at meeting of AAAS, University of California, Berkeley.
- Norberg-Schulz, C. 1968. *Intentions in Architecture*. Cambridge, MA: MIT Press.
- Norberg-Schulz, C. 1986. *Architecture: Meaning and Place*. New York: Electra-Rizzoli.
- Preiser, W. F. E. 1979. Four Commentaries on the Charter. *Journal of Architectural Research* 7(2): 5–9.
- Reprinted Charter of Machu Picchu. *Journal of Architectural Research* 7(2): 9.
- Scott, G. 1974. *The Architecture of Humanism*. New York: Norton.
- Stokols, D., and I. Altman, eds. 1987. *Handbook of Environmental Psychology*. New York: Wiley.
- Venturi, R. 1977. *Complexity and Contradiction in Architecture*. New York: Museum of Modern Art.
- Vischer, J. C. 1989. *Environmental Quality in Offices*. New York: Van Nostrand Reinhold.
- von Foerster, H. 1973. On constructing a reality. In *Environmental Design Research: Proceedings of the 4th Annual Environmental Design Research Association Conference*, Vol. 2, edited by W. F. E. Preiser. Stroudsburg, PA: Dowden, Hutchinson & Ross.
- Wolfe, T. 1981. *From Bauhaus to Our House*. New York: Farrar Strauss Giroux.

Part I

Housing Design and Social Change

Part I of this book, "Housing Design Innovation," reflects the changing social structure of society. It deals with social situations that are becoming common in Western industrialized society today, such as single-parent families. These situations require innovative design responses, presented in the form of case-study examples of housing. The populations covered in this part of the book include the homeless, the single-parent family, and pregnant women in conflict with the law, as well as elderly and retired persons.

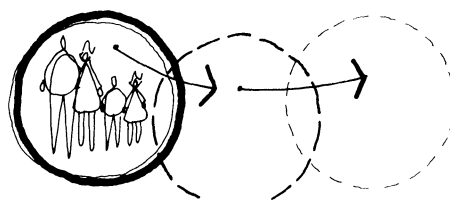
The traditional American dream and model of free-standing suburban houses surrounded by gardens and like-minded suburbanites no longer fits, at least as far as the United States is concerned. The reality is increasing "atomization" of social structures that used to be the glue of society, such as the support the nuclear family or the extended family clan provided to family members. Today, we find a continuing trend of increases in divorce rates and growing numbers of people living by themselves. Interestingly, more cooperative or "cohousing" projects are gaining recognition and are being realized on the west coast of the United States, for example.

Cohousing still serves only a tiny fraction of the population; the majority of people seem to be mishoused. For the socially/economically disadvantaged segment of society, the so-called "safety net" seems to have failed and innovative solutions need to be found. The purpose of Part I, then, is to fill that gap by showing that meaningful models and solutions can and have been developed, even though some may only be prototypes at this time. It is hoped that the chapters presented here will stimulate alternatives to traditional housing, i.e., housing experiments that attempt to provide needed social support. Contrary to a statement made by one of the interviewees in the Epilogue, *the environment does indeed affect human behavior!* To deny that would be unfortunate and would send us back to the dark ages, when architecture was seen to be pure art only.

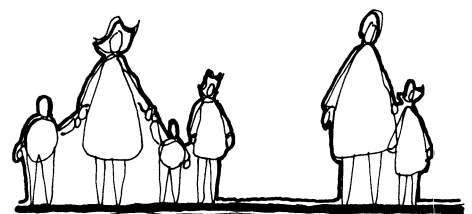
1. Housing the Single-parent Family

Kathryn H. Anthony

The 1980s have witnessed an explosion of a new generation of poverty, largely composed of women and their children. Forced out of their homes by separation, divorce, or unwed motherhood, this group has grown significantly over the past decade and their housing problems can often only be characterized as desperate. Unless drastic changes in federal housing policies are made during the Bush administration, it is likely that the housing dilemmas faced by America's single parents in the 1990s will be even worse than they are today. The rapidly changing demographics of the American household and the prominence of single-parent families presents one of the greatest challenges to designers, planners, developers, and politicians.



Rapid shifts in the demographics of the American household pose challenging problems for designers and providers of housing.

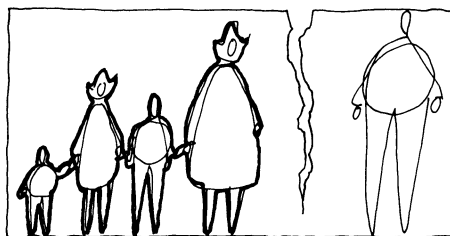


The explosion of poverty in the 1980s was composed mainly of women and their children.

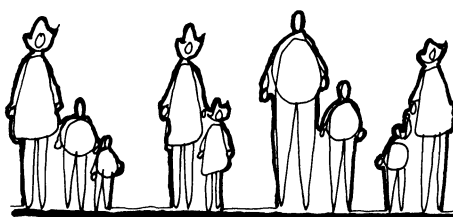
WHO ARE AMERICA'S SINGLE-PARENT FAMILIES?

Single-parent families are an extremely diverse group. At present, the majority of single-parent families are the byproducts of divorce and separation. The 1980 census showed that 3,670,000 single-parent families were caused by divorce, 3,454,000 by separation or an absent spouse, 2,268,000 by never having been married, and 658,000 by death of a spouse. The numbers of unwed parents have skyrocketed, and it is very likely that in only a few years this group will soon become the major source of single parenthood. At present, one out of every five American children lives with a single parent, usually the mother (Bianchi & Seltzer, 1986), and one out of every four American families is headed by a single parent (U.S. Bureau of the Census, 1984).

