ARCHITECTURE AND SHELTER

The Roles and Responsibilities of Architects in Meeting Basic Needs

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ARCHITECTURE AND SHELTER

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This paper concerns the responsibility that the architectural profession has to the basic human needs of the society it serves. In order for the profession to meet these responsibilities - to shelter, to a healthy workplace, to a liveable city - it must change and enlarge the parameters of practice. It must also become more directly engaged in the ethics of the profession. The development of architecture, however, has led in quite another direction. As a result, practicing architects believe that their intended professional monopoly over the built environment has eroded considerably, while at the same time, the public views the profession as increasingly irrelevant to urgent social concerns.

Because these social concerns are most compelling and ruinous in the Third World, this paper has focussed on the work that some architects have undertaken there. By examining their work in support of the development of communities in China and Southeast Asia, it is possible to extrapolate some common elements that suggest a way for practicing professionals to act responsibly in honouring the human right to shelter.

The opportunities for responsible action involve architects working for government bodies, educational institutions, and in private practice. In this work, architects have had to respond often in non-traditional ways in working for Non-governmental organizations and community-based organizations. The non-traditional, or enabling

practitioner uses architecture as a tool towards the democratization of the built environment. For the profession to recover its relevance to society, these non-traditional tools and methods must become a more central part of the profession.

Architecture, as well as the democratization process, has a role in the development of a sustainable future and it has a responsibility, as a profession, to use its resources to address the basic need of shelter in society and to honour the human rights derived from that basic need.

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CHAPTER 1
INTRODUCTION

1.1. PROBLEM STATEMENT

The profession of architecture has been increasingly plagued by doubts about its role, both in society as a whole and within the industry specifically. By all appearances, the role of the architect, particularly in Western industrialized culture, is eroding. While they have tended to view themselves as stewards of the built environment, the volume of construction actually designed by architects seems to be diminishing. This fact, in and of itself, does not "necessarily mean that the society does not value architecture. It may also mean that architects no longer personify architecture." (Baniassad, 1988).

This statement suggests that there may be a serious mismatch between that which society needs from the architect and that which the architect is able or willing to deliver. In this sense, architects can be seen to be abdicating their broader responsibilities to society in favour of the narrower responsibilities to their craft and profession. Certainly there has been ample evidence that society is dissatisfied with the architecture that is produced in the name of the art. It is also true that those architects that continue to view their work as monuments to history, will have some of the grim realities of the present elude them.

In 1987, the International Year of Shelter for the Homeless, we were shown the relentlessness of this grim reality - a reality that is no longer confined to the Third World. The

Royal Architectural Institute of Canada (RAIC), at its annual conference that year, recognized first that it was an "intolerable and unacceptable situation" of crisis proportions and second that it was a problem to which architects should address their talents and energy, both in the developing world and in Canada. It was at this conference that we began to see an institutional shift in the perception of the role of architects in society and of the responsibility of the profession to society. One example of that shift was the RAIC-sponsored project in Colombia called *Construyamos*. This project gave some indication of the possible roles that architects might play in self-help housing and of the need for the training of para-professionals.

The RAIC, with its continuing involvement in the self-help movement in Colombia through *Construyamos*, and its *Inquiry on the Role of Architecture*, has expressed a clear interest in the need for the exploration of alternative roles for the design professional. The American Institute of Architects (AIA), too, with its *Vision 2000* document is examining the future role of architecture in society. Such investigations begin to address the broader responsibilities of architects to society's basic needs.

Currently these basic needs are being met, in much of the world, without the aid of architects at all. Within the context of developing nations, self-help housing has often become the only alternative for the bottom quintile of society to gain any kind of shelter at all. Governments, strapped for cash, are ill-equipped to provide the capital required to meet the exploding needs of the urban poor. The expertise of design professionals has tended to be of little value in the informal sector of housing. Without money and without technical support, the urban poor have fended for themselves with debilitating effects, both on their own

health and on the well-being of the urban fabric as a whole. In this activity, it is possible for the architect to be one of the agents of change, "a party to the process for self induced improvement in the overall quality of the life of people he strives to serve."(Dawes, 1987)

Over the last twenty years, much has been written on community-initiated schemes and the bottom-up approach to the provision of housing. Very little of the literature, though, covers the role of design professionals in this process. This observation raises questions about that role. If it has not been covered in the literature, does that indicate that architects have no role in this growing area of housing supply? If there is a role, is it simply poorly defined or do architects feel no particular responsibility to address the issue? Is it a problem with which design professionals should be involved at all?

It is argued here that the design professional has a responsibility of involvement in the provision of the basic need for shelter. This paper then reviews some of the available options for the delivery of housing that have been exercised by communities and professionals in other circumstances. These examples demonstrate how design professionals have been addressing their responsibilities. From this, a better understanding of the role that architects can and do play in housing and community development can be created. Out of this understanding it is possible to see Canadian practice from a different perspective out of which an alternative to Canadian practice can be outlined. Such an alternative is intended to provide a means by which architects can become 'a party to the process' and more effectively serve their community within the context of responsible action.

1.2. HYPOTHESIS

This paper will examine the following ideas:

.1) that the profession of architecture, as a result of its history, has become progressively more limited in its scope and therefore in its service to the community.

.2) that there is a personal and professional obligation on the part of architects to act responsibly in addressing the basic human need for shelter.

.3) that work is being undertaken to meet these responsibilities in the Third World and that there is a relationship between this work and that which has been or could be undertaken in the First World.

.4) that changes to the way in which both architects and society view the profession can better accommodate these relationships and responsibilities.

1.3. METHOD

The methodology of the research has been divided into three parts: literature review, field study, and evaluation.

.1) Literature review covered:

a) the history of the profession.
b) professional ethics and social responsibility.
c) the tradition of self-help in housing

d) other housing alternatives - sites and services, 'builders yards', squatting.
e) paraprofessionals in the field.
f) the existing housing process in Thailand, Indonesia and Canada.
g) training programs.

.2) Field Study

This portion of the research involved travelling to Beijing, Shanghai, Nanjing, Hong Kong, Manila, Bangkok, Jakarta, Denpasar, Pengastulan, and Mexico City between 1989 and 1991. The field study involved:

a) interviews with: professionals involved, paraprofessionals, students and faculty participants. The interviews were to determine: the level of community participation, the level of professional participation, the organization management & implementation of self-help, and the training requirements for field work.

b) site visits to each project to describe: the nature of the project, the community motivation and participation, the support services provided to participants, the current state of the project, and the involvement of the design professional.

.3) Analysis of data

This portion of the work involved the development of a common thread between the historical information and the field study.

.4) Synthesis/Evaluation

From this information recommendations have been developed for:

a) the practice of architecture in this field
b) the additional training requirements for architects entering this field.
c) the applicability to architectural practice within Canada.

1.4. ORGANIZATION OF THE PAPER

The paper is divided into nine chapters and three parts:

Chapter 1 - Introduction: sets the parameters of the work to follow and presents the questions to be addressed.

PART I - CONTEXT

Chapter 2 - The Architect in Practice: describes the tradition out of which alternatives can be evaluated.

Chapter 3 - The Role of Architecture: sets the ethical context from which these examples are meant to be viewed and considers the question of professional responsibilities to society.

Chapter 4 - Self Help and Advocacy: sets the historical context of housing delivery and the relationship between design professionals and housing for the poor.

PART II - ARCHITECTURE AND DEVELOPMENT

Chapter 5 - Government: the role of the design professional in government organizations.

Chapter 6 - Educational Institutions: the role of design professionals in the training of students and in the use of students in community development.

Chapter 7 - Non-governmental Organizations (NGOs): the role of design professionals in assisting NGOs in community development.

PART III - A CHANGING ROLE

Chapter 8 - Canada: comparative examples of work undertaken in Canada.

Chapter 9 - Conclusions: how can we achieve what needs to be done?

PART I

> "The machinery of Society, profoundly *out of gear*, oscillates between an amelioration, of historical importance, and a catastrophe.
> The primordial instinct of every human being is to assure himself of a shelter. The various classes of workers in society to-day *no longer have dwellings adapted to their needs; neither the artizan nor the intellectual*.
> It is a question of building which is at the root of the social unrest of to-day: architecture or revolution." (Le Corbusier, [1960]:14)

These words, written in 1923, raised a number of issues with which the profession has been struggling since. Among them are the relationship between architecture and dwelling, and the role of architecture in motivating behaviour in society. In presenting a choice between architecture and revolution, Le Corbusier seemed to be suggesting that if we choose the path of architecture - which is to say, *new* architecture - we can avoid revolution - a revolution that would be ignited, in part, by substandard housing.

The anticipated revolution failed to materialize. It is doubtful that architecture could claim any credit for averting that predicted event. However, the issues that Le Corbusier raised would not go away. Architects, before 1923 and since, have sought to better define the relationship between society and their profession. What is that relationship? What has it been and what could it be? Is there an alternative to be found in the profession that could allow it to take on a more fulfilling role in society?

Part I of this paper considers that relationship first by reviewing the foundation out of which any options must be

derived. Before we can look at alternatives to traditional architectural practice, it is important to provide a reference point. What is traditional practice?

Following from that description, another series of questions become apparent. What would motivate the architectural profession to seek alternatives to traditional practice? What is wrong with the way we practice architecture now? For those that might accept that there is something wrong, there is still the question of the context for change. In other words, even if I see the need for some changes in professional practice, that may not motivate me to seek alternatives, or, even if it did, why this direction instead of that? Chapter 3 takes up some of these questions of motive.

If we are suitably motivated to seek alternatives, it is not necessary that we create a completely new form of practice. Many people have been practicing architecture in a way that recognizes and responds to shelter inadequacies. The fourth chapter describes briefly this alternative tradition.

CHAPTER 2
THE TRADITION OF ARCHITECTURE

> "With the exception of engineering, architecture is more fully involved with technocratic and corporate elites than other professions, which creates unusual difficulties. One is ethical; a worthwhile objective in any profession is that it provides service to all clients, not just to the very rich and powerful. A second difficulty of its dependence on elites in the private sector is that architecture enjoys few of the legal and monopolistic protections accorded, for example, the health professions, which are closely bound to public and quasi-public sectors. (Blau, 1984:134)

The difficulty that design professionals, and, in particular, architects have had in responding to the needs of communities is that their alliance has traditionally been with society's elites. For the architect, breaking through the barrier of either self-perceived or community-perceived isolation from the populace is difficult. That barrier exists, in part, as a result of our understanding of what it is that architects do and what it is we, as a society, think they do. It is a barrier that has developed out of the nature of the profession, both historically and since the development of the modern incarnation of the architectural profession.

2.1 HISTORICAL

The difficulties described by Blau above are hardly recent manifestations for the profession. The concept of service

to society as well as the relative lack of monopolistic protection were issues that arose with the Renaissance, if not before. The practice of architecture has been marked by a continuing shift between theory and practice, between art and craft. At different stages of history one side will be more emphasized than the other and as a result builders, patrons as well as architects themselves will define the intellectual rigour of architecture in ways that reflect the prevailing convictions.

With the shift in the use of materials from wood, mud, and brick to stone there was a new responsibility on the part of builders. The skills required were unprecedented and more highly specialized (Kostof, 1977:4). But, in addition to the skills of technique, there was another important responsibility that the first architects had to societies that had begun to shift from nomadic to a more settled, agrarian-based culture. Permanent homes had to be designed and built for deities. Who, though, would presume to know what it was that the gods would find amenable? In many ancient cultures the only direct conduit to the gods was the king. It was the king, then, that often took credit for the design of temples, regardless of who might have actually prepared and directed the work. The relationship, though, between the architect and the knowledge of the sacred was important.

This relationship was more explicitly delineated in ancient Egyptian society. Here state architects had to consult archival information regarding the design of temples and public buildings in order to meet the divinely inspired instructions written by the prophets and the king. That these writings were made available to architects meant that they were tied closely to the secrets of the religion and had been educated in the interpretation of its sacred documents. This placed them in the company of kings and the

priesthood and, therefore, in a position of great power. It affiliated the architect with vision (in his understanding of the domestic needs of the gods), science (in his understanding of the structure and materials of building) and with crafts (in his understanding of the way in which materials come together). Each of these areas was associated with a deity. The Egyptian "House of Books" was associated with Seshat, science with Thot and Ptah with crafts. These three gods formed,

> ". . . a constellation that neatly scans the total scope of architecture, from pure theory on the one hand to the practical knowhow of construction on the other." (Kostof, 1977:6)

Professionally designated as the 'master builder' or 'overseer of works', the architect was involved with architectural design theory (in his manipulation of geometry), with drawings (as instructions to labour) and with supervision of construction. Although there is little known of the level of supervision by the architect on the building site, or of the extent of the instructions delivered to the site by way of drawings and details, one can assume, from his elevated position in society, that the architect had little to do, either in education or in practice, with the hundreds of labourers engaged on a project.

For the Greek architect, the designation *architekton* meant 'master-carpenter' rather than 'master-designer', a distinction that suggested the architect's educational background in the building crafts and in the supervision of the building project[1]. Unlike the Egyptian architect, his

1. In *Statesman* 259d, it is stated that the architect is not a workman but the director of the work of others and that he provides the knowledge but not the manual labour. Unlike other theoretical pursuits, though, his work is not

Greek counterpart had little relationship with the occult (Kostof, 1977:25), although there was certainly a theoretical side to his education. In particular this concerned issues of ornamentation, proportion and the properties of the Orders.

With less emphasis on the occult, the Greek architect was employed more broadly. Little distinction was made between engineering, architecture and city planning, so the architect was typically involved in all three areas. He could work as a consultant in receiving private commissions, as a salaried architect for the city or in an elected position as a state architect. In his capacity as a consultant, he would often work on private homes for the wealthy, although these kinds of commissions did not appear until the Hellenistic period (Coulton, 1977:17).

The required versatility of the architect was cause for comment by Pythius in his *Commentaries*. As recorded by Vitruvius, Pythius "proposed that architects should show proficiency in 'all the arts and sciences' in contrast to practitioners of other professions who 'bring a single subject to the highest perfection'" (Kostof, 1977a:17) Vitruvius expanded on those generalist sentiments some four hundred years later in 27 B.C.:

> "He should be a man of letters, a skilful draughtsman, a mathematician, familiar with historical studies, a diligent student of philosophy, acquainted with music; not ignorant of medicine, learned in the responses of jurisconsults, familiar with astronomy and astronomical calculations." (1.1.3.)

---

done when "he has delivered a verdict on the facts". The architect "must give the appropriate directions to each of the workmen and see that they complete the work assigned."

The Roman architect, too, worked in many fields. Vitruvius saw the profession as embracing "the whole artificial environment of man" (MacDonald, 1977:39). As a result the architect was involved in surveying, hydraulic engineering, and town planning as well as buildings.

With the fall of the Roman Empire, the pendulum swung from theory to practice. There was a movement "from an intellectual pursuit that required a liberal education as a base, to an empirical skill that could be learned within the restricted compass of apprenticeship." (Kostof, 1977b:60) Because the 'master-builder' rose through the ranks of the building trades, his social status was changed but he was, nonetheless, still engaged in similar pursuits and required a theoretical grounding in geometry. Along with church programs, his commissions would include similar projects to those of the Greeks and Romans, that is, "palaces, wealthy homes, gardens, castles, military installations, and the design of cities." (Kostof, 1977b:76)

In the fifteenth century, with the revival of Vitruvius and the new writings of Alberti, the pendulum again swung back to a Liberal Arts theoretical basis for the profession. Instead of the empirical approach of the medieval master builder, the architect again become the director of design. The architect, then, shifted away from a direct involvement in the building trades. This separation was deepened by "the introduction of a novel set of forms, based on the Classical remains" (Ettlinger, 1977:121). The master mason was familiar with a more traditional architectural language that arose out of patterns developed from many generations of experience in the field. Without the recourse to these traditional patterns, he was necessarily left to follow the instructions of the architect.

For Alberti this was as it should be. Architecture was separated from the crafts and "the architect was an artist whose activity had nothing to do with that of a craftsman." (Wilkinson, 1977:125) His book *On the Art of Building*, is quite explicit on this distinction:

> ". . . the carpenter is but an instrument in the hands of the architect. Him I consider the architect, who by sure and wonderful reason and method, knows both how to devise through his own mind and energy, and to realize by construction, whatever can be most beautifully fitted out for the noble needs of man . . ." (Alberti, [1988]:3)

There resulted from this deliberate split accusations that the architect was no longer trained in technique and therefore was nothing more than a dilettante. This is a now familiar argument between the profession and the building trades, each accusing the other of incompetence, either in understanding theory or in building practice.

In addition to the development of this new distinction between art and craft, Alberti saw architecture as central to a civil society. "For him humanism was not simply book learning or acquaintance with ancient monuments, but the application of all knowledge in the public interest." (Ettlinger, 1977:112) These two developments laid the foundation for the modern profession. The practice of the profession in history provided the basis for conflicts that continue into the modern profession - the conflict between art and craft, between theory and practice and, in particular, the conflict between specialization and generalization. The observation that Pythius made regarding the distinction between architecture and other, more specialized, professions is one that plagues the modern practice.

2.2 PROFESSIONAL PRACTICE

Following in the footsteps of Alberti and his efforts to lend an improved social status to the profession, the architects of 18th century England attempted to find security and status in acting "as impartial agents midway between client and builder." (Saint, 1983:58)

In Laugier's *Essai sur l'Architecture* of 1753, the attempt was made to derive from first principles the 'true' nature or the basis for architectural form. The engraving that fronted this work indicated a fundamental change in the perception of architecture. As Vale points out, Laugier's engraving,

> ". . . shows no builder of the primitive hut but rather a figure representing the designer, with compasses in hand, who is to transpose the visual characteristics of the primitive wooden shelter into stone, and subsequently the classical tradition. With this transposition the divorce of the building from the user is begun . . ." (Vale, 1991:10)

Further, Laugier's return to first principles in the search for rational form was an approach to be revisited with the advent of the Modern Movement. It was here, though, that architectural theory first brought forward the notion that "style, as something independent of the mode of building, could be talked about." (Bognar, 1989:16)

The Industrial Revolution had effectively created a new patron for the architect with the rise of the upper middle class in trade and industry (Wilton-Ely, 1977:190). In their search for clients, however, they were faced with mounting competition from entrepreneurial 'design-build' services (Saint, 1983:60). Buffeted as he was from "engineers, surveyors, cabinetmakers and even house agents" (Saint, 1983:60), the architect needed to establish a

Figure 2.1
Laugier's engraving
(Source: Vale, 1991)

distinct identity and improve his social status and separate himself from the competition.

In 1791 the Architects' Club was established in Britain. With a membership limited to members of the Royal Academy of Arts (formed in 1768) and selected others, the discussions of this exclusive dinner club included professional qualifications and fees (Wilton-Ely, 1977:192) - topics that today continue to occupy the interests of professional institutes. In 1834 the Institute of British Architects was founded with a mandate to facilitate "the acquirement of architectural knowledge, for the promotion of the different branches of science connected with it, and for establishing an uniformity and respectability of the practice of the profession." (Wilton-Ely, 1977:193). The same incentive that drove Alberti to seek a stronger differentiation between the architect and the craftsmen on the site, was now motivating British architects to seek respectability in professionalization.

Aside from the promotion of architectural knowledge, two issues consumed the interest of the Institute in these early years - the relationship between the architect and the building industry (particularly, one would assume, the design-build companies) and, related to that, professional self-defence. With all these other parties involved in the construction industry staking a claim for the built environment, the architect was left with Alberti's increasingly confining claim to 'art' as his domain of expertise[2]. The territory that Alberti argued for was now

2. The rise of Romanticism and the new attitudes towards the creative act and 'Art' that arose with Goethe and Schiller and were keenly expressed in England by the likes of Blake and Wordsworth. This certainly helped to reinforce the reverential attitude in architecture towards the creative act and its product as the central dominion of the architect. See Saint on Goethe's Romantic misinterpretation

being thrust upon the profession as the only remaining territory in the built environment over which the architect could lay claim[3]. Art, as a means of self-defence, did not leave the new professional with a strong argument against the shifting divisions of labour that developed out of the Industrial Revolution. These changes in the labour force were, in part, a result of the population explosion in Britain that took place between 1800 and 1830. Urbanization and the increase of population from 9 to 14 million in the space of those thirty years, created a need for housing that called for "far larger speculative ventures in urban development than had been connected with the leisurely evolution of Georgian London, Bath, or Edinburgh." (Wilton-Ely, 1977:193) With this need, the nature of the construction process had to change. The master-craftsman, working on piece-work, was replaced by the general contractor with a team of craftsmen who would bid competitively for a job on a lump sum basis. With this, there was further reason for the architect's role to shift away from the site to the drawing board. Drawings became the medium of the legal contract between parties - the general contractor, the client, and the architect. The

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of the Gothic (Saint, 1983:19-23) and Mark Swenarton, *Artisans and Architects* on Goethe's influence on Ruskin and the rise of the Arts & Crafts movement.

3. The sense in which the term 'Art' is used, though, changed. For Goethe and the Romantics that followed, "true art was not (as classical theory held) a matter of formal beauty so much as a matter of 'character', the expression in the object of the God-given urge in man to 'find material in which to breathe his spirit'. Against neoclassical notions of 'good taste', Goethe saw art as the expression of the primitive . . ." (Swenarton, 1989:3) Abbe Laugier, although with neoclassical intent, did, with the Romantics, favour "Nature as the ultimate source of authority" (Wilton-Ely, 1977:190) leading to what Watkin called, "hut worship" (Watkin, 1977:2). See also, Rykwert, (1972:43-50) for a discussion of the relationship between Laugier's approach to architecture and Rousseau's approach to human social development.

drawings and specifications as legal documents were reinforced by the declining "skill and initiative among the building crafts through general contracting." (Wilton-Ely, 1977:194) The client now needed some protection in the course of a contract that would assure him of getting what he asked for. The growing reliance on drawings and the technique of architecture widened a rift between the professional architect and the 'artist' architect. The approach of the former gave the client better protection from unscrupulous or unskilled builders, while the latter could provide the client with only the ineffable.

In the midst of these growing rifts, Pugin published *Contrasts* in 1836. Seen in the context of combined shift on the one hand from art to professionalism (or practice) and on the other the shift away from craft and the direct connections on the site to the drawing board, it is little wonder that he embraced the Gothic as a model for architecture. While Pugin couched his argument in terms of morality and Catholic orthodoxy, one can see the relationship between his arguments and the need to return to a time of greater coherence between art and craft, as well as a stronger relationship between architecture and religion. For Pugin, Gothic architecture represented the revealed truth of the Catholic church. Further, he believed that, "since Gothic architecture is divinely ordained it is not marked by human imperfections but is an inescapable reality." (Watkin, 1977:19)

With the quest for 'inescapable reality' architectural theory added yet another requirement in the definition of architecture - a definition that could - like the definition of health by doctors[4] - only be determined or recognized by

4. See Ivan Illich, *Medical Nemesis*. He suggests that the medical profession is, as he puts it, "a radical monopoly"

the professional. In addition to this harbinger of the modern movement's search for an architecture beyond style, Pugin also ushered in a new sense "of social responsibility and active commitment to a philosophy of design" (Wilton-Ely, 1977:195). This new sense not only related the profession itself to its responsibilities to society but it related design to morality and to a kind of architectural determinism - that is, that good design can create good people (see McLeod, 1971:9) This instilled in Pugin a sense of social responsibility that was to affect the more conscientious architects of the nineteenth century (Wilton-Ely, 1977:195).

The dissatisfaction with the growing separation between art and practice, and the need for an expression of the relationship between art and society was further developed by John Ruskin, William Morris, and the Arts and Crafts Movement. With the revolutions in Europe in 1848 coming hot on the heels of the first recession of the new industrial age, Ruskin felt bound to respond to the inequity he saw around him. Like Pugin, Ruskin saw 'true' architecture as a Christian art and Gothic was the architectural representation of Christianity.

> "[B]y combining the sense of the crisis of industrial society . . . with the notions of art that he had inherited from German Romanticism, Ruskin forged the notion of Gothic architecture 'as involving the liberty of the workman' . . ." (Swenarton, 1989:15)

Ruskin, then, did not see architecture as an isolated phenomenon, or an issue of style, but "as the record of human activity or *work*,"; that is, as process (McLeod,

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that disables people from doing or making things on their own, thus impinging on freedom and independence. This monopoly also "labels the handicapped as unfit and breeds ever new categories of patients." (Illich, 1977:34, 35) Illich is echoing E.C. Hughes comments about the professional. See 3.1.

1971:43). In addition to recognizing the role of process in architecture, in his 1849 publication, *The Seven Lamps of Architecture*, he also put forward the popular notion "linking morality and the redeeming virtues of the nuclear family to the very details of domestic architecture" (Larson, 1983:66).

With Morris, the emphasis changed from Christian morality to a more secular determinism: "that man will automatically produce great work if he is given freedom and autonomy in its execution" (McLeod, 1971:43). Morris and his colleague, Philip Webb, were particularly taken by those aspects of medieval society[5] that placed priority on the communal life of the village and the guild rather than on the abstractions of philosophy and theory.

By this time, the profession was moving closer to establishing a registration procedure for architects. This, of course, implied significant changes in the training of architects and equally substantial changes in the relationship between architects and builders. As a campaign, it was in direct conflict with the need recognized by Pugin, Ruskin, and Morris that there must be a closer relationship between the architect and the process of building. As a result, although there were certainly many in favour of a registration procedure - older professionals in larger practices and younger practitioners who wanted to see their qualifications recognized - there were many against the concept. Among the most articulate of these opponents was W. R. Lethaby, one of the leading proponents of the Arts and Crafts Movement. He saw that the move

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5. It should be noted that part of the interest in medievalism was prompted by a profound mistrust of mechanization. In this sense, those architects, like Ruskin and Morris, were seen as withdrawing from the challenges of industrialization. (Wilton-Ely, 1977:202)

towards professionalism placed the architect in a position that was too far removed from the production of buildings. The fragmentation that began with Alberti was exacerbated by the registration of professional architects. The intention, however, was similar - the establishment and public recognition of an elite that would act as arbiters of taste[6] (another word that created considerable annoyance in the Arts and Crafts Movement). The other intention was, with the recognition of this status by society, to further entrench the position of architects against an increasing array of design and building services. To this end, the RIBA began to lobby for registration in 1890. Registration legislation was delayed until 1931 in part because of the inability of the RIBA to take control of the profession (Saint, 1983:66)[7], but by the turn of the century the fight for registration was all but over. The problems of the profession, however, were not. If architects were to be registered by a legislative act of the State, there would be implications on the training of architects and on the defining role of the architect. Legislation finally formalized in the public's perception, the fundamental questions that arose with the Industrial Revolution: what is it in the training of the architect or in the practice of architecture that differentiates it from the engineer, the professional builders, or even cabinet makers? (see Saint, 1983:60)

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6. As Gwendolyn Wright points out, in the United States during this period, although architects continued to insist publicly on the absence of class differences, they "lamented the crudity of aesthetic taste among the lower and middle classes . . . Within a few years, the WAA [Western Association of Architects] would also include 'lazy, uneducated workers' as part of the problem it faced in trying to keep 'the art divine'" (Wright, 1980:73-4)

7. By the turn of the century only 10 percent of the profession belonged to the organization. (Wilton-Ely, 1977:202)

2.3. THE CURRENT PROFESSION

The pending institutionalization of architecture prepared its proponents for new developments that came with the turn of the century. Engineering took on greater importance both as a model of professionalism and as a basis for aesthetic rationale. Architecture as a business became a more prominent concern and the Acts and Bylaws that governed the newly formed profession of architecture reflected this bias.

2.3.1. The Rise of Engineering

Historically, engineering was not well differentiated from architecture until the twentieth century and the scientific revolution in technology. However, with the Industrial Revolution there were many new opportunities for the exploration of these differences in bridge-building, in factories and warehouses and in new building types such as railway stations, schools, hospitals and so on. It was with the development of the railway from 1825 that these opportunities were best realized in the design and construction of railway stations. Because there was no precedent for this building type, there was a conflict between the cultural needs of the form and its more utilitarian requirements. There was no form available "to express and articulate adequately the junction between the head building and the train shed." (Frampton, 1980:33) Both St. Pancras Station and Paddington Station in London reflected this problem. Brunel's engineering design of the latter was poorly matched with "the rather rudimentary station building" (Frampton, 1980:34) in front of the train shed. Brunel's staff, indeed, was capable of handling most architectural work. The reverse, however, could not be said, since "few architects could boast of half his constructional capabilities." (Saint, 1983:60)

These new forms captured not only the public's imagination but that of architects as well. With exhibition buildings, the engineer had none of the problems of the railway terminus, "for where the issues of cultural context could scarcely arise the engineer reigned supreme." (Frampton, 1980:34) The displays of invention that marked such efforts as the Crystal Palace and Eiffel's tower in Paris became icons of a new age - of design, of the division of labour, and of the Victorian sense of the dominion of science over nature.

With the split between the cultural and technological context of built form, the division between engineering and architecture widened. The engineer's interest, from the public's perception, was seen to be structural safety, while the architect's interest was increasingly in the realm of aesthetics or at least, style.

With the rise of the Modern Movement by the turn of the century, the aesthetics of engineering took on an even greater interest than was displayed in the works of Paxton, Eiffel or Brunel. Le Corbusier, Gropius, the Futurists all held a fascination for the rationality of engineered design.

> "Our engineers are healthy and virile, active and useful, balanced and happy in their work. Our architects are disillusioned and unemployed, boastful or peevish. This is because there will soon be nothing more for them to do. . . .
>
> Our engineers produce architecture, for they employ a mathematical calculation which derives from natural law, and their works give us the feeling of HARMONY. The engineer therefore has his own aesthetic, for he must, in making his calculations, qualify some of the terms of his equation; and it is here that taste intervenes. Now, in handling a mathematical problem, a man is regarding it from a purely abstract point of view, and in such a state, his taste must follow a sure and certain path. (Le Corbusier, [1970]:18-9)

This 'sure and certain path' marked the modernist search for a rationality in aesthetics that could place architecture beyond style. It reflected also a shift towards a scientific basis for aesthetics which, in turn, placed a greater dependence on the engineer whose training and abilities were better suited to scientific rationalism than those of the architect. Yet, despite the fascination, or as some have put it, a fetishism with functionalism[8], the architect's role was becoming increasingly restricted. As Larson pointed out,

> "Of the Vitruvian definition - architecture is the combination of 'firmness, commodity and delight' - only delight was not claimed by credentialed or otherwise expert rivals. To concentrate on the aesthetic dimension of building was therefore an inevitable strategic choice." (Larson, 1983:72)

The additional erosion of the power of architecture over the built environment created an even more compelling need for the professionalization of the architecture.[9]

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8. See Pecora, 1991. Deutsche makes the further point that the "functionalization of the city" politicizes space while obscuring the identity of those who define its use. There is a political conflict, then, between "the technocratic definition of the city as the product of experts" and the attribution of meaning to space through social processes. (Deutsche, 1991:159-60)

9. In 1991 the Nova Scotia Association of Architects came into dispute with the Engineers Association over jurisdictional issues with regard to suggested changes to the provincial act governing architecture. The NSAA wanted jurisdiction over buildings used by people but engineers, who are currently working on buildings designed for some types of human use found this encroached on their turf. What was questioned is the definition of 'building'. "The Engineering Act refers to structures. The Architecture Act refers to buildings. Engineers say they're synonymous. But architects say structures are [merely] beams, floors, things like that . . ." (Jones, 1991) The architects claimed that because they are trained to include "psychological, sociological and aesthetic considerations, which engineers

2.3.2. The Legitimation of Architecture

Professionalization demanded a definition of the role of the architect in society. If the profession was requesting a monopoly over a certain segment of society, the public had a right to know not only what this monopoly would do to protect the public interest, undoubtedly it also would ask why this monopoly should be granted to one group providing a service rather than another. In other words, why should architects and not, say, engineers have that power. This forced the profession into defining its role in the same way as the medical or engineering professions. These other professions could lay claim to a specialized area of knowledge to which architects could not. Because they are scientifically based areas of knowledge, both medicine and engineering can define the area of their specialization with some rigour. Indeed, without growing levels of specialization, the practitioner in these fields would be unable to keep abreast of the growing layers of information that results from the cumulative growth in scientific knowledge. However, as Pythius pointed out some 2400 years ago, architects are generalists, not specialists. Architecture, like law, is not so much a science-based profession as it is culture-based. As a result the means by which the professional domain can be defined will be different and certainly less clear.

Yet, with professionalization comes the requirement to address that fundamental question: What do architects do that others in the building professions and trades do not?[10]

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are not" there is justification in making such a distinction.

10. The question is often answered by referring to the architect's association with aesthetics, a position that Alberti encouraged. Ironically this was the very position

The modern profession has not yet satisfactorily answered it. Although we can say that there is a difference between architecture and structure, if we resort solely to the notion that that difference is aesthetic, or qualitative, the public response is typically that such judgments are in the eye of the beholder: that is, subjective and therefore hardly adequate as a defining characteristic to a profession that would be given charge over a significant portion of the built environment. It is a response that is shared by other professionals and paraprofessionals in the building industry. The architectural profession, in reaction to this, was compelled to become, institutionally, progressively more defensive of its position and to attempt, in individual practice, to become more specialized. Viewed from an historical perspective, there is little to suggest that either will meet with success.

The defensive position, at the institutional level, has led to the legislative act that governs the practice of architecture - The Architects Act (see Appendix I) - to define the profession by exclusion. In other words, architecture is defined in the Act by what others can or cannot do. Article 57 defines the "practice of Architecture" as someone who "is engaged in the planning or supervision of the erection or alteration of buildings for persons other than himself". There are, however exceptions to this general definition. These exceptions make the definition specific. Section 58 of the Act in British Columbia indicates that engineers are not prevented by the Act from erecting buildings that are "usually designed or supervised for these purposes by an engineer." It does not prevent individuals from designing their own houses or duplexes, or corporations from having 'qualified persons'

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claimed by the British architectural opponents to registration. Since art could not be taught, how could it be examined? (see McLeod, 1971:125; Saint, 1983:66)

making plans, specifications for buildings to be occupied by the corporation. It does not prevent anyone from designing apartment buildings containing less than five suites, hotels containing less than 11 rooms, commercial buildings under 470 square metres, and so on. The definition of the professional jurisdiction for architects, then, has been limited by the Act to numbers. Why should eleven rooms be the limit?[11] Or 470 square metres? While designers, who remain on the outside, may argue to increase these limits, many simply go on and design what s/he pleases and wait for the Institute to discover the infraction and then successfully take legal action against the alleged offence. Consequently, if the Institute is to defend these apparently arbitrary numbers, it must put a significant amount of its energies towards policing.

In addition to the increasingly defensive posture of the profession towards its jurisdiction in the built environment, increasing specialization within the building industry as a whole has contributed to the further erosion of the professional jurisdiction. The division of labour within the construction industry has continued apace since the early 19th century. As buildings have increased in their complexity, both programmatically and in construction technique, there has been growth in these divisions of labour. Gutman points out that both Robert Stern and Robert Venturi have "work completed in their offices [that] is

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11. These limits are related to aspects of the National and Provincial buildings codes that govern aspects of fire and structural safety in relation to the size of buildings. Although the numbers that result from that relationship are not entirely arbitrary, they imply that only those people who are familiar with the code intent will be able to competently deal with that size of building. This would, in turn, suggest that only architects have that competence. Such is not the case. Indeed, architects are now often using code experts (non-architects) as subconsultants, particularly on complex building programs.

frequently limited to specialized services in design." (Gutman, 1988:39) Working drawings, specifications, construction management and even the interior space planning, particularly of technical facilities, have been left to other experts. Gutman gives the example of the Lewis Thomas Laboratories at Princeton in which Venturi was the "architect for the exterior of the building; [and] Thomas Payette, architect for the interior." (Gutman, 1988:39) Even in less high-profile architectural offices, similar, if less extensive specialization occurs. Routinely, specifications are left to subconsultants, as is interior design, compliance of the design to building codes and fire codes, as well as the administration of the construction contract.

2.3.3 The New Formalism

With increasing specialization, it is not surprising that Venturi commented predictively:

> "The architect's ever diminishing power and his growing ineffectualness in shaping the whole environment can perhaps be reversed, ironically, by narrowing his concerns and concentrating on his own job. Perhaps then relationships and power will take care of themselves." (Venturi, 1966:20)

For Venturi, Stern and others that job was fundamentally formalist in nature. With this statement he effectively abandoned the functionalism of the Modernists along with their social vision and claim to technical rationality. Staking a claim to formalism was safe from jurisdictional assault, was highly marketable and well controlled.

It was well controlled because its formalistic principles were self-defining (in much the same way that sociologists and critics as disparate as Hughes and Illich have indicated that the medical profession defines health and disease) and

ultimately self-referential. In the postmodern framework the meaning in architecture is defined by the architect "in the form of witty comment upon earlier conventions" (Ghirardo, 1991:10) This can also be extended to comment on social conditions or, as Venturi put it:

> "The architect who would accept his role as combiner of significant old cliches - valid banalities - in new contexts as his condition within a society that directs its best efforts, its big money, and its elegant technologies elsewhere, can ironically express in this indirect way a true concern for society's inverted scale of values. (Venturi, 1966:52)

In a response to this rather conciliatory approach to social comment, the Deconstructivist social commentary was certainly more confrontational. For this more recent stage of formalism, "fragmentation, dispersion, decentering, schizophrenia, disturbance are the new objectives." (McLeod, 1989:43) In addition, within the framework of the poststructuralist linguistic theory, architecture is seen, as Eisenman describes it, as "*independent discourse*, free of external values - classical or any other; that is, the intersection of the *meaning-free*, the *arbitrary*, and the *timeless* in the artificial" (in McLeod, 1989:47) This formal hermeticism places architecture, finally, beyond the contaminating reach of social processes, of history, or of meaning. It not only defies the functionalism of the Moderns but also the allusive character of the Postmoderns. In this way control is complete. Even the "role of the ideal client has now been subsumed by the architects themselves" (Crawford, 1991:43), a solipsistic stance with which the architectural literary hero, Howard Roark, would likely feel quite comfortable.

Excluded from this discussion is mass culture and the overwhelming majority of buildings and the people who use them. This closed conversation of the avant-garde has

become progressively more theoretical. It is no accident that Michael Graves' drawings or his teapot design are seen as equally, if not more important than the buildings themselves.

It is also no accident that Michael Graves is seen in advertisements for Dexter shoes. This self-referential formalism is also highly marketable. The "culture of consumption incorporated postmodernism's emphasis on surface and readable imagery as a useful form of packaging essentially identical structures into more compelling products, subsuming architectural style into a brand-name marketing strategy." (Crawford, 1991:41) Graves' products, his signature, are highly marketable. In much the same way as sports stars' names are associated with a variety of sports products, so Graves' name is associated with high fashion, whether the product was designed by him or not. This made the Postmodern style very adaptable to the marketplace. In addition, because it was, effectively, 'the decorated shed' (to use Venturi's term), it very quickly became "the style of choice for the cheapest and most expedient building types: motels, shopping malls, and fast food restaurants" (Crawford, 1991:42) The division of labour, to which Gutman referred, between exterior and interior architecture was a natural outcome of this shift into formalism.

Another outcome of Venturi's 'Gentle Manifesto' was the retreat by some professionals, the avant-garde, into "complex theoretical constructs that render architecture untouchable by the demands of modern life" (Crawford, 1991:42) It is here that the jurisdictional safety of the profession is complete. It is safe from the corrupting influence of business and safe, as well, from the socio-political concerns of modern life. With such theoretical constructs, over which the cognoscenti of the profession

hold complete control, the architect can at the same time "signify both the exchange or commercial value of the architect's skills and the architect's ability to renounce all mere exchange value." (Pecora, 1991:46) By becoming completely autonomous, from both business and social concerns, architecture both "aestheticizes society" and "finally succeeds in making itself irrelevant" (Pecora, 1991:48)

2.4. THE BUSINESS OF ARCHITECTURE

For the great majority of practising architects, these theoretical options are unavailable in any meaningful sense since architecture is also a business. As such the professional is providing a service for specified fees. It is classified as "a producer service business, since the bulk of practice today provides services to producers of commodities" (Gutman, 1988:9). The services that the professional provides form part of the contractual obligations between the parties involved in the production of a building but they also involve some of the broader issues of development from urban design to feasibility studies.

In order to survive as a practising professional, the architect must deal with four issues: getting the work, determining for whom s/he is working, determining the scope of services and undertaking the work.

2.4.1. The Marketplace

Getting the work demands from the architect some ability in promoting and marketing the firm. This endeavour places the architectural firm squarely in the same marketplace, using

the same marketing tools, as anyone selling their services or goods. Some architects are still uncomfortable with the prospect of advertising the business side of their work to clients and the public. (Gutman, 1988:20) This discomfort led one marketing professional to observe that "architects' brochures are about as understated as anything created in the universe . . . [they] have a secret competition to see who can use the smallest type size on their business cards." (AIA, 1987:9)

Although the Bylaws of the Architectural Institute of British Columbia allows - as now do most, if not all, professional bodies - advertising by professionals, there are limits placed on the way it can be presented. Fees, for example, cannot be stated.[12] Until recently, the legal profession faced the same prohibition. It was considered by the governing bodies that advertising was fundamentally unprofessional.

> "To many architects being known as a business person means that clients will imagine they place profitability and self-interest ahead of concern for building quality and the well-being of the client. The latter concerns are the hallmark of professionalism." (Gutman, 1988:20)

Many of the larger firms in the United States and Canada are now hiring, not as consultants but as full-time employees, marketing and promotional staff to prepare brochures, press releases, and advertising for the firm. Such efforts may leave the public with some suspicion that the professional's priorities place economic self-interest well ahead of the public interest. However, without some level of self-interest, a firm cannot survive. Although many architects

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12. Since 1972 such a prohibition was removed from the code of ethics of the AIA through a consent decree with the Department of Justice. (from Gutman, 1988:75)

react unfavourably, or with outright hostility, to the presence of marketing personnel within the firm (Cuff, 1991:69), the AIA has recognized, as has the AIBC with the publication of its "As Others Should See Us" document, that the promotion of the firm is critical to its survival. This relatively enthusiastic response on the part of the North American regulatory bodies to the business needs of the profession was not nearly so receptively received by the RIBA. Before 1979 "the RIBA Code of Professional Conduct did not allow architects to initiate direct approaches to potential clients." (Gutman, 1988:81)

As architectural practice in North America becomes more homogeneous in terms of training and its regulatory environment (including licensing requirements), competition for work increases. Many larger firms now work at a national, even an international level. This is particularly true for those firms that are associated with commercial clients that operate at a national or international level. Those firms, then, with broader access to markets and with the available cash flow to support marketing staff, will undoubtedly have a competitive edge on those local and regional firms pursuing the same work.

Aside from these more immediate issues of survival, the issue of marketing raises a broader point concerning the actions of professionals. Andrew Saint gives the example of the British architect John Poulson who, after his bankruptcy and imprisonment in 1973, became a symbol of "certain objectionable features in British business and politics during the 1960s". (Saint, 1983:138) One of the reasons for his bankruptcy was his practice of presenting 'generous gifts' to those people in business and government that could assist him in securing contracts for his firm. In other words, he "schemed, bullied, bribed and cajoled his way to obtaining the all-important contracts" (Saint, 1983:140).

Poulson's corrupt and illegal behaviour, though, received an interesting response from those architects in the RIBA with experience in commercial and international practice.

> "By the standards of international business, Poulson had done nothing exceptionally wicked, however inept or misguided or greedy he might have been. Had not the accident of financial failure prised open the can of worms, none of these misdemeanours would have come to light. In how many other matters of business, of government and of building might not similar derelictions have been hidden, simply by cleverer organization and accounting? (Saint, 1983:141)

This stance seems reminiscent of the response of the Republican public to Watergate. The error of Nixon and his staff was in their clumsiness of getting caught, not in the deed itself.

There is, of course, a fundamental difference between aggressive marketing and illegal acts, but when professionals enter the sphere of influence controlled by business, they are playing by the same rules - or lack of them - that govern business. An acute awareness of that line between public interest and self-interest is a requirement of professionalism.

2.4.2. The Client

The demand for architectural services has traditionally come from the wealthy and from institutions such as the church or the government. Modern practice has depended on "a broad middle-and upper-middle-class support for high culture" (Cuff, 1991:53) but the bulk of its work comes not from individuals but from institutions; the traditional ones of the church and government, but most predominantly from corporations. Nearly 45% of fees come from commercial projects (Gutman, 1988:119). As such, architects are more typically dealing with agents of the client who are in turn

representing boards of directors or committees. The actual client is obscured by bureaucratic organizational structure. The end user is represented only by program requirements. The dynamics of client organizations will affect the development and organizational structure of the architectural firm (see 2.4.4.) It will also affect the design process and product. Fitch argues, for example, that the isolation of the architect from the client, or more particularly, the end user has "precipitated the trend toward more formal, abstract, and less humane design." (in Cuff, 1991:55) The abstraction of postmodernism suited this trend well.

The spirit of entrepreneurial development affected the nature of the client group as well. By the 1970's, in addition to the ability to advertise, architects, predominantly in the U.S., were beginning to follow in the pioneering footsteps of John Portman and becoming more directly involved in acting as their own developers. In such a capacity, now allowed within the framework of the Standards of Professional Practice of the AIA, as well as within the Bylaws of the registration bodies in Canadian architecture, the architect is now able to act as her own client. In such a capacity, difficulties can arise between the role of the architect as a professional (with the interests of the public good as a central concern) and as a developer (with the interests of profit and survival as a business as more central concerns). Sometimes these separate motives do not conflict, but when they do, the resolution to that conflict may tend to obscure the needs and the interests of the public.

John Portman considers that his work,

> "increases value and makes developments successful, for only the designer by 'weaving elements of sensory appeal' into his projects can humanize the calculations

> of the speculator. Thus architecture and real estate work to mutual advantage and to the whole community's benefit." (Saint, 1983:153)

On the other side, however,

> "his schemes confront the problems of urban renewal, his chosen field of combat, only indirectly. He remains as a developer bound fast by profitability; his great projects, so far as they have yet gone, serve only the affluent middle classes and the corporations that rent his office and hotel space. Prosperity, by the orthodox theory of capitalism, is to percolate downwards throughout the social hierarchy as a result of the jobs created by these developments. (Saint, 1983:153-4)

It could be readily argued that Portman's role in development was not to build housing for the poor so there should be no reason why he should be called to task for directing his development attentions to the affluent middle class. This is hardly an argument against architects acting as developers. Furthermore, as Saint and Gutman point out, the role of architect as developer is not a new one. It was practiced by Adam and Nash in England and by Bulfinch and Richardson in the U.S. but, in the development of the professionalization of architecture in the latter half of the nineteenth century, the desire to distance the profession from commerce and craft proved overwhelming. The fact that the cycle has returned to a somewhat earlier model of the profession should not be cause for concern. Yet, the rationale that was presented in favour of professionalization in the nineteenth century gave rise to this separation between development and professional practice. The fact that the profession has returned to this model of the architect acting as his own client suggests that there were and are some problems with the argument for professionalization. On the other hand, as Richard Meier put it, in a more contemporary context:

> "I don't believe that one can adequately provide professional architectural services and also be a financier or real-estate person. You're just spread too thin. . . . It's a lame excuse to say that you have to be a financier in order to be a good architect." (from Gutman, 1988:49)

Each of these tasks - architect and developer - consume all of the available time of the individuals involved. John Scott, the marketing specialist, echoed Meier's observations in pointing out that "people running an architecture practice probably can't run a development business at the same time, and certainly not as a sideline." (AIA, 1987:8)

Robert Steinberg remarked further that:

> "Architects and developers have fundamentally different yardsticks . . . Most architects value permanence, a philosophical imperative to leave something behind. The developer's yardstick is usually, simply, money; if you don't value (and have) money, you aren't a developer long. Consequently, it can be very difficult to be an outstanding developer and an outstanding architect." (AIA, 1987:19)

In another arena, conflicts can arise when the architect is employed by a developer to provide housing for a non-profit organization. In British Columbia, for example, non-profit housing is subsidized , in part, by the Provincial government. Schemes are submitted by non-profit organizations, often working with developers. These submissions must include preliminary plans for the development, clear title or an option on the land, zoning approvals for the proposed development and so on. For organizations with little or no money available, it is often quite impossible to prepare such a submission without a developer. Typically, then, a developer will approach the group with a property in place, with a development team, including an architect, and only the requirement for an

organization with whom he can associate in order to make the appropriate submission. In such a process the end user, the members of the non-profit organization, are likely to have only minimal input in the design process. They will often get what they are given. In such instances the architect is employed directly by the developer and is inclined to take his/her instructions from that 'client'. There is, though, another client that the architect must recognize - the people that will be living in the building over the course of its useful life. When conflict arises between the client who pays and the client who must live with the decisions made, the architect will base his/her decisions on the recognition of the architect's role as a profession or a business. Again, in most instances, these roles may not conflict, but where they do, the architect must decide which role takes priority.[13]

2.4.3. Scope of Services

There are many roles that the professional can play in the built environment. The design of buildings is only one of them. The modern tradition of architecture - that is, since the early nineteenth century - evolved out of a need for an intermediary between the Building Contractor and the Client. In this role, the architect had to be conversant with the technical aspects of building, construction law, construction management as well as a command of the tools that can translate the client's needs into something that can be built and used. As this intermediary role was developing, the architect often took on a number of roles that have since been delegated to other consultants and specialists. In England, these tasks included: "arranging leases, assessing rents, measuring property, taking out

13. How professionals make these decisions will be explained further in Chapter 3.

quantities and so forth." (Saint, 1983:58) In addition, particularly in the early part of the nineteenth century, architects often had interests in contracting companies and materials suppliers (MacLeod, 1971:123). In the United States during the same period, architects, as a result of organizational differences in the construction industry, were often more involved in construction management. General contractors had not developed to the same extent as they had in Britain so the architect was left with the responsibility of supervision separate contracts for each trade. (Saint, 1983:73)

In contemporary practice, much of this broader scope of services has been either delegated to other consultants or has been deemed as unprofessional conduct by the registration bodies governing the profession. A review of the traditional scope of services performed by the architect (Appendix A) indicates not only an expected focus on design, but a facility with:

- coordination of subconsultants
- budget review
- review and compliance with all applicable codes
- coordination of data
- preparation of contract documents
- monitoring and interpretation of contracts
- review of contractor's claims for payment
- review of warranties
- client consultation
- agency consultation

In addition to these basic services, the architect may be expected to provide or supervise the provision of additional services such as:

- facility programming
- life cycle costing
- economic feasibility studies
- marketing studies
- environmental and energy studies
- project management
- building diagnostics
- post-occupancy evaluations
- project financing
- interior design
- project promotion
- fine arts
- environmental monitoring
- urban design
- urban and regional planning
- policy development
- training

This range of services is still quite broad despite the reduction of services in some areas over the past 150 years. The return of some architects to the former role of developer/architect has added a dimension of financial and management capabilities to this inventory of responsibilities. In general, though, those skills still involve the architect's ability in design, technology, and management (of both information and people).

2.4.4. Office Practice

Depending on the level of responsibility and exposure to liability which the architect is prepared to accept, s/he will engage in practice at one of several levels: salaried architect, sole proprietorship, partnership, joint venture, or corporation. The size of a firm will determine, in part, the kind and complexity of the work it will do and the way

in which the creative process (and therefore the results of that process) is managed.

More than 93% of architectural firms have fewer than 20 employees (Gutman, 1988:115). The remaining 7% of large and very large firms capture 56% of all revenues (Cuff, 1991:47). While there is an obvious economic pressure toward increasing the size of a firm to accommodate the needs of the larger market afforded by commercial clients, size will have an impact on the organization of an office, the relationship that employees have to the design process, and on the product that results from this process. Skidmore, Owings and Merrill (SOM), a firm with nearly 1,600 employees in London and five U.S. cities, provides the best-known example of the development of the large firm directed toward the provision of service to the corporate client.

SOM was formed in 1939 by two architects and an engineer. Their aims were broad in scope. Not only did they want to garner recognition for themselves and the profession, they wanted to gain the respect of this growing client group by developing an office structure that could match their client's needs at a national level. Beyond that, they were interested in,

> "the influencing and alteration of the physical condition of society: 'We were not after jobs as such. We were after leverage in influence social and environmental conditions.' Beyond that was another aim, yet larger: 'To work, we must have volume. An efficient set of master builders can eat up a lot of work. Volume meant power. We would try to change men's minds". (Boyle, 1977:325-6)

To accomplish these aims, SOM provided not only the traditional design services of architecture and engineering, but the additional services of graphics, interior design, master planning, research, construction management and so

on. In this way their clients, generally national in scope themselves, could come to one firm for a range of design and related services. The organization of the SOM offices demanded a division of labour and a hierarchical chain of command that matched that of any national corporation. In providing such a broad range of design services, the firm was following in the conceptual footsteps of Gropius, Morris, or, as Owings himself suggested, the Gothic master-builders. The difference between them, in part, was that for SOM "total design was conceived as a device of control as much as of service" (Boyle, 1977:328) The more areas of the design process that the firm could control, the more consistent would be the product to the general aims of the office.

Although larger firms can take on more complex tasks, which will tend to expand the opportunity for collective influence (Blau, 1984:34) it also reduces democratic control in favour of hierarchical decision-making. Running counter to this tendency for increasing control is the understanding that architecture, like filmmaking, is more a collective art than strictly an individual one (see Cuff, 1991:56). There are many organizations and individuals exercising some level of control over the process and the product. Despite the romanticized (and politicized) version of the creative act represented by Howard Roark in Ayn Rand's *The Fountainhead*, the architectural firm is influenced from all sides. The resistance to such influence, through the organizational structure of the office will tend, in itself, to separate the firm and the architect from many of the parties involved, directly or indirectly, in the design - most notably, the public. The more the design process is rationalized, either by age or by organizational structure, the less likely is innovation to occur and the more perfunctory is the decision-making. Such ossification "can

be expected to erode the collective exercise of voice." (Blau, 1984:30)

2.5. THE PROFESSIONAL DILEMMA

Patterns emerge from such a broad historical overview. In the long history of the profession, the emphasis has swung between theory and practice, between art and craft, between business and profession. Even in contemporary practice all of these streams seem evident. From SOM and their approach to the organization of their business practice, to the theoretical stance of Eisenman; from the formalism of Graves to the design/build approach of the 'woodbutchers' of the 1960s (exemplified by Blue Sky Design on Hornby Island in British Columbia), the range of design method and organizational environment is widely available to the practising architect. With such options available, why would the architect choose alternatives to traditional practice?

A reader's poll in Progressive Architecture indicated that "about half of all architects under the age of 50 have considered leaving conventional practice for nontraditional employment" (Arcidi, 1990:60) The main reasons for their dissatisfaction, after financial, were the qualitative issues of control over one's work, opportunities for advancement and personal satisfaction. Beyond that, at the institutional level, there are continuing problems that are integral to the professionalization process.

Increasing specialization since the Industrial Revolution affected the architect's access to work. That specialization has been continuing with the increasing complexity of buildings. While it is an appropriate

reaction in science-based professions, architecture has had some difficulty in responding to this requirement of the building industry. The profession had either moved toward the division of labour in large firms emulating traditional hierarchical corporate structure (the stance of SOM) or in specializing in the formal aspects of architecture (the stance of Graves or Venturi). With the former, there is a tendency to bureaucratize the design process, thus limiting creative response. With the latter, there is a tendency to ignore the social aspects of the profession by focussing entirely on the aesthetics - the only area left over which the architect exercises autonomous control.

Given the nineteenth century argument against professionalization, institutionally architects have not been able to address the growth of formalism in terms of the legislative acts that govern architects. Instead they have moved toward a greater focus on governing the business aspects of the profession. The recent focus on issues of advertising, marketing, and the architect's involvement in development are illustrations of the institutional interest in governing these business concerns. Within that framework, however, there are many other professionals who are competing for the same territory. As a result there has been a growing tendency, for the institute, to attempt to protect that area of professional interest from further erosion. A consequence of that protectionism has been increased policing of the membership. While it is difficult to exercise control over those people on the outside (without resorting to expensive legal action), the institute can make some headway in the public sphere by making sure that those members of the institute adhere scrupulously to the regulations. Since the rationale for the existence of the legislative acts governing professions is ostensibly the protection of the public from incompetent behaviour on the part of the untrained and unregistered or the unscrupulous

behaviour of those who are registered, it is important that the institutional response to the practitioner meet the letter of the prevailing law. This prevailing law will tend to become progressively more exclusionary as other specialists further erode the area of practice governed by architects. Unfortunately, since it cannot legislate the aesthetic aspects of the profession - the only area over which the architect has actual or even publicly perceived control - the institutions have few options available outside of progressive exclusion.

Early in this process of professionalization, Walter Gropius sensed this dilemma, as did Morris (in another context) before him. Like Nathaniel Owings of SOM, who professed an interest in emulating the Gothic builders, both Gropius and Morris admired the spiritual unity, the sense of common purpose and the relationship of the designer to the craft and the site. Unlike Morris, though, Gropius was not a Luddite. He was not looking for the return to a preindustrial era. Rather, he found the modern industrial world a source of inspiration (as did Le Corbusier and the Futurists). This inspiration resulted in the development of the Bauhaus as a centre of experimental training in design. Bauhaus training required "a broad, co-ordinating mind, not the narrow specialist." (Gropius, [1962]:20) Further, he saw the problems associated with formalism as well as those with business.

> "Our conception of the basic unity of all design in relation to life was in diametric opposition to that of 'art for art's sake' and the much more dangerous philosophy it sprang from, business as an end in itself." (Gropius, [1962]:20)

The intention of the Bauhaus was to establish a rational basis for design and to remove the distinction between the fine arts and applied arts or crafts. In all of this, the

focus was to be the spiritual and material needs of humankind. To accommodate that focus, students should be trained to work in teams. Collaboration was to be an important hallmark not only for the Bauhaus but for the development, some 40 years later of The Architects Collaborative.

> "*The architect of the future - if he wants to rise to the top again - will be forced by the trend of events to draw closer once more to the building production.* If he will build up a closely co-operating team together with the engineer, the scientist and the builder, then design, construction and economy may again become an entity - a fusion of art, science and business" (Gropius, [1962]:74)

Reminiscent of the Egyptian trinity of Seshat, Thot and Ptah, Gropius saw the role of the architect as a coordinator "of all efforts in building up man's physical surroundings" (Gropius, [1962]:76). But, following the example of the Gothic, this coordination could not occur within the framework of the cult of the individual, but only through teamwork.

A fundamental difference between his approach to the Gothic and that of Morris, Ruskin or Pugin, was, aside from an acceptance of the machine, the complete secularization of art. Where, for his predecessors, art could not be disassociated from morality, religion or politics, for Gropius the 'spiritual revolution' that he sought was in scientific rationalism. For Gropius and the other moderns:

> "Ethics . . . meant truth in the use of materials, not general morality; social betterment was equated with healthy living conditions, not political liberty; economics meant efficiency in production, not the welfare of the individual in industrial society . . ." (Boyle, 1977:342)

The modernists had an abiding concern for the role that architecture played in society, but their belief in scientific rationalism as a response to social conditions was clearly inadequate. Le Corbusier's statement at the end of *Towards a New Architecture*, "Architecture or Revolution. Revolution can be avoided." exemplified this belief in the ability of architecture to determine society's behaviour and its future. In this sense, the modernists were not that far removed from Pugin and Ruskin. For the postmodernists, however, that belief has been abandoned with Venturi's admonition that architects should just do their job and leave these other relationships to those people better suited to them.

Concurrent with these shifts in architectural theory, the practice of architecture has shifted steadily towards business. The onset of professionalism placed architecture squarely in the business world with all of the logic of its organization and motivation. Like the business model and like the formalist model of architecture, the new profession became self-referential. The concept of service to society came to be service to the profession itself.

> ". . . architects in modern America indeed came to terms with the facts of industry and commerce, but typically at the cost of their ethical responsibilities as independent professionals. The ethics of the individual architect were replaced by the ethics of the architectural office, and the more the architectural office resembled businesses in general, the more did its ethics resemble those of the business world." (Boyle, 1977:342)

Combined with the fundamentally commercial nature of the formalist stance, which, in itself rejected any sense of responsibility to social ideals, "the new profession of architecture replaced the ideals of society with the ideals of the profession itself." (Boyle, 1977:334)

In all of these different streams of architecture - business, theory, craft - there is a separation from society and an increasing reduction in the relevance of architecture beyond its usefulness as a marketing tool or as a personal statement of individual artistry. The question that remains unanswered is: 'what is built and for whom?' This raises the issue of the use towards which resources are put. It is an issue of both politics and ethics. Ignoring it, as Venturi suggests, "by narrowing his concerns and concentrating on his own job"[14] does not answer the question, it only places it out of the range of the architect's influence. Cuff suggests that,

> "to ignore the social context within which buildings are designed is counterproductive for all parties involved, most assuredly for architects. By devaluing the conditions that frame the creative process, a spectrum of constraints and opportunities are overlooked and removed from the potential control of the architect." (Cuff, 1991:56)

That social context involves an understanding of the responsibilities that professionals have to society and how they respond to those responsibilities.

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14. Taking quite another stance, Che Guevara speaking at the UIA Congress in Havana in 1963 said: "Technology can be used to subjugate the people or it can be used to liberate them . . . And whoever says that a technician of whatever sort, be he an architect, doctor, engineer, scientist, etc., needs solely to work with his instruments in his chosen specialty, while his countrymen are starving or wearing themselves out in the struggle, has de facto gone over to the other side. He is not a political; he has taken a political decision, but one opposed to the movements for liberation . . ." (in Comerio & Protzen, 1982:4)

CHAPTER 3
ARCHITECTURE AND RIGHT ACTION

> ". . . you are not a profession that has distinguished itself by your social and civic contributions to the cause of civil rights, and I am sure this does not come to you as any shock. You are most distinguished by your thunderous silence and your complete irrelevance.
>
> *Whitney Young, Jr.* (1968:47)

There is an ethical environment in which all professions operate. In their decision-making process, professionals are affected by events or conditions that are beyond their control yet they must make responsible decisions. That responsibility is integral to the concept of professionalism. The awareness the conditions that affect decisions and of the tools for making responsible decisions is important to the professional.

The architect functions in the arena of development - a rather broad term that can refer to anything from an addition to a house to the planning of cities. The responsibilities that the architect must carry result from the parameters that come with development. Doctors, for example, are faced with other responsibilities and the discipline that studies and refines them is bioethics. In architecture, this field does not yet exist. However, the issues of ethics and development must be addressed by professionals. In so doing, a number of issues must be examined: the role of architecture in society, the responsibilities of the profession, the professional and the

person, the parameters of development, and the basic needs that architectural expertise can address.

3.1. THE ROLE OF ARCHITECTURE

In addressing the annual convention of the AIA in 1968, Whitney Young, Jr., then executive director of the Urban League, presented the assembled professionals with a challenge. While the ghettoes of New Jersey, Detroit, Watts and other cities across the United States were being set aflame, Mr. Young seemed to be suggesting to the architects of America that their silence on these social issues of the urban environment was, or should be, a source of some shame for professionals. The AIA, for its part, was not entirely silent. There were some in its membership that were active in the streets of the city[1]. The majority, though, in architectural circles were headed in quite another direction.

In the midst of the social revolution of the sixties, Robert Venturi issued his 'Gentle Manifesto'[2]. Certainly this was not the first time that an architect has paused to reflect

1. The AIA supported the development of ARCH, the first community design centre, in Harlem in 1964 not only with money but with institutional support that enabled ARCH to seek additional funding from foundations as well as government. Their formal involvement in Community Design Centres began only after the 1969 convention that established the Task Force on Professional Responsibility to Society.

2. Venturi's *Complexity and Contradiction in Architecture* was first published in 1966. His self-described 'gentle manifesto' related entirely to design issues rather than, more typical of manifestos, social issues. As an address to the severity of the Modern Movement, this book created the underpinnings for the rise of Post-Modernism. See also 2.3.3.

on the nature of architecture and its relationship to society. In this century alone, from Adolph Loos and his contentious opinions about ornament and crime, to the modernist search for a Platonic architecture that would take society beyond mere style, architects have been looking for the architectural answer to society's salvation. What made *Complexity and Contradiction* unusual in this litany of manifestos is that it ran in quite the opposite direction to the temper of the times and yet, for such a modest exercise, it seemed to redirect, almost single-handedly, architectural design for the next 20 years.

Now, with the dissolution of Post-Modernism in poststructuralist hermeticism (see McLeod, 1989), and with the further fragmentation of the profession into divisive roles in business *or* theory *or* academics, it is perhaps time for further reflection on the role that the architectural profession can or should play in society. In North America, both the Royal Architectural Institute of Canada (RAIC) and the AIA have initiated discussions, both from within and outside the profession, on the role of the architect in society, the former with its *Inquiry into the Role of the Architect* and the latter with *Vision 2000*.

Despite recent statistical evidence otherwise (Gutman, 1988:3-8), architects would appear to be involved in an ever-decreasing percentage of the built environment. As their professional role is narrowed by a growing army of specialists in all facets of this work, architects seem to be relegated to the facades department of the corporate structure. The marketability of formalism is hardly a new development, though, in architecture. In Britain, after 1820, architects were often called upon by builders "to make elevations as a selling point for the builder or to enforce conformity on behalf of the proprietor." (Saint, 1983:60) Such precedents, though, are hardly consoling to many

professionals today - notwithstanding the stature that Graves or Venturi have reached in such roles. It is still not a satisfying pursuit for the mythic image of the heroic individual architect/artist battling the philistines of pop culture and crass business interests.

Mr. Young's reference to the irrelevance of the profession, no doubt, invoked a certain level of apprehension in the architects at the conference. But the fear of irrelevance can be a powerful motivating force in generating change in the profession. Opportunities can arise out of the search for change but it is entirely possible for these fears to lead to impotence or to the pursuit of short-sighted goals. Those firms that have not been shocked into the passive resistance to change are now hiring marketing staff not only to sell the services of the firm but to read and analyze demographic statistics in order to find those new market niches for architectural services. Should we be specializing in retirement housing? Or health care for the aging? What does the public want, anyway? What about smart buildings? Or 'green' buildings? Can we get the jump on our competition by specializing in one of these areas and meeting the needs of new markets?

With institutional inquiries by the AIA and the RAIC, some of the questions of practice can be answered through the investigation of market trends and polling. By means of a Lou Harris survey in the spring of 1988, Vision 2000 identified 27 social, technological, economic, environmental, political and professional trends after polling 201 people inside and outside the design industry.

Predating the efforts by the AIA, the RAIC initiated in 1984 a more introspective study. Their inquiry arose out of the omission of architecture from the 1983 Applebaum-Hebert Commission on federal cultural policy. Out of this

oversight a number of questions arose within the profession. Did the Commission not consider that architecture to be part of Canadian culture? Despite the fact that the federal government is one of the major consumers of architectural services, did it not consider that there might be some need for a federal policy regarding architecture? If these representatives of the Canadian public found architecture an invisible force or an irrelevant force, what must the Canadian public itself think of architecture and its practitioners? Perhaps they don't think of architects at all. If that is the case, is architecture in danger of becoming completely marginalized? If so, that market niche for which firms so avidly search may be diminishing even more quickly than the profession believed.

These pragmatic concerns of survival as a business, as important as they are, must be seen within a context. Architects are not selling widgets for whatever the market will bear. They are providing a service to society. When the profession considers the context within which it works, it considers goals in a different way than does the widget manufacturer. If society loses interest in widgets, the manufacturer either changes the product or goes out of business. Although these conditions also apply to the architectural profession, - and these RAIC and AIA inquiries into trends and changing roles are strong evidence of the application of such conditions - an additional and more fundamental consideration applies: the responsibility that the profession has to society. Because of these responsibilities or obligations, the goals of the profession as a whole are not like sales projections or the search for new markets. They must be broader than that and they must be immutable.

Professional organizations from law to library science distinguish themselves from other vocations by the setting

out of codes of conduct and responsibility (see Gorlin, 1987). As an example one immediately thinks of the icon of professional declarations, the Hippocratic Oath (see Appendix B), which enjoins the medical profession to a responsibility to its apprentices and to society as a whole. This traditional oath is some 22 centuries old and, while some of its language might now be considered obsolete, its basic precepts have held up remarkably well. There are two parts to the oath: the relationship between the apprentice and the teacher followed by the ethical code which describes the relationship between the professional and both his client and society as a whole. From this foundation one can begin to judge specifics of ethical behaviour within the profession. Outside, society as a whole can develop expectations of the profession. Out of this a moral heritage arises; that is, "the devotion of professional skills to meeting the needs of client groups and, ultimately, to the common good." (Reeck, 1982:38) Does such a moral heritage exist in architecture? Surely we would like to believe it does. One expects that, at its foundation, this would be the case for any profession and that this heritage and attendant obligations are the distinguishing characteristics between a profession and a craft.

Another distinguishing feature of professions, is one that the sociologist E.C. Hughes put forward as "guilty knowledge"[3] or knowledge that can be seen as dangerous in the hands of people without the moral heritage of professions. In addition,

3. Reeck gives the example of guilty knowledge: "The surgeon, for instance, has 'guilty knowledge', because he can remove an organ from a living body . . . the psychological therapist can shape the human mind . . . [Professionals] are ones whose decisions potentially have enormous, even frightful, impact on other human beings and on the environment." (Reeck, 1982:17)

> "they presume to tell society what is good and right for the individual and for society at large in some aspect of life. Indeed, they set the very terms in which people may think about this aspect of life." (Hughes, 1958:79)

Professionals have been commissioned by society to use this knowledge to make decisions that have potentially dangerous and significant implications both for human beings and their environment. They are,

> "exempted from the 'guilt' and . . . as an assurance of meriting such exemption, such specialists are expected to have a more rigorous ethic, to be more client-oriented in the conduct of services to the client, and to control the entry and training of novices so that these concerns about the responsible use of guilty knowledge remain central in the practice of the occupation. These are the occupations traditionally known as the 'professions'." (Herrick, 1978:2)

Society entrusts the professional with the formidable responsibility of using this knowledge for the welfare of society. In turn, "every profession is legitimated by the good faith it keeps with the people it serves." (Smith & Churchill, 1986:85) Under those circumstances ethics becomes an imperative of professional tradition, not a luxury better suited to late-night reflection. Without a constructive ethical standard, the professional can, and occasionally does, lapse into exploitive behaviour in using his/her specialized knowledge.

The depths of exploitive behaviour were based on two conditions: the absence of a constructive ethical standard and the narrow definition of the professional as being merely technically competent. During the Second World War, the death camps exterminated millions,

> . . . under the most rationally planned and controlled conditions. The goal was to exact the greatest output of labor for the smallest input of food, clothing, and services. . . . even more poignant than the sheer magnitude of the slaughter is the fact that professionals were largely responsible for the planning of the atrocity. The agents of death were not simply Nazi thugs. Management professionals were involved through the I.G. Auschwitz Company, a subsidiary of the I.G. Farben Corporation. Medical professionals examined and classified prisoners, selecting those for work in particular occupations. They helped to determine the maximum output obtainable at the least expense. (Reeck, 1982:25-6)

Architects, most notably Albert Speer, were also professionally involved in these atrocities. As Speer remarked, "For the commission to do a great building, I would have sold my soul like Faust." (Speer, 1971:62) Similarly, Mies van der Rohe who worked at both ends of the political spectrum in his early career provoked the comment by Philip Johnson, "How apolitical can you get? If the devil himself offered Mies a job he would take it." (Jencks, 1973:40). Clearly, technical expertise is not a moral agent here. Nor is artistry. This 'guilty' knowledge can be directed towards enabling or exploiting society. It is only when we develop and maintain our moral heritage through professional ethics that this expertise can be used for enabling ends.

The recognition of our moral heritage only begins to address the question of social responsibility of professionals. If we agree that this heritage exists for architecture as it does in medicine, what are the implications for right action within the profession? How do we define right action? Does a common moral heritage exist for a profession, and, in particular, for architecture?

3.2 PROFESSIONAL RESPONSIBILITIES

> Architecture is one of the most urgent needs of man, for the house has always been the indispensable and first tool that he has forged for himself.
> *Le Corbusier* ([1970]:17)

> Perfection of tools, but confusion of aims are characteristic of our time.
> *Einstein* (in Gropius, 1968:4)

In September 1990 a formal complaint was lodged with three Provincial Associations of Professional Engineers by the environmental organization, Probe International. The complaint was against B.C. Hydro International, Lavalin International, Hydro-Quebec International, Acres International and SNC., Canadian consulting firms forming a consortium know as CIPM Yangtze Joint Venture. This consortium prepared the $14 million feasibility study of the Three Gorges Dam in central China. Probe accused the consortium of "glossing over environmental concerns, ignoring significant costs and exaggerating the benefits of the project." (Farrow, 1990) Their criticism went on to say that , " the consortium, by concluding that the Three Gorges Dam is technically, environmentally and economically feasible, has violated the professional engineering code of ethics and has been professionally negligent." (Farrow, 1990) In their letter to the Association of Professional Engineers governing each of these firms, Probe stated explicitly that:

> ". . . we believe our critique [*Damming the Three Gorges: What Dam Builders Don't Want You To Know*] illustrates violations of the Code of Ethics, as amended August 1990 in the Engineers and Geoscientists Act of British Columbia [see Appendix C], including: section 1(a) which states "He [the Engineer] will be realistic . . . in the

> preparation of all estimates, reports, statements and testimony;" section 1(b) which states "He will not distort . . . facts in an attempt to justify his decisions or avoid his responsibilities;" section 2 which states "The engineer will have proper regard for the safety, health and welfare of the public in the performance of his professional duties. He will regard his duty to the public safety and health as paramount;" and section 2(d) which states "He will guard against conditions which are dangerous or threatening to the environment and he will seek to ensure that all standards required by law for environmental control are met." All of these principles, we believe, have been violated by the consortium in its conduct of the Three Gorges Water Control Project Feasibility Study." (Probe, 1990)

This action by Probe should give design professionals some pause for thought on the responsibilities that they have beyond those directly related to their clients.

Professionals make a bond with society. This bond is usually expressed in a declaration by the prospective member. Like the Hippocratic Oath, this declaration has a number of common elements dealing with the designer's responsibility to his/her client, to the profession and to society at large. For example, Article 9 of the Bylaws of the Architectural Institute of British Columbia states:

> "Solemnly do I declare that having read and understood the Act of the Architectural Institute of British Columbia, its Bylaws and Regulations, and having passed the examinations, I am eligible for membership. Further do I announce that I will uphold professional aims, and the art, and the science, of architecture and thereby improve the environment. I also accept with obligation the need to further my education as an architect. I promise now that my professional conduct as it concerns the community, my work, and my fellow architects will be governed by the ethics and the tradition of this honourable and learned profession.(AIBC, 1990:4)

This oath must be taken by all prospective members of the profession and it is administered by the provincial body that regulates those who may legitimately hold themselves out to the public as "architects". In this way, the public has some assurance that those people calling themselves architects have met educational and professional standards that provide some protection of the public good. But what commitment does the professional make to the public, to society, through the oath?

It makes only oblique references to the obligations of the architect to society. The only two references to the world at large are: "improve the environment" and "professional conduct as it concerns the community". In each of these instances those larger responsibilities are referred back to the profession and its governing body. In other words, the oath does not suggest that we have an obligation to improve the environment, only that we should uphold the professional aims of architecture and, by doing so, one of the results of this action will be an improvement to the environment. Similarly, concern for the community is subsumed by the ethics and tradition of the profession. In other words, if the architect follows the tradition of the profession, s/he will fulfill this concern for the community. This tradition and ethical conduct, though, is entirely rooted in two basic areas: the relations between architects and the presentation of technical competence to the public at large.

The latter obligation is highlighted in the oath by reference to the obligation to further one's "education as an architect". To this end, the Provincial bodies governing the practice of architecture regularly hold Professional Development courses that cover a variety of aspects of practice such as: technical details (the application of vapour barriers and insulation, for example), jurisdictional issues (zoning and building bylaws), management techniques

(office practice, marketing), and legal issues (construction law, liability). In British Columbia, the Oath is the only area in which this particular obligation is registered. There is no further mention of it in either the Act or the Bylaws. At the national level, the RAIC has recognized the requirement for continuing education.

> "Conscientious effort with respect to continuing education, whatever the source, is a basic necessity for every Architect. Keeping abreast of change, as well as renewing knowledge gained earlier, is important to the ability of an Architect to offer a viable service to the public, and to do credit to his profession." (RAIC, 1977:3)

This renewal of knowledge tends to focus on the technique of practice rather than the broader issues of the professional's relationship to society at large (except insofar as it relates to issues of liability).

Nowhere in the By-laws or the provincial Architect's Act is there any direct reference to a professional's broader obligations to society. Indeed if we look at Articles 30 - 34 of the Bylaw, under the title "Professional Ethics" (see Appendix D), - a place we might expect to see these broader obligations outlined - we see reference only to rules for advertising, actions that constitute conflict of interest, rules governing the competition for work between architects and the professional conduct of architects. All of these bylaws outline the way architects are to conduct themselves <u>in</u> public, but, unlike the quoted Code of Ethics of the Professional Engineers, it does not delineate the architect's obligations <u>to</u> the public. In the area of 'conduct', for example, the clause states:

> "All Architects are expected to conduct their affairs in a competent and professional manner, and refrain from acts which would reflect unfavourably on the profession as a whole." (AIBC, 1990:12)

The extent of competency remains undefined by the bylaws, but, aside from the legal definition concerning mental fitness, competency may be taken here to mean a working familiarity with current issues of technique (as described above) and as required by the Examining Board of the Institute[4]. "Professional manner" is likewise undefined, but can be taken to mean conduct that exhibits the training that defines the professional; that is, those areas of competence defined by the educational requirements delineated by the Canadian Architectural Certification Board and as outlined by the requirements of the Examining Board of the Provincial Institute. Of equal importance in this sentence, though, is the admonition to refrain from acts that will reflect unfavourably on the profession. Again, the emphasis of conduct concern the actions of the professional <u>in</u> public, not the relationship of his/her actions <u>to</u> the public.

The Bylaws of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, by comparison, state, as Probe indicated above:

> "The engineer will have proper regard for the safety, health and welfare of the public in the performance of his professional duties. He will regard his duty to the public safety and health as paramount . . . He will seek opportunities to work for the advancement of the safety, health and welfare of his community. (Section 14.2, Code of Ethics)

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4. The Examining Board reviews the Experience Record of the candidate for registration, along with the results of the professional examinations. All of these requirements are focussed on areas of technical competence (see Appendix E) such as: Project analysis, Schematic Designs, Design Development, Construction Documents, Administration of Construction Contracts, Cost Planning Control, Coordination of Consultants, Tender Award, Office Administration. (see AIBC "Architect in Training Program: Outline of Performance Requirements", 1983.

Here the professional's responsibilities to the public are made explicit. These responsibilities are seen to be overriding. While the engineer will use technical expertise to meet those responsibilities to the public, it is clear that that expertise is in service to the public. At no point do the Bylaws of the Architectural Institute make explicit this overriding duty. The references, instead, typically refer to the architect's decorum in public and the competent execution of his/her technical skills.

Does society have the right to expect any more than technical competence and public decorum from a profession? When a legislative act is passed that creates a profession, what does it expect in return?

Through professional associations, society can expect certain things from members of that profession[5]. The least of these expectations involves technical competence. While professional organizations often begin with broad aims concerning obligations to society and the protection of the public good, these aims are expressed by the profession specifically through technical expertise. This expertise is directed first towards the paying client, and then towards society at large. When a member of the design profession is accused of professional negligence, generally, s/he is considered to have been responsible for a technical failure in the building's performance. These failures range from improper flashing details to building failure.

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5. What society can or should expect from the professional is addressed in 2.4. The examples that follow in Chapters 4 - 8 also give some indication of the extent of those expectations. However, as Blau points out, "the profession continues to resist a definition of its boundaries and internal specialization." (Blau, 1984:7)

The Probe action implies that there is far more to professional obligations and therefore to professional negligence than technical expertise and building performance. Their argument strongly suggests a larger responsibility than fealty to one's client and technical competence. By implication, it proposes that the responsibility the design professional owes to society must take priority over the responsibility to the specific client. In this they agree with the Association of Professional Engineers in considering that the engineer must "regard his duty to the public safety and health as paramount."[6] This raises questions about the nature of the design professional's responsibilities and towards whom they are directed. What are these responsibilities?

In considering this question, the role of the design professional in society cannot be seen in isolation. We are all human beings acting in the world. Our actions as professionals are also actions as human beings. Technical competence, then, as a professional is only part of the responsibility that we assume in and towards society. There are other, broader, responsibilities. In all, these professional responsibilities might be divided into four general areas:

1. The responsibilities that arise out of birth.
2. The responsibilities that arise out of knowledge.
3. The responsibilities that arise from the profession.
4. The responsibilities to one's self.

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6. McLachlin points out further that where a conflict arises between the public concern and the specific concerns of the paying client, the engineer is expected by this oath to discontinue any course of action that is harmful to the environment. (McLachlin & Wallace, 1987:38)

Of these, only the third is covered by the traditional expectations of the profession. What are these other responsibilities? What is the relationship between them, if any? How does one fulfill these obligations?

3.3. BIRTH

> If you want to make use of the advantages of civilization, but are not prepared to concern yourself with upholding civilization - you are done.
>
> *Ortega* (1957:88)

Some obligations are thrust upon us. By the accident of birth, many professionals were born in and/or work in the industrialized nations, countries of great wealth. This wealth was acquired, typically, at some considerable expense to the physical and social environment. In addition to having such enormous resources at our disposal, we, as design professionals, often have the power to influence how these resources are utilized. Available resources can be used efficiently or wastefully. They can be used to advance the welfare of society or to impede it. Because the flow of these resources and the influence of power can be felt transnationally, these obligations, too, flow beyond borders.

Such statements are easily said but poorly understood, particularly in the face of the mystery of birth. The accident of birth leaves some children beginning their lives picking through piles of garbage in the outskirts of Manila, selling trinkets in the streets of Jakarta or their bodies in Bangkok. Some children are born, through no fault of their own, into injustice. Others are born, through no

divine right, into privilege. The privileged accept as 'rights' - that is, society's responsibility to individuals - those opportunities for which others often must fight and die. While we are not responsible for having been born into such privilege, do we, as a result of such serendipity, have the fundamental responsibility as human beings to use the advantages and opportunities afforded us to resolve these persistent inequities? I believe we do.

As members of a world community, we, as individuals, communities and nations, have obligations to the social and physical environment that we all share. As members of the resource-rich minority in that world community, the obligations towards distributive justice should rest with those of us who have rather than those who have not. In simple terms, those of us who have been taking out of the collection plate, have an obligation to put something back in.

There are some contentious implications in these statements. Among them are: the notion that the possession of wealth and resources carries with it an ethical imperative; the conclusion that we have been taking out of a "collection plate"; and the concept of equity as socially meaningful.

These contentious implications must be addressed through a series of steps. A relationship must be established between inequity and the use of resources. This inequity must be seen to exist for reasons other than simply laziness, unfortunate geographic or climatic choices on the part of the poor (3.3.1). Acting justly will be argued as the fulfillment of basic needs (3.3.2). These needs, in turn, should be seen as human rights (3.3.3). The recognition of these human rights gives rise to the concept of distributive justice (3.3.4). With the acknowledgment of distributive justice and these rights comes a basic responsibility

(3.3.5). When a claim for rights is made, a corresponding duty is implied. Among those upon whom this duty falls are those who have the resources to distribute.

3.3.1 Inequity

Does inequity exist? At first glance the question would appear to be ridiculous or, at best rhetorical. The word, though, presumes injustice or unfairness. It is with this implication that the rationale for the status quo arises.

When reference is made to the inordinate command of resources that is granted to the 26 percent of the population in the First World - 80 percent of the world's commercial energy, 85 percent of the world's supply of paper and so on (WCED, 1987:33) - it is entirely possible to conclude that these figures do not represent inequity but rather the rightful rewards of hard work, of industrialization and capitalism. In such a scenario, the poor of the world - the other 74 percent of the population - can be seen as simply unlucky enough to have been born in a location that does not have as healthy a share of the world's raw resources in its waters or its soil. The poor may also have their condition characterized by "their lack of educated personnel, entrepreneurial spirit, expertise and capital, and [by] corruption." (Trainer, 1985:114) These conditions can be seen as self-inflicted. This argument would suggest that the status of the poor is no more unfair than is the self-inflicted sickness of the habitual smoker. Does this characterization stand up to examination? There are persistent facts of inequity that present another picture. Among these are:

- foreign aid and debt
- structural adjustment

- environmental degradation and the poor
- development

.1) Foreign Aid and Debt - Our philosophical concepts of liberalism are poorly reflected in the policies that implement our sense of justice. It is here that economics governs. In the industrialized nations it is commonly believed that, through 'foreign aid', we are acting philanthropically. We are thought to be sharing our technology, our food, and our trained professionals with the destitute of the Third World. In this way distributive justice is achieved. Often, this is referred to in the media as 'Western generosity' and commonly thought of as charity. What occurs, in fact, could hardly be described as philanthropic or generous.

The United Nations Conference on Trade and Development (UNCTAD) described the debt of the Least Developed Countries (LDCs) in this way:

> The LDCs experienced a very rapid growth of external indebtedness during the 1970s as a result of severe external imbalances. As this was not matched by an improvement in their general economic situation, debt service obligations become increasingly burdensome. The LDCs' debt situation worsened considerably in the 1980s when the world economic crisis added to the vulnerability of their debt servicing capacity already exacerbated by their structurally limited export base. Global recession reduced demand for their exports, which consisted mainly of primary commodities. Escalating debt service obligations from borrowings in earlier years, compounded by falling export earnings and rising import costs, exerted severe pressure on the LDCs' balances of payments. (UNCTAD,1987:124)

There are arguments and recriminations as the International Monetary Fund (IMF) and the leaders of debtor states look for someone to blame for this vicious cycle of

impoverishment. Did it arise from a binge of borrowing or a binge of lending? There is considerable evidence now that it was the latter. Commercial lending institutions, which today carry most of the exposure for these debts, actively courted this risk.

> In the 1970s banks had sought to make a quick killing by lending reserves swollen by petrodollars to Latin America ($257-billion) and Africa ($134.8 billion). At that time - from 1974-80 - the lending climate looked rosy: interest rates on developing country loans averaged 10.7 per cent and exports of non-oil exporting developing countries were expanding at 21 per cent. (Bindra, 1990)

As UNCTAD outlined, though, there was a rather vicious bottom line. The growth of exports from developing countries declined to an annual rate of 1 per cent. Interest rates climbed. The oil prices dropped. Suddenly the promise of a miraculous drive to an industrialized economy that could generate the capital to pay down these debts did not materialize. As a result the balances of payments reached the point that in 1987 there was a net flow of financial resources from the developing countries to industrialized countries of $43 billion (US). In 1988 that increased to $50 billion. (Head, 1989b)

The response of the commercial lending institutions shifted quickly from courtship in the 70's to rejection in the 80's. Many of these financial institutions have now written off their Third World loans, with suggestions like those of Donald Fullerton, the president of the Canadian Imperial Bank of Commerce, that the Less Developed Countries,

> "are far less important to the world economy than was believed a few years ago. . . . In other words there are a lot of very interesting things going on in the world, and the banks see many exciting and profitable opportunities within their reach

> which do not involve adding to the LDC exposure." (D. Smith, 1989)

In writing off these debts, the banks have,

> ". . . literally written off those societies and those economies, foregoing their own responsibility for the original loans and for high interest rates, abandoning any prospect of future business profit - all this in order to preserve the absolute purity of the concept of debt? . . ." (Head, 1989b)

The banks would claim - do, in fact, claim - that they are not philanthropic enterprises. They are running businesses. Certainly that cannot be disputed and while this is not the place to raise the issue of the ethical responsibilities of business to society, it is unfortunate that their stance seems to be reflected in the policies of First World governments which are now engaged in cutting financial aid to the Third World while bailing out the banks that initiated these awkward investments[7].

The hoped-for goal of 0.7% of the GNP directed towards aid - a target that arose out the 1969 Pearson Commission and meant to be achieved by 1975 (Browne, 1990:23)- has now been reduced by the Canadian government to a target of .47% by 1995 (Todd, 1991). In the face of these consistent reductions, the already destitute debtor nations of the Third World are sending what little they have left to the financial institutions of the First World. Stephen Lewis referred to this condition in terms of equity:

> You have 25% of the world using 70-80% of the world's resources, having all of the world's

7. In Canada, federal tax regulations have allowed the banks "to claim more than $3 billion in tax relief" as a result of the losses from these bad debts to Third World countries (Brent Jang, "Hope seen for Canadian banks' Third World loans", *Vancouver Sun*, 22JUL91

> riches; and when enormously vulnerable countries come to you for some relief, you exact the last penny of interest as though you couldn't survive without it. The donor countries could forgive the African debt tomorrow morning and never even know it was gone. We lost on the stock exchange on one famous Monday in October 1987 *ten times the entire African debt*. And you will notice that capitalism is still limping along. There is something rotten at the core of a system that behaves so insensitively and punitively towards countries which are in the precise process of responding to every admonition and every requirement laid upon them. (Lewis, 1988:5)

The myth that 'foreign aid' in any way satisfactorily meets the need for equity,

> fails to understand that the South is not able indefinitely to pay its debts, buy our goods, protect our environment, respect our values and refrain from destabilizing our world. (Head, 1989b)

There are, in addition to the obvious implications to this debt burden, further hidden costs that arise out of destabilization. A recent study indicated that the brain drain out of the Third World exacerbates the debt burden.

> "Although the international mobility of scientists is an important way of exchanging expertise, under the present setup the underdeveloped nations are currently the net losers in this exchange," Professor Alan Smithers of the University of Manchester told a Royal society of Chemistry conference. (Reuters, 1991)

This study indicated that over the period of 1967 to 1985 there was an estimated transfer of $51 billion (US) in human capital from India to the United States. Typically immigration policy in First World countries supports this brain drain by restricting immigration to those with specialized skills. UNCTAD recognized this in 1970 when their research uncovered that "some developing countries lose between 20 and 70 per cent of their annual output of

doctors." At that time it was calculated that while the value of this brain drain to the US economy amounted to some $3.7 billion, the value of US aid in 1970 amounted to $3.1 billion. (Reuters, 1991) Even before the debt crisis that began a decade later, there was a net outflow of capital from the Third World.

As it stands, then, the rich countries of the North are draining the South of resources that it can least afford - knowledge and capital. Both of these resources are already in great abundance in the North. It is difficult, in the face of these circumstances, to resort to the argument that the poor are poor because they are inefficient and uneducated. These conditions exist as a result of inequity created by First World development policies. Unfortunately, the developed nations, through the agency of the World Bank and the IMF, exacerbate that inequity through the additional policy measure of structural adjustment.

.2) Structural adjustment - The World Bank and the International Monetary Fund initiated structural adjustment programs in 1979. These programs have tied the approval of Bank loans to the initiation by recipient governments of changes in their domestic economy that are expected to correct external deficits. In other words, to assist Third World governments to improve their balance of trade and the growth of their GNP, the World Bank - supported programs,

> . . . emphasized short-term restoration of balance of payments equilibrium and financial stability (as have IMF stabilization programs over several decades). Their objectives also included improvements in the incentive system and medium to long-term aggregate growth. (Zuckerman, 1989:2)

Viewed in economic terms it makes a great deal of sense to repair these damaged economies by setting them on a path towards stability. Typically this will involve the

government in redirecting its productive energies towards export commodities and in reducing its economic expenditures on the public sector. Once these economies are repaired and are in good health, they are then in a much better position to generate the capital to support social services such as health care and education, to create employment and to repay the interest on the outstanding loans that these governments have taken out. The thrust of the manipulations of the internal policies of the recipient countries was to "give emphasis to measures that raise the productivity of the poor rather than increase consumption through the provision of public services or government subsidies." (Balassa, 1981:2)

In addition to a reduction in government spending on health and education, adjustment programmes would usually include the elimination of food subsidies, devaluation of currency (to discourage import consumption and encourage exports), increasing prices to power, water and transportation, restriction of credit along with higher taxes and interest rates. (George, 1988:52) In return for these conditions, the debtor countries "are rewarded by being allowed to spend the money that they receive on just about anything they like." (Hancock, 1989:56) As often as not, this funding went towards the purchase of arms or was directed towards personal spending sprees from the likes of Marcos or the equally profligate sprees of President Mobutu Sese Seko of Zaire. While skimming "roughly 20 percent of all official foreign assistance to his country" (Dyck, 1990) to amass a personal estimated fortune of $3-billion, he dismissed in 1984 "7,000 teachers from the public school system for budgetary reasons" (Cornia, 1987:34) Zaire, or at least its government leader continues to receive adjustment funding. Mobutu remains, in fact, "the United States' principal African client" in large part because he seems "better than the visible alternatives." (Pfaff, 1990) While the World Bank officials continue to call for political reform, their

interference in the affairs of state continues to be limited to economic policy. The wealthy of debtor nations are customarily protected from the ill effects of these adjustments to economic policies.

Structural adjustment, however, raised a number of problems for the poor of Third World nations. In 1990 such economic reforms initiated in Zambia resulted in a 120% rise in the price of corn meal (Bryant, 1990). Riots ensued when this staple of their diet was effectively put out of reach of the poor. Twenty-seven people died and hundreds were injured. The senior vice-president of the World Bank, Moeen Qureshi, defended the Zambian government's efforts of economic reform and the need for debtor countries to begin to live within their means. While admitting that good governance is important to the successful economic management, he pointed out that "the bank's constitution prevents it from taking purely political factors into account." The political turmoil that resulted from the initiation of the adjustment policies, though, must be taken in stride. "There is no way, when the resources are extremely scarce, to protect everybody . . ." (Melly, 1990)

In Peru after the IMF-sponsored stabilization policy was adopted in August of 1990, the price of bread increased by 1,150 percent overnight. The price of fuel increased by 2,968 percent. In the period immediately prior to the initiation of these policies, wages had compressed by 80 percent. (Chossudovsky, 1991) Under such conditions, it is not difficult to see a relationship between economic policy and the recent outbreak of cholera throughout South America. The major banks have maintained a credit embargo on Peru until such time as its external debt is considered to be under control. Until further limits are made to "future public investment in the very social sectors whose chronic

deprivation has bred the present health crisis"[8] (Todd, 1991), the IMF, the World Bank, and the international financial community will continue to 'adjust' the Peruvian economy. In the remaining months of 1991 it was predicted that fatalities would reach more than 40,000 in the region. Under such circumstances, the 'entrepreneurial spirit' expected by the funding agencies to bring the poor out of their condition can hardly be expected to thrive. And without hope it will be difficult for the debtor nations to "grow out of debt" as the World Bank and the IMF expected as a result of these adjustment policies. Even if, under such dire conditions, the debtor nations could 'grow out of debt', they would be faced with debilitating and exacerbated environmental degradation - degradation that will affect not only the poor of the Third World, but the whole planet.

.3) Environmental Degradation - In an effort to improve their balance of trade some debtor nations are using their own countryside as a toxic waste dump for First World industrial waste. Nations in Africa, Central and South America as well as India and South Korea have been involved in such dumping attempts. Often the deals proposed are very difficult to resist.

> "In one deal, Guinea-Bisseau was offered $40 per tonne for 15 million tonnes of foreign industrial waste. The total payment of $600 million would have been four times the West African country's gross national product, and twice its foreign debt." (McIlroy, 1989a)

While many of the debtor nations have been offered hospitals, roads and medicine in return for the permission

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8. It is interesting to note that while civil spending is attacked, arms budgets are not largely because "such measures would be 'interfering in the internal affairs of sovereign nations'". (George, 1988:22)

to dump this waste, some are now, like Nigeria, banning waste imports.

In the face of such behaviour and with the burden of structural adjustment, the debtor nations are now faced with additional conditions on continued lending from the World Bank and other agencies. Barber Conable, president of the World Bank, proposed, at their 1989 annual meeting, that environmental impact assessments be sharply upgraded. This resulted from the increasing scrutiny that environmental organizations placed on the activities of the Bank and its lending policies (Gherson, 1989). It was argued that the Bank should be "using its leverage to promote better environmental policies in the same countries " that were undergoing structural adjustment (Mukherji, 1989) Spurred on by some of the more overwhelming despoliation that resulted from World Bank-aided projects in the energy, forestry and agricultural sectors (see Hancock, 1991; Adams & Solomon, 1985), environmentalists sought to temper these developmental excesses through impact assessments. As necessary as this environmental sensitivity is, though, the sources of environmental degradation are not in the Third World. The sources are located where industrial production, the use of automobiles, of refrigerants, of chemicals is the greatest - that is, the First World (see WCED, 1987; McIlroy, 1989b; Trainer, 1985). To add further conditions for Third World debtor nations on the lending of badly needed capital suggests a yet another level of imperialism - this time of a kind of environmental reductionism that relegates "the cause of social justice to the back burner" (Stanfield, 1991:6). Barber Conable said,

> "developing countries have been advised not to replicate the environmentally unsound policies and practices of the industrialized world. But unless such advice is accompanied by viable alternatives, it implies that developing countries should

> stagnate (while) the richest nations remain free to maintain their industry-based wealth. This is unacceptable." (Conable, 1989)

So when the Chinese policy-makers say they want to see a fridge in every kitchen by the year 2000, this will mean an enormous increase in the production of CFCs unless there is a 'viable alternative'. Moral suasion is not likely to be an acceptable solution. While it is possible to replace CFCs as a refrigerant with more benign chemical formulations, the rights to these formulae are owned by private companies. Authorities in India and China have said that they are willing to use these replacement chemicals but "only if the rich nations pay for them." (McIlroy, 1989b) Knowing, as we do, that it is absolutely necessary to the survival of the planet that CFC production cease, are we willing to pay?

.4) Development - When we use the term development we would do well to consider what we mean by the term, and towards whom we direct it. A dictionary yields provocative definitions. One refers to growth and expansion and another refers to evolution and maturation. Often our concept of development has tended strongly towards the former at the expense of the latter. This idea of development as expansion favours the model perpetuated by the industrialized nations. The latter concept would tend to favour a more participatory development at the grassroots level. The former tends to view development both as philanthropic aid and as market expansion, the latter more as equal partnership. Behind these differing perceptions of the concept of development there are questions: development for whom and for what motivation?

At a conference in the fall of 1990, Patricia Keays used as an example of the more traditional concept of development, a hunger project in Zimbabwe. The way the project was set up

by the donor agency, the local people were faced with questions as to who was going to eat, what they could eat, and how much of it they might get. The terms were dictated by the funding agency to such an oppressive extent that the field workers decided finally that starvation was better than capitulation. What this said to her is that a 'development of transformation' was required and that transformative work needs to be undertaken by the 10% of the population that controls resources rather than the 90% of those who don't. There are two main points that fall out of this story:

1. that the "preoccupation with the project cycle, external controls and budgets are the trademarks of conventional development approaches." (Gohlert, 1991:8) This preoccupation does not function well at the field level. The priority of documentation often overtakes the priorities of the community itself. (see Hancock, 1991:124-128)

2. that unless people are involved directly in development what is undertaken is not development at all. Under such circumstances the poor become the *objects* of development; in effect, the vehicles for programs, projects and investment[9]. As a result, the

9. With 78% of Canadian Overseas Development Aid (ODA) remaining in Canada (Keays, 1990), it is not difficult to see why the poor are necessary as vehicles of development. It is an approach that the government uses in its domestic housing delivery and is consistently used by Canadian government officials to inspire the Canadian public about aid. This represents not just the former stance of the government towards foreign aid (see Clarke & Swift, 1982:149-211), but their current thinking as well. The vice-president of CIDA, Lewis Perinbam was quoted in September of 1991: "It's time to regard international development as an investment rather than a public expenditure. It is the bridge to our future. For instance, the funds we have contributed to non-governmental organizations that take young Canadians to the far corners

> goals and priorities of development will vary widely depending on whom one asks. If the poor themselves are not included in the framing of priorities, as, typically, they are not, then those priorities will be skewed to meet the needs of the donor and recipient agencies. "As a Senegalese peasant commented after one mission of high-powered development experts had made a cursory tour of his village: 'They do not know that there are living people here.'" (Hancock, 1991:125)

Our conventional development paradigm - in demanding the integration of local economies in the international market, in steadfastly burying the needs of the poor in a growth-centred, top-down model that exacerbates the disenfranchisement of communities - aggravates inequity. This model typifies governments' domestic policy in housing, as well (see Chapter 5).

The privileged world in which we live is intimately tied to the economies and ultimately to the inequitable social conditions of the Third World. Our access to resources is gained at some expense. It does not arise inconsequentially out of nothing. The expenses of development are most often paid by the people who can least afford it - the poor of the Third World. It is difficult to justify or rationalize this imposed inequity when nearly half of the world cannot meet even its basic needs.

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of the globe have created a Canadian presence in more than 100 countries. They have opened doors for our private sector in countries where it would otherwise be unknown." (*The Globe & Mail*, 10 SEP 91)

3.3.2. Basic Needs

There are two perceived levels of basic needs - the biophysical and the psychosocial. The former, or first stage, is a necessary element in sustaining life and is related to the minimum requirements of the family for private consumption. The latter, the second stage, is related to the essential services provided by the public sector. In 1948, the United Nations, in its Universal Declaration of Human Rights, spelled out those basic needs as food, clothing, housing, medical care, social services, security, education, dignity, and "the free development of [individual] personality. (McHale, 1978) The basic needs that are generally thought of as the first stage, the biophysical, are those of food, shelter, clothing and household goods. Those of the second stage, the psychosocial, are education, health, public transportation, sanitation and water supply. (ILO, 1981) These can only be supplied through the intervention of some higher authority or social organization. When the state or the community is unable or unwilling to provide these basic rights for its citizens, then that responsibility passes on to those organizations that can realize these rights and meet the basic needs of the community. In addition to those infrastructural needs, the second stage encompasses a wider range of individual needs such as security, dignity and self-actualization (McHale, 1978; Nevis, 1984) These needs, too, arise out of society and the individual's relationship to it. They are difficult, if not impossible, to quantify. Nonetheless, they exist within this hierarchy of basic needs. Food, water and shelter are more fundamental than self-actualization - after all, one must be alive to be able to consider one's dignity and self-actualization - but both the biophysical and the psychosocial needs are basic to human life.

The essential tenet of the basic needs approach to development is "that the poor groups in society be made the focus of development and helped to meet their most basic needs." (ILO, 1981) As elementary and obvious as this approach might be in addressing inequities from the bottom up, there are implications to the implementation of this simple idea. One of these implications is social transformation. In order to address these inequities, there must be some redistribution of existing assets and income and there must be some redistribution of political power through decentralization. (Soejatmoko, 1979; Blunt, 1985; ILO, 1977, 1981; Leipziger, 1981)

The concept of basic needs and the implied transformation that accompanies it, do not come as a revelation to those who do not have the political power, the resources or the equity. Because the developed nations control those resources, the responsibility for their redistribution rests first with them. These are responsibilities, too, that arise out of being human. It is up to us to choose how we will act upon those responsibilities (and how they will act upon us).

3.3.3. Needs as Rights

With increasing frequency, the expansion of urban development has given rise to conflicts of rights. While the validity of these rights in themselves is still disputed, the conflicts between communities, as well as between species, grows as the limits of frontiers are reached. Typically these rights, if they are considered at all, are viewed as competitive. Communities are given choices by governing authorities: either housing or farming; either housing or parkland; either liveability or affordability. In the Third World these are profound choices. In the First World they are more often lifestyle

choices; that is, the choice between productive farmland or a golf course, or occasionally, between housing and the aesthetic value of open space. In either case, the conflict is between competing uses of land; land that, in most urban areas, has become increasingly unavailable for further development either as a result of existing use or restrictive zoning.

The frontiers that we are reaching as our cities expand are limits that occur in urban development throughout the world. The way in which communities attempt to resolve these conflicts determines the health and liveability, not only of those communities themselves, but of the globe.

.1) The Concept of Rights - When a child is born, does he or she have rights that arrive with that first breath? We know that this child has basic needs, without which life could not continue. But is the fulfillment of these basic needs a human right? In other words, once alive, does this child have the right to a support system that will allow the child to continue to live? Or, further, a right to thrive?[10]

The 1948 United Nations adopted the Universal Declaration of Human Rights. This document delineates three basic categories of rights:

> "1. civil rights and liberties, such as speech, publication, association, religion movement;
> 2. political rights, such as the ability to influence government and choose representatives;
> 3. social and economic rights, such as the right to work, the right to social security during illness and old age, the right to an income consistent with human dignity, the right to

10. See Abraham Maslow, *Toward a Psychology of Being*. New York: D. Van Nostrand Company, 1968. regarding the hierarchy of needs subsumed, according to Maslow by the need for self-actualization.

> leisure, and the right to an education." (Hulchanski, 1989:7)

The first of these categories of rights can be considered to be generally negative, in that it provides freedom from the restrictions of others. The obligations of others that correspond to my civil rights are to leave me alone, to refrain from actions that restrict my liberties.

The second and third categories tend to be positive rights in that the obligations of others in realizing these rights requires action and, frequently, money. While there are costs associated with our right to influence our governments, we have come to accept these costs as a legitimate price for our ability to exercise those rights. It is the third category of rights that remains contentious. Unlike the right to be left alone, the right to housing entails some obligation on the part of society to fulfill that right through the provision of services, the transfer of wealth and the investment of resources.

.2) Housing Rