

THE ARCHITECTURAL PROFESSION:

A MANAGEMENT VIEWPOINT

by

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ABSTRACT

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This thesis attempts to use some of the criteria of management science to evaluate the market behavior and effectiveness of architectural professionalism in Great Britain. Professionalism in architecture emerged in the nineteenth century seeking to guarantee what market forces, faced with a highly specialized service, could not; the competence and integrity of practitioners. It guaranteed competence by basing entry into the profession on an examination and apprenticeship system, and integrity by drawing up a professional code of conduct. However, the rise of the professional manager together with the increased economic sophistication of the market, has changed the conditions to which professionalism must respond.

Business organizations generally regulate their transactions with the market environment by operating on five marketing variables: product-mix, distribution, promotion, price and planning. They do this by coping with the following issues: what is being sold, how is the customer reached, how does he become interested in a product, how much is he willing to pay for it and how should an organization establish its priorities on these issues? The ability of architects to handle these variables has been limited by their training and their professional code--they are only allowed to diversify their product-mix within narrow limits; they are not given much room in the distribution channel, they are forbidden to promote themselves and the pricing of their services is institutionally determined. The foregoing largely nullify the value of the planning variable.

The professional restrictions placed upon the architect's market behavior have had an effect upon the types of organization that he can evolve. He has not been able to use the pricing mechanism to accumulate the resources needed for growth. Architectural firms have been kept small and have not been able to evolve differentiated organizational functions such as marketing, finance, R & D, and personnel; they have lost some of the economies of scale that an increase in firm size can bring.

Professionalism as currently formulated has prevented the architect from responding flexibly to a dynamic market situation. The code of practice has preserved a "prevention is better than cure" approach to the problems of possible professional abuse even though the market is in a much better position to look after itself than it was a century ago. It is suggested that if professional restrictions on architects' behavior were removed, the market would quickly learn to protect itself and even to expect better service.

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## INTRODUCTION

In 1873 William the Fourth of England was petitioned by his own cousin, Thomas Philip Earl de Grey, "for the purpose of forming an Institution for the general advancement of Civil Architecture and for promoting and facilitating the acquirement of the knowledge of the various Arts and Sciences connected therewith; it being an Art esteemed and encouraged in all nations as tending greatly to promote the domestic convenience of citizens and the public improvement and embellishment of Towns and Cities...." A Royal Charter was granted him and the Institute of British Architects was born. It became the "Royal Institute of British Architects" in Victoria's reign (1887) but its avowed purpose remained<sup>1</sup> unaltered.

The objectives originally set out by de Grey have survived several modifications to the Charter and have retained their original form. Around these objectives the architectural profession has grown--an organisation designed to carry them through in practice.

This thesis takes the aims of the original charter and asks whether the profession in its present form measures up to them. It is a difficult question on which to come up with a conclusive answer; objectives are more misty than

<sup>1</sup>  
R.I.B.A. chapter 29.



goals, and in a discipline which claims as much of art as it does of science, goals can often remain almost as elusive as the objectives from which they are distilled.

What in "Civil Architecture" constitutes an advancement? We may recognise one when we see one, but can we specify with confidence its contributive elements? We shall circumvent the knotty problem of identifying ingredients--a problem that currently vegetates in the tangled undergrowth of theory--and rest our discussion on the observation that much architecture is demonstrably bad. The advancement of civil architecture has been patchy and thinly spread; the built environment has undergone a physical and architectural deterioration in spite of a general improvement in housing conditions, and the rate of technical development in the building industry has lagged consistently behind that in others. Widespread discontent with the present conditions of the built environment brings to light a social need that has gone unsatisfied-- a market gap, if you will. How much of the discontent can be laid at the door of the profession is hard to say, but the market gap exists as a fact; supply and demand are out of step. The architect being on the supply side must share

the responsibility that accrues to that segment.

Taken in isolation the individual architect-client relationship does not have a great impact on the total environment. The environment in most cases is the urban setting in which the individual building constitutes but a simple object. Yet in Britain eighty percent of the buildings put up each year involve the architectural profession in some capacity or other and at that level of aggregation, the collection of objects which architects deal with becomes, properly speaking, the urban environment itself or rather its physical fabric. Any improvement in the way design skills are distributed in the market, potential and actual or in the general conditions under which architecture is performed, has implications for the quality of the urban environment as a whole.

See in this way, our enquiry can be readily fitted into a marketing framework; if we take the aims of the R.I.B.A. as laid down in the original charter as marketing objectives, how well adapted, we may ask, is the architectural profession to its marketing task? That is, how well adapted is it to the task of matching the supply of architectural skills and services to the demand and need for them? We attempt to

answer this question in the four chapters that follow.

The first chapter gives a brief account of how the profession evolved and what economic and managerial circumstances it responded to; it describes its nineteenth century origins together with those of modern management science and prepares the ground for a comparison of the two disciplines. The second chapter explores the economic and market environment in which a business firm operates and establishes the latitude given to architectural firms by their professional code in responding to that environment. The third chapter examines the organisational components that business firms have evolved to implement their responses to the environment. Again it looks at the professional code and its effect on the development of architectural organisations. In the concluding chapter the main points drawn from the comparison between architectural and business organisations are summarised, and, where the points suggest it, recommendations are made for the modification and improvement of the architectural environment.

## CHAPTER 1

In this chapter we shall be looking at the respective growth of the two fields that we want to compare--architecture and management--from their nineteenth century origins up to the present. We shall see how professionalism, as a concept, evolved in response to nineteenth century market conditions and how the growth of management science affected and modified these conditions in our own century.

### MANAGEMENT

#### The nineteenth century

In the late eighteenth century and throughout the course of the nineteenth century there were few formal provisions for the training of managers. The old institutions had provided in addition to the basic classical education (grammar, Latin, Greek and ancient history, and philosophy), the background teaching for the three main types of graduates--clergymen, doctors, and lawyers--these were the professions par excellence. Since formal management training was so rare as to be negligible, and since formal education ~~ended~~ <sup>ended</sup> so early, managers typically were trained by practical work in small firms. In this respect, at least, they were not essentially different from the professional men of the day.<sup>1</sup>

<sup>1</sup>Pollard. 26. p. 131-147.

The Industrial Revolution had produced well defined groups of managers in many industries; there was, however, by 1830, hardly a managerial profession as such. Examples of dishonest, absconding or alcoholic managers who did much damage to their firms and their embryonic profession abound in this period.<sup>2</sup>

On the other hand, the entrepreneur of the day was fast acquiring prestige. He was respectably clothed in a new economic theory that offered both freedom of movement and decorum--laissez-faire.

If we define our terms closely enough, there could be no precedent for modern management problems before say 1750. The whole economic environment, the attitude of labour and even the legal framework were different. The practice of using accounts as direct aids to management was unknown. It was not one of the achievements of the British Industrial Revolution; in a sense, it does not even belong to the later nineteenth century, but to the twentieth century. Among the wealth of accounting textbooks which came off the European presses between the sixteenth century and the early nineteenth century, nothing perhaps is more surprising than the absence of references to the needs of the industrialist and to the

<sup>2</sup>

Pollard. 26. p. 33.

teachings of cost accounting. Among the many innovations and schemes of rationalisation of the age, the rationalisation of management through the accountancy and audit was stirring but faintly.<sup>3</sup>

Where it was to be found, the response of the industrialist to the development of accounting as a tool of industrial management in the late eighteenth century and the early nineteenth century was tentative and cautious. As in the field of management in its other aspects, there was no tradition, no body of doctrine, no literature worthy of the name developed to unify or even up the practices in different parts of the country or in different industries. The fact that improvements were slow and minimal in overall management accounting in this period is perhaps due largely to four factors: 1) the absence of a tradition in accounting itself and the absence of accounting knowledge within industry, 2) the small number of accountants available, 3) the inability of industrial accountants to deal with the main new factors involved in cost calculations, namely, the relatively large quantities of fixed capital,<sup>4</sup> and 4) the smallness and

<sup>3</sup>  
Pollard. 26. p. 271.

<sup>4</sup>  
Pollard. 26. p. 264.

stability of enterprises, requiring only a few men to control them.

The absence of measures and standards of performance pushed the emphasis on to the human element in the managerial task. The success of the concern, it was firmly believed, would stand or fall with the quality of its partners and there was little that organised science, or accountancy, could do to help them beyond the industrial technology itself.<sup>5</sup>

Nevertheless, by the early twentieth century, the state of the art in the field of management had sufficiently evolved for the wheel to turn a full circle. The days when it was held to be axiomatic that control by salaried managers was the quickest way to ruin, had long passed. The more advanced industries and the larger firms had learned to detach the function of management from the person of the proprietor and to see it as a separate set of activities sensibly and rationally performed, if necessary, by a separate set of individuals.

#### The twentieth century

How have economic and managerial thinking evolved during

5

Pollard. 26. p. 289.

the course of this century? According to Penrose,<sup>6</sup> enterprise can be treated as a psychological predisposition on the part of the individuals to take a chance in the hope of gain and in particular to commit effort and resources to speculative activity. Some speculative activity is dependent for its success upon an ability to evaluate risk and to measure uncertainty. The balance between the measurable and the non-measurable has today become an essential problem of management.

The twentieth century has seen the gradual evolution of a body of analytical techniques that could find direct application in the field of economics and of management in the evaluation of risk and in the measurement of uncertainty. Most recently, the fields of econometrics, operations research, and electronic data processing have created a technical capacity to automate certain areas of decision-making.

The theoretical foundations of modern management science emerge clearly in "systems oriented" companies, where the distinction between "pre-doing" and "doing" is becoming

6

Penrose. 25. p. 33.



sharp and dramatic.<sup>7</sup> Non-operations activities (pre-doing) are uniquely different from operations activities (doing). So distinct in character as to present the theorist with a new and vitally significant dichotomy in economic enterprises. Non-operations activities are those that use analytical and planning techniques to choose and evaluate a possible course of action from among those available; operations activities are those that employ techniques that bring about the action itself once it has been selected. With the growth of the large corporation and the acceptance of the systems viewpoint, the professional manager becomes important. There has been a shift of power from private entrepreneurial ownership to professional management. Berle and Means hold that ownership has been separated from control as a result of the diffusion of stock ownership, a consequence of the growth of the large corporation.<sup>8</sup>

The adaptation of the corporation or limited liability company to private manufacturing business removed the most important limitation on the growth and ultimate size of

<sup>7</sup>  
Meyers. 6. p. 210.

<sup>8</sup>  
Papandreou. 24. p. 195.

the business firm when it destroyed the connection between the extent and nature of a firm's operations and the personal financial position of the owner.<sup>9</sup> In this simple fact we see the key to the transition from a nineteenth century managerial environment to a twentieth century environment in which the professional manager could begin to operate and emerge as an independent force.

The changes in management that took place in the transition from the nineteenth century to the twentieth century can be summarised:

1. The growth of analytic methods for measurement and decisions and the possibility of communicating these through formal education.
2. The evolution of the professional manager and his gradual displacement of the owner as the controlling element in the firm.
3. The rise of the large corporation.

#### THE ARCHITECTURAL PROFESSION

The nineteenth century

Although there had been associations of architects and surveyors founded in the last decade of the eighteenth century,

<sup>9</sup>  
Penrose. 25. p. 6.

they were little more than dining clubs, and the great period of professional activity was the middle decades of the nineteenth century; the age of Benthamism, self-help, individualism and laissez-faire.

Professionalism may be defined sociologically as the institutionalisation of an occupation based on skilled intellectual technique whereby the competence and integrity of practitioners are guaranteed to prospective purchasers of their services. These guarantees are usually made in the first instance through the medium of a voluntary professional association. The effect and usually the explicitly avowed object of such guarantees is to raise the public prestige of the association, which in turn serves to ensure to its members some measure of security of employment and income.<sup>10</sup>

The architectural profession itself had four sources: the master artificers, clerks in the office of works, holders of higher appointments in the office of works, and amateurs. These diverse elements banded together to form the Royal Institute of Architects in 1834.<sup>11</sup>

<sup>10</sup>  
Kaye. 20. p. 21.

<sup>11</sup>  
Kaye. 20. p. 88.

Why was it necessary to turn architecture into a profession in the first place? Why guarantee the architect's integrity as well as his competence?

In the nineteenth century, laissez-faire and "caveat emptor" were acceptable as principles of commercial activity because it could be assumed that the customer both knew what he wanted and was able to recognise it when he saw it. In the case of professional services, neither of these assumptions could be made. If the profession fell into disrepute because of the poor quality of individual service, there would have been a consequent lessening of demand. It was therefore in every professional's long-term interest to ensure that the public received effective service from his colleagues. This necessity became more acute if the service was dispensable and it became more important than ever that the temptation for the individual to undercut his fellows be removed. Thus, the concern of the professional viewpoint during the nineteenth century was almost wholly directed towards the establishment and maintenance of the architectural profession's reputation in the public eye, firstly by the guarantee of integrity and secondly by that of competence.<sup>12</sup>

<sup>12</sup>

Kaye. 20. p. 163.

The guarantee of integrity would assure the client that the architect would act in his best interests, free of commitments that would conflict with them. The guarantee of competence would tell a prospective client that the architect he employed possessed the skills necessary to serve him. Since most building in the nineteenth century did not require a very complex or extensive technology, the problem of guaranteeing competence was not stressed as strongly as that of guaranteeing integrity.

Competence was guaranteed by restricting entry into the profession to those suitably qualified. Such qualifications could be acquired by serving an apprenticeship for a number of years and sitting for professional examinations. Gradually, the method of training became more formalized and schools of architecture were set up to replace part of the apprenticeship. Integrity was guaranteed by drawing up a professional code of conduct which would regulate a member's behavior towards his client in such a way that his interests were not compromised.

Professionalism was in part a response to a change in the architect's status, deriving from a change in the section of society to which he looked for clients. The noble patron of the eighteenth century was gradually replaced by the municipalities, public companies and clubs. They were followed

by the wealthy industrialists, the Anglo-Indian nabobs and the clergy and parish councils of the middle decade of the nineteenth century. Thus we see throughout the course of the century an extension of the possible market for architectural services.<sup>13</sup>

Summing up the function of the professional association in economic terms, we find that it is there to provide an acceptable substitute for the market relationship with its implication of "caveat emptor"--let the buyer beware--in a society based on a laissez-faire economy. This function it attempts to fulfill by guaranteeing firstly the competence and secondly, the integrity of its members. The commitment is met by means of tests, examinations, and other conditions of membership on the one hand, and by establishment of a professional code of conduct on the other.

#### Twentieth century developments

Papandreou holds that when a group of firms subject some segment of their behavior to the coordinating influences or authority of the group or some organisation which in some sense or other represents the group, a multi-firm may be said

<sup>13</sup>  
Kaye. 20. p. 163.

14  
to exist; thus can we look upon the architectural profession as a single organisation or unit.

The various Registration Acts became the devices by which a coordinating authority emerged and in a sense these Acts were the logical outcome of the professional aim to guarantee integrity and competence. Statutory registration is professionalism pushed to its logical conclusion. It prevents anyone not affiliated to the professional body from practising and so can impose its own terms for admission on those wishing to do so. Statutory registration becomes a way of controlling market entry and admitting into professional practice only those who are able and willing to stand by the guarantee. Yet even at present statutory registration does not control market entry completely; it cannot prevent anyone from designing and putting up a building, providing he does not officially call himself an architect.

An outstanding problem is that to the extent that the professional services are individual and relate to specific problems they are not standardised. It is impossible on this account for a professional association to guarantee efficiency. Efficiency implies that the means employed in the attainment

of an end system are minimised, or conversely that the ends attained from a given set of means are maximised. If each situation is unique, neither the ends nor the means are entirely or even sufficiently repeatable and it becomes impossible in practice to evolve methods of analysis and sets of procedures that can optimise the means-end relationships. The best that can be offered is a guarantee of competence in tackling the individual problems, albeit often at a comparatively low level of efficiency.

One characteristic of a profession on which all authorities agree is the possession of a skilled intellectual technique; that is a technique whose performance depends upon intellectual analysis.<sup>15</sup> The professional is an expert and his relationship with his client is dominated by that fact. The layman is unable to judge the quality of his services except in the long-run, and is, therefore, initially obliged to take them on trust.

Uniquely, perhaps, the architect claims both technical knowledge and artistic insight and it is this claim and its implications for the architect-client relationship which has dominated the course of development of the architectural profession. Art is an activity the products of which are

<sup>15</sup>  
Kaye. 20. p. 14.



intended by their makers to be judged accordingly to aesthetic criteria, and artistic insight shares with professional skill the characteristic that neither can be assessed by the layman. Frequently aesthetic criteria militate against efficiency. Traditionally, this has not been a problem for the architect, since competence and integrity as he defined it were only concerned with ensuring that the building when built should stand up and that it should embody the best that the architect had to offer aesthetically. Yet, the nature of the market for architectural services has undergone a transformation. As a result, perhaps, of technical and conceptual advances in allied fields, efficiency, primarily economic, has come to the fore as a prime requirement of professional performance.

If efficiency poses a problem of selecting appropriate means when the ends have been specified, effectiveness poses that of specifying the ends themselves in such a way that they are attainable. This brings us to the problem of the architect's social role.

The architect's social role results from his responsibility to society as a whole as opposed to the individual client. It

is the product both of society's expectations and of the architect's own commitment. Conflicts arise when society's expectations and the client's expectations are in conflict with each other. Such a situation might occur, for example, in a slum clearance program when a workable low income community is bulldozed out of existence to be replaced by a middle income housing project; the architect might find himself serving private enterprise against the public interest. The promotion of "civil architecture" incorporated in the professional charter posits a notion of the public interest that has been progressively transformed as society has drawn its boundaries of social awareness and involvement even wider.

The architect's social role pushes him to formulate his goals more broadly than the business firm, to incorporate considerations of social welfare. It is hard to see why the architect should do this and the businessman not, until one takes into account the tradition of professionalism itself-- a tradition that questioned the assertion that the free play of market forces would maximise social welfare. If social welfare was maximised by such market forces then clearly the pursuit of social goals was built into the system and need not be articulated. In fact, the businessman has been edging closer to the architect's point of view in the last

few years. The rapid deterioration of the natural and built environment is offering tangible evidence that social goals are not automatically taken care of in the free competition model of economic processes, and although some would attribute this to market imperfections susceptible of improvement, one must remember that perfect competition is a theoretical notion and likely to remain so. Nevertheless, social goals must be operationally definable if they are to serve as a guide to action. They must yield more than elusive generalities; this condition has yet to be satisfied. The architect's social role must not be neglected when he is compared with the businessman. To a significant degree, his economic motivations and behavior are shaped by perceptions that allot to the architect a different place in the order of things to that of the businessman.

The changes in the architectural profession that have taken place since the last century can be summarised:

- 1) An extension of the power of the institutional body through the Registration Acts.
- 2) An increase in the complexity of the architectural task.

Emerging problems of professionalism

Simon observes that if we want an organism or mechanism to behave efficiently and effectively in a complex and changing environment, we can design into it adaptive mechanisms that allow it to respond flexibly to the demand that environment places upon it. Alternatively, we can try to simplify and stabilise the environment; we can adapt organisms to the environment or the environment to organisms.

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The business firm provides an instance of an organism adapting itself to the environment--in this case the economic environment. It does not constitute a total adaptation since the economic environment itself is shaped in part by government policy, that policy being responsive to the needs of business firms. Conversely, the architectural profession has sought to make the environment accord with the bent of the organism. It has done this by substituting for the prevailing economic environment, a professional environment. In so doing, it has neither encouraged nor facilitated the creation of complex architectural organizations adaptable to a competitive and micro-economic environment. As we shall see, it has kept the environment in which architectural firms operate artificially simple, inhibiting their individual evolution and fostering their institutional dependence.