The author thanks the following individuals for their valuable assistance: for Warren Village and Decatur Place, Judith Weaver, Charles S. Sink, Tom Morris, and Maxwell L. Saul; and for Elizabeth Stone House, Deborah Linnell and Robert Livermore III.



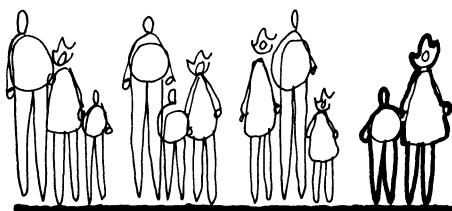
Most **single-parent** families result from **divorce** and **separation**.



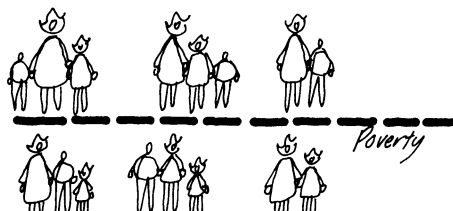
In only a few years, **unwed** parents may be the **major source** of **single** parenthood.

The high rate of divorce and separation, as well as increasing numbers of unwed mothers, have contributed to a generation of largely impoverished women and children. Almost half (49 percent) of American families headed by women have annual incomes below the poverty line, or about \$7,000 for a family of four. By comparison, male-headed households with incomes below the poverty line represent only 5 percent of all male-headed households (National Low Income Housing Coalition, 1980).

Single-parent households make up a growing share of both America's young households and the nation's poverty population. Over the past 15 years, the number of single-parent households with heads aged 25 to 34 more than tripled. In 1987, the median annual income for households in this category was only \$9,621. In the same year, for single-parent households with heads aged under 25, the median annual income was even worse—a meager \$4,688 (Apgar & Brown, 1988).



In America today **one** of every **four** families is headed by a **single** parent.

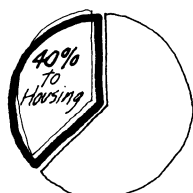


About **half** of the **single-parent** families headed by **women** are **below** the **poverty** line.

WHAT KINDS OF HOUSING CONDITIONS DO SINGLE PARENTS LIVE IN TODAY?



Renter's income

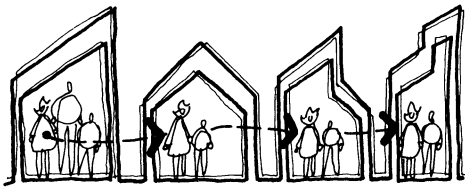


Homeowner's income

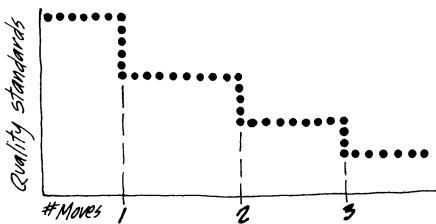
One **third** of female-headed households are **financially** burdened by the **cost** of **housing**.

The housing conditions of the nation's single parents are, for the most part, rather dismal. Compared to two-parent families, this group appears to be at a clear disadvantage when it comes to housing. Over half the female-headed households with minor children in America have a housing problem. One third of these households are cost-burdened, i.e., they pay more than 30 percent of their income for rent, or, if homeowners, they pay more than 40 percent of their income for housing costs (Birch, 1985).

Single parents live in a variety of housing arrangements. The more fortunate ones live on their own. Some are able to keep their homes after a separation or divorce, but this often occurs only with great financial hardship (Weitzman, 1985). A series of moves is the more likely scenario. In fact, U.S. national data reveals that in the first year of separation, 55 percent of divorced mothers have moved out of their marital homes. Three years later, 74 percent of them have moved, and by this time 31 percent of them have moved once, 21 percent twice, and 22 percent three times or more (Bane & Weiss, 1980). Those forced to move often drop their housing standards substantially. Some move back in with their immediate families or other



*Most women move out of their marital homes after a divorce and many move **several** more times within **3** years.*



*Those who move **often** from one housing situation to the next tend to **drop** their housing **quality standards**.*

relatives, often in a less-than-ideal environment that poses new problems of its own (Anderson-Khlief, 1982). Still others rent out portions of their homes as accessory apartments, or share housing with other single-parent families (Mulroy, 1988).

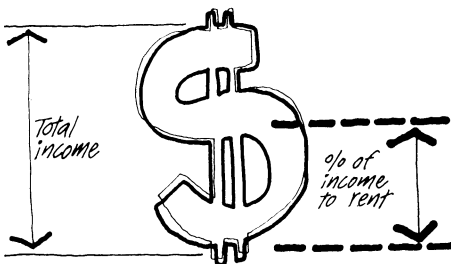
High-rent burdens (the ratio of median rent to income) especially plague single-parent families. In fact, rental housing is increasingly becoming home to low- and moderate-income single-parent households. From 1974 to 1987, median incomes of young single-parent renter households dropped sharply, while rents rose steadily. The rent burden for young single-parent families increased from 34.9 percent to 58.4 percent. From 1974 to 1983, the number of young single-parent households living in inadequate housing rose from 374,000 to 484,000 (Apgar & Brown, 1988).

Although not generally thought of as such, the U.S. Department of Housing and Urban Development's Section 8 program and public housing program are predominantly women's programs. Female-headed households comprise over three-fourths of Section 8 participants. Public housing projects also contain a majority of female-headed households, although exact figures are not known. Approximately three out of four households in public housing are headed by single adults, most of whom are female (National Low Income Housing Coalition, 1980).

