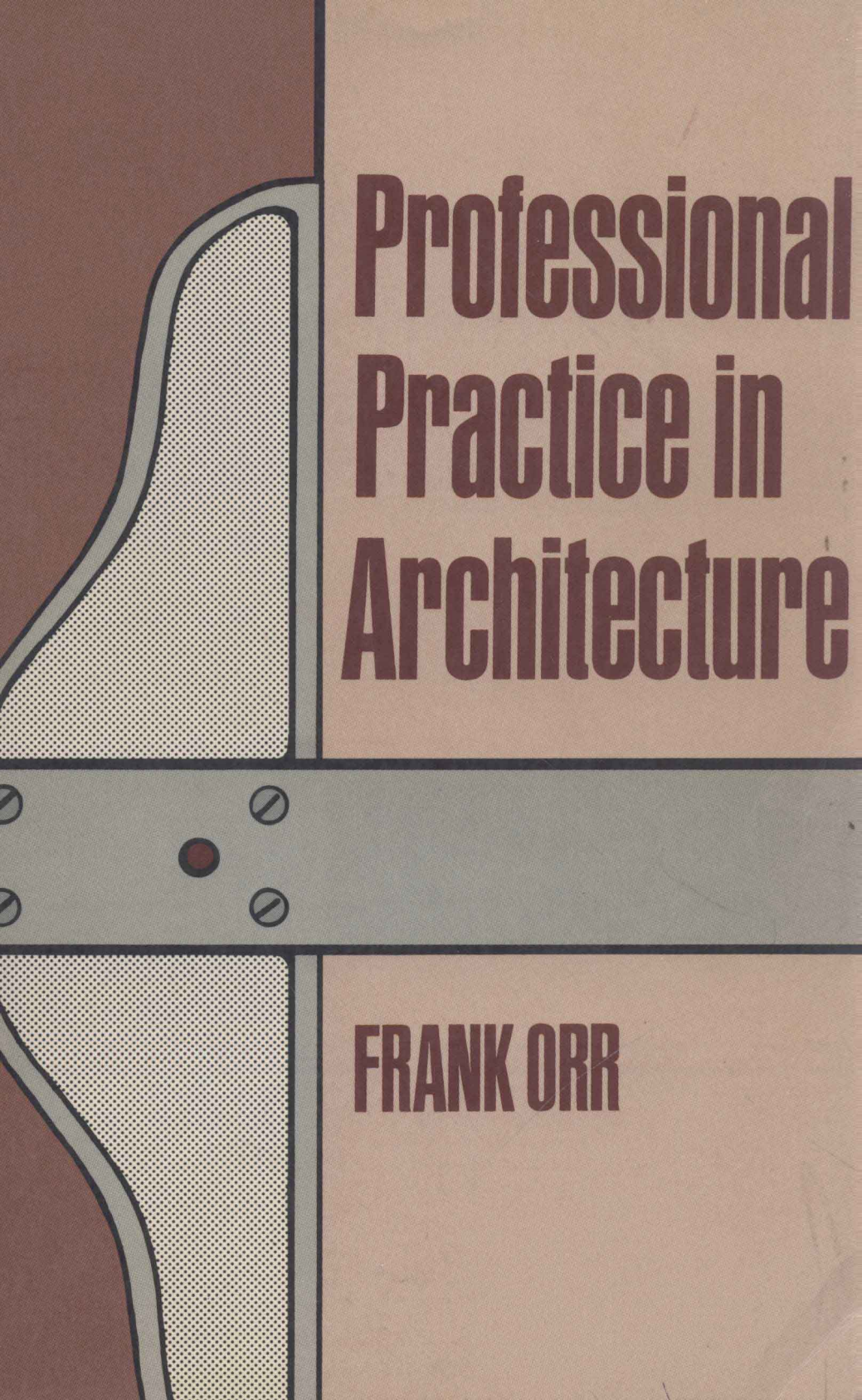


Professional Practice in Architecture

FRANK ORR

FRANK ORR

Professional Practice in Architecture

VNR VAN NOSTRAND REINHOLD COMPANY
NEW YORK CINCINNATI TORONTO LONDON MELBOURNE

Library of Congress Catalog Card Number 81-19692
ISBN 0-442-27065-8 (cloth)
ISBN 0-442-26391-0 (paper)