Of course, since the Registration Acts are not water-tight , the R.I.B.A. does not regulate the architectural environment in its totality; many organisations which design and erect buildings do not employ architects and there exists a large market for architectural and design services which by-passes the profession altogether. What the architect has to contend with is not just the professionally determined environment, but the total market environment in which he is made to compete for his market share whether he likes it or not. His survival is not threatened so much by his professional colleagues as by well qualified people and organisations who can offer comparable services untrammelled by the rules of his game, i.e., contractors or real estate developers each employing architects as salaried employees.

Professionalism blossomed during the course of the nineteenth century because the guarantee that if offered--those of the competence and integrity of its members--were at a premium. The guarantee was held to be necessary at a time when the knowledge necessary for the efficient functioning of economic competition was absent in certain areas. Under such conditions competition could ensure neither the efficient allocation of resources nor the maximization of welfare.

Is there any measure by which we can assess the overall performance of this professionalism as compared with other forms of organisational control? Is the measure to be the excellence of particular buildings? If so, what kind of excellence? Aesthetic? Economic? Functional? Shall we look rather at the distribution of good architecture in the built environment? Or at the cost of building relative to that of other goods and services? Can we say that it is the economic performance of architectural organisations? Their growth rate? Their survival?

Each of these questions will open up an area of enquiry in which professionalism might be expected to hold its own. In no area is the enquiry going to be conclusive for measures are at present not available; the excellence of particular buildings speaks not for professionalism but for the genius and perseverance of individual architects--often in defiance of professionalism; the distribution of good architecture in the built environment owes at least as much to socio-political factors as it does to professionalism; the cost of building may have to do with the nature of the product itself or of the building industry in general. The economic performance of architectural organisations certainly could be

a measure of how far the professional environment protects its members, yet we know little of individual architects' economic ambitions and motivations.

If an architect goes into the profession solely for the financial opportunities offered then certainly, given the consistently low rate of profitability and remuneration, professionalism has failed him. But an architect may choose his profession and subsequently practice it on purely vocational grounds; for him economic performance will be of little moment and cannot be taken as a measure of professional fulfillment. Although these are performance areas which can be looked at further in sizing up professionalism, there exists at present no adequate performance standards and until these are devised the case for or against professionalism cannot rest on purely empirical grounds. This has forced upon us a different approach to the subject; we have tried to come to terms with it by questioning the validity of the arguments themselves rather than seeing what they produce in practice. In a way this is the easier task. Professionalism rests its case on conditions currently prevailing in the market environment; the problem of ascertaining whether these conditions exist in fact is an easier one than coming up with

yardsticks of professional performance and seeing how individual firms measure up to them.

The issues defined.

We shall summarise the main points that this thesis tries to make so as to clarify the structure of the argument. Market conditions in the late eighteenth and early nineteenth century were such that a product or service requiring specialist knowledge by the buyer could not be developed to its full potential without special provisions. Classical education was the province of a small elite and technical education was at its beginning. It followed that both the amount of information that the market could absorb and diffuse and the degree of control that it could exercise through having this information were very low. Industrial accounting as a tool of analysis and decision-making had as yet scarcely made a dent in industrial practice and the government refused to acknowledge that it had much of a role to play in determining economic behaviour.

The architectural profession was one of many that germinated in response to these market deficiencies. A group of men having specialist knowledge and skills banded together to



guarantee the integrity and competence of its members.

It was hoped that a market would then mushroom based on trust rather than knowledge, since the latter was effectively lacking. Integrity was guaranteed by a code of professional conduct which prevented practitioners from behaving like independent economic agents in a competitive market and competence was secured by setting standards of entry into the profession, enforced by examination. Barring the few, this created uniformity of skills and attainment.

One hundred thirty-six years have passed since the architectural profession received its charter; what has changed? The guarantee has remained in force, one still enters the profession by examination and the same professional principles regulate and direct one's behaviour. But the market itself over the same period has grown wiser and stronger and no longer holds the protection offered by the professional guarantee in its former esteem. The changes in the market environment that affect the profession all concern the quantity of information and the standard of "know-how" that are now available to the prospective purchaser of architectural services: the advent of universal education, the spread and gradual sophistication of accounting, the refinement

of micro-economic theory and econometrics, and most recently the growth of management science. These changes have stimulated and sharpened market expectations of professional performance. This thesis maintains that the architect, despite the cachet carried by his professional guarantee, has not matched these growing expectations and his failure can be attributed in large part to institutional restrictions which prevent him from building up the large flexible organisations that can meet these new and growing needs. Other organisations, less encumbered and sometimes less scrupulous have been more nimble and have sprung up to offer services which architects believed to be properly theirs to perform. Insofar as the client knows what he wants and can recognise it when he sees it, he is content to employ anyone who can offer it. The professional guarantee only caters for the client's confessed ignorance; it has no numinous attributes of its own.

His inability to respond effectively to the rapidly growing demands of sophisticated markets highlights a second problem that the architect faces today; he does not operate in a closed market or in a monopoly situation. While, as we shall see, the professional institution by its control of market variables such as price and product creates an environment

which aims at monopoly; it is by no means a closed system. Nothing compels a client to go through an architect's office if he wants a building. Indeed, as he becomes more aware of what he wants and develops his own "know-how" as a client, he can begin to dispense with the services of an independent consultant altogether and can either employ architects as salaried employees or go directly to a contractor who has his own architectural department. A monopoly cannot work efficiently in markets where substitutes are readily available; to this principle architecture is no exception.

With the architectural profession's monopoly position so weak and vulnerable, competitors have closed in on its traditional markets and offer, in some respects at least, similar services and skills. The architect is not permitted by his code, or, for that matter by his training, to respond competitively; all the managerial decisions which affect an architectural firm's competitiveness have been pre-empted by the R.I.B.A. itself. Organisationally this constitutes a centralisation of the decision-making functions within the profession, acceptable in theory if the institution matched the authority that it enjoys over individual firms with commensurate responsibility for their performance. The R.I.B.A. however, pious affirmations notwithstanding, assumes no

economic liability for the performance of individual architectural firms and seems to be in the envious position of exercising authority without being properly accountable for it.

### Conclusion

Whether professionalism as an organisational device is still best equipped to secure the aims of the original charter is hard to say. As long as the client needed protection from charlatans and frauds, the value of the professional guarantee exceeded that of the market inefficiencies it occasioned. A better informed client on the other hand made the guarantee redundant. Professionalism also claimed that by sheltering its members from the rigours of competition it could safeguard the quality of the architectural service; it has managed up until now to shield its members from inter-professional competition but not from that offered by outsiders. The security it fosters is illusory since by making its members organisationally uncompetitive it has reduced their ability to respond to these outside pressures as they arise.

According to Selsnick, organisations become institutions with the embodiment of organisational values which respond to them; failing this, institutions atrophy.<sup>17</sup> The remaining

<sup>17</sup>

Goulner. 16. p. 226.

chapters examine the architectural profession as an institution and its response to prevailing social and economic conditions. Can it tackle the problems of efficiency within the existing institutional framework or must it evolve a new organisational form? Can it respond speedily and effectively to the creation of new markets and to the demise of old ones? How can it preserve its traditional social commitment?

The business firm seeks to establish stable relationships with its environments by encouraging and making rational choices in certain critical areas of operation; it determines the nature of transactions that will take place between itself and the market--if, for example, it chooses a product-mix, how that transaction will be achieved--it chooses a method of distribution; what will it cost?--it makes pricing decisions; and how its presence will be communicated with those willing to participate--it promotes. In addition, it prepares the ground for future decisions to be made with respect to these transactions--it plans.

These decisions--establishing product-mix, distribution, pricing, promotion and planning--are marketing decisions. They will furnish the criteria by which answers to the questions of the preceding paragraph can be evaluated.

## CHAPTER 2

### INTRODUCTION

In this chapter we shall attempt to evaluate how far the architectural profession responds to the challenge and needs of a rapidly changing environment.

The social environment is changing as rapidly as the physical environment. Rising income and education in the western hemisphere together with a growing awareness of their relative deprivation by developing countries begin to articulate expectations which the architect must acknowledge. It is likely that the social goals currently embodied in the charter will have to be expanded and made operational. This can be done either by setting them as imperatives, "Wipe out all slums by 1980," or "Each family decently housed by 1990;" or as constraints such as "No architect shall by his work create pollution." Such goals can be established by the profession itself and built into its code, or the profession can act as a political pressure group and have them built into the legislature at the national level.

By whatever way the profession chooses to come to terms with this environment, it will have to make decisions in five

areas that will shape its response. It will have to decide what service it is offering and to whom, how the availability of this service is to be communicated, how it is to be priced and how professional operations are going to be organised. These are the marketing variables of product, distribution, promotion, pricing, and planning. The latitude allowed to the architect under the first four of these five headings is very directly regulated or shaped by the professional code. We must see to what extent such regulation is called for by the particular nature of the service that he offers and to what extent it actively promotes and develops his professional opportunities together with the standards of service.

#### PRODUCT

Marketing short-run task may be to adjust customers' wants to existing goods, but its long-run task is to adjust the goods to the customers' wants.<sup>1</sup> To a marketeer, a market is all persons or business units who buy or may be induced to buy a product as a bundle of physical service and symbolic particulars expected to yield satisfactions or benefits to the buyer.<sup>2</sup>

<sup>1</sup>  
Kotler. 21. p. 3.

<sup>2</sup>  
Kotler. 21. p. 289.

### Diversification

The notion that the market limited the size of firms follows from the assumption that the firm is tied to given products and that a specific group of markets governs its possibilities of expansions. Such an assumption, for example, is made by the architectural profession when in a small R.I.B.A. document entitled, "The Conditions of Engagement," it attempts to define the "normal service"-- a specified number of tasks and a way of performing them. These tasks constitute the architectural "product." If this assumption is dropped, however, one is dealing with a different concept of the firm and a different kind of analysis becomes more appropriate.

The fact that demand curves for different products can be assumed to be tilted downwards does not mean that the expected net revenue from additional units of investment need ever become negative. Net revenue may well be rising as investment, and, therefore as total production increases. Demand in the sense of the composition of selling opportunities relevant to a firm's planning will undergo important changes as the firm grows if growth itself alters the significance and character of the resources of the firm, that is, the productive



services they can render.<sup>3</sup>

The productive opportunity of the firm will be fixed if we assume that no change takes place in external conditions nor any change in knowledge and as a consequence no change in the internal supply of the productive services. These are the traditional static assumptions and by themselves they guarantee that increasing costs of production for all products produced by a firm must at some point step in.<sup>4</sup>

Architectural firms which offer only the "normal services" are candidates for these assumptions; they employ mainly architects and architectural technicians and tend to offer a fairly unvarying productive service. Thus it comes as no surprise for us to discover that the size of architectural firms has been kept small. The average size of a professional practice in the United Kingdom consists of five or six members, two of which will be professionally qualified principals and the remaining four, salaried employees.<sup>5</sup>

A firm diversifies in its productive activities whenever, without entirely abandoning its old lines of product, it embarks upon the production of new products including intermediate

<sup>3</sup> Penrose. 25. p. 84.

<sup>4</sup> Penrose. 25. p. 55.

<sup>5</sup> P.I.B. 23.

products which are sufficiently different from other products it produces to imply some significant differences in the firm's production or distribution programs.

The possibilities of using or offering services change with changes in knowledge. More services become available, previously unused services become employed and employed services become unused as knowledge increases about the physical characteristics of the resources, about ways of using them or about products it would be profitable to use them for. Consequently, there is a close connection between the type of knowledge possessed by the personnel of the firm and the services obtainable from its material resources.

Once it is recognised that the very process of operation and of expansion are intimately associated with a process by which knowledge is improved and increased, then it becomes immediately clear that the productive opportunity of a firm will change even in the absence of any change in external circumstances or in fundamental technological knowledge.<sup>6</sup> Architectural knowledge and skills, for example, could as they stand be productively coupled with other specialisations over a wide range: engineering, surveying, city and regional

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Penrose. 25. p. 56.

planning, product design, interior design, environmental psychology--all are fields in which the architect could make a useful contribution. They offer opportunities for diversification which could broaden considerably the base of his services and the markets they serve.

Diversification that involves departure from the firm's existing areas may be one of three kinds:

1. The entry into new markets with new products using the same production base.
2. Expansion in the same market with new products based on different areas of technology.
3. Entry into new markets with new products based upon a different area of technology.

For architects, diversification of the first kind would push him to use specifically architectural skills in new areas. For example, he could use his existing design skills at the scale of the individual products rather than that of a building, or even at a scale larger, such as that of a city or of a region. Diversification of the second kind would demand from him the development of new skills that he could offer along with the normal services; such client services could include surveying, real estate, analysis, interior design and so forth. The third type of diversification suggests a situation in which an architect has non-architectural

interests or ambitions because here his links with his professional background become more tenuous. It could arise if the demand for his services fluctuated too widely and he was looking for a counterbalancing activity which was unrelated to his profession.

#### Market segmentation

The decision to pursue a policy of diversification of the products offered by a firm inevitably leads to the questions, "What is the nature of our business?" "What do we have to offer?" "Why?" The first step towards answering these questions is to raise other ones. "Who is the customer, the actual customer and the potential customer?" "Where is he and how does he buy and where can he be reached?"

The nature of one's business should not be determined so much by the producer as by the consumer. It is not defined by an organisation's name, statutes, articles of incorporation or professional charter but by the want the consumer satisfies when he buys a product or a service. The question can therefore be answered only by looking at the business from the outside from the point of view of the customer and the market.<sup>7</sup>

<sup>7</sup>  
Drucker. 13. p. 67.

Where architects are concerned, however, the answer must be qualified; often what one customer wants can encroach significantly on another's well-being and architects who profess social as well as economic goals must frequently strike a balance between conflicting demands. If the particular social goals that might be threatened are operational, then they can be seen to be either compatible or incompatible with a particular market's or customer's demands and a decision can be made. If they are not, then the issue becomes more clouded and personal, leaving it to an architect's particular sense of social commitment, how far he is prepared to go to satisfy a particular client's requirement.

One way of looking at a market is to segment it. Whenever a market for a product or service consists of two or more buyers, the market is capable of being segmented, that is, divided into meaningful buyer groups. The purpose of segmentation is to determine differences among buyers which may be consequential in choosing among them or marketing to them. For instance, business buyers are sometimes called intermediate buyers because their purchases are directed towards a further purpose. The demand for all these goods is a derived demand. Those buyers who purchase a product or service for their own

use are called consumers; both their behavior and their pattern of preferences will differ from those of intermediate buyers. For example, if a client commissions an office building or a factory from an architect, he is asking him to design a factor of production; if he commissions a private house for himself, he is asking for a consumption good. In each case the client's priorities will be different and the architect has to be sensitive to that fact.

The seller who is alert to the needs of different market segments is in a better position to spot and compare market opportunities. He can also make a more rational allocation of his total marketing budget as well as a more responsive adjustment of his products and marketing appeal. The segmentation of the market can be performed according to social-economic, geographic or personality variables and buyer behavior. Once the process of segmentation has been carried out, the firm has to evolve strategies by which it will be able to reach the markets defined. In general three kinds of strategies are usually described. <sup>8</sup> The first is a strategy of undifferentiated marketing: here the firm treats the market as a homogenous group it does not acknowledge or perhaps is unable to recognise such differences as may exist between different

buyers. The second is a strategy of differentiated marketing. Here the firm has segmented the market into different groups and has evolved a sub-strategy for each of these groups. This sub-strategy may involve either offering different products to each of these sub-groups or distributing an existing product in a different manner to each of these sub-groups. The third strategy is one of concentrated marketing. Here the firm has performed a segmentation of the market, it has recognised the differences between potential buyers and has decided to concentrate its efforts on one particular segment of the market. For this firm the purpose of segmentation is simply to enable it to isolate the particular sub-market to which it wants to address itself. Often where a firm's resources are too limited to permit a complete coverage of the market, its only realistic choice will be a strategy of concentrated marketing.

In the profession, it is only the very large firms that can afford to segment their market and to have one designer specialising in factory buildings, a second in universities, a third in housing and so on. Most firms, because of a relative lack of specialisation have to treat their market as undifferentiated, gladly accepting whatever commissions fortune sends their way. Some will develop a sufficient specialisation over time to pursue a strategy of concentrated

marketing; this may happen because they establish comfortable working relations with a client or because in the course of doing a particular project they acquire specialised knowledge which enhances their reputation for such work.

#### Market research

The second question one must ask in trying to ascertain the nature of the business one is running is the following: "What does the customer consider value, what does he look for when buying a new product?" Traditional economic theory has answered this question with one word, "price," but this is misleading. In fact, what the customer considers value is so complicated that it can only be answered by the customer himself. Management should not even try to guess at it. It should go to the customer in a systematic question for the answer.

The art of going to the customer in order to determine his needs has now earned the name of "market research;" it is defined by the American Marketing Association as "The systematic gathering, recording and analysing of data about problems relating to the marketing of goods and services."<sup>9</sup>

<sup>9</sup>  
Kotler. 21. p. 191.



The marketing research process consists firstly of problem definition, secondly of model construction, thirdly of data collection and finally of data interpretation. It differs in nature from other forms of research such as scientific or academic research. The latter may be viewed as they have been in most discussions of problem solving as processes for seeking a problem solution. Market research, however, can be viewed more generally as a process for gathering information about problem structures that will ultimately be valuable in discovering a problem solution. The latter viewpoint is more general than the former in a significant sense in that it suggests that information obtained from any particular area of the research field may be used in many contexts besides the one in which it was generated.<sup>10</sup>

Architects who are unsure about how prospective users of their buildings would respond to specific designs features such as a novel form of seating or an unusual layout can, if the project is large and if their client agrees, initiate "user studies" in which the design feature is either simulated or built on its own to find out how people react to it. This is a form, albeit a comparatively crude one, of market research.

<sup>10</sup>

Simon. 34. p. 72.

Individual projects cannot support the same depth of market research as can a consumer goods selling nation-wide over a long period of time. Although the benefits of research done on one project can be transferred to another, the costs at present cannot unless such projects are carried out by very large firms who can use the research findings internally and absorb the costs more easily.

Despite the considerable resources that have recently been invested in market research, it appears that the chances are slim that an entirely new product can come from developments that are prompted by evaluations of market data.<sup>11</sup> What the customer considers value can only be accurately established by observing the way he uses the product under consideration, and for that to happen the product must already exist. Certainly market research can assist the development of a new product by offering guide lines evolved from direct experience in the market, but market research cannot of itself determine the nature of a product or its attributes. This is, properly speaking, the function of research and development.

<sup>11</sup>

Stewart. 38. p. 258.

### Research and development

Technological change increasingly confronts organisations with a simple challenge. Innovate and grow or stagnate and decline. A company which has recognised and accepted the challenge will begin to evolve a research and development strategy. It might search for product additions which constitute complimentary products, utilise the same channels, utilise the same raw material and production facilities, technology or know-how, or exploit by-products of its own production processes. Such a company might also search for products that mitigate company weaknesses, such as highly seasonal sales or products losing out to substitutes. Here innovation is very much related to diversification and to the extent that, as we saw earlier, architects have good reason to diversify, they have good opportunities to innovate.