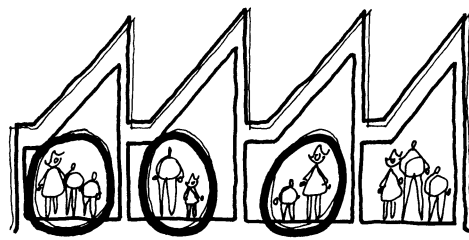
The worst off have no homes at all. In fact, a fairly high percentage of the nation's homeless are also single-parent families. The large numbers of homeless women and children who live on our nation's streets and sidewalks are astounding, shattering the stereotype of the old, male alcoholic as the predominant image of the homeless.

In discussing the housing conditions of today's single-parent families, it is important to distinguish between inner-city, suburban, and rural residents. Single mothers are usually renters, and thus are concentrated in central cities. The search for affordable housing after a separation or divorce often results in a move from standard-quality rental housing in a safe inner-city neighborhood to substandard housing in a deteriorated part of the city. The picture in the suburbs and in rural areas is somewhat different, however. Here single mothers have often become the "nouveau poor." Having been homeowners during a marriage, these women are left house-poor in suburbia or rural America. Accompanying this displacement in housing is a dramatic shift from middle- to low-income status (Mulroy, 1988).

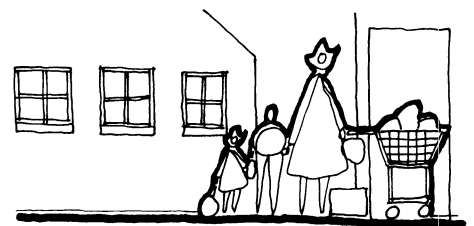
Another distinction must be made among the housing conditions of different types of single-parent families. The housing needs of those who are separated, divorced, or widowed are often quite different from those who have never married. Parents with preschool, young school-age, or teenage children, as well as with small or large families, experience a different set of housing needs (Anthony et al., 1990).



*Single-parent families are especially burdened by **high rent**.*

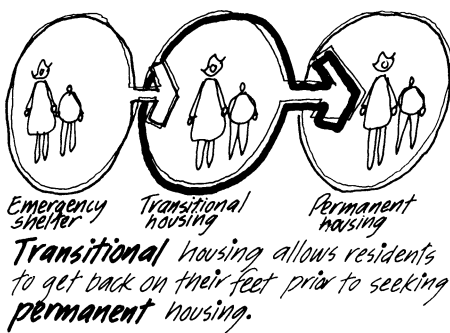


*Three of four households in public housing are headed by **single parents**.*



*A high percentage of America's **homeless** are **single-parent families**.*

WHAT KINDS OF SPECIAL HOUSING ENVIRONMENTS ARE OFFERED FOR SINGLE PARENTS AND THEIR CHILDREN, AND HOW WELL ARE THEY WORKING?



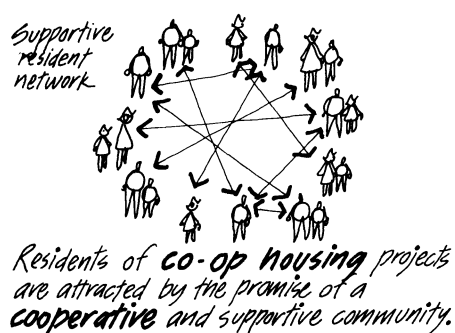
A few housing projects have been designed and built, with the assistance of federal dollars, especially for single parents and their children. One of the best known prototypes is called Hubertusvereniging, or "Mother's Home," in Amsterdam, designed by Aldo van Eyck. The project was sponsored by the Hubertusvereniging Foundation and directed by the Catholic church. It was completed in 1980 and houses approximately 16 mothers and their children. In addition, it operates as a 24-hour emergency shelter for up to 90 people and a child-care center. Its residents include transitional families, pregnant teenagers, children awaiting adoption, and the temporarily homeless, as well as single parents (Ahrentzen, 1989b; France, 1985).

Another project that has attracted some international attention is Nina West Homes in London, named after a single-parent developer and activist. Nina West developed several housing complexes for single parents and their children. Some began as conversions of small buildings into multifamily housing with day-care facilities. One of the more well-known projects that Nina West administers is Fiona House, designed by Sylvester Bone in 1972. It contains four private apartment units on each of three floors. Windows from each apartment overlook a carpeted interior hallway that serves as a play space for children. Each apartment unit is equipped with an intercom that links up to the corridor and to other apartment units, so parents can easily communicate with their children or with other adult residents without having to leave their own unit. Nina West Homes is an example of transitional housing, where residents move out after a stay of about one to two years (Ahrentzen, 1989a, 1989b; Strong, 1975).

Although these housing developments are clearly the exception rather than the rule, they merit attention as prototypes. They are generally viewed as transitional housing, i.e., housing in which people will stay for a minimal period of time, generally about three years or less. Residents' tenures in these housing environments are viewed as a time for them to get back on their feet, establish goals for themselves, and prepare for a more independent life of work and housing on their own.

The Scandinavian countries, especially Denmark and Sweden, have pioneered a relatively recent housing form known as cohousing and collective housing, respectively. Although these housing developments are not targeted exclusively for single-parent families, such families make up a relatively large segment of the inhabitants. In contrast to some of the housing developments described earlier, these housing forms are long-term rather than transitional environments. While the specific form of housing often differs from project to project, cohousing developments share certain features. Four common characteristics include a participatory planning and design process; intentional neighborhood design encouraging a strong sense of community; extensive common facilities, often with day care, home-based work spaces, and communal dining; and resident management. As of spring 1988, 67 co-housing communities had been built in Denmark and another 38 were planned. In fact, they have quadrupled in number during the last five years. Their sizes range from 6 to 80 households, with most housing between 15 and 33 dwelling-units (McCamant & Durrett, 1988).

Interest in collective housing in Sweden began to flourish in the mid-1970s, and today many of the larger Swedish towns and cities contain at least one example of collective housing. Over 30 collective housing developments were constructed in Stockholm during the 1980s alone (Figures 1-1-1-3). Collective housing is based on cooperation among residents, particularly in domestic work such as cooking and maintaining communal facilities (Almqvist, 1989). Recent studies conducted in Sweden have demonstrated that fellowship and a strong sense of community often emerge as a result of sharing interests and activities (Krantz, 1989). An excellent overview of collective housing in Sweden is provided by Woodward (1989). What is admirable about the Scandinavian example is that these new housing forms accommodate the housing needs of single parents, but do not stigmatize them or isolate them from the community at large. On the contrary, single-parent families



become an important part of the entire cohousing community, which includes elderly, two-parent families, and other diverse groups.

A comprehensive overview of residents' reactions to ten housing projects built under the federal Non-Profit Housing Program in Canada is provided by Wekerle (1988). She describes two different types of housing targeted at women: co-ops and second-stage housing. The majority of residents at the co-ops are low- to moderate-income single parents with at least one child. Over 80 percent of these residents report having experienced discrimination when they sought housing. Residents are usually attracted by the promise of a supportive community, rather than by the design or location of the housing itself. In fact, they shared many activities with other members, from informal socializing, shared babysitting, and preparing meals to managing the co-op (Wekerle, 1988).

By contrast, second-stage housing provides short-term housing (from a few months to a year) for women and their children. Along a spectrum of temporary to permanent housing, it falls somewhere in between, and is neither a battered women's shelter nor standard housing in the community (Wekerle, 1988).

Residents are highly satisfied with the physical environment of both the Canadian co-ops and second-stage housing. In the co-ops, residents place great value on the emotional support they provide for each other; in the second-stage housing, women are overwhelmingly positive about the gains they have made (Wekerle, 1988).

A watershed in the American architectural scene occurred in 1984, with a national design competition for the "New American House" sponsored by the National Endowment for the Arts and the Minneapolis College of Art and Design. The program called for six prototypical units of urban infill housing expressly for nontraditional households, and resulted in the winning design by Troy West and Jacqueline Leavitt. Targeted at the single-parent-family market, the design was centered on a shelter-service concept with a space for conducting paid work on the street frontage. Flexibility was built into the design, allowing a combination of units to become a single-parent or an intergenerational house with a child-care center. While several of the original design components have been modified, the project, Dayton Court, has since been built in St. Paul, Minnesota (Leavitt, 1984, 1989; Ahrentzen, 1989b).



Figure 1-1. One of the first examples of collective housing in Stockholm, Sweden, designed by Sven Markelius in 1935 (Photo by author).



Figure 1-2. Rear view of Katthuvudet, a collective apartment house in Stockholm, Sweden, that opened in 1986 (*Photo by author*).



Figure 1-3. View of communal dining room at Katthuvudet, Stockholm, Sweden (*Photo by author*).

For an overview of single-parent housing currently available in the United States and elsewhere, consult Ahrentzen (1989), Franck and Ahrentzen (1989), Sprague et al. (1986), Sprague (1985), and McCamant and Durrett (1988). Some of the American housing developments especially targeted at single-parent families are shown in Table 1-1. For some guidelines about starting up programs to help single-parent families with their housing needs, consult Pettitt and Huchet (1987). Some excellent design guidelines for single-parent housing can be found in Cook et al. (1988). In the next sections, we will focus in more detail on two American projects, Warren Village and Elizabeth Stone House.

Table 1-1. Housing Developments Aimed at Single-Parent Families (partial list)

LOCATION BY STATE	NAME OF DEVELOPMENT
California	
Hayward	Sparksway Commons, Inc.
Los Angeles	Willowbrook Green
North Hollywood	North Hollywood Apartments
San Jose	Shared Housing Project
San Rafael	Second Step Housing Project
Santa Cruz County	Pajaro Valley Shelter for Women and Children
Colorado	
Denver	Warren Village I Decatur Place
Kentucky	
Lexington	One-Parent Family Facility
Massachusetts	
Boston	Horizon House
Jamaica Plain	Elizabeth Stone House
New Bedford	County Street Residence
Roxbury	Elizabeth Stone House
Maryland	
Montgomery County	Pleasant View Project
Minnesota	
St. Paul	Passage Community
New Jersey	
Hoboken	St. Francis Home
New York	
Bronx	Casa Rita Residence for Homeless Families (two projects) Residence for Homeless Women and Children
Brooklyn	Samaritan House
Spring Valley	The Haven-Rockland Family Shelter
Rhode Island	
Providence	Women's Development Corporation
Washington	
Seattle	Interim Housing

Source: Adapted from Ahrentzen (1989a); National Association of Housing and Redevelopment Officials (1989); Pettitt and Huchet (1987); Sprague et al. (1986); Sprague (1985).

Warren Village

Located in Denver, Colorado, Warren Village is both the oldest and largest housing project built specifically for single parents and their children. The first phase was completed in 1974, and the second phase was finished in 1984. The design of the second phase was based in large part on feedback received from residents and staff in Phase I.

The purpose of Warren Village is to break the cycle of poverty and government dependency among single-parent families by providing a transitional, three-pronged program to help residents become more self-sufficient. In addition to housing, Warren Village provides on-site child care for infants through children aged 12, and family support services in the form of counseling and mandatory goal setting. Currently, Warren Village contains housing units for approximately 200 families in its two facilities: Warren Village I at 1323 Gilpin Street in Capitol Hill, designed by Charles S. Sink and Associates, now of Sink Combs Dethlefs (Figures 1-4–1-8), and

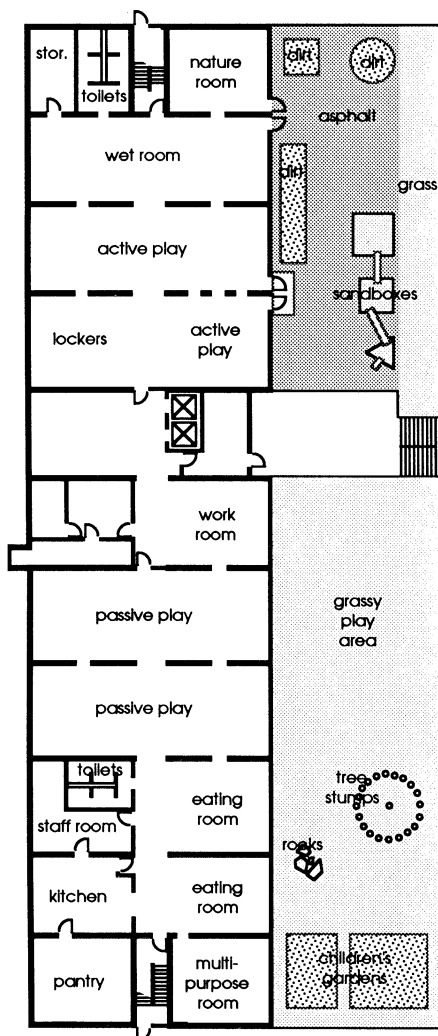


Figure 1-4. Basement floor plan showing day-care center, Warren Village, Denver, Colorado (Illustration: Sink Combs Dethlefs and Debra Foster).

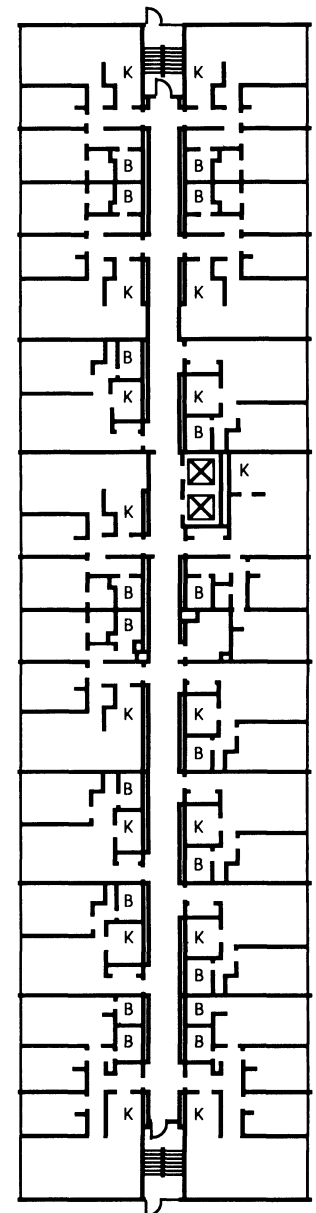
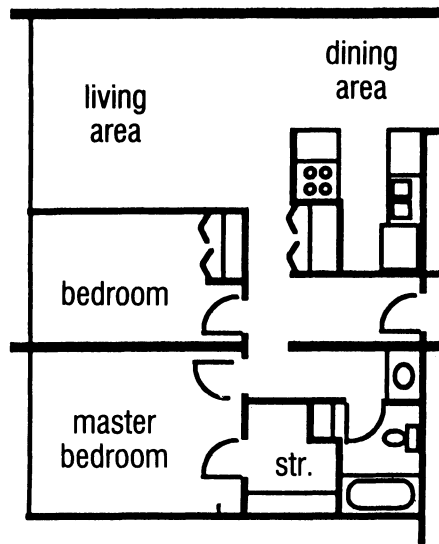
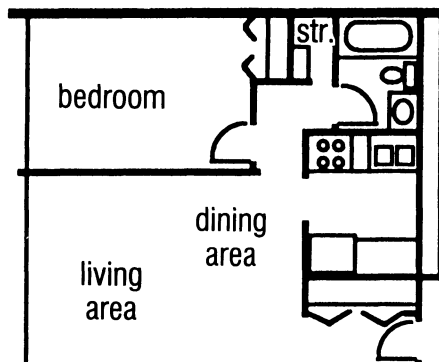


Figure 1-5. Typical floor plan of Warren Village, Denver, Colorado (Illustration: Sink Combs Dethlefs and Debra Foster).

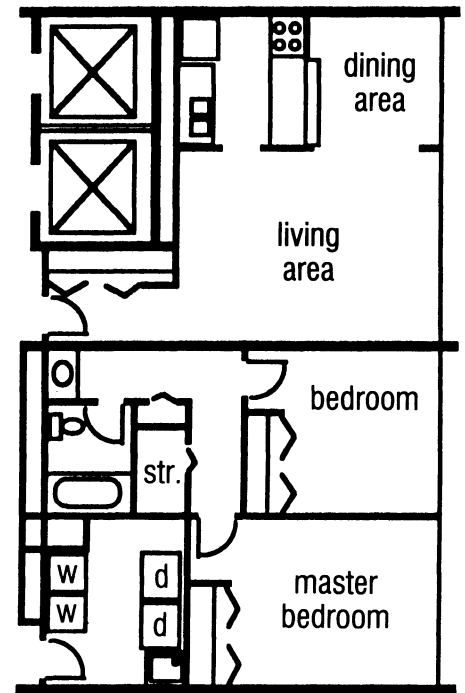
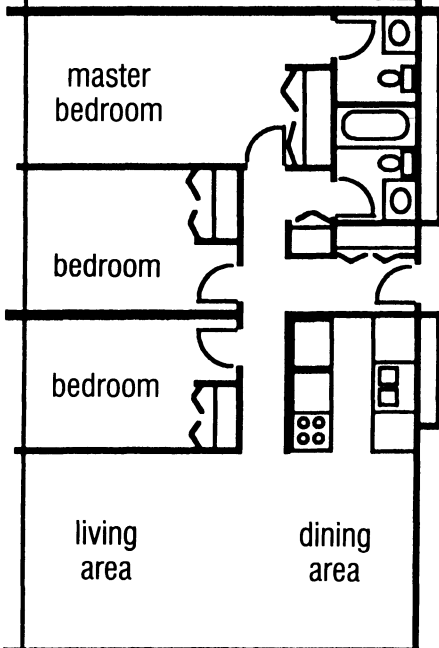
Typical 2-bedroom unit



Typical 1-bedroom unit



Typical 3-bedroom unit



2-bedroom @ laundry & elevators

Figure 1-6. Typical apartment plans, Warren Village, Denver, Colorado (*Illustration: Sink Combs Dethlefs and Debra Foster*).



Figure 1-7. View of Warren Village, Denver, Colorado, before renovation (*Photo: James L. Rose*).



Figure 1-8. Close-up view of Warren Village playground area, Denver, Colorado, before renovation (*Photo: James L. Rose*).

Decatur Place at 1155 Decatur in West Denver, designed by Maxwell L. Saul, now of DMJM (Figures 1-9–1-13). Both are located near city parks and public elementary schools. Warren Village I is a seven-story building with 96 apartments and a day-care facility. Decatur Place is a four-story structure containing 105 apartments, extensive day-care space, and offices.

The day-care centers, called the Learning Center, are located on the first level in each building, and are open from 7 A.M. to 6 P.M. on weekdays. Between the two sites, the program is licensed to serve 302 children, including 40 infants. School-age children attend the Learning Center before and after school as well as during school vacations. Breakfasts, lunches, and afternoon snacks are provided for the children. Children from Warren Village as well as children who live in the community attend the Learning Center. A sliding fee scale helps residents cover child-care costs.

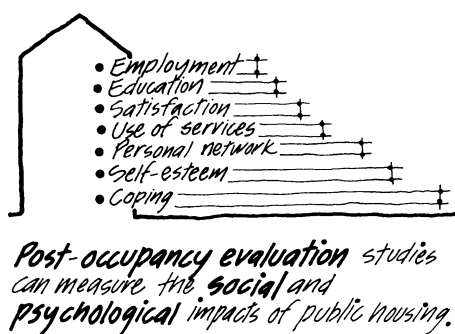
The housing component of Warren Village operates under the Section 8 housing assistance program. Residents pay 30 percent of their income for rent, with the remainder subsidized by the federal government. Apartments range from one to three bedrooms, with some units specifically designed for disabled residents. Warren Village I contains one-, two-, and three-bedroom apartments, while Decatur Place has only two- and three-bedroom units. The one-bedroom units have 520 square feet; two-bedroom units have 760 square feet; and three-bedroom units have 965 square feet. Major appliances are provided, but the apartments are unfurnished.

A major renovation project at Warren Village I was completed in January 1989. Whereas the original entryway required residents to walk through the Learning Center on the ground level, residents now have their own entry directly to the first floor. A new ramp, front steps, pavilion, and bermed area have resulted in dramatic improvements (Figure 1-14). With separate entries to the Learning Center and the residents' apartments, the space functions more efficiently than before. Several focus groups with neighbors helped shape the renovation work. Following early discussions, a number of individuals were shown initial plans and provided input into the design process. A strong attempt was made to involve Warren Village staff, parents, and children as well as neighbors in the programming process and to achieve a final design form that related well to surrounding buildings. In addition, the first-floor common areas have been remodeled, and one-third of the apartments have been upgraded.

Feedback from the architects of these projects is revealing. Tom Morris, who completed the renovation of the playground and front entry of Warren Village I, believes that one of the major problems of the original project was its very tight site, and that a 40' × 280' playground was inadequate for 150 children, especially while doubling as a front yard. In the future, similar projects will need more space all around.

Maxwell L. Saul, the architect of Decatur Place, stresses that the combination of day care and human services with housing is a key to its success. Another important factor is the site's location, close to public transit lines and opportunities for education and employment. Security is another fundamental concern, as residents are often living under conditions of extreme stress. Saul cites the need for more inclusive, forward-looking federal housing subsidy programs that would facilitate the inclusion of day care. A variety of supplemental funding sources were needed to help finance the day-care facilities at Decatur Place, requiring a concerted effort from many groups.

A systematic post-occupancy evaluation of Warren Village has never been conducted. To date, no one has specifically addressed how residents have responded to the physical environmental features of Warren Village or Decatur Place in terms of their interior, architectural, and landscape design. However, Warren Village has been the focus of a study that examined changes over time in employment, educational status, satisfaction with housing and day care, service utilization, personal support networks, and psychological variables such as self-esteem and coping behavior (Chapman & Doucette, 1981). A second objective was to assess respondents' goal orientations and the effects of Warren Village's then-new goal-setting



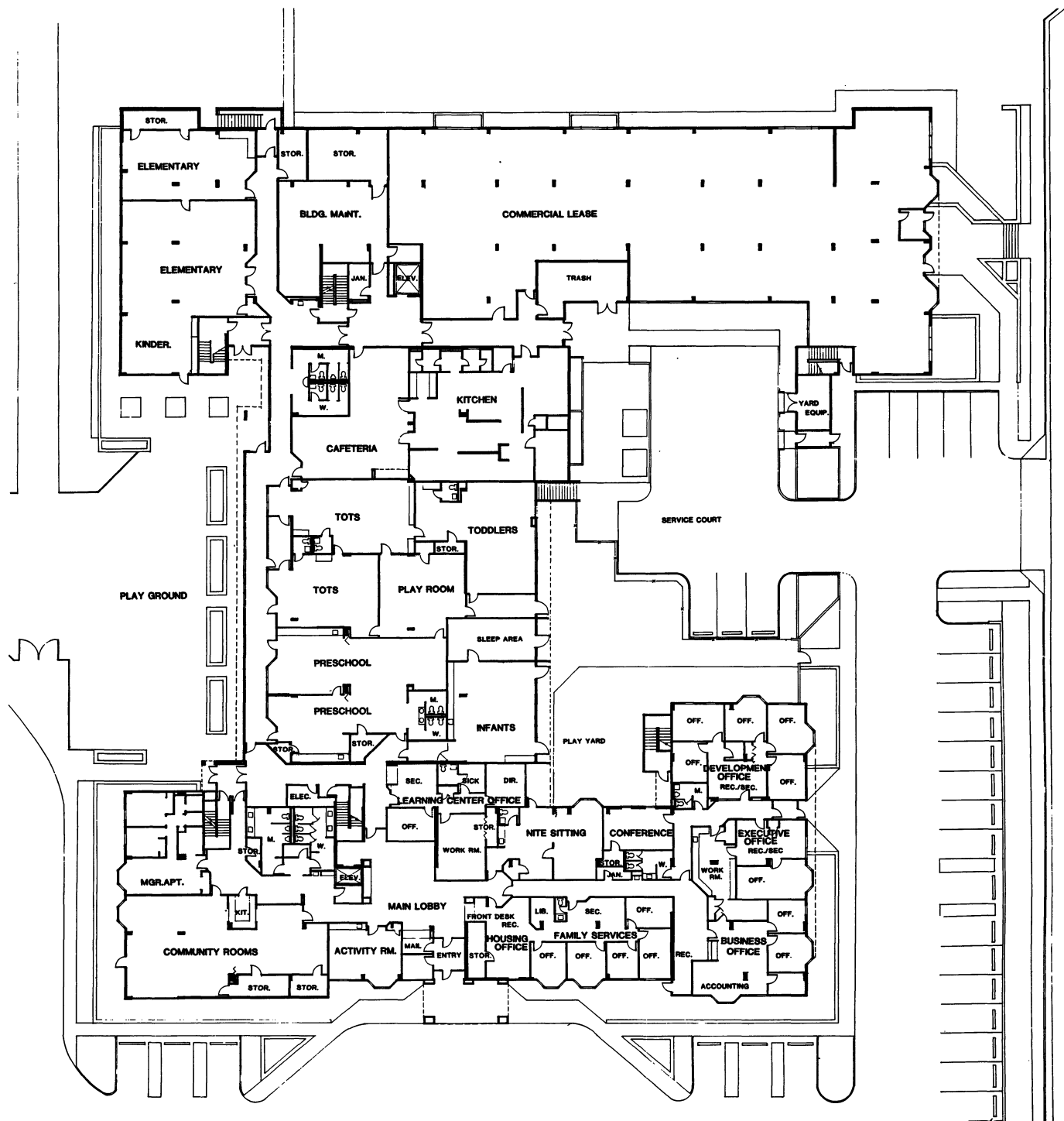


Figure 1-9. Ground-level floor plan of Decatur Place, 1155 Decatur, Denver, Colorado
(Design: Maxwell L. Saul, architect).

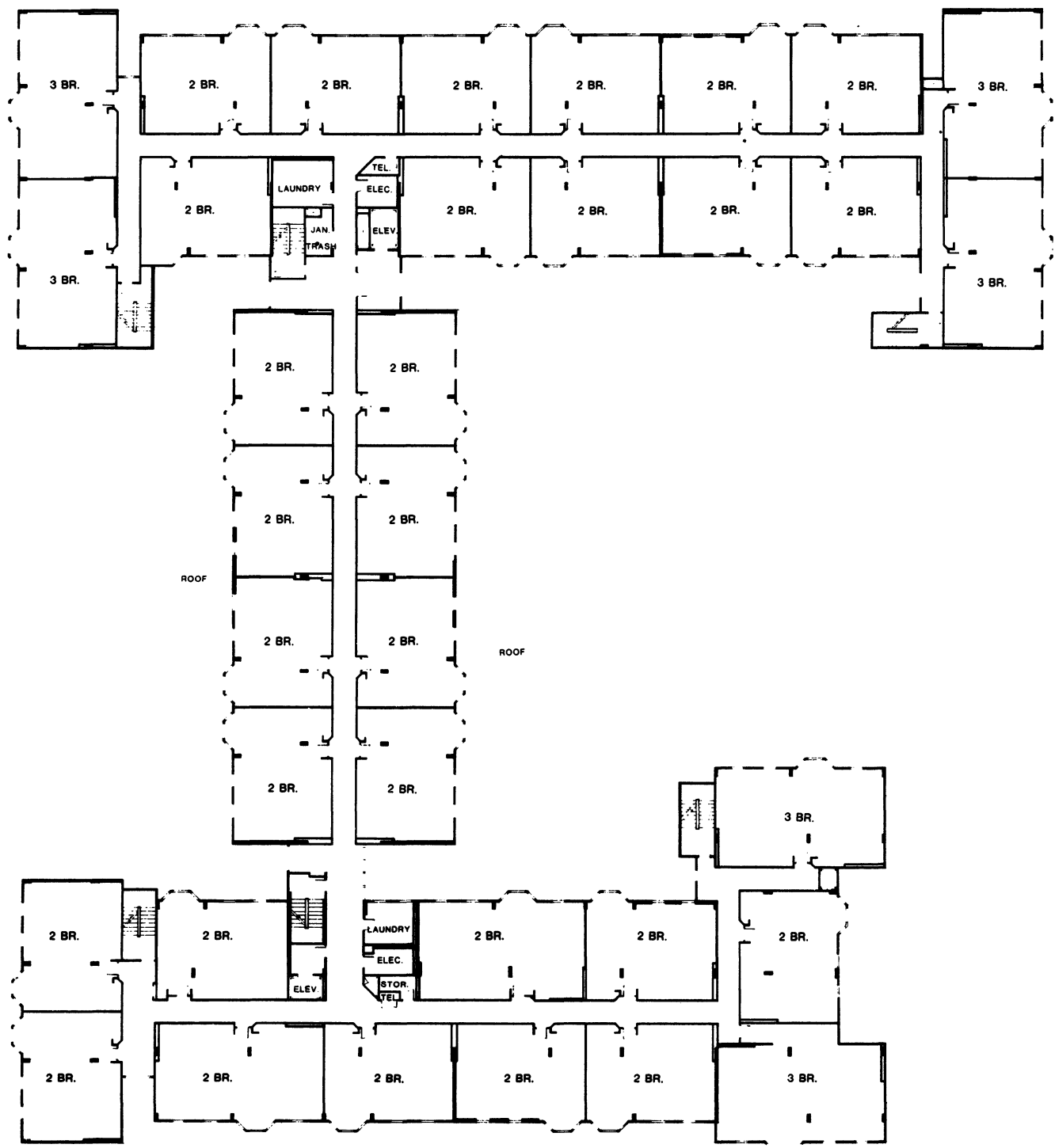


Figure 1-10. Typical floor plan of Decatur Place, 1155 Decatur, Denver, Colorado
(Design: Maxwell L. Saul, architect).

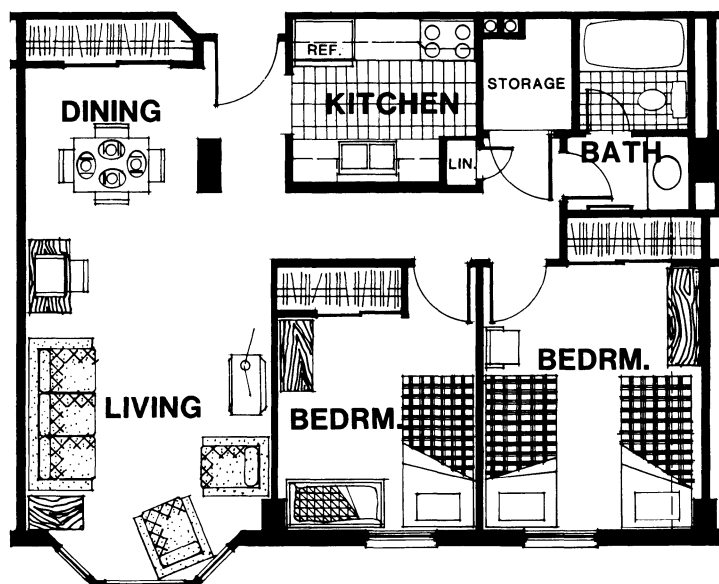


Figure 1-11. Typical two-bedroom apartment plan of Decatur Place, Denver, Colorado (Courtesy of Warren Village staff).

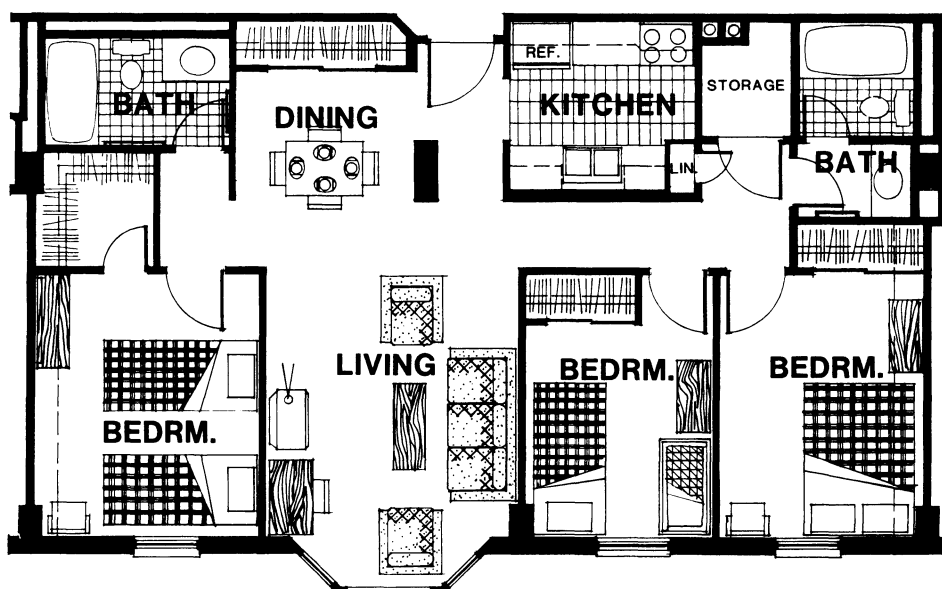


Figure 1-12. Typical three-bedroom apartment plan of Decatur Place, Denver, Colorado (Courtesy of Warren Village staff).

program. The third objective was to make recommendations for replicating the program. A total of 79 one-hour-long face-to-face interviews were completed with four groups of respondents: non-residents, former residents, long-term current residents, and new current residents (Chapman & Doucette, 1981).

Results from the Abt study indicate that Warren Village residents increase their level of educational attainment during their stay; they tend to increase their rate of employment; and after they leave, they decrease their dependence on welfare as they increase their rate of employment. In terms of education specifically, many residents entered Warren Village with less than a high-school education, but left the program with at least a high-school degree and often with some post-secondary