Printed in the United States of America.
Designed by Rose Delia Vasquez

Published by Van Nostrand Reinhold Company
135 West 50th Street
New York, NY 10020

Van Nostrand Reinhold Limited
1410 Birchmount Road
Scarborough, Ontario M1P 2E7, Canada

Van Nostrand Reinhold Australia Pty. Ltd.
17 Queen Street
Mitcham, Victoria 3132, Australia

Van Nostrand Reinhold Company Limited
Molly Millars Lane
Wokingham, Berkshire, England

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

Library of Congress Cataloging in Publication Data

Orr, Frank, 1932-
Professional practice in architecture.

Bibliography: p.
Includes index.
1. Architectural practice—United States.
I. Title.
NA1996.077 720'.68 81-19692
ISBN 0-442-27065-8 AACR2
ISBN 0-442-26391-0 (pbk.)

Acknowledgments

There are many to whom thanks are due for helping with this effort. Prominent are:

John Mitchell, for encouraging me to try;

The late Edwin Keeble, my former employer and mentor of many years, from whom much of the content originally came;

Wendy Lochner, my wise and kind editor;

Ed Houk, my partner, for not only putting up with the time loss and other distractions the effort generated, but also for sharing his wisdom in architectural matters;

Nancy, who continues to be supportive and loving even though playing one of life's most difficult roles, the wife of an architect.

INTRODUCTION

The overriding, guiding purpose of erecting a building is to get from here to there—namely, from the perceived need to the realized, completed, and occupied building.

Despite some appearances, the purpose is not to produce fine, exacting, and beautiful drawings, nor complete and concise specifications, as helpful as these may be in realizing the real goal. These are only means, subordinate to the end product—either, in short term, a single building or, in the long view, a consistently high-quality output of many buildings over the duration of a professional practice. (The latter of these goals may even be said to be subordinate to the former, since the user/consumer "buys" only a single project, whether one or a number of buildings, not a lifetime practice.)

Both the Roman architect Vitruvius and the Italian Renaissance architect Alberti gave us three "ways" of architecture—utility, strength, and beauty (or firmness, commodity, and delight). In the daily activities of a person involved as a small cog in the building-production machine, it may be easy to become fixed on the utility or strength of architecture and to overlook its beauty or delight.

Architects must always focus on the real, fundamental, rock-bottom objectives of their activity, no matter how small or large, narrow or wide their contribution may seem to be. In my opinion, the practice of architecture has two such basic objectives, both stated or implied above—to produce buildings that satisfy human needs and to

evaluate one's work constantly, to measure it against the principles of "firmness, commodity, and delight."

It is not enough to provide structures that will remain standing under all loading conditions, roofs that will not leak, and environmental systems that maintain human bodily comfort. While the majority of the design and delivery team may not participate in a direct way in the decisions affecting the "delight" aspects, their sympathy to these choices or lack thereof can profoundly affect the success of a building in meeting the visual criteria.

A building has been defined as a structure that separates inside spaces from the outside environment for the primary purpose of creating comfortable conditions for the occupant. As we have noted above, expanding this definition to include the aspects of beauty transforms it into a definition of architecture. Architectural practice, therefore, might be said to be the organization of the labor necessary to produce architecture. Unfortunately, this definition is somewhat too broad in that at least over the last one hundred years or so, for most projects the architect is just one of a triumvirate necessary to produce architecture.

The opening chapters of this book explore these elements as well as others that play ancillary roles in the decision-design-delivery process. In order to understand the role of the "design" member of this trio, it is necessary to understand, in a comprehensive way, the entirety of the process and its participants.

Later chapters examine the general internal and external elements and organization of professional architectural practice. According to a recent AIA survey approximately 80 percent of America's registered architects work in offices of ten people or less and prefer to do so. The discussions in this book focus on the types of activities likely to be encountered in offices of this size. However, where appropriate, mention is made of the alternatives available to larger or smaller offices.

The last part of the book looks into the future, identifying trends that may develop into standard practices and patterns.

What this book does not do is attempt to teach design, presentation, marketing, energy analysis, or any similar specialized activity. It does attempt to show how to organize a professional office as well as one's own assignments in order to perform these tasks more effectively.

CONTENTS

Part I

THE WORKING ENVIRONMENT OF THE ARCHITECT

1

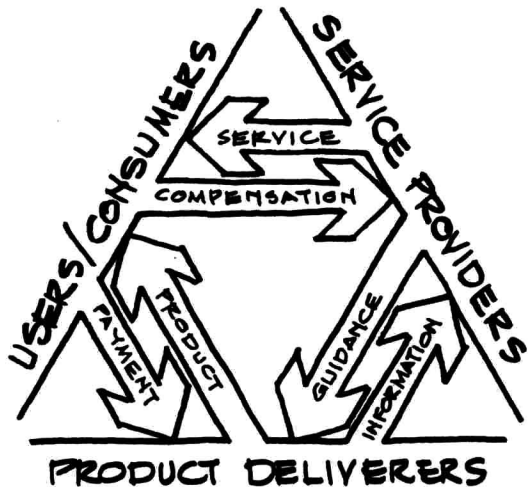
The American Construction Economy

Everyone, even people living in the most tightly controlled socialist societies, engages in business with some frequency. Every time you purchase or sell anything, you enter into a business contract, even if it involves only a loaf of bread.

In the United States, as in most of the western world, freely entered business contracts are the norm and almost all exchanges of goods and services occur in this manner. This means that the laws of supply and demand are very much in action and have a great effect on what is produced for sale and what is purchased, even when government seeks through regulation to moderate the extremes.

These same laws or forces affect the construction industry as much as or perhaps more than most other segments of our economy. It is, by and large, a free economy, meaning that individuals or freely associated groups perceive the need for and initiate the process of constructing a building. The relationships and interactions among parties involved in this process are complex and varied but function, in the main, in a free-enterprise atmosphere, one paying another for value received.

Construction involves many skills, tools, and types of entrepreneurs and government regulators and provides employment for a large number of people. The greatest numbers are found in the



1-1 The Way the Economy Works

physical construction of a building, the last phase in the sequence. The entire industry as well as a typical individual building project might be described as an inverted pyramid, with the number of people increasing as the project progresses. One conclusion is that, if high employment is a public goal, then that goal is best served if as many projects as possible progress from the planning stage into actual construction.

Unfortunately, and almost always due to circumstances beyond control, much of what architectural offices begin to work on does not eventually result in actual construction. The primary reason for this is that the financial feasibility of many projects cannot be determined without preliminary design study and evaluation. Upon investigation, it may be found that some of these projects are simply not feasible, at least within the resources of those proposing them. Thus, some will eventually become "real" projects, but many will not.

Another prominent reason is that the workload for many, primarily smaller, architectural offices fluctuates widely, and occasionally nonconstruction commissions are undertaken to supplement income. Depending on local needs and the firm's connections, these may include projects in such areas as graphic design, site evaluation, and interior design, although the last may rightfully be considered an integral part of architectural practice.

In a free economy, construction expresses the public will in a

direct way, though moderated by a lag due to its huge costs and extended time requirements. The public gets what it desires enough to pay for. Much that is built is initiated and sponsored by government, but even here market forces are at work, since the industry responding to its initiative is overwhelmingly in private hands.

The public goals that are addressed and hopefully met in what architects build are generally an expression of the social values of the time. For example, the interstate-highway system was planned when the automobile was considered to be the best possible means of personal transportation and its use likely to continue to grow indefinitely. However, according to law all construction must also satisfy the goals of health, safety, and welfare. Society, through government and voluntary covenants, has established standards to ensure a minimum level of conformity with these goals, although these can shift with changing social policies.

Under the blanket term "public welfare" a great many subgoals may be found: accessibility for the handicapped; the ability to prevent constructions or practices that may not be unhealthy or unsafe but are nuisances or unsightly; the preservation of historical buildings that contribute to the character and meaning of a locale; and, in a few cases, the ability to prescribe strict design constraints. But, perhaps a better definition of public welfare would be: that which enriches and ennobles mankind, that which calls forth the best in us, which encourages us to act most responsibly in our use of limited resources and in our relations with each other—in short, those traits that should be found in buildings if good architecture has been produced.

In all the diverse activities of a construction project, the people engaged must be paid and their expenses met or their part of the work will not be done and the project will not proceed. This means that sufficient money has to be invested in the project at each level to cover the costs. Too often developers or would-be developers attempt to promote a project without understanding this very basic principle or without recognizing that it applies to them, and they expect other parties to work for unreasonably low or sometimes even no income. Since architects are among the first actors to appear in the scenario, they are often asked to contribute preliminary services "just to help get the project off the ground" or at least to accept an income lower than office expenses require. This is not good practice for an architect in particular nor for the public in general.

The American economy functions, as we have observed, on the basis of freely entered business agreements. Money for this activity must be found, and it is found by, controlled by, and flows from the sponsor or sponsors of the project. The "sponsors" may not be the original initiators but are always the parties who propel the project into the construction phase. If they do not have ready funds, they must either borrow them or find other parties who will invest in the project, holding an equity in it and its income-producing ability after completion.

When money is available, the project can proceed and those involved will be assured of receiving their due remuneration for their labors, services, or products. The precise cash flow can be rather complex and usually increases in complexity in direct proportion to the size of the project. Some payments are made directly by the sponsor, or "owner," as is the more common identification, and others are made indirectly through other parties, including the architect. At any rate, the owner ultimately makes all payments, and the architect and other participants are therefore obligated to satisfy their contractual arrangements and to meet the owner's specifications, as long as they are consistent with legal and ethical requirements.

Without such relationship and commitment the process, at least in the long term, would not function. Likewise, all the participants under contract must trust one another. This includes those outside direct-pay relationships, such as the governmental officials who administer the codes and other regulations under which construction is allowed. Unfortunately, some see these relationships as exercises in gamesmanship and as a result generate an attitude of mistrust and animosity and an atmosphere of greed and fear. Their number, however, is relatively small; the system works because trust and respect are the norms.

In the following chapters the actors in the building-construction drama are identified and explained in greater detail and their functions and interrelationships are more thoroughly defined. This exposition is necessary for a sound understanding of the economic environment in which architectural practice exists.

Architects are said to work from the general to the particular, whereas scientists are said to work from the particular to the general. Consistent with this notion is the manner in which the contents of this book are presented. It is the author's conviction that an

understanding of the pond in which one is to swim is essential before one learns how to do so. If one's goal is to learn how to function as a practicing architect and to maintain that practice, it is essential to understand the nature of the larger business world in which this practice can flourish.

You are encouraged to investigate in as much depth as possible the local economy, both inside and outside the construction industry. It is hoped that an understanding and acceptance of the fact that goods and services must be paid for will emerge and that productivity, trust, and respect are valued and ultimately rewarded.

It used to be fashionable, though not very realistic, for architects to consider themselves "above" the need to function as businessmen. Fortunately, this is less true today, but it is a lesson that seems to be only reluctantly learned by many. The principles of business and management required for a successful architectural practice are to a large extent the same as those required for any other business enterprise. Therefore, it is essential for the successful architectural firm to have in its staff the highest level of business acumen possible, and it is equally essential that every architect have at least a cursory understanding of business practices and principles and a much deeper understanding of the tenets of good management, even if he is managing a one-person firm.

The American economy operates on the principle of free choice. However, when one makes a choice, one must accept responsibility for it and for its consequences. This is just as true in construction as in any other field. If one chooses to be an architect and is successful in completing the educational, practical, and registration requirements, one must accept the responsibilities and consequences of this choice. Among these are the commitment to uphold the public health, safety, and welfare; to act responsibly in regard to other people and to available resources; and, with the help of all the other players on the stage, to strive for the best work that one can produce.

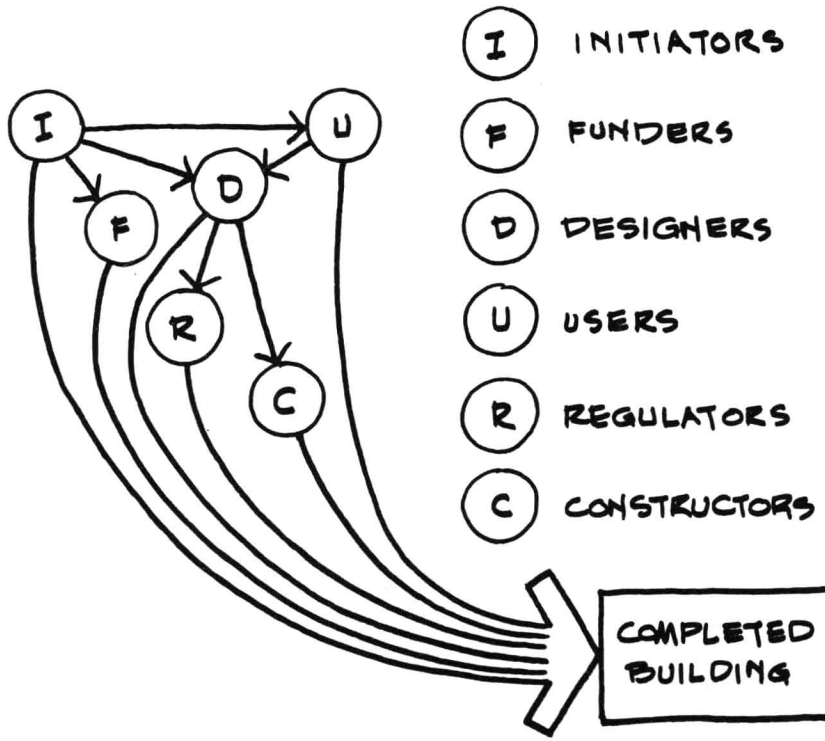
2

Elements in the Construction Process

In spite of the egocentric bias of architects and other design professionals, the construction process does not start with them; in fact they often play their roles rather late in the process of a construction project.

The earliest actors—no metaphor or pun is intended; these parties are called actors because of the actions they take—are the initiators of the projects, those who decide that it is desirable, profitable, or necessary to erect a particular building or other construction. Very often they are motivated by profit; almost equally as often they are motivated by a perceived social need, as in the case of governmental officials proposing a new bridge or a new school. At times the motivation is simply personal need and desire, as in the case of a new family residence.

Sometimes the party that initiates a project does so simply because that is what it does for a living. In this case the party may be identified as a developer. Developers put "packages" together for building projects, which often include not only a site and a building but also temporary and permanent financing, leasing, and continuing maintenance. It is their business to bring together these diverse activities and perhaps "massage" (review and adjust) them until it appears that everything will work out; that is, that sufficient sales or



2-1 The Construction Industry

rental income can be generated to pay for the mortgage, the land, the design fees, and other expenses and still leave enough for an attractive return on investment. (The process of proving if this can be done, at least on paper, is one type of feasibility study and is discussed in more detail in Chapter 15.)

The initiator may also be an on-going business that needs more space in order to respond to a growing market. It may be a nonprofit corporate body, such as a church or a private school, that is expanding and needs additional or different kinds of space for its program of activities. Whatever the origin, the point is that someone or some group has to make the initial decision to erect a building; understanding the motivations and operational methods of this party is highly desirable if not essential in establishing and maintaining effective office practice.

The users, on the other hand, often are not the initiators. They