There are two kinds of innovation in every business: innovation in product or service and innovation in the various skills and activities needed to supply them. Innovation may arise out of the needs of the market and the customer or it may come out of the work on advancement of skill and knowledge carried out in schools and laboratories. As an example of innovation of the second kind, we may cite architectural schools. These have been particularly active

in recent years in setting up research departments. Work is in progress on design methodology, computation, environmental psychology, land use and a number of other fields which could show promising results.

We can distinguish the six stages of the innovation process:<sup>12</sup>

1. Idea generation
2. Screening
3. Business analysis
4. Product development
5. Text marketing
6. Commercialisation

It is interesting to note that although architects as a group enjoy a reputation for creativity, little of their inventiveness percolates past the idea generation stage. Much of it remains at the sketch design or model level because it fails the tests set up by subsequent stages. Until such inventiveness can find its way through all six stages and emerge in a market, even if a small one, as an accepted fact, it cannot properly be called an innovation.

<sup>12</sup>  
Kotler. 21. p. 318.

A firm's ability to innovate is highly dependent upon its ability to attract and retain creative manpower. Creative manpower has a peculiar property: whereas a five or ten percent improvement in the efficiency of a manufacturing process is a major accomplishment, it is possible to vary the output of creative talent by factors of tens or hundreds.<sup>13</sup> How? By varying the environment in which the talent functions. If creative output is high, the firm can afford many small inefficiencies and still maintain profitable growth. It is important for us in discussing the architectural profession to bear in mind the distinctions between various forms of creative talent; we have to draw a line between aesthetic and technological innovation. Technological innovation is more likely to be economically productive.

It may be sufficient just to vary the environment in which creative talent operates in order to increase its output but it will not guarantee that such output is productive; it must, as we have seen, succeed in getting through the six stages of the innovation process. This is partly due to the nature of the innovation itself and partly to having the resources available to push it through the six stages described. Some architectural firms can employ

<sup>13</sup>

Hoskins. 19. p. 263.

highly creative manpower, produce ideas which are eminently workable and still lack the resources to reach even the stages of business analysis or product development.

#### Market integration

A special form of diversification involves an increase in the number of intermediate products that a firm produces for its own use. The firm may integrate backwards and create products for its own use, or it may integrate forward and start producing new products (including distribution services which are links in the chain of production to the final consumer). In this process some of its existing final products may become intermediate products. Such integration allows the firm to standardise its operations. It provides temporary stability at the operational level enabling higher management to go into innovation or more complicated and ambitious planning and consequently to venture into uncertainty of a higher magnitude and pay-off.

In attempting to achieve integration we have to identify those areas of a complex system which are likely to offer the greatest economies by being pulled together. For this we will need a process description of the system. For our purposes such a process description can use the same classification

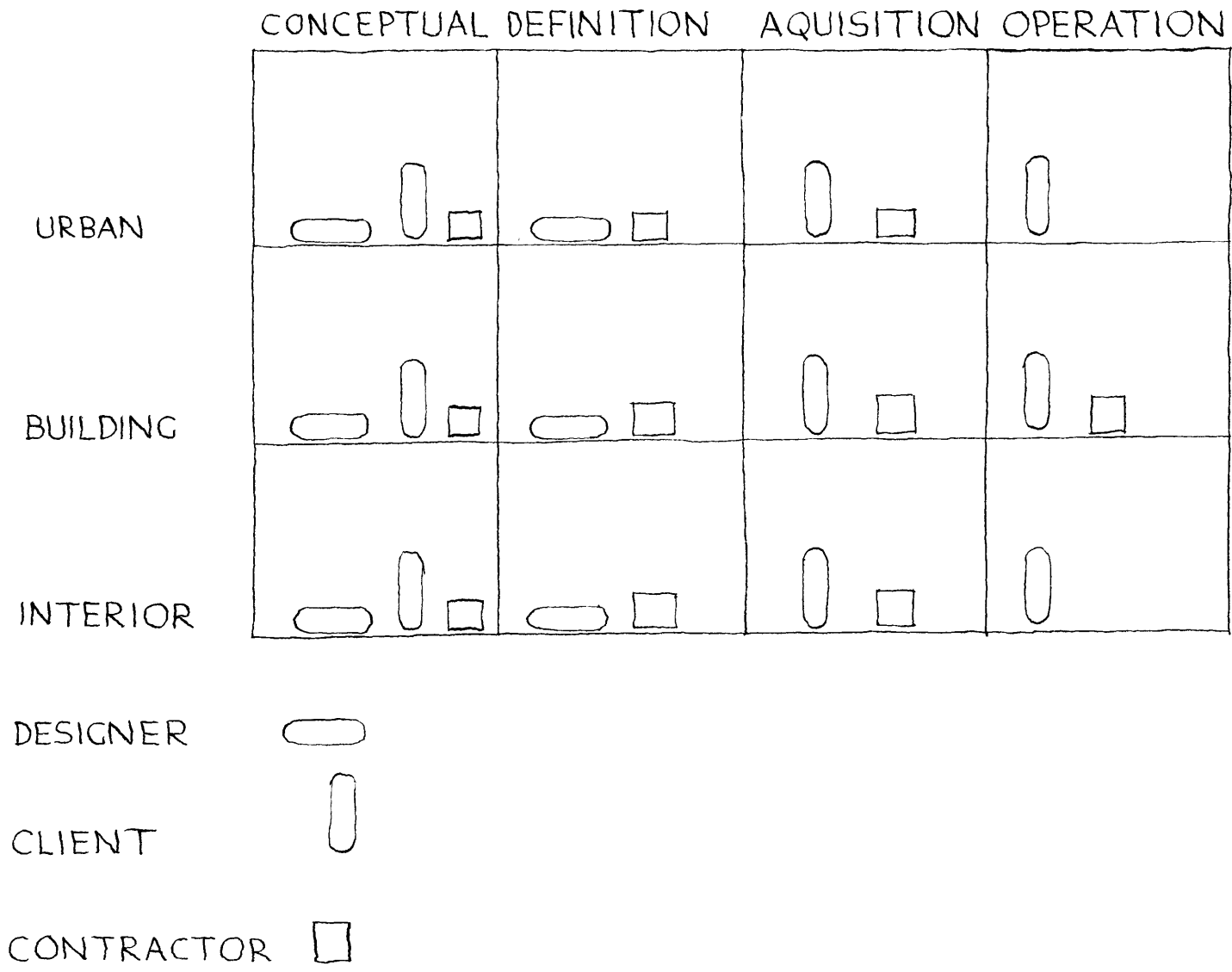
as that applied to defence systems. Defence systems have a life-cycle whose period of usefulness is limited by changing operational requirements and advances in technology. This life-cycle usually consists of several phases, which can be related, if somewhat loosely, to the innovation process:

- a) Conceptual--idea generation
- b) Definition--business analysis, test marketing, screening
- c) Acquisition (including development and production)--  
product development
- d) Operation--commercialisation.

We can apply these phases to the building industry in general. For example the conceptual phase would be the equivalent of our working drawings and detailing stage; the acquisition phase would parallel our construction stage; and the operations phase would parallel the occupancy stage. We can use this classification system at three different scales: the urban scale, the scale of the individual building and the scale of the interior and furniture design.

We can represent this classification system by means of a diagram (see figure 1). On the top of the diagram we can place the phases and along the side we can place the scales.

FIGURE 1





This diagram will allow us to identify the areas in which a person with architectural training has opportunities to apply his skills. Each cell calls for a different set of professional skills, many of which can be architectural in origin, although through a process of specialisation the architect may have built upon them.

At the conceptual stage, the architect has a contribution to make at all three scales. He is supposed to be by training an ideas man and as such he must be able to open up different possibilities for the way people live. Although he will be most familiar with these possibilities at the scale of the individual building, he must be able to interpret their implications at the urban scale as well as at the smaller scale, that of the room and of the individual.

In the definition phase, the architect is perhaps more at home at the scale of the building and of the interior. This is because in these two cases he is closer to the physical object. Yet the urban scale is but the systematic aggregation of such physical objects and the professional architect is frequently called upon to suggest or specify how such aggregation might take place.

The acquisition phase is the one in which the physical product at any of the three scales is brought into being. Although the "plan of work" requires that the architect adopt a supervisory role so as to safeguard his client's interests, responsibility for this stage rests in the hands of the contractors and calls for skills in finance, labor relations, and general management. Since the architect can only work in this phase as a contractor's employee (the code forbids him to hold a directorship in such a firm) he is unlikely to evolve into a position as professional architect which will allow him to acquire the required skills and so the scope for a new architectural role must appear limited by the career prospects. This is a pity since much of what he can do in the conception and definition phases are dependent on the state of the technology available in the acquisition stage.

The final stage, the operational, is virtually foreign to the architect. There are two reasons for this. Firstly, the architect's formal responsibilities end when he hands the building over to the client and he has little or no opportunity to monitor the performance of the building during its lifetime. Secondly, the architect is professionally forbidden to have a financial interest in the buildings he

designs and thus has little incentive to push for greater involvement after the design and construction phases. The same lack of incentives operate at the urban scale and at that of the individual item of furniture.

The diagram shows the way different organisations have evolved to span different phases of the total process. In his professional capacity an architect occupies primarily the concept and definition phases of the diagram. One can find him in the acquisition and operations phases but this time most likely as a salaried employee. Although the professional architect's skills can be applied to pretty much each cell in this diagram professionally he is encouraged to deploy himself largely in the first two phases. This represents an under-utilisation of his know-how, a loss to society, as well as missed economic and professional opportunities-- a loss to the individual.

The first two stages of the process would be of interest primarily to those with a professional turn of mind whereas the last two stages would probably appeal to those with an entrepreneurial bent. Many people, however, would find themselves between these two extremes offering a blend of professional competence and entrepreneurial spirit. It is

only to the extent that a surfeit of the latter corrodes the standards of the former that professional restrictions can validly apply.

If the diagram is to acknowledge the profession's social commitment as well as its economic interests then one would have to build into it a political-legislative section. Some architects might find themselves strongly drawn into a field which could use their skills in a policy-making way. Much of the quality of the built environment is highly dependent upon soundly conceived social and economic policies with respect to housing, urban planning and regional development. Under such a section the architect could currently forge himself a career unimpeded by his professional code. He could go directly into politics into the civil service or take a high level advisory role. Unfortunately, the House of Commons boasts only one architect at the present time and the civil service has not up until now created good opportunities for those with a professional background to get involved in high level policy-making. Nevertheless, government and politics are two fields in which the socially committed architect is not professionally prevented from making his contribution.

### Conflicts of interest

When the clause of the code that heads this section is applied to the diagram, it can be seen that the architect is denied most of the entrepreneurial activities that he may wish to pursue. The traditional reasons given by the profession for these entrepreneurial restrictions is that they create conflicts of interest--the architect being expected to offer a completely disinterested service. But what does this term mean exactly? Some architects, for instance, have a stylistic preference for brick even where certain types of buildings call for a concrete structure; other architects will have a predilection for tower blocks when four story terrace-houses may do the job. These are professional preferences which the client, in choosing an architect, is expected somehow or other to become acquainted with; he does not assume thereby that he is getting any the less of a professional service because the architect has his own biases and preferences.

Of course, the conflict of interest referred to is an economic one. The economic incentive is claimed to be, and possibly is, stronger than the stylistic or aesthetic one. If an architect is director of a brick company, then we can

be suspicious if for each of his buildings he specifies brick and only brick; we can reasonably assume that his motivation will not be an aesthetic one. Yet, what if we are told at the outset that the architect is director of a brick company? What if we are well aware that each building that this architect designs is likely to be made out of brick? What if we still want to employ this architect in spite of this knowledge? Is it obvious that if the incentive to use brick is personal economic gain, the building will be mediocre whereas if it is aesthetic, the building will be outstanding? It is by no means evident that disinterested service is necessarily good service; an architect who is director of a brick company may become a specialist in the subject of bricks and may be able to offer a higher standard of design to those clients who chose it as a result of his involvement. By the same token a so-called aesthetic preference for brick may be the result of inadequate knowledge of other materials available so that here the service may only be disinterested to the extent that it is uninformed. All that is, in fact, required to circumvent the conflict of interest is that the client should have prior knowledge of the architect's commitments, financial and aesthetic, in order to be able to make a more informed choice. After all,

problems of conflicts of interest are not new, nor are they confined to the architectural profession.<sup>15</sup> They are likely to arise whenever a person assumes a complex or multiple role and where the goals that are pursued in one role are modified or compromised by the goals pursued in another. The architectural profession has sought to tackle this problem by limiting the number of roles that its members can assume. Other organisations have succeeded up to a point in making potentially conflicting roles independent of one another by decentralisation of goals and responsibilities--some building contractors, for example, are now offering consultancy services quite independently of their main operations by making such services autonomous. Another approach to the problem has been to make one's interests declarable with a heavy penalty for concealment--this is the approach adopted in financial markets. The point to be made is that there are ways of coping with multiple roles without eliminating them altogether. The architect must be allowed to evolve such roles if he is to retain the flexibility essential to the process of innovation, these will be most productive if they can be deployed in other organisations as well as his own.

The architectural profession's approach to the issue has stressed prevention rather than cure; everyone's behavior

<sup>15</sup>  
The Economist. 14.

must be totally regulated at all times in order to prevent the occasional lapse. Other institutions have taken a more positive approach by making conflicts of interest known and visible. Here the behavior of institutional members is not constrained by rules and regulations. Providing that a conflict of interest, when it occurs, can be made quickly visible, such visibility for a firm whose long-term prosperity depends upon its reputation, becomes the sanction itself. There are many instances where this approach has been adequate to safeguard professional standards without fossilizing professional behavior.<sup>16</sup>

We are not suggesting that all architects should become directors of brick companies or for that matter that all directors of brick companies should become architects. Useful and effective roles could be created between these two extremes. By making the distinction between a professional and an entrepreneurial function over-rigid, the profession has failed to tap the market for intermediary services.

Managing any business must always be to a considerable extent, entrepreneurial in character, but there exists many different types of entrepreneur. There are those who seem to be primarily interested in the profitability and



growth of their firm, as an organisation, for the production and distribution of goods and services. One might call these "product minded" entrepreneurs and probably if architects were given entrepreneurial license, we would find many, if not most, falling into this category. Another type of entrepreneur whom we might call the "empire builder" is of a different order; he is pushed by visions of creating a powerful industrial empire extending over a wide area; he is a business politician and strategist.<sup>17</sup> An architect whose ambition was directed towards the number of buildings he could put up rather than their quality would fit such a role. One should realise that everything inside a business-- manufacturing, marketing, research and so forth--creates only costs. It is only a cost centre; the managerial area is concerned with costs alone.<sup>18</sup> It is results that are entrepreneurial; the most efficient engineering department is of little value if it designs the wrong product.

#### Conclusion

It often happens that the horizons of a firm, particularly of a small firm, are extremely limited. Specificity of

17

Penrose. 25. p. 39.

18

Drucker. 13.

entrepreneurial resources means that some of the productive services most essential for expansion will not be available to a firm even though all managerial services which are required for efficient operation in a particular field are fully available. This certainly seems to be one of the problems that face the architectural profession. The professional code of practice has made the scope of entrepreneurial activity quite specific and quite limited.

A firm's product-mix tends to set the upper limit to the firm's potential profitability, while the quality of its marketing program tends to determine how closely this upper limit is reached. The two sources of profit improvement are therefore adjustments in the product-mix and adjustments in the marketing strategy.<sup>19</sup> Neither with the product-mix nor with the marketing strategy has the architect been able to exploit his opportunities. This is partly due to his training and partly due to restrictions placed upon him by his professional code. If his training does not at present offer adequate opportunities for specialisation and diversification, the professional code does not allow him to develop multiple roles effectively in organisations other than his own and his own

<sup>19</sup>

Kotler. 21. p. 296.

at present does not command the resources to make use of such roles. The ability to develop multiple roles and the opportunities available for diversification and specialisation are indeed interrelated. They both underlie the freedom that one has to choose one's own product-mix and one's own marketing strategy. The profitability of a firm and its potential for growth are both highly dependent upon how these strategies are shaped; one must recognise that here the architect operates at a disadvantage.

#### DISTRIBUTION

If an organisation has to face the problem of deciding what business it is in and what product or service it has to offer the customer or client, it must also determine how that product or service is going to be distributed. Every producer seeks to link together the set of marketing intermediaries that best fulfills the firm's objectives. This set of marketing intermediaries is called "the marketing channel."

The marketing channel

The use of middle-men in the distribution process largely boils down to their superior efficiency in the performance

of basic marketing tasks and functions. Marketing intermediaries through their experience, their specialisation, their contacts and their scale offer the producer more than he can usually achieve on his own.<sup>20</sup>

The channels chosen for distributing the company's products or services intimately affect every other marketing decision. In the final analysis the problem of distribution is the problem facilitating as far as it is economically and physically possible the purchasing decision. This decision is really a set of decisions. At the very least it may involve a product, a brand, a style, a quality, a place, a dealer, a time, a price and a way to pay.<sup>21</sup>

The characteristics of the product itself are in part determined by the way it is distributed. In turn the method of distribution will in some ways depend upon the technology available.

We can take an example from the building industry itself: the real estate developer. The real estate developer speculates upon the existence of a market for certain building types, offering for instance residential accomodation or office space, and builds on this anticipated market at a scale which

<sup>20</sup>  
Kotler. 21. p. 389.

<sup>21</sup>  
Kotler. 21. p. 70.

offers him economies in technology, management and finance. Because the present state of building technology often creates an interval of two years or more between the design and the finished building, the developer has little idea at the design stage who his client is going to be. In order to minimize his risk he offers a design which constitutes the lowest common denominator of his prospective client's individual needs. It will not be long before industrialised building technology offers reductions in construction time from a matter of years to a matter of weeks and in some cases, a matter of days.<sup>22</sup> This will allow a real estate developer to be much more responsive to the needs of individual clients and will remove much of the need for speculation from his work. The client might well, under these circumstances, go to the developer's architect directly and participate in the design of his own dwelling a few days or weeks before occupying it, rather than going to an agent and seeing what is available.

An evaluation of channel alternatives for the distribution of a product or service should start with an estimate of their respective implications, for sales, cost and profits. Unfortunately, techniques of analysis are still sorely lacking in the area of evaluating total channel systems.

Organisations often compete for the control of distribution channels; this is done because it is technically more efficient to conduct a sequence of operations in close proximity and to maintain a smooth flow of supplies and a more stable market. The capacity of an organisation to maintain a complex highly interdependent pattern of activity such as is called for by the control of the distribution channel, is limited in part by its capacity to handle the communications required for coordination. The greater the efficiency of communications within an organisation, the greater the tolerance for interdependencies.

#### The architect in the channel

Even if architectural organisations were in a position to be able to control the channels of distribution, they would be restricted from doing so by the code of professional conduct. Architects are not allowed to hold directorships or financial interests in any firm connected with the building industry; they are allowed to work as salaried employees for such people as do control the channels in positions which, by virtue of the subordinate nature are unlikely to attract the talent of the profession, and unlikely to allow the architectural viewpoint to influence the characteristics of

the channel. The architect can work for a contractor, a developer, or an estate agent. In these roles, however, he will have less say in determining the characteristics of the product than he would as an independent professional, and the quality of his work must suffer accordingly. Conflict of interest is once more the reason given for denying architects any measure of control over the distribution channels. In this instance, the effects have been more nefarious than where the product-mix is concerned; architects working as salaried employees in the distribution network increasingly find their professional judgment ignored or undermined, their competence eroded and their integrity strained by their situation.

The fear that some of the multiple roles they would develop would conflict has pared these down to the point where as salaried architects they are no longer in a position to uphold traditional architectural or even social values. Working in the offices of a real estate organisation, they are often called upon to work to standards which many professionals in private practice would consider unacceptable. The same would be true of those working in a contracting firm. This is not to pass a moral judgment on such standards, but simply to point out that architects as entrepreneurs are likely to

be motivated by different standards and criteria than real estate developers and contractors. In denying architects this role, the profession has ensured that the latter dominate the market and that traditional architectural values will not be represented at the entrepreneurial level.

#### Conclusion

The configuration of distribution channels is determined partly by the nature of the product and partly by competitive forces. The nature of the architectural products offers the architect very clear opportunities to extend his position in the channel. This would be beneficial to him in the sense that new roles could be created that call for his skills, and it would be beneficial to the client if the architect's influence in the channel made it more responsive to his needs. The professional code prevents the architect from taking this opportunity and his influence in the channel is low. The very design standards which the code has sought to maintain are being debased as a consequence of its operations.

#### PROMOTION

A second important clause of the professional code stipulates that: "A member or student must not advertise or



offer his professional services to any person or body corporate by means of circulars or otherwise or make paid announcements in the press."

According to Drucker,<sup>23</sup> there is only one valid definition of business purpose: to create a customer. Markets are not created by God, nature or economic forces, but by businessmen. It is the customer who determines what business is, for it is the customer and he alone who, being willing to pay for a good or for a service, converts economic resources into wealth, things into goods.

Taken as a normative definition of business purpose, this may do, but it tells us nothing of the purposes that businessmen actually do have. Many undoubtedly have quite as strong a sense of social commitment as do architects and the business purpose itself may not be the mainspring of action. The creation of customers will have consequences for others than himself--it is a social phenomenon that calls for awareness and integrity going beyond the welfare of the individual customer.

Here architects and businessmen are faced with a similar dilemma. We talked earlier about the social role of the architect;

<sup>23</sup>  
Drucker. 13. p. 52.

what about that of the businessman? Is he to be spared the discomfiture of having to expand his notion of business purposes to accommodate social goals? The creation of a customer by itself can only be a valid social goal if it can be shown that by creating satisfaction for him in particular, social welfare in general is maximised. This consideration must qualify our acceptance of Drucker's definition as we expand on it.

Because it is its purpose to create a customer, a business function, it is claimed, has two and only these two basic functions: marketing and innovation.<sup>24</sup> Marketing creates the customer and innovation creates the product which will be sold to the customer; these are the entrepreneurial functions. Thus although the relationship between a sales volume and the marketing effort is not linear throughout, increases in the company's marketing efforts will produce increases in company sales.

What is promotion?

Promotion can be considered as one of the corner-stones of any organisation's marketing effort. It is generally

<sup>24</sup>

Drucker. 13. p. 53.

classified into four sub-activities: advertising, personal  
selling, sales promotion, and publicity.<sup>25</sup>

The marketer understands that purchases are born in a set of motivations far more fundamental than the particular products or services that he is attempting to sell. The product is only the means, often one among many, for satisfying a more basic want.<sup>26</sup> Therefore, some promotion becomes essential, firstly in order to create customer awareness of the product existence and characteristics, and secondly to create positive psychological associations which can enhance the buyer's satisfaction. In that sense, promotion may also be considered to add to the real value of a company's offering.

The selling process tries to create product awareness; it must ensure that the product is comprehensible by the customer, it must convince him that the offer is a good one and it must induce him to accept it. These are components of promotional activity.

Although the building industry as a whole promotes its products, its prospective market is as yet little acquainted with specifically architectural values and so does not articulate

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Kotler. 21. p. 451.

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Kotler. 21. p. 68.

a need for them. An awareness of architectural values, a professional would maintain, can enhance the worth and hence the satisfaction to be gained from the final product. To the perennial dismay of the architectural profession, most people are prepared to put up with--indeed some demand--a product of low architectural quality. As we have said, motivations emerge in a number of ways and resolve themselves through an indeterminate number of goods and services. If architects believe that an awareness and pursuit of architectural values is a desirable way to satisfy such motivations, then he will find himself competing with others holding similar beliefs about what they have to offer and if he wants a fair hearing for his cause then he must actively strive to create an awareness of it.

#### Advertising

Promotion has interesting and important economic consequences. It makes a great difference for the prospects of diversification whether the competition in a given market forces the cutting of prices or requires an exertion of selling efforts. The former is an impersonal market response leaving the identity of the seller of no significance to the buyers. The latter will, almost of necessity, be connected not only with

the product, but also with the name or trademark of the seller and the identity of the firm emerges as a significant competitive factor.<sup>27</sup>

Perhaps the most important technique of non-price competition is advertising, much of which serves a desirable economic function. When advertising primarily provides information to prospective buyers about the range of products available, their prices and their characteristics, it increases the degree of knowledge which customers have. The increased knowledge should enable consumers to make product choices which are more likely to increase their satisfaction. Advertising is probably the most effective instrument per dollar of expenditure for increasing awareness of a product. It can be especially suited to the communication of architectural values if these are embodied in "images." Carefully handled advertising is an effective medium by which to transmit images to a wide audience. Personal selling, on the other hand, is typically more effective than advertising in producing a belief that the product is a good one especially if the product is costly or technically complex. It is thus undoubtedly more effective in triggering the purchase act.<sup>28</sup>

<sup>27</sup>

Penrose. 25. p. 116.

<sup>28</sup>

Kotler. 21. p. 453.

One dissects customer behavior into separate compartments marked, economic, psychological and sociological. These components of behavior come into play in a series of stages that an individual customer will go through in the process of adopting a new product: awareness, interest, evaluation, trial, and adoption.<sup>29</sup>

Consumer behavior is a complex and often puzzling phenomenon, not amenable to quick and easy measurement and interpretation. Nevertheless, good planning and control of advertising and promotion depend critically on being able to develop adequate measures of advertising and promotional effectiveness. This would be particularly difficult in the case of architectural advertising and promotion. To create an awareness of architectural values takes longer than introducing a new consumer food and each of the five stages of adoption are likely to be more complex and take longer to cross than in the case of a consumer non-durable. This lag in the response to exposure complicates the problem of measurement. Moreover, while the effects of advertising and good promotion on sales is fairly certain, very often their profitability may be quite doubtful. Marketing costs are more difficult to measure and control than production

<sup>29</sup>

Kotler. 21. p. 343.

costs; there are more bases over which to allocate marketing costs, the allocation itself being more arbitrary and the consequences of decisions effecting these costs being always more difficult to estimate.<sup>30</sup>

#### The professional view

The architect is explicitly forbidden by the code to advertise his services or to solicit work; the only way that work comes to architects in private practice is through recommendations from satisfied clients or those who know and admire buildings that they have designed.

The profession has singled out the competitive element in promotional activity and, having set its heart against competition in general, promotion could not be allowed. It is argued that competition reduces professional standards and promotion being a form of competition will also have that effect. Yet, if we recall the original argument, competition reduced standards when the buyer lacked the knowledge to evaluate a specialised professional service. Promotion is a form of competition which can, if properly administered and supervised, communicate the necessary

<sup>30</sup>

Kotler. 21. p. 586.

knowledge to prospective consumers of such a service. Armed with this knowledge, consumers are in a better position to evaluate the standard of service offered, thus undermining the arguments given against competition in the first place. To the extent that promotion is honest and educates the consumer of professional services, he is in a position to make rational choices and to evaluate his own requirements; his knowledge acts as a constraint upon the standards of performance. And if this knowledge is reinforced by a growing understanding of, and sensitivity to, those architectural values that increase his satisfaction, it is in fact more likely that competition will improve performance. Competition cannot reduce standards below those which the consumer is willing to purchase, if anything they will rise to meet the client's more sophisticated expectations.

Paradoxically, as it now turns out, promotion could become the Achilles Heel of the case for professionalism. Whether it does so or not hinges on who does the promotion and how, whom is it addressed to and where it begins? Successful promotion should seek to educate the user of the building as well as the client; if they are not the same person, the former must be able to communicate his expectations



to the latter. Architecture is a complex product and everyone is in some way or another affected by it; extended public awareness of its effects will only be built on a more solid base of architectural literacy than exists at present.

If we segment the market into consumers and intermediate buyers, then we can see that architects could develop an effective promotional strategy that would distinguish between the client and the user of the building. If the client is not the user, then much of what he asks the architect to do depends upon his perception of user needs and expectations. The user's demands act as a constraint upon client behavior. To the extent that the architectural profession can communicate directly with the user, i.e., society at large, over the client's head, he is affecting the demand curve that faces the client as an intermediary buyer and reducing the differences between that demand curve which we may call the social demand curve for his product and the client demand curve to which he himself has to respond. Promotional activity of this kind, if carried out by the right kind of organisation (the R.I.B.A. for instance) becomes an effective device through which to activate the profession's sense of social commitment.

Until now architectural education has been aimed at those who were going to become architects. Most of those, other than architects who are involved in the building industry have had no exposure to architectural values--some have even become actively hostile to these--and users have been ignored altogether. This would have to change.

There is probably enough "know-how" within the building industry at present to serve as protection against frauds and charlatans and to that extent the market has been able to set a lower limit on the "required competence and integrity of architects." But neither the professional code nor a technical knowledge of the building are alone going to determine how far above the limit market expectations are going to settle. How much more they expect will depend on how much more they are taught to expect and here the architectural profession has a very clear opportunity to act as educator. In the final analysis, the higher the standards expected by the market as a whole, the less will the professional need to concern himself with identifying its lower limit; the market itself, by disciplining these who stray below it, will identify it quickly enough--probably before the code does.

## Conclusion

Promotion is a form of communication with a market that the architect is denied by his professional code. It will come as no surprise given what we have said above to find the market generally insensitive to architectural aspirations and potential.

## PRICE

### The architect's fee

The code sets down that "A member or student is remunerated solely by his professional fees, payable by his client or by salary payable by his employer. He is debarred from any source of remuneration in connection with the works and duties entrusted to him. It is the duty of the member or student to uphold and apply the scales of professional charges adopted by the Royal Institute."

The scales of professional charges referred to are to be found in a document published by the Institute entitled, "The Conditions of Engagement." This document effectively regulates the total income of the profession in all spheres of work and at all levels of responsibility.

The architect in private practice is paid by fee which is normally a percentage of the total cost of construction. The Conditions of Engagement define the terms on which the architect is engaged and the minimum fees which he should charge.

The architect's fee for the normal service for new work is charged as a percentage of the cost of the works. For example, the fee for works costing over 16,000 pounds say, is 6%. Works of lower value are subject to increased percentages. The minimum fees and charges described in The Conditions of Engagement may not in fact be sufficient in all circumstances, in which case higher fees and charges may be agreed between the client and the architect, when the architect is commissioned.

The architect's work on the building project is supported by services which vary widely in nature and extent with the circumstances of the project. Normal services do not include quantity surveying, town planning, civil, structural, mechanical, electrical or heating and ventilating engineering or similar consultants' services.

So far we have been able to compare in a forthright manner an identifiable position adopted by the profession,

with a received body of wisdom of itself making few theoretical claims and resting largely on empirical grounds. With the problem of pricing, we come to a situation where the rationale behind the professional stand is much less clear than was the case when we dealt with product, distribution, and promotion (whatever the validity of the rationale in those instances). At the same time the criteria by which such a stand is being assessed are much more nebulous. The criteria themselves have their origins in micro-economic theory in general and in the theory of the firm in particular.

#### The theory of the firm

Although the theory of the firm is not universally accepted by economists and some of its assumptions are still being debated, it will provide us with a useful focus for discussion; it will allow us to gauge the state of art in matters of pricing. We are not aiming to show that micro-economics has been refined to a point of theoretical perfection, but merely that it has changed and that it has brought about, and been responsive to, changes in economic perception and behavior. Any change in the economic environment of necessity brings about a shift both in the conditions to which professionalism must respond and in the arguments that it must present to justify

its existence.

The analysis of the theory of the firm is based on two fundamental assumptions. Firstly, we assume that each market is free and operates freely in the sense that there is no external control of market forces; secondly we assume that entrepreneurs seek to maximise profit. If we take it as given that the firm is operating within a perfectly competitive market, the generally received theory of the firm asserts that the objective of the firm is to maximise net revenue in the face of given prices and a technologically determined production function.<sup>31</sup>

We can see immediately that little would compel an architectural firm to act in the manner suggested by the theory; not only is it doubtful that architects as a group are out to maximise net revenue but also even if they were, they would be hard pushed to establish a production function from which they could work. Although there is, in fact, no consensus on the theory, the methodological arguments in its favor assert simply that it is irrelevant whether the assumptions are valid or not. The only crucial test of the theory itself is its predictive powers.<sup>32</sup>

<sup>31</sup>  
Cyert & March. 12. p. 13.

<sup>32</sup>  
Cyert & March. 12. p. 5.

Four conditions define perfect competition, one of the main assumptions made by the theory of the firm. Firstly, each economic agent must be so small relative to the market as a whole that it cannot exert a perceptible influence on price. Secondly, the product of any one seller must be identical to the product of any other seller (homogeneous product). Thirdly, all resources must be perfectly mobile, that is to say, they must be capable of a quick conversion into cash, or a quick exchange. Finally, consumers, producers, and resource owners must possess perfect knowledge. It is claimed that if these four conditions are met and if every consumer, every firm, every industry and every input market is perfectly competitive, then the social welfare or the economic well-being of the society will be maximised.

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Although perfect competition frequently works as a theoretical model of economic processes, for many reasons active price competition may not characterise certain markets. Firms have come to recognise that not much is gained in reducing the price if other firms do the same thing. Indeed, if total industry demand is fairly inelastic, as is the case for example with many consumer non-durables, price competition tends to cut into the profits of all firms concerned. Thus

a broader framework than profit maximisation is needed to understand the performance of firms sheltered from the rigours of competition.<sup>34</sup> A professional institution like the R.I.B.A. for instance has consistently tried to shelter its members from the rigours of competition precisely to create a broader framework than profit maximisation. Such a framework has been thought necessary because the socially optimal output does not coincide with the maximum satisfaction of the client for architectural services. The architect's social commitment pushes him to see the user of his building as a client as much as the purchaser of his services. The definition of social welfare is further complicated by the fact that this user exists in the future as well as in the present. In this case the protection from competition has different objectives than those described above. Nevertheless, here as elsewhere, the problem is one of trying to strike a balance between the amount of profitability required and the degree of competition necessary to produce the socially optimal output.

From the standpoint of the theory of the firm a theory of monopolistic competition adds two dimensions--selling

<sup>34</sup>  
Williamson. 4. p. 239.



expense and product quality--to the kind of decisions the firm makes, but leaves the decision process essentially unchanged from the traditional model. However, the policies of a monopolist may be constrained by the indirect competition of all commodities for the consumers' dollar and of the reasonable adequate substitute goods as well as by the threat of potential competition if market entry is possible.

In oligopoly markets a small number of large firms are interdependent, the policies of the one directly and perceptibly affecting the policies of the others; here competition cannot be impersonal. A cartel is a special case of an oligopoly market, being a combination of firms whose object is to eliminate the scope of competitive forces within a market. Oligopolists are reluctant to employ price cutting as a competitive weapon; the large firms' competitive effort has been channeled away from price policy and into advertising services and product characteristic modifications.

The architectural profession has many of the attributes of a cartel, but in addition to controlling price it has sought to prevent other forms of non-price competition from developing between its members. In its final clause the professional code makes this clear when it states that:

"A member or student must not attempt to supplant another architect nor must he compete with another architect by means of a reduction of fees or by any other inducements." The profession has gone further and refused to acknowledge the indirect competition of all commodities for the consumer's dollar; its members are not only prevented from competing with each other as would happen in a cartel, but they are further restrained from competing with non-members in a position to offer substitute goods and services at a competitive price (some professionals would argue that such goods were not in fact adequate substitutes but what decides it is whether the market sees them as such).

The social welfare aspects of monopolistic forms of competition are ambiguous. From a very microscopic standpoint each firm produces less than the socially optimal output. On the other hand, if each firm were somehow forced to produce this seemingly desirable level of output at marginal costs price, private enterprise would probably no longer represent a viable economic system.<sup>35</sup> The motivation to take risks and to innovate would be lost. Some economists and all oligopolists hold that oligopolist market organisation is essential for the dynamic growth of the economy<sup>36</sup> (for example

<sup>35</sup>  
Fergusson. 15. p. 350.

<sup>36</sup>  
Fergusson. 15. p. 333.

an oligopoly can create the resources that are necessary to support research and development, one of the determinants of economic growth according to many). This is not an argument that R.I.B.A. could apply to its own case with great credibility at present.

We have implied that in a perfectly competitive market, the firm will seek to maximise its profits, and although in situations where competition is less intense, profit maximisation may no longer be the primary goal, it will still be found in the front rank of the organisation's objectives. Few subjects have been the object of more persistent and profound misunderstanding as the role of profits in business enterprise. The architectural profession, armed with the half-truths of economic ignorance has been, since its birth a century and a half ago, a vociferous opponent of the profit motive. The fact that the part played by profits has undergone a transformation with the rise of professional management and the diffusion of stock ownership has gone largely unnoticed. In its protestations the profession has preferred to refine its litany of disdain rather than its advocacy and in doing so it has been remarkably successful in keeping profits at bay. Thus it comes as no surprise to

find architecture as a profession quite unprofitable.<sup>37</sup>  
Obviously this by itself does not argue for the profit motive, if one is not interested in profits--that would be tautological. It might begin to do so, however, if it can be shown that professional standards have consistently lagged behind those to be found in other professions or in industry in general, as a consequence, of what might well be specious economic piety. A more detailed discussion of the role of profits and its relation to pricing is given in Appendix A.

The architect, as we saw earlier, is expected to price his services in proportion to the total cost of construction in most situations and on a straight time basis in others (i.e., consultancy services). The generally small size of private architectural firms, together with the individual nature of the service offered has given rise within the profession to an association of profits with personal remuneration and reward rather than with the long-term needs and plans of a professional practice. It is in fact this often misleading identification of profit with personal gain which has prevented its proper role from being established and sheltered pricing from its influence.

The problems of professional pricing

Although substantial differences have been found between the decision-making process of firms and the decision-making process of the theory of the firm, the latter does offer insights into the way firms set their prices. To the extent that a firm has company objectives, knows its production costs and understands the nature of the demand curve that faces it, it is at least in a position to make rational decisions with respect to price. An architectural firm is in no such position; it has not attempted to relate design inputs to building outputs and in order to keep life simple and quiet for itself it has assumed an almost linear relationship between the two. The basic fee for an architect's services is 6% of the total construction cost of the buildings designed and erected under his supervision. This figure was fixed in 1918 being 5% before then.<sup>38</sup> Although within a certain price range this percentage covers costs, a recent R.I.B.A. survey found that the mean percentage "costs" as calculated, of all the jobs analysed exceeded fees by 0.6% of all construction costs (7% against 6.4%). Between 1956 and 1965 overall practice costs per head of technical staff rose by 93%, whereas overall fee income per head of

<sup>38</sup>

P.I.B. 23. p. 12.

technical staff rose only by 75%.<sup>39</sup> Luckily for architectural firms the negative effects of this were mitigated by a rise in productivity in other areas of activity, but the gap between costs and fees is still widening and calls into question the basis on which the profession's pricing policy rests. The private firm lacks the means at present to assess the individual demand curve that faces it and hence has no procedure for affecting it, or establishing a demand-based pricing system. It may believe itself to be using a pricing system based on costs but this is not so, for the costs that it is looking to are not its own. Some of them can be known readily enough--those that stem from the supervision of construction, the production of schedules and so on--but it is the problem of how long to spend on the design phase itself that lies behind the difficulty of determining professional fees.

This lack of firm basis on which to evolve the pricing policy has had far reaching and negative effects on the standards of professional skills and the market for them. Architectural firms in general with the exception of a few have had their profitability constricted to the point where

funds for future growth have been lacking. Naturally we should not assume that the prospect of higher profits will always call forth the necessary effort from all firms in a position to earn them. Very good businessmen or architects may well possess a personal scale of values in which an income greater than that necessary to provide a comfortable position in the community has a relatively low claim on time and effort.

The building of vocational goals by either businessmen or architects can also, as we have said, push profits into second place. To be sure there would be a period of time over which the firm would be too small and frail to allow this to happen; even an architect with vocational goals will recognise the contribution of profits to the firm's ability to survive. But if at a certain size both survival and vocational opportunities are secured, further growth may have no relevance for him and profit maximisation would be superfluous. It is only to the extent that desirable professional opportunities and the growth of the firm are related that the committed architect need concern himself with profitability. Entrepreneurial preference of this sort provides exactly the same kind of restriction on the firm's growth as does

entrepreneurial inability to perceive or act upon opportunities  
for profitable growth.<sup>40</sup>

Still, as with businessmen and business firms, there will be a good number of architects who are concerned with growth. Yet, if we look at the number of ways that a firm can increase its profits or its return on investment it becomes obvious that the architect is for the most part institutionally prevented from deploying them. There is already so little discretionary spending done in an architect's firm that it becomes difficult to see where costs can be pared without damaging professional standards. If the selling price is increased there is the risk of losing clients; if the market was more sophisticated and economically better informed this would probably not happen, but the Conditions of Engagement which originally were to give the minimum fee that an architect should charge have become a maximum beyond which he dare not go. Most architectural firms in the United Kingdom adhere to the official scale of fees unless their services and work are so differentiated from that of their professional colleagues that comparison is impossible.<sup>41</sup> This is rare and there is little specialisation

<sup>40</sup>

Penrose. 25. p. 35.

<sup>41</sup>

P.I.B. 23.



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in private practice. Architects are reluctant to commit their fortunes to any narrowly specialised field and general practice is predominant. In any case their professional training has not allowed for it and few are likely to have the perseverance after seven years of preparation to specialise further.

#### Pricing and innovation

The price for architectural services is fixed and rigid; it looks neither to costs nor to demand; it is made to depend in a very arbitrary manner upon the cost of construction.

As might be expected, and has been observed in many situations, the more money and time spent on design, up to a certain point, the more money and time saved on construction. This suggests that there exists a price-cross elasticity of demand that relates design and construction. Price-cross elasticity of demand is the proportional change in the quantity of X demanded resulting from a given relative change in the price of the related good Y. Simply put, any reduction in the cost of construction resulting from an increase in design activity and cost is likely to generate an increase in demand for design services. As each building is, in some sense unique, saving money or

time in the construction phase is likely to involve an element of innovation. Innovation involves risk both for the architect and for the client. On each building the architect stakes his reputation and the client, his money. Risk can only be covered by a higher level of pay-off to those expected to bear it, yet in the building industry, only the client and the contractor properly receive the benefits of an innovation. Over a certain value the cost of design and the cost of construction are inversely related for a given size and type of building. If this is generally the case--it is not in every instance (for example, that of luxury houses)--the professional fee system, by pricing designs in direct proportion to the cost of construction, penalises the architect both for efficiency and design innovation. Each time that an architect can produce a cheaper or better building by his own inventiveness, he is going to reduce his remuneration through the savings he achieves, and at the same time he is likely--given the relation between design and construction costs--to add to his own design costs in the process. Here the risks he takes are not covered by a higher level of payoff. It is in his interest to stick to the budget or exceed it rather than get involved in risky experiments, innovations or economies.

Designers hold one of the keys to the economic use of resources in the construction industry, an industry which in the United Kingdom devours annually one-eighth of the national income.<sup>43</sup> These resources have been used less than optimally when one considers that costs in the building industry have been rising consistently faster since the war than those in other industries.<sup>44</sup> The economic penalties that attend design innovation and experimentation must have played no small part in bringing about this state of affairs.

#### Conclusion

We can summarise the discussion on price thus:

1. The growth of firms is strongly linked with their ability to make a profit.
  2. Profitability in turn is affected by the pricing policies pursued, pricing generally being either based on a firm's costs or on the demand for its product.
  3. Architectural firms are constrained by the code to price their services not according to their costs or the demand for them, but in direct proportion to the costs of construction to which they often stand in an inverse relationship.
  4. The effect has been that architectural firms have been
- <sup>43</sup>  
Stone. 39.
- <sup>44</sup>  
Stone. 39.

by and large unprofitable and have not had the resources needed to grow. The size of firms has been kept small, they have not been able to attract the diversified talent needed to improve their service, and their ability to innovate or exercise any influence within the building industry has been impaired.

#### PLANNING

In their struggle for survival and growth, firms will devise and negotiate an environment so as to eliminate uncertainty. Rather than treat the environment as exogeneous and to be predicted they seek ways to make it controllable. The corporation is not designed for uncertainty where there are no clear objectives to reach, no measures of accomplishment and where it is not clear what to try and control. But it is well equipped to handle risk; it is precisely an organisation designed to uncover, analyse, evaluate, and operate on risk; accordingly, the innovative work of a corporation consists in converting uncertainty to risk.<sup>45</sup> The process by which uncertainty is metabolised into risk is known as planning. It is an activity which up until now has been carried out predominantly by firms that have already reached a certain size and that can allocate to it the resources required.

<sup>45</sup>  
Schon. 31. p. 120.

According to Frank Gilmore, "...the swing to strategic planning in large organisations constitutes a serious threat to small business management. It challenges one of the important competitive advantages which the small company had enjoyed--being faster on its feet than the large company in adapting to changing conditions. It is perfectly clear that mere adaptation in the short-run will no longer suffice. Trends must henceforth be made, not simply coped with."<sup>46</sup>

If this warning applies to architectural firms as well as business firms, then it bodes ill for the profession as a whole. The great majority of architectural firms as we have seen employ no more than five to six people, their resources are minimal and their viability is quite marginal. The rate of attrition among small offices is high, particularly in times of recession.<sup>47</sup> They look to the building industry, one of the most erratic and variable in the national economy, for their employment and security.

#### Planning and growth

For many, if not most, firms the more effective long-run protection both against direct competition as well as against

<sup>46</sup>

Steiner. 37. p. 135.

<sup>47</sup>

Sunday Times Business News. 41.

the indirect competition of new products will lie in the firm's ability to anticipate or at least to match threatening innovations in process, products and marketing techniques. Yet their technical feasibility often resists the kind of definition required by the investment game, and may continue to evade definition throughout the entire process of innovation. Generally the more radical the innovation, the less it will be rational and predictable. But the resources that are going to be needed to cover the uncertainty inherent in this process of anticipation and matching will only be made available with an increase in the size of the organisation.

As long as expansion can provide a way of using the services of its resources more profitably than they are being used, a firm has an incentive to expand. Indeed, many of the productive services created through an increase in knowledge that occurs as a result of experience gained in the operation of the firm as time passes will remain unused if the firm fails to expand. Thus they provide internal inducement to expansion as well as new possibilities for it.

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Penrose. 25. p. 54.

In the final analysis, however, the decision to search for opportunities is an enterprising decision requiring entrepreneurial intuition and imagination and must precede the economic decision to go ahead with the examination of opportunities for expansion. It is a decisionmaking process which focuses on the long-term and attempts to match the anticipated position of the firm with anticipated changes in the environment. It calls for a strong sense of awareness of where the organisation is heading for, where it should be heading for and how it can get there. We call it strategic planning. It is the process of deciding on the objectives of the organisation, on changes in these objectives and on the policies that are to govern the acquisition, use and disposition of these resources.

At the more detailed level, planning is the process whereby objectives are translated into goals. Objectives are timeless, immeasurable, without quantification. Goals are measurable and possess a time parameter as well. By goals we shall mean value premises that can serve as inputs to decisions, which have to be distinguished from motives which are the causes that lead individuals to select some goals rather than others as premises for their decisions.

### Strategic and long-range planning

A distinction is sometimes made between strategic and long-range planning. Long-range planning deals with the futurity of present decisions; actions take today will have long-range consequences and long-range planning examines these evolving chains of cause and effect. A long-range plan shows the estimated consequences over the next several years of strategic decisions already taken; it is part, in effect, of the management control process.<sup>49</sup> The estimates used in strategic planning are intended to show the expected results of the plan. They are neutral and impersonal. By contrast the management control process and the data used in it are intended to influence the managers to take actions that will lead to desired results.

Strategic planning is essentially applied economics, whereas management control is essentially applied social psychology. The two activities tend to conflict with one another in some respects. The time that management spends thinking about the future is taken from the time that it could otherwise use in controlling current operations, so that in this indirect sense strategic planning can hurt current performance. Striking a balance between the two is one of

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Anthony. 3. p. 6.



the central problems in the whole management process.<sup>50</sup>

For practical purposes, strategic planning may be thought of as forecasting and setting objectives, management control as supervising and evaluating operational personnel, and operational control as carrying out the day-to-day operation of the business. All three activities involve some form of anticipation of a future state of affairs which we can call planning. All three involve the setting of objectives, establishing standards of performance with respect to these objectives and matching actual performance with the standards.

One might well ask whose objectives are an organisation's objectives. There could be five possible answers to this question. Firstly, the people who wrote the charter under which the organisation operates (in our case this would be the Royal Institute of British Architects). Secondly, it could be the holders of formal authority over the organisation (legislative or stockholders). Thirdly, it could be members of the organisation as a whole. Fourthly, the organisation's specialised planning people and finally, the organisation's top managers. Whichever of these groups is responsible for it,

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Anthony. 3. p. 6.

the planning process can be decomposed into six steps:

1. Diagnosis. Where is the company now and why?
2. Prognosis. Where is the company headed?
3. Objectives. Where should the company be headed?
4. Strategy. What is the best way of getting there?
5. Tactics. What specific actions should be taken,  
by whom and when?
6. Control. What measures should be watched to  
indicate whether the company is  
succeeding?

The planning process encourages systematic thinking ahead by management and leads to better, overall coordination of company efforts. It leads to the development of performance standards for control and causes the company to sharpen its guiding objectives and policies. The company is then much better prepared to face sudden and unanticipated developments.

#### Budgeting

Plans maintain their credibility through implementation, the process by which an anticipated state of affairs is translated into a detailed course of action for its attainment.

Budgetary procedures are the ones most often used for translating a plan into an activity.

The definition of a budget may be summarised as a predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the subsequent evaluation of performance.<sup>51</sup> The values of budgeting lie as much in the process as in the resulting documents; it forces periodic self-examination as to functions, methods, objectives and costs.

A budget represents a bilateral commitment. The manager commits himself to produce desired results with a particular level of spending and his superior commits himself to regard the spending as acceptable if it is consistent with the budget.

The problem of budgeting is largely the problem of measure. The constant temptation that one must resist is to confine or tailor performance to that which is measurable and as long as measurements are abused as a tool of control, they will remain the weakest area in the manager's performance.

In few places can this problem be more telling than in the field of architecture, pot-holed as it is with half-

<sup>51</sup>  
Shillinglaw. 32.

measures. Few of the performance standards allow for comparisons and evaluation between them. One can judge a building with respect to its cost and the cash flows generated; one can see whether it functions as it was designed to with respect to lay-out and physical amenities; one can appreciate a building aesthetically in terms of its scale, proportions and location but one cannot convincingly relate the costs or cash flows to function, components, or the aesthetic worth of the edifice. Measures can be devised which will help us to evaluate these criteria individually; none as yet have been produced to relate them to each other.

Some architects have attempted to apply the principle of cost-benefit analysis when budgeting for individual projects. It was first introduced by the United States government to expand the criteria by which budgetary allocations could be made, but it has not been used in enough situations and over sufficient periods of time for a definitive assessment to be possible. Architecture is unfortunately a discipline in which neither costs nor benefits are easily measurable. We are not talking here only of construction costs but also of design costs. Very few design costs can be identified with specific features of the building and these in turn rarely give a directly measurable pay-off. Design is a frail

activity highly vulnerable to budgeting abuses where much of the problem of measurement can be traced to inadequate data we asll as a lack of workable analytical techniques for interpreting them.

Whether one is talking of strategic planning or of budgeting, of the long-term or the short-term, the various ways of reducing risk have the same effect on the demand for managerial services as to the ways of reducing uncertainty; the greater the risk or uncertainty, the more difficult will be the managerial task. Hence, the expansion plans of a firm are necessarily restricted by the capacity of management to deal with increased problems with which they are confronted.

#### Planning and architects

How and how much does the architect plan? If we look at the professional code and the conditions of engagement, we see that in matters of product-mix, price, distribution and promotion, the architect is constrained. These are the areas in which strategic planning can be most effective. On the other hand, in the operational control area, the day to day running of the business within a decision framework established by strategic planning, the professional restrictions

are lifted and the architect is free to act. Strategic planning calls for decisions which would have effect on the four marketing variables which we have discussed in this chapter. In these areas, the most consequential decisions to be made have been pre-empted by the professional body that claims on these matters to act on behalf of each individual firm. The professional institution thus hopes to bring about a uniformity of behaviour and a homogeneity of service that will maintain the architect's traditional good standing.

The restrictions, however, have consequences that were not altogether anticipated. The lack of well-defined opportunities for the exercise and deployment of managerial and entrepreneurial talent have made the profession in Great Britain deficient in such talents. Few competent managers or entrepreneurs are going to relish the idea of having their skills and ambitions confined to the operational control area. Yet today, with the exception of a few management control areas, operational control forms virtually the full extent of the architect's managerial ambit.

The environment is changing at a rate to which the profession is not responding fast enough. The markets in which the architect will be operating ten years hence call for decisions that have to be taken now. The soundness of such decisions ultimately rests on the planning intelligence in the profession. Through the professional code of conduct, the R.I.B.A. has arrogated to itself most, if not all, of the decisions which are the outcome of strategic planning activities; the profession is offered but one perspective and interpretation of the future, that of its institutional representative. There is no reason to suppose the R.I.B.A.'s powers of prescience to be any greater than that of individual firms using similar data. If the institution's prognoses turn out to be wrong, the profession as a whole suffers; little redress is possible since the small firm lacks both the resources and the authority to fend for itself.

#### Summary

We have examined the five marketing variables around which firms make decisions in trying to adjust their responses to their environment and we have seen that on all of them-- product-mix, distribution, promotion and price--professional architects are directly constrained by their code of practice.

Planning--the fifth variable--is an activity that seeks to coordinate decisions taken on the other four; and if these are controlled, then so is planning.

Two situations would exonerate architectural firms from the necessity of operating with these variables; either they are unnecessary for the efficient and effective functioning of the firm in its markets, or, if we treat the profession as a multi-firm and the R.I.B.A. as a coordinating authority, these decisions are taken centrally and are adequate to the needs of the firms and their markets.

In the first instance, our findings will depend upon whether we talk to architects themselves or to their prospective market. If we put it to the professionals, we may find them quite pleased with their situation; they enjoy their work and they make a living, can one ask more? The fact that individual firms may be growing at the cosy rate of three percent a year may easily, for lack of adequate data, blind them to the fact that their prospective market is growing at twenty. If this were the case, then it would suggest the existence of a market gap, unsatisfied demand. This thesis has taken as a point of departure the existence of such a market gap, implying that, quite independently of



how individual architects feel about their performance, the profession as a whole does not meet market expectations.

If the marketing variables are used by firms to adjust to their environment, then the existence of a market gap implies that these variables have been either misused or neglected.

If the first situation does not obtain, does the second? The code is, in fact, the outcome of decisions taken centrally with respect to the marketing variables. But in the course of taking these decisions, the R.I.B.A. has transformed them from variables into parameters, creating a static response to a dynamic situation. That the static response is inadequate to the needs of the market is indicated by the presence of a market gap--a gap not articulated into a demand curve to be sure, but whose presence is betrayed by a general and growing feeling of dissatisfaction with the state of the built environment.

The architectural profession would do well to take a closer look at the workings of its code. All that would be needed to change this situation would be to transform the R.I.B.A. from a regulative body, which is there to compensate for a lack of information in the market, into a communicative device for creating such information. Instead of making

strategic decisions on behalf of firms in order to protect the client, it could restore this decision-making authority to the firms and help the client to protect himself by supplying him with the information he needs in his dealings with professional firms. This would offer the double benefit of restoring a much needed flexibility to small firms in a dynamic market situation as well as encouraging sophistication and know-how in the market for architectural service.

#### Conclusion

In summary:

- 1) Planning is an activity that attempts to determine both the future states of the four marketing variables-- product-mix, distribution, promotion and price--and a course of action to attain them.
- 2) The professional code has denied the individual firms much say with respect to these four variables.
- 3) The result is that firms have not enough control over their future and their individual survival is contingent upon the health of the building industry; entrepreneurial and managerial talent have shied away for lack of any well-defined opportunities and the vigor of the profession has been sapped.

CHAPTER 3

INTRODUCTION

In this chapter we shall look at certain organizational functions--planning, finance, production, research and development, marketing, personnel, information and control-- and see to what extent the architectural profession, in responding to the organizational constraints imposed upon it by its code, has been able to develop them.

Organizations and the profession

The architect as well as being a designer has to be a manager. There are five basic operations in the work of a manager: he sets objectives, he organises, he motivates and communicates, he has the job of measurement, he develops people.<sup>1</sup> Above all a manager must manage.<sup>2</sup> Of these operations there is one which is made redundant by the professional code and that is the first. The architectural manager can only set objectives at a level which is not properly speaking managerial. We saw in the preceding chapter that the marketing environment called for the

<sup>1</sup>  
Drucker. 13. p. 410.

<sup>2</sup>  
Drucker. 13. p. 22.

establishment of goals that answer four basic questions: what we are selling, how much for, how shall we sell it, how shall we let our market know that we are selling it? These questions are answered and acted upon--in business firms at any rate--by the operations of the organisation sub-units described in this chapter. Many, if not most of these functions have not been developed in architectural organisations or at best have been developed only in embryo. This in itself is not indictable; after all, there are many organisations such as the Church and the Civil Service in which such functions are negligible or absent. But architectural firms, unlike the civil service and the Church and quite like business firms, are involved in market operations; they are selling a service. Professionalism attempts to supplant the rules of the free market with its own; in so doing, it absolves--or so it believes--its members from the need to build up complex organisations that are responsive to free market forces. Therefore the test of professionalism is whether architectural organisations perform better under its rules than they would in the free market and if the answer is "no" then we can legitimately question the present organisation of architectural firms. The difference between an architectural firm selling a service and a business firm selling a product

is not as pronounced as the profession would have us believe. That the profession is more concerned with effectiveness than with efficiency, with the quality of its service than with its economic viability is a commendable vocational aspiration which is not peculiar to the profession alone; it is shared by many business firms. Yet, individual business firms are allowed to choose for themselves what balance they will strike between effectiveness and efficiency; it is not institutionally determined on their behalf. Still, architects, in assuming a social role, define effectiveness more broadly than do businessmen as a rule. This poses problems, since unless this role is embodied institutionally, there is nothing that will guarantee its survival. The individual may or may not adopt it and the same goes with the businessman. Unfortunately, it may be the one with the social commitment that is at a disadvantage in th's game and the challenge is to find an organizational solution that can inject greater entrepreneurial and managerial vigor into the profession while safeguarding its traditional goals, if not actively promoting them.

It is the comparative freedom of the business firm to set its own objectives that gradually has forced the evolution of the organizational functions that we describe in this chapter. Many of these firms operate at a level of technological

sophistication conspicuously absent in architecture. How is the customer protected? The answer is that he is not, or at least was not at first. Just as a firm has to learn from its mistakes in order to grow strong in its environment, so too the customer. The relation of trust that the professions have tried to foster desirable as it is, is slightly quixotic and often smacks of paternalism. In most areas of economic activity measures to protect the purchaser or client were not taken by independent bodies but by the government itself. At the same time the customer learned from his own mistakes as well as those of others and became, by degrees, more sophisticated. Competition thus pushed the standard of service upward rather than downwards where it was allowed to operate, albeit regulated.

With the first management operation pre-empted by the R.I.B.A. the others as we shall see have either withered or operated in a vacuum inside the profession. Objectives given vision and guidance to subsequent decisions and if objectives are absent, confusion will prevail.

What is an organization?

Chester Bernard defined an organization as "a system of consciously coordinated activities or forces of two or more

persons."<sup>3</sup> It is impossible for the behavior of the single isolated individual to reach any high degree of rationality, though it can be improved when the environment of choice itself can be selected and deliberately modified. Organisational coordination through the progressive decentralisation of authority becomes a necessary condition for continued growth beyond a relatively small sized firm, and in fact lies at the heart of the concept of the firm.<sup>4</sup>

Modern organization theory treats the firm as a coalition in the sense that each group in the coalition is essential to the firm's continuing existence and the members of the coalition can be regarded as equals. This view, however, is more useful when observing a firm in a period of crisis than when survival is not a pressing problem. Where survival is not a current concern restoring the hierarchy among members makes management emerge as the chief member of the coalition.<sup>5</sup> Management structure, especially the structure of top-management, is therefore the only reliable criterion of size. A company is as large as the management structure it requires. There are businesses with a handful of employees that have all the characteristics of a very large company; one example

<sup>3</sup> Papandreou. 24. p. 185

<sup>4</sup> Papandreou. 24. p. 187.

<sup>5</sup> Williamson. 44. p. 240.

would be management consulting firms. The reason is that everybody in a management consulting firm is top management or at least upper middle management.<sup>6</sup> Whatever its nature, an organisation will tend to assume hierarchical form whenever the task environment is complex relative to the problem-solving and communicating powers of the organisation members and their tools. Simon holds that hierarchy is the adapted form for finite intelligence to assume in the face of complexity.<sup>7</sup>

Clear lines of authority and responsibility are desirable, as is clear role definition. People can then get on with their jobs without confusion and performance will improve. This is the case both for higher specificity of management roles and for a higher degree of articulation of the organisation hierarchy. Yet for some time now it has been evident that lateral or horizontal relations are more vital to the efficiency of a production organisation than was formerly recognised and the peer colleague is the key person in the organisational world of the executive.<sup>8</sup>

Lickert, MacGregor and Argyris are led by the findings of social psychology to take a critical few of the rational

<sup>6</sup>Drucker. 13. p. 276.

<sup>7</sup>Simon. 33. p. 102.

<sup>8</sup>Read. 28. p. 20.



structure advocated by management writers.<sup>9</sup> Explicitly, or by implication, they prefer low specificity of role and organisation where individual self-realisation, job commitment and job satisfaction may be raised as well as performance. Other writers have hypothesised an inverse relationship between role specificity and technical structural innovation. Burnes, Stalker, Frank, Bennis, Haydgc, Thompson when considering adaptiveness, all expected greater innovation when specificity was lower.<sup>10</sup>

What type of organisation?

Because we know from observation that people are consistently more innovative in some environments than in others, we are interested in designing one that actively helps us to translate latent creativity--through research, development, and manufacturing processes into the maximum number of new and profitable products, ideas or services.

In the architectural profession, the nature of the innovational process differs from that in manufacturing organisations. In a manufacturing organisation, the technological

<sup>9</sup> Hickson. 17. p. 233.

<sup>10</sup> Hickson. 17. p. 233.

innovation will find its way onto the product line, the cost incurred being amortised over several thousands or millions of units of production, each prospective buyer of the product taking a small share of the risk. In an architectural organisation, each project that comes into the office offers scope for innovation, but since the financial risk that an architectural innovation involves is borne mostly by the individual client, it cannot be spread effectively over other projects in the office. Other projects can of course benefit from a single project's innovation but in order to be economical the payoff for the risk taken must often accrue entirely to the one for which the innovation is being considered. It is difficult to patent architectural inventiveness. If it was otherwise, both the client and the architect would receive payoff from other projects adopting given innovation once it had been demonstrated on one project and they would be able to balance out the risks involved more easily. As it stands, although the inherent nature of the architectural task offers considerable scope for innovation, the market is not structured well enough to absorb and spread the risk so as to make the process viable.

One must emphasize the predominantly innovational role of architectural organisations. It is, of course, true as

was once pointed out in the last chapter that much of this innovation is artistic rather than technological and that it does not always offer tangible financial returns. But we shall find that in temperament and style an architectural office would identify at least as much with a research and development firm as with a manufacturing one. Such a disposition has organisational consequences.

The organisational functions that we describe are those that must be carried out in some manner and to some degree by any self-contained organisation in order to stay in good health. If an organisation is not self-contained but forms part of a larger organisational body some of these functions will be otiose, but only to the extent that they are adequately carried out by the larger unit. The R.I.B.A. has taken over some of them and it can be considered the larger organisation unit whose existence makes unnecessary the performance of these particular functions by the individual firm. Each function can be broken down into sub-functions by the individual firm. Each function can be broken down into sub-functions that will vary between organisations. We shall take each in turn and examine it in order to answer three questions: how many of these organisational activities are carried out by individual architectural firms, how many

by the professional institution to which they belong, and how many are omitted altogether?

### PLANNING

Planning, as an activity can be and is carried out by firms whatever their size. However, if it is to be done systematically, if it lays claim to sizeable resources, if its performance calls for and makes use of specialist skills, then it will be most effective when it is differentiated organisationally from other company activities. This differentiation of the planning function has been observed most frequently in those organisations which have already attained a certain size.

What planning does

As we saw in the last chapter, planning is basically a device to force management to lift its sight from immediate pressing problems and study the implications of forecasted future states of nature for the management of the business. It is believed that doing this will give management time to weigh alternative courses of action free from the pressure of immediate events and to work a means of reaching agreed upon goals. There are eight areas in which objectives of

performance and results have to be set in the planning process: market standing, innovation, productivity, physical and financial resources, profitability, manager performance and development, workers performance and attitude and public responsibility.<sup>11</sup> How are these tackled by architectural firms?

The effects of the code

When discussing planning in the last chapter, we saw that the area of decision in which the architectural firm was allowed to operate by its professional body was so small that it hardly justified the existence of a planning function at all. There are in fact two reasons why the planning function is not organisationally more formalised by architectural practices. The first one concerns professional constraints; it is of little benefit to try and improve the market standing of the firm if the competitive behavior that this would elicit has been prohibited and profitability can hardly be increased as professional fees are more or less fixed with costs down at a minimum as a result. The second reason is that planning requires a higher quality of information and general planning "know-how" than architects at present dispose of. Productivity and worker performance can be better assessed when a measure of the relationship between inputs and

<sup>11</sup>

Drucker. 13. p. 83.

outputs has been devised; the same goes for manager performance and development.

The role of the R.I.B.A.

If the individual firm is not in a position to carry out the planning function, does the professional institution help out? The R.I.B.A. has begun during the last few years to collect statistical information which may be of use to architects.<sup>12</sup> At present the only identifiable area of decision which could benefit from this data is that which deals with market standing. Yet even if a firm were to know its market standing, which would be a step forward, it could not act upon it effectively. Generally, the information collected by the institute is too aggregated to be of much use to the individual firm. The institute itself does no planning in the sense of setting objectives, but it does offer a professional forum in which the future is discussed and some form of strategic thinking takes place.

It is hard to avoid the conclusion that the professional environment does little to encourage planning. This might not matter so much if the institutional body carried out some planning of its own, but it does not.

<sup>12</sup>  
R.I.B.A. 30.

## Conclusion

The architectural profession is almost entirely dependent for its livelihood upon the fortunes of the building industry, an industry highly sensitive to seasonal and cyclical swings. The ability to spot industry trends and opportunities and to prepare for them ahead of time would create responsiveness to market conditions with less organisational disruption. This is what planning offers to firms in a position to take advantage of it. The professional code does not prevent architectural firms from planning if they choose to do so; by its control of variables, however, it reduces its value to the organisation below the point at which it is worth differentiating functionally from the rest of the organisation. Planning is an essential element of an organisation's response to the environment; it reduces uncertainty and conserves scarce resources; failure to recognise this can only undermine an organisation's health and prospects of survival.

## FINANCE

Although the term finance has not so far been mentioned in our discussion it plays an important role in an organisation's survival strategy. At one time the function of finance was

confined mainly to keeping accurate financial records, preparing reports, managing the firm's cash position and providing the means for payment of bills. These are certainly the duties of the financial manager in the large architectural office. Yet recently finance has expanded to encompass the management of the overall assets of the firm. It is concerned not only with the total amount of capital employed in the firm but also with the allocation of this capital to various assets. In addition to managing assets, it has become concerned with obtaining the best mix of finance relative to the overall valuation of the firm, as well as dividend policy in the light of its effects upon valuation.

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#### The new function of finance

Finance has changed from a field that was concerned primarily with the procurement of funds to one that includes the management of assets, the allocation of capital and the valuation of the firm as a whole. The function of finance can be broken down into three major decisions the firm must make; the investment decision, the financing decision and the dividend decision. These decisions have to be made by an architectural firm as surely as by a firm quoted on the

13

Van Horne. 42. p. 4.

14

Van Horne. 42. p. 9.



stock exchange. De-jargonized they answer the questions: what shall we spend our money on, where shall we get it from, and how shall we pay for it?

The investment decision is perhaps the most important of the three decisions. Capital budgeting, a major aspect of this decision, is the allocation of capital to investment proposals whose benefits are to be realized in the future. In addition to selecting new investments, a firm must manage existing assets efficiently. At present the major investment made by an architectural firm is in its manpower and capital budgeting procedures will not be appropriate unless one has a way of measuring manpower productivity. Although such measures are not used at present by architectural firms, they are being developed in the field of research management and could be made to apply.

The financing decision is concerned with determining the best financial mix or capital structure for a firm. If a company can change its total valuation simply by varying its capital structure, an optimal financing mix will exist in which the market price per share is maximised over the long-run. Although the market price per share will not be of great concern to architectural firms since these are not

quoted on the stock exchange, their capital structure could affect their ability to borrow money in the future and to that extent the way such firms finance themselves today determines in part how they can do so tomorrow.

The dividend decision encompasses the percentage of earnings paid to stockholders in cash dividends, the stability of absolute dividends over time, stock dividends, and the re-purchase of stock. The dividend pay-out ratio determines the amount of earnings retained in the firm and must be evaluated in the light of the objective of maximising shareholders' wealth. If investors at the margin are not indifferent between current dividends and capital gains there will be an optimal dividend pay-out ratio that maximises shareholders' wealth. The value of the dividend to investors must be balanced against the opportunity cost of the retained earnings lost as a means of equity financing. It is clear that the dividend decision must be analysed in relation to the financing decision. In the case of an architectural firm, if it has no outside shareholders, the dividend decision is simply one of assessing how much each principal should be paid and how much should be retained by the business.

If we assume that a firm's objective is to maximise its value to the shareholders or owners, then it should strive for an optimal combination of the three decisions just described. Because these decisions are interrelated, they should be solved jointly.

#### Finance and the profession

Up until now, the architect has had to sub-optimize in matters of financial management; he has not effectively been able to command the resources required for a firm's operation and growth. There are three ways that one can acquire such resources: firstly, internally--through the retention of profit; secondly, by attracting investors with the prospects of future profits and growth; and thirdly, by borrowing. By whichever method the resources are acquired, a firm's ability to attract them is strongly linked to profitability and stability, neither attribute being characteristic of current architectural practice in Great Britain. The few professional firms that have been able to grow have done so primarily through the retention of earnings as well as short-term borrowings; they have not displayed the profitability or stability of earnings that would attract investors or long-term loans.

Because the main asset of an architectural office is manpower rather than capital equipment, no great strain has so far been put on the financial management function. The small size and low profitability of firms has meant that there are few investment opportunities in the profession and architects have not needed finance in such quantities as to push them towards the stock market. If architects were to diversify their services and become entrepreneurial, however, then it is likely not only that the financial opportunities created could attract outside investors, but that architects themselves would feel the need to broaden their financial base. The code here acts as an indirect constraint on the evolution of a finance function. By setting a limit on the diversification possibilities and the profitability of firms, the code has prevented the firms from growing to a size where finance became sufficiently important to be formalized into an organisational function.

Although these are not formalised, architectural firms still have money problems; their needs for short term funds to overcome cyclical swings can be quite pressing. The R.I.B.A. having denied small firms the good opportunities to grow through their own initiative--through diversification

and profits--has a potential role to play as broker and guarantor of short and medium term funds for its professional members. Such a move, even at the institutional level, would provide some much needed financial stability on the professional scene.

#### Conclusion

As with planning, the code does not directly prevent the operation of a finance function within architectural firms: instead it creates a situation which robs the function of its vitality and justification.

#### PRODUCTION

Production is the organisational function which creates the products or product-mix that the firm sells to its market. To a firm that is in business, it is a function that is indispensable. Other functions can be discharged as activities without being organisationally differentiated. Production, even as sole function, must be developed, otherwise the firm is not in business.

One of the most difficult problems that faces any organisation is that of dividing up the task that it performs without the loss of efficiency or effectiveness. The problem

of departmentalisation centers on two variables: self-containment and skill specialisation. The forms of departmentalisation that are advantageous in terms of one are often costly in terms of the other.<sup>15</sup>

A unit is self-contained to the extent that the conditions for carrying out its activities are independent of what is done in the other organisation units. If there are time costs associated with the coordination of different units then these costs must be balanced against the time costs associated with lack of complete process specialisation within independent units.

#### Project management

Existing management theory was found lacking when it was realised that certain management relationships were evolving in the development and acquisition of large single-purpose projects whose development and production cut across interior organisational flows of authority and responsibility and radiated outside to other organisations that were managed as autonomous units.<sup>16</sup> The concept of project management

<sup>15</sup> Simon and March. 36. p. 29.

<sup>16</sup> Cleland. 9. p. 282.

evolved as a response to this issue. It made its debut in the administration of contracts given out by the department of defence and has achieved a considerable measure of success in rationalising and coordinating a large number of complex tasks bringing them together into a coherent system of action. Some of the techniques used in project management--most notably the critical path method--have recently found their way into architects' offices.

Three conditions are necessary for a task to be handled as a project: its end product must be specified; its accomplishment must require the use of some scarce or expensive resource; and it must be possible for the work to be listed in terms of separate items or sub-tasks. The quantitative techniques used in project management are mostly straightforward and rather easily understood: the starting point is a network schedule which generates a project schedule serving as a basis for a great many other operations, such as estimating cost control and allocation of office manpower.

Whereas in defence contracting, the concepts of project management are applied to every phase of a project, in the building industry they have been used mostly in the constructional

phase. They have on occasion been applied to the design process itself, but this is not where they have yielded their greatest efficiencies. This is partly because it is only at the commencement of the construction phase that the architect takes off his designer's cap and puts on his management one. He does not fully see the design problem in managerial terms and no measures have as yet been devised that could contribute to such a perception. There is the danger that project management could over-formalise the design function at the expense of creativity. Like any other technique, it is a tool that can be misused. A defence project and a building project are not the same thing. The design process must be carefully examined so that the areas which are the province of creativity can be identified and handled with care and respect.

#### Production and the code

Production is another organisational function where the code has been at work. If we accept that, with careful attention paid to design requirements, project management techniques could be applied to architectural work, then the unnatural division that still remains between the design and contracting phases through the separation of responsibilities



should be ended. This will not happen while the architect cannot diversify services. Contractors are now offering an integrated service in both design and construction to which they can apply project management techniques but here, we recall, the architect plays a subordinate rôle. Until architects and contractors can work together on an equal footing within a project management framework that can cover all phases of a project, from inception through to operation, the architect will not be responding organisationally to the increased complexity of the tasks that face him.

Project management calls for a project coordinator. Such a person must be impartial and have a balanced view of the resources and scope of various phases of the project. At present neither the architect nor the contractor in their present rôles satisfy this requirement. The architect, with his commitment to the design phase is not as a rule, very responsive to the contractor's difficulties and the contractor is more anxious to make use of his existing equipment than he is to produce a good design. Each in his existing rôle could serve under a project leader, allowing his advocacy to establish his claim to resources, but what is needed is the creation of a new rôle to which either can aspire.

Until the professional code allows the architect to adopt such a role, he will not be able to make best use of the techniques of project management.

### Conclusion

Production is the organisational function in which the architect, given his present role, is least constrained. He is free to organise the discharge of the professional services defined in the conditions of engagement pretty much as he chooses. Yet, the minute he wishes to change roles or his product-mix, he finds himself in difficulties. This is even so in something so directly beneficial to the quality of his service as project management. By preventing the architect from holding directorships or developing an entrepreneurial role, the professional code as before, has not prevented the growth of the production function (in this case it would be difficult) but it has strongly restricted the range of its applications. ✓

### RESEARCH AND DEVELOPMENT

We have already looked at the market role of research and development, and we saw that its function was to create and introduce new products, techniques or skills. Let us

see how it fits into the organisational structure.

In general, vigorous innovative activity will take place only in organisational units that are not assigned substantial responsibilities for programmed activities, hence the level at which innovation will take place depends on the level at which there are individuals or units having planned responsibilities without heavy operating responsibilities.<sup>17</sup> This observation seems to be at odds with what goes on in architectural practices. The architect has the dual role of designer, where innovation is encouraged, and manager, in which he carries heavy operating responsibilities.

#### R & D strategy

Research and development must be sensitive to an organisation's chosen marketing strategy; it can try and be first to market based on a strong research and development program, technical leadership and risk taking. It could adopt a "follow the leader" approach backed by strong development resources and an ability to react quickly as the market starts its growth phase. It could go in for applied engineering and rely on product modification to fit the needs of particular customers in a mature market. Finally,

<sup>17</sup>

Simon and March. 36. p. 198.

it could follow a "me too" approach based on superior manufacturing  
18  
efficiency and cost control. Ansoff uses the term "R-intensive"  
and "D-intensive" to denote a tendency towards the basic  
and experimental on the one hand a tendency towards the  
19  
commercial product design on the other--the two basic marketing  
postures that a firm may adopt.

The problem of finding adequate measures of performance  
is no less pressing in research and development than in the  
design process. A company must appraise three key factors  
to evaluate a research program: firstly, the economic value  
of the technology produced as opposed to the cost of the  
research which produced it; secondly, the amount of technological  
output per unit of effort expended, i.e., non-economic  
productivity; finally, the degree to which the programme's  
20  
technology supports company goals.

As with most functions that we are describing, research  
and development is an activity which will work effectively  
only after companies have reached a certain size and can allocate

18  
Ansoff. 1. p. 11.

19  
Ansoff. 1. p. 3.

20  
Quinn. 17. p. 64.

sufficient resources to it. Even if a small organisation is able to develop a significantly advanced new product it is unlikely to have the resources needed to exploit it. This does not mean that a small company cannot innovate efficiently-- a large company typically spends from three to ten times as much as a small one to develop a particular product;<sup>21</sup> what it does mean, though, is that innovation takes the small company to a higher level of overall risk in its operations than it does the large company and this can be both discomfoting and discouraging.

#### Architecture and innovation

To an economist, an innovation either increases the utility of a product for a given cost or it reduces cost at a given level of utility. A building is capable of offering both technical and aesthetic utility. Innovations in technical utility can be brought about through new and stronger materials, new mechanical or technical devices or installations and more efficient ways of resolving problems of accomodation. Aesthetic utility concerns the degree of emotional and intellectual satisfaction that a building can give to its owner, its users or even the general public that passes it

<sup>21</sup>

Cooper. 10. p. 76.

by in the street. It tends to be a highly personal matter that eludes both consensus and measurement; it cannot be easily transmitted to other buildings through an accepted body of principles the way technical utility can be.

There are areas in which professional architects could effectively innovate if they developed research and development functions: constructional methods, design technology, and organisational systems to mention but three. But as we have seen, the pricing system does not allow him sufficient resources to develop such a function. Innovation would take architectural firms to a higher level of risk than their size could bear, and as we recall from the preceding chapter, in many cases their total remuneration would fall in the same proportion as the cost savings brought about by the innovation. If the pricing system discourages an architect from innovating for his client, the clause that prevents him from diversifying also prevents him innovating for himself.

#### Conclusion

Once more, restrictive conditions of the professional code have removed much of the logic behind the creation of a research and development function in architectural organisations. Up until now it has remained the responsibility of the government

and universities; it constitutes inadequate proportion of the nation's annual investment in the building industry.

#### MARKETING

This thesis has adopted a marketing orientation to see whether the architectural profession as a whole has adapted resources and objectives to outside opportunities. This, at the level of the individual firm, is the task of the marketing function.

In a product-oriented company, each department develops its own logic of operations. A market-oriented company insists on the substitution of a single logic for these many logics. It requires that departments be guided by the logic of the customer need; satisfaction at a profit.

#### The marketing tasks

The firm hoping to make a successful adaptation to marketing opportunities must understand the characteristics of different major markets and environmental forces. Several trends characterise the prospective market for architectural services; growing population, changing age structure, high mobility, rising income, educational and leisure levels. Various market measures must be devised to allow for the

discharge of management functions--the analysis of market opportunities, the planning of company effort and the control of marketing performance. The marketing function has the organisational task of evolving a marketing strategy, that is, a set of principles for adjusting the marketing program to changing conditions. But the professional code forbids both promotion and competition; the marketing function evolved to respond to them. It should not be surprising that architectural organisations will have little use for such a function until they accept the objectives that created it.

#### PERSONNEL

The most valuable asset that an organisation possesses is the people that make it up. They are its life-blood and in some instances the purpose of the organisation itself. The personnel function in an organisation is the "people function." It ensures that people are allocated to the tasks that they are competent and willing to perform; that future manpower needs are anticipated and catered to; that the roles created for people do not lead to destructive conflict; and that the organisational structure is so designed that people can fulfill their aspirations within it. In a professional



firm the personnel function is perhaps the most important one since the human resource is the prime asset.

#### Recruitment and training

Many advanced companies engage in "total career development," a conscious policy of maximising managerial quality over the long-run by balancing the old criteria of finding the best man for the job with some consideration of the best job for the development of the man. This policy is pursued even where it results in some short-run sacrifices in efficiency.<sup>22</sup>

For professional practice in particular the problem of organisation becomes inextricably interwoven with the problem of recruitment, for the system of influence which can effectively be used in the organisation will depend directly on the training and competence of the employees at various levels of the hierarchy. Training as a mode of influence upon decisions has its greatest value in those situations where the exercise of formal authority through commands proves difficult. Training permits a higher degree of decentralisation of the decision-making process by bringing

the necessary competence into the very lowest levels of the  
23  
organisational hierarchy.

#### Architectural recruitment and training

Much of the training that takes place within an architectural organisation has been institutionally devised. Standards, areas of competence and duration of training are set down by the R.I.B.A. It is, after all, one of the "raison d'etre" of the institute; it guarantees the professional standards offered through the control of education and training of architects. Yet it looks to the needs of the profession in the abstract and not to those of the individual firm. Uniformity is achieved at the expense of flexibility.

The profession offers little in the way of career opportunity to anyone not trained as an architect; consequently the latter are expected to fill a multiplicity of roles within individual firms for which they often have little aspiration and no training, the training they receive addressing itself purely to design issues not managerial ones.

There has been much talk in architectural circles of late of multi-disciplinary organisations and teams; of

architects working in close collaboration with engineers, designers, quantity surveyors and others. The idea will call for a very much broader outlook from the individual architect than he now has through his education and training. Professional standards would be in much better shape if they responded to organisational needs instead of suppressing them; the personnel function could then abandon the thankless chore of fitting round architects into square managerial holes and get on with the task it was created for-- deploying highly qualified manpower intelligently.

Fortunately, the profession is becoming aware of the need to broaden the base of the architect's education and training. Opportunities are now being created for the architect to specialise if he so chooses, during the later stages of his education. This should create a number of new roles to which he can aspire and extend the number of services and skills he can offer. "The normal service" will no longer be a single product offered by each professional nor each firm for that matter, but will become subdivided among specialised groups.

It will not be sufficient to create new roles and opportunities for architects outside their present professional orbit. Some will have to be created within the architectural

firms which can attract outside specialists and offer them a worthwhile career. Only in this way will architects avoid insulating themselves and respond appropriately to development outside their own field which affects them.

#### Conclusion

The code affects the personnel function by defining the roles which professionals can play and indirectly the training that they will receive. The roles that architects adopt limit the relationships that they can develop with other organisations and this has discouraged the training and growth of managerial and entrepreneurial talent in the profession. Because manpower is the profession's most important asset, the personnel function can be justified, but its vitality is likely to be sapped by the paucity of roles and career opportunities available to mobilise ambition and competence from a wide number of fields.

#### MANAGEMENT INFORMATION AND CONTROL

Information and control systems are set up within organisations so that they can gain self-knowledge, knowledge about their environment and knowledge about the way they

interact with it, using what they have learned to regulate their behavior or that of their surroundings.

The purpose of information and controls

In any organisation the system which relates specific influences upon behavior to each other is made up of some six elements: standards, measures, incentives, rewards, penalties and controls.<sup>24</sup> In each organisation the system will fuse the elements in its own distinctive way; the fusion will vary from one organisation to the next and does not always lend itself to ready observation, analysis or modification.

Managers use controls to ensure that the resources are obtained and used effectively in the accomplishment of the organisation's objectives. Controls can best be understood by looking at uncertainty. Uncertainty arises for two reasons; one, the more essential in the sense that it must inevitably occur in any sizeable organisation, is that different parts cannot be perfectly acquainted with each other; the other is that we are unfamiliar with the external environment, with the details of its behavior, past, present and future.

Control systems differ as to the specificity of the desired behavior. In simple cases the purpose of control

is strictly regulative, keeping performance within reasonable limits, but in other cases, again especially when people are involved, the control system assumes an educative and informative role. In any event, whether regulative or educative, the problem of control is inseparable from the problem of information; one cannot specify what information is required for decision-making until an explanatory model of the decision process and the system involved has been constructed and tested. This in turn cannot be designed adequately without taking control into account.

#### Centralisation versus decentralisation

The control problems that have received the most attention from organisation theorists are those concerning centralisation and decentralisation. They arise from the nature of organised work itself (that is, work undertaken by two or more people) and the social climate which sanctions it; the less unpredictable the work demands in a subordinate's job, the more distant will the supervision be. Conversely, the more predictable the work demands, the closer the supervision it allows.

Decentralisation places authority to make decisions

at points as near as possible to where the action takes place. It is likely to get the best overall results by applying knowledge and understanding on the greatest number of decisions.<sup>26</sup> To work effectively decentralisation requires personnel policies based on measured performance, enforced standards, rewards for good performance and removal for incapacity or poor performance.

The argument that is advanced in support of decentralisation is that given realistic limits on the human planning capacity, a decentralised system will work better than a centralised one. With external economies and diseconomies present, the net advantage of decentralised over centralised decision-making or vice versa must be assessed by weighing the losses in the former through failure to take account of indirect consequences of actions against the losses in the latter through inability to obtain the necessary facts and to carry through the necessary computations.<sup>27</sup>

A description of how decentralised and control principles are applied to organisations and how they help to develop the notions of expense, profit, or investment centers is given in Appendix B.

<sup>26</sup>  
Cordiner. 11. p. 30.

<sup>27</sup>  
Simon and March. 36. p. 206.

### Architectural organisations

How would the control principles described in the Appendix apply to architectural organisations? Would we classify them as expense, profit or investment centers? The fact that they are organisationally independent entities that can determine their own size and can earn revenue would seem to make them investment centers, but things are not so simple. The professional institute has control over many, if not most, of the decisions that higher management would want to take in an independent business firm; in particular it has control over two important variables which affect output: price and product-mix. Neither determines the volume of output directly, but both affect it to the extent that they influence the demand for a product, and hence, the quantity that can be economically supplied. In this instance, the classification cannot be as final as in the case of a decentralized manufacturing organisation since control of the output variable is not formalised and is indirect.

Nevertheless, a firm that does not have proper control of its output cannot, as shown in the Appendix, operate efficiently as a profit centre, even less than it can pass off as an investment centre where the size of the centre is largely dependent upon its output. In effect, a firm



having only control over its inputs, has to be classified as an expense centre. The professional firm is encouraged to perform as an investment centre, but is only given the latitude of an expense centre. How can this be?

The answer brings up the problems of measure. In both expense centres and financial performance centres a measure of efficiency can be developed that relates actual expense to some standards--that is, to a number that expresses what expenses should be incurred for the amount of measured output. Effectiveness on the other hand--the degree to which a goal has been attained--cannot be measured in financial terms in an expense centre. Effectiveness is related to outputs and in an expense centre by definition outputs are not measured in financial terms. This applies particularly in architectural design where the quality of the output is often quite unrelated to the financial worth of the product. An architect concerned with effectiveness--that is, with the quality of the output--has to decide how far he is willing to submit himself to the claims of measurement; the combination of inputs that will tend to efficiency and be amenable to financial measurement will differ from that which will lead to effectiveness.

Costs used as measures

In accounting the term "managed cost" is descriptive of the type of inputs for which an objective decision cannot be made as to the optimum quantity to be employed. One tries to convert managed costs into "engineered costs"--  
28  
for which inputs can be optimised. There is a good chance that in design offices the next few years will witness a steady conversion of what are at present managed costs into engineered costs. This transformation will have to be carried out with caution; the tighter controls which are implied by such a change-over, while appearing to provide desired results over a short-run period may actually damage an organisation over a longer span of time by stifling innovation.

Most architectural costs can be classified as diversified service costs, a form of managed costs, the greatest percentage of these being typically represented by salary rolls and fixed over fairly wide ranges of volumes. The major problem posed by diversified service costs is that it is difficult to associate them with specific work units. Cost reduction requires the definition of the function or task performed and an examination to see whether this task can either be

eliminated or accomplished with less cost. Because the major element of diversified service costs is the cost of personnel, these efforts are customarily concentrated on job evaluation.

The conversion of managed costs into engineered costs encourages visibility and visibility insofar as it encourages diagnosis is a useful system designed concept.<sup>29</sup> But it can be illusory. Different organisations have varying degrees of "closure" or put differently our understanding of the relationship between input and output in different organisations is not uniform nor is the extent to which we can exercise control. Architectural organisations, like research and development organisations, would be considered as more open systems than manufacturing organisations so that the control measures that we apply to the latter cannot be transplanted without modification to the former in the expectation of eliciting analogous behavior.

There is nothing so insuperable about the problem of measure in architectural design that justifies the treatment of an independent architectural firm as an expense centre by the R.I.B.A. The principals in a practice, no matter

how anxious they may be to protect their effectiveness are still faced with problems of efficiency, financial performance and organisational health. The professional body has kept the individual firms as expense centers by denying them the areas of decision that would make them anything else. The underlying aim of this restriction was to guarantee effectiveness to prospective clients. Yet, just as up to a point effectiveness can be enhanced by efficiency beyond a certain point, effectiveness can be compromised by lack of it; the two are not necessarily mutually exclusive even though they have been treated as such by the profession.

#### Conclusion

Architectural firms, in the structure of their information and control systems, are involved in a contradiction: they are organised as investment centres, but are given the latitude of expense centres. The code--indirectly once more--through its control of price and product-mix makes it difficult for the individual firm to control the volume of its output to the extent that it is dependent on demand, the level of demand being strongly linked to price and product-mix. The architectural profession, if treated as a multi-firm, is highly centralised in spite of the presence of small and

numerous firms in the market. Centralisation works best in organisations carrying out highly repetitive and programmable tasks; architectural firms, with their commitment to innovation and to the uniqueness of individual projects cannot be said to meet this requirement.

#### Summary

None of the organisational activities described in this chapter have been directly affected by the professional code of practice. If an architect wishes to set up an elaborate management information system, he is free to do so; if he carries out a research and development program, no one will stop him; if market research is his interest, he may follow it up. So it is with all the organisational activities. In fact, the code is not so concerned with the type of organisations that architectural firms set up as with the transactions that they carry out with their environment, and it is only to the extent that these transactions affect organisational development that the code has any influence.

By its direct control of the marketing variables, the code has limited the resources that an architectural firm may deploy as well as the objectives it may pursue; it

has pared down the funds through which firms nourish their growth and eliminated many of the organisational objectives which motivate it. Thus, while architects carry out some of the organisational activities described informally, they have rarely had the resources or opportunities to operate at a scale which would justify the embodiment of such activities into fully-fledged organisational functions.

As Simon has implied, the creation of hierarchical organisational functions is the rational response to increased complexity of tasks. Architects cannot hope to negotiate the growing intricacies and complexities of the built environment unless they are free to create organisations appropriate to the purpose.

CHAPTER 4

Before making any recommendations, let us once again go over in summary form the arguments that this thesis puts forward:

1. Professionalism is a form of market organisation that guarantees the competence and integrity of its members where the free market cannot.

2. The free market has become sufficiently sophisticated in its operations to make such a guarantee unnecessary. Where some form of guarantee is still necessary, it can be provided at governmental level as happens in other organisations.

3. Because a central professional authority places certain restrictions on the transactions and communications that architectural organisations can establish with their market environment, they have not been able to respond dynamically to the pressures and expectations which that environment is now putting upon them. The control of market behavior--the mechanism by which the guarantee is created--has been overcentralised in the profession with the result that architectural organisations have generally failed to grow and diversify in step with the increasing complexity and variety of the problems that confront them.

Lest things should appear too dismal, it has to be affirmed loudly and clearly that the professional architect may be dispensable but the design function and the project management function are not. What is alleged, and this by the market as much as by the author, is that the architectural profession as currently organised does not offer the best embodiment of the design and management function. Yet in some ways the profession carries the seeds of its own rebirth; let us see how.

#### The professional control limits

In the last chapter we claimed that the profession's institutional control of individual firms looks to prevention rather than cure; the classes of permissible behaviour have been narrowed down so as to completely exclude those which constitute a threat to standards as professionally defined. In systems parlance, the control limits have been set very close to each other, we believe too close, since the system itself, i.e., the profession, operates in an unstable and changing environment and needs a greater range and flexibility of responses to adapt effectively.

Three types of situations could warrant the narrow setting of control limits: first, the system and its environment



are stable and are not changing over time; second, the system has a high degree of closure--that is, both the inputs and outputs to the system are known and can be determined as can the way they are related to each other inside the system; finally, the cost of individual deviations is greater than the total cost of having narrow limits (control cost versus opportunity cost). The first and third situations obtained in the late eighteenth and nineteenth centuries; the market for architects' services was well defined as was the service itself, given the level of professional "know-how;" also, any lapse or malpractice by a professional member would bring down more obloquy on the profession than it could contend with, given that the client was so vulnerable and helpless.

Today none of these situations prevails; the market and the technology are evolving too rapidly to guarantee "system" stability; with the increase complexity of the building task the relationship between architectural inputs and building outputs has become even more confused than it had been hitherto, and increasingly sophisticated clients and client organisations will not brook professional misdeeds for long without seeking redress.

A recommendation

What is called for is a widening of the professional control limits and a decentralisation of the control mechanisms; both imply a divestment of authority by the R.I.B.A. Prevention may have been the only control strategy available when there was not enough information in the system to allow remedial action or "feedback," but this is no longer so. Not only has there already taken place a vast increase in the amount of information and "know-how" made available to clients and institutional bodies about individual architectural firms and overall professional performance, but electronic data processing promises a further increase in the level of this information as well as a prospective transformation of the market characteristics that the profession will have to respond to. By decentralising control and widening the control limits, the range of acceptable behavior is extended and the system acquires a greater capacity for learning-- an important attribute in a fast-changing environment. The system is transformed from a mechanistic one whose behavioral choices are narrowly determined into an organismic one which can assimilate its environment through being better informed about it and accomodate itself to it with a greater flexibility and choice of responses.

How would one go about widening the control limits placed on professional behavior? Simply by doing away with the professional code of conduct and the conditions of engagement altogether--they are not needed. The governmental and social controls that regulate the behavior of the business firm should be expanded where necessary and applied to the professional firm. Even so, if the profession's sense of social commitment is to survive this transfer of institutional authority and strength, then the architect has to get involved at the political level as the businessman has had to before him. He will have to ensure that the controls that are drawn up do in fact preserve and foster the social values to which he has traditionally pledged himself.

It could be objected that the information in the market, while adequate for the client's protection, is not uniformly distributed and that certain segments of the market could be open to professional exploitation. This is true and happily suggests a continuing if modified need for a professional body such as the R.I.B.A. This august institution, instead of addressing itself to the regulation of its members' behavior, could shift its emphasis and become an information processing centre with the task of ensuring that the necessary

"know-how" is evenly distributed in the market, present and potential. Such a shift would reduce the R.I.B.A.'s formal authority, but it would most likely increase its influence and its ability to bring about important and necessary changes within the profession. In fact, it is uniquely qualified to remain the premier interpreter and promoter of such social values as the profession has cherished. Until now the R.I.B.A. has played a schizoid role. It has tried to protect the professional architect as well as his client. If the architect is remunerated by the client, they are in a bargaining situation and sometimes in conflict with each other. The R.I.B.A. cannot represent both at once, and if it is acting independently it is hard to see on what specific authority it can claim the role of arbitrator. Our proposals, while giving the professional architect a freer rein would place the R.I.B.A. more firmly in the camp of the client. The institute would become a countervailing power whose responsibility it would be to keep the client as fully informed as possible as to his options while allowing the individual firm freely to evolve the type of organisation described in the last chapter--an organisation better able to learn and more responsive to the times.

Some difficulties

Widening the control limits on professional behavior is bound to create some abuses at first at any rate. Some architects will succeed, market sanctions notwithstanding, in reducing the quality of their service; others, in exploiting their clients financially. This will be the price exacted by increased organisational and institutional flexibility. Whether it is seen as a price worth paying will depend upon the profession's view of its market. Is it concerned with the particular standard of service in the particular case or with the general standard of service and the general case? How far and how often does the former deviate from the latter? What impact do such deviations have on market behavior? Does it decrease the demand for architectural services or does it make such demand as exists more world-wise and disciplined? The answers to these questions should provoke some necessary re-thinking about the purpose and viability of a professional organisation in the second half of the twentieth century.

Added to the possible abuses that such an institutional transformation would at first allow, is the resistance--evidenced by the debates currently raging in the architectural journals

over the code--that the change would create among the professionals themselves. While there are architects who are beginning to voice some of the criticisms made in the preceding chapters, for the present their strictures are falling on deaf ears. The problems and issues described have not made many inroads into the professional consciousness and will probably not do so until they can stand out from a backcloth of data that can strengthen their contours and their tone. Even if the problems emerge from a stronger data base, resistance would not be entirely overcome; vested interest, rigid attitudes and straight skepticism will find advocates. Exploitation of and resistance to change are two of the costs associated with the learning process; they are not fixed, they can be minimised, but if we want to create organisations with a capacity for self-development, i.e., learning, we must expect to reckon with them.

Simply denying architects the safe waters of professionalism and setting them adrift in the marketplace might appear simple-minded; after all, market behavior might call for a role which few architects would be willing to adopt and for which they may lack a taste and temperament. But the proposal that I am making is not a final solution; it is a first step.

Widening the control limits by allowing a greater diversity of professional and market behavior allows more learning to take place and it is from such learning that new institutions will emerge, more responsive to current needs and traditional values. Such institutions should offer the architect a wide number of roles from which he can choose; he could remain a designer or he could get involved in policymaking at the governmental level. He could represent the client in an organisation solely devoted to that purpose or he could pursue independent research. There is no reason why all of these roles or indeed more than a few should push him nearer the marketplace than he wishes to go. He needs to be in touch with the marketplace; he does not need to live there. It is, of course, impossible to specify which roles will be market-oriented and which will not; all that can be said is that the market structure will never be totally efficient and some segments of society are always going to need protecting from its unfettered operations. It is probably here that the socially committed architect will find his best opportunities.

#### Conclusion

This thesis has not presented a watertight case against prevailing notions of professionalism in architecture; on the

data available it would not be possible. What it has done is to list the traditional arguments used to justify professionalism and to question them on the basis of evidence drawn from management science. The case for or against professionalism must await the collection of hard data and the establishment of operational criteria by which such data could be evaluated. Perhaps the most pressing step would be an investigation of architects' attitudes, motivations and ambitions. Are they profit maximisers or are they indifferent to profit? What premium do they set on the growth of their firms and up to what size? How do they perceive their opportunities and what is the source of their professional satisfaction? Answers to such questions would suggest what modification our notions of professionalism might sustain--they might also point to gaps in some of the assumptions that underlie management science itself.



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APPENDIX A

Drucker tells us that it is the first duty of a business to survive. A guiding principle of business economics in other words, is not the maximisation of profits; it is the avoidance of loss. Business enterprise must produce the premium to cover the risks inevitably involved in its operation and there is only one source for this risk premium-- profits.

Profits

Profitability is not the purpose of business enterprise and business activity but a limiting factor upon it. Profits are not the explanation, cause or rationale of business behavior or business decisions, but the tests of their validity.

Profit serves three distinct purposes; firstly, it measures the net effectiveness and soundness of business decisions; secondly, it is the risk premium that covers the cost of staying in business--replacement, obsolescence, market risk and uncertainty; thirdly and finally, profit ensures the supply of future capital for innovation and expansion, either directly through self-financing or out of retained earnings, or indirectly by attracting outside capital.

All three concepts of profit are minimum concepts.<sup>1</sup>

There is no need to deny that other objectives are often important in business enterprise--power, prestige, public approval or the mere love of the game. It need only be recognised that the attainment of these ends more often than not are associated with the ability to make a profit.

Higgins has pointed out that profit maximisation is a survival condition in perfect competition. Its force is much weaker, however, in the case of non-perfect competition since under such conditions, the entrepreneur may be expected to have margins with which to work and with which to satisfy desires other than the desire for profit. Here recognition of the fact that expectations are not single-valued will generally force us to substitute a preference function<sup>2</sup> maximisation for profit maximisation analysis. It is likely that, applied to architects, such a preference function would assign to profits a secondary role once the firm had reached a size large enough to give their vocational aspirations free play.

The businessman's desire to increase his profit can often be interpreted as a desire to expand his firm, for

<sup>1</sup> Drucker. 13. p. 99.

<sup>2</sup> Papandreou. 24. p. 208.



large size may raise the firm's profits more than in proportion to the value of its assets. There may be an optimum output for each of the firm's product lines, but not an optimum output for the firm as a whole. Profits then become the means of obtaining capital needed to finance expansion plans. Beyond some point, however, profits will compete with sales. Too high a level of profit will reduce the magnitude of the firm's current operations, while too low a profit level will prevent future growth. The optimal profit stream will be that intermediate stream consistent with the largest flow of output (or rate of growth of output) over the firm's lifetime.<sup>3</sup>

In the ordinary static model of the firm once the equilibrium level of output is found the operation of the firm can be considered a routine exercise. There is no really essential decision-making role to be performed by management so long as market conditions and technology remain the same. However, in many cases, management is highly preoccupied with growth.<sup>4</sup> Growth offers economies of scale; these are present when a larger firm, because of its size

<sup>3</sup>  
Baumol. 5. p. 97.

<sup>4</sup>  
Baumol. 5. p. 86.

alone, can not only produce and sell goods and services more efficiently than smaller firms, but can also introduce larger quantities of new products more efficiently.

One must not accept growth as the primary entrepreneurial or managerial objective in every instance. As we have seen, we cannot be certain that architects aspire to such growth. Rothchild has suggested that the primary motive of the entrepreneur is long-run survival. In this view, decisions are made to maximise the security level of the organisation, and this very well may be what architects will settle for if it secures the professional opportunities that they yearn for. Another suggestion is Baumol's, that firms seek to maximise sales subject to a profit constraint. Gordon, Simon and Margolis have all argued that profit maximisation should be replaced with a goal of making satisfactory profits, these representing a level of aspiration which the firm uses to evaluate alternative policies. Other authors have proposed that organisational preservation or conservation or maintenance of the market position are more relevant principles of selection than profit maximisation.<sup>5</sup>

<sup>5</sup>  
Cyert & March. 12. p. 9.

## Pricing

As might be expected, decisions that pertain to profits and decisions that pertain to price are intimately connected.

A business firm will either deploy a cost-oriented pricing strategy using mark-up pricing or target-pricing strategy, or it will opt for a demand-oriented pricing strategy with either price discrimination or competition-oriented pricing.<sup>6</sup> A great number of firms set their prices largely or even wholly on the basis of their costs. One reason for the prevalence of this cost-plus pricing is that it appears to shield the decision-maker from risk: if price is greater than cost, then risk is avoided. Unfortunately, this is a fallacy since many costs are fixed and unit cost is dependent on volume of sales.

A cost-oriented pricing policy will be heavily dependent upon a well-organised cost-accounting system which in turn will depend upon a good framework and set of procedures for cost classification. This is provided by the chartered accounts specifying how the distinction among various categories of costs are to be made. The question of classification is closely allied to the question of the price at which productive

inputs will be charged against specific operations.<sup>7</sup>

With a demand-oriented pricing system three concepts are needed to relate the process of market measurement to different forms of demand; we have to consider market demand, company demand and company sales forecasts. Statistical demand analysis can be used to unravel the size and importance of real factors that affect the demand for a product; it is a worthwhile activity whether or not it results in a highly reliable forecasting equation since it increases company knowledge of underlying demand factors.<sup>8</sup>

Five different pricing objectives can be found in practice irrespective of how the price is set:<sup>9</sup>

- 1) Market penetration. The firm prices its product low enough to gain a wide share of the market.
- 2) Market skimming. A certain segment of the market will buy the product anyway and the firm might as well charge what the traffic will bear.

<sup>7</sup> Shillinglaw. 32.

<sup>8</sup> Kotler. 21. p. 119.

<sup>9</sup> Kotler. 21. p. 357.

- 3) Early cash recovery. The firm does not intend to stay in the market too long, and it wants to make a profit and get out. This will suggest a higher price in a short-lived venture.
- 4) Satisficing. The firm prices its product no higher than what is required to guarantee an adequate return on capital employed.
- 5) Product line promotion. The firm wants to get people to try a particular product and will initially charge a lower price to encourage them.

Of these pricing objectives, only the second and the fourth are likely to appeal to the architectural profession at present. Market skimming will be used in those areas where "money is no object" such as luxury houses or prestige developments; satisficing will be used for all other commissions for lack of any good data on possible market responses. Since firms are not allowed to undercut each other, they are unlikely to opt for the market penetration or product-line promotion strategy and since most of them intend to go on practising architecture in the future, the early-cash-recovery strategy would be superfluous. This is not to say that if the profession's involvement in the

building industry underwent a change, they would not find some of the discarded strategies more interesting.

In markets characterised by product differentiation, an individual firm has more latitude in its price decisions with respect to these objectives. Product differences whether in styling, quality or functional features serve to desensitise the buyer to existing price differentials.

The demand curve for a specific commodity relates equilibrium quantities bought to the market price of the commodity. The demand curve and the marginal revenue curve are identical for a producer in a perfectly competitive market; the demand curve is a horizontal line at the level of the market equilibrium price. Demand is perfectly elastic and the coefficient of price elasticity approaches infinity.

Elasticity of demand is the relative responsiveness of the quantity demanded to changes in price. It may also be determined from the changes in price and the money income spent upon the goods. When demand has unit elasticity, total revenue is not affected by changes in prices. If demand is elastic, total revenue varies inversely with price. If demand is inelastic, total revenue varies directly

with price.

The policy importance of price elasticity has led to many statistical studies designed to estimate its numerical value. Generally the more and better the substitutes for a specific good, the greater the price elasticity will tend to be. Similarly, the greater the number of possible uses of a commodity, the greater its price elasticity will be. Certain writers have suggested that commodities can be classified as necessities and luxuries on the basis of income elasticity.<sup>10</sup> Judging by the fact that a number of non-architectural firms are successfully offering architectural services, the demand for such services must be considered elastic and consequently the revenue of the profession will tend to vary inversely with price.

Anticipating highly elastic demand, each entrepreneur has an incentive to reduce price and thus all entrepreneurs have this incentive. But if all prices are reduced, simultaneously, each entrepreneur will gain only that increment in sales attributable to the general price reduction. He will not capture portions of his rival's market, thus if the actions of one entrepreneur are matched by all the other

<sup>10</sup>

Fergusson. 15. p. 88.

entrepreneurs in the product group, demand will be far less elastic.

The short-run equilibrium of the firm is attained at the point where marginal costs equal marginal revenue. Alternatively stated, since marginal revenue equals price for a perfectly competitive producer, short-run equilibrium occurs at the output point for which marginal costs equal marginal prices.

Long-run equilibrium for a firm in perfect competition occurs at the point where price equals minimum long-run average cost. The position of long-run equilibrium is characterised by a "no-profit" situation--the firms have neither a pure profit nor a pure loss, only an accounting profit equal to the rate of return attainable in other perfectly competitive industries. The conventional definition of the long-run is "a period of time of such length that inputs are variable;" it is a planning horizon.

In the short-run the primary difference between monopoly and perfect competition lies in the slope of the demand curve. In perfect competition one can define a unique supply price for each quantity, whereas in monopoly this is not so. A given quantity would be supplied at different prices depending upon market demand and marginal revenue.



APPENDIX B

The availability of particular techniques of communication will in large part determine the way in which decision-making functions can and should be distributed throughout the organisation. Information and stimuli move from sources to points of decision, instructions move from points of decision to points of action. Information and results move from points of action to points of decision and control. Insofar as the points of information and the points of action are determined in advance the only mobile elements are the points of decision. The difficulties of transmission from sources of information to decision centres tends to draw the latter towards the former, while the difficulties of transmission from decision centres to points of action creates a pull in the opposite direction. The task of properly locating<sup>1</sup> decision centres is one of balancing these opposing pulls.

The responsibility center

In designing an organisation, one attempts to make the responsibility of decision centres coterminous with their authority. Each block in an organisation chart represents both a decision and a responsibility centre; an organisational unit headed by a single person answerable to higher authority

<sup>1</sup>  
Simon. 35. p. 157.

and obliged to perform certain tasks. This fragmentation of responsibility is necessary whenever the business is too large and too complex for one man to have direct contact with all operations. The span of control of a supervisor varies directly with the technical complexity of the operations, and with the number of different kinds of activities<sup>2</sup> to be carried out by the group.

A management control system should be structured in such a way that when heads of responsibility centres are motivated to act in their own perceived best interest they are also acting in the best interests of the whole organisation insofar as this is feasible.

If the objective or objectives cannot be broken into sub-objectives and factored without introducing excessive interdependencies, then other things being equal, the tendency will be towards centralisation. The difficulty for example in breaking the profit objectives successively into many profit sub-objectives encourages cost control decentralisation (cost centres) rather than the creation of profit centres within business activities.

The responsibility centre is a device that achieves a measure of decentralisation. For decentralisation to be effective two conditions must be met. The first is that top management must be assured that the divisional manager will make the same decisions that would be made by top management itself if it were doing his job. The second is that top management must have a way of evaluating a divisional manager in pursuing the profit goals of this company.

Although the price mechanism may be a useful device for recurring decentralised decision-making within a firm it requires not only the absence of external economies but also the availability to the decision-maker of reasonable estimates or effective techniques for estimating marginal costs and returns (which implies that goals must be operational). In the absence of such techniques, price may not be such an effective device and other methods will have to be found.

It is a generally accepted principle of cost accounting that each element of cost or revenue both in the budget and in the accumulation of results must be traced to the organisational segment in which responsibilities lie. Thus at a minimum there should be one account or group of accounts

for each responsibility unit. If a responsibility centre produces a product or performs a service that it sells in the marketplace, then the revenue earned from sales provides a useful monetary measure of its output, although in situations where this marketplace validation of output is absent, serious and sometimes insuperable problems of measurement arise. Often measurement of profit performance of divisional managers achieves in itself many of the benefits of decentralisation.

The total resources consumed by a responsibility centre when measured in monetary terms are the expenses of that responsibility centre, whatever their finality on paper, they remain at best an approximation to the true inputs. Outputs, again measured in monetary terms, are often called "reserve" or "gross margin;" in a profit-seeking company the difference between revenue (or gross margin) and expense is called "profit."

Decentralisation, it must be clear, is not a fixed measure, but a question of degree. If organisations were put on a sliding scale with total centralisation at one end of the scale and total decentralisation at the other, three important points could be identified along such a scale:

we can call them the expense centre point, the profit centre point, and the investment centre point.<sup>3</sup>

In an expense centre inputs are measured in monetary terms, i.e., expenses, but no attempt is made to measure output in monetary terms or to relate inputs and outputs in monetary terms. Usually the department, sections or other sub-units within a division are treated as expense centres.

In a financial performance centre both inputs and outputs are measured in monetary terms and the relationship between them is calculated. The measures in the financial performance centre are therefore inherently broader than those in an expense centre. The term financial performance centre or profit centre makes it apparent that we tend to emphasise the financial, i.e., monetary aspect of measurements.

The ultimate extension of the responsibility centre idea is the investment centre in which the supervisor is responsible not only for profits but also for the assets that he uses. The formal financial measure in a financial performance centre is profit; in an investment centre it is profit related to assets employed.

<sup>3</sup>  
Anthony. 4. p. 167.

### Transfer pricing

Any organisation that has gone further towards decentralisation than the expense centre, gives to sub-units control over the price at which they sell their output, even if that output is purchased by another sub-unit of the same organisation. An internal pricing system is called a transfer pricing system and it is expected to approximate external market conditions with respect to a sub-unit's product or service.

A transfer price will serve its decision-making objective satisfactorily only if it leads divisional management to make the same decisions that headquarters management would make if it had the time to study the sub-unit's problem and if it had full access to all the data available. If the transfer price leads to a departure from this ideal, it will not be optimal.

Competitively negotiated transfer prices can be obtained by applying the following simple principles: buyers and sellers must be completely free to deal inside or outside the company; prices determined by negotiation between buyers and sellers must have a minimum of arbitration; negotiators must have access to data on alternative sources and markets

4

Shillinglaw. 32.

and have facilities for using such markets. An appropriate transfer price for managerial guidance in decision-making<sup>5</sup> is going to be one that approximates opportunity costs.

Unless a transfer price can be constructed a responsibility centre cannot be a financial performance centre even if it furnishes a significant amount of output to other units inside the company. Any evaluation of transfer prices would take as a criterion the extent to which they promote goal congruence.

Transfer prices fall into two categories: market-based prices and cost-based prices; they may be applied either to products or to services. If market-based prices are not available transfer prices must be built up from costs, preferably standard costs. Otherwise the selling division can bury its inefficiencies in the transfer prices. At times a price based on incremental costs is appropriate for capacity filling or other special types of transactions.

If the best available monetary measure of output is a misleading indication of real output then a transfer price should not be used. Also if it provokes too much

<sup>5</sup>  
Shillinglaw. 32. p. 821.

competition and not enough cooperation it should be kept clear of. Often it is neither practical or desirable for divisions to deal completely with each other as though they were independent companies: inasmuch as the selling division is not concerned about selling its product and the buying division is not concerned about its source of supply divisional personnel can be much more cavalier in the way they treat each other than if they represented independent companies, this can create destructive animosity between divisions.

Failures and frustrations of decentralisation are often traceable to bad boundaries and rules and the scope for profit performance measurement should be a major guide in marking off profit centre boundaries. From a profit measurement point of view it is the lack of satisfactory intermediate markets more than any other single factor that makes it extremely difficult to decentralise effectively on a functional basis. Many transfer pricing problems would disappear if the divisional structure could be reorganised around product lines. Transfers within each division could then be made at full standard cost or incremental cost--the functional sub-executive in each division would not be expected to make final decisions or make or buy or sell or process further.



The control problem

Decentralisation will not be effective if control principles are not firmly grasped; the object of control is to obtain desired behavior or results (often as set forth in the plan). Given the specification of the desired behavior or results in the form of a quantified standard goal or budget there are certain processes that go into control: measurement, comparison, direction. It is not possible to get full control over any production system. When we talk about control models we refer primarily to management by exception with respect to the repetitive types of decision problems which are faced by production management; management by exception suggesting that in the absence of deviations it could be presumed that operations were under control and that management could devote its efforts to cost reduction programs or other worthwhile activities of an innovative nature.<sup>7</sup>

At the core of the control problem is the ability to discern the type of system that exists and the first step is to classify the situation as being one of risk, certainty or uncertainty. In principle control systems are needed because events are constantly arising which shift the system

off course. A deviation signal is a function of a system's standard, its output, and the level of external disturbance. Better control models eliminate noise from the information system and give the manager more confidence in the deviation signal; in contrast, a naive model tends to "cry wolf" and leads to ineffective remedial action. The control model must allow one to distinguish between those deviations that are likely to be the results of random forces and those that are not, the basis for that distinction being provided by a set of control limits.<sup>8</sup> With rare exception, the management control system is built around the financial structure, resources and outputs embracing all aspects of a company's operations are expressed in monetary units. It is a total system designed to encourage managers to take actions that are in the best interests of the company.

8

Shillinglaw. 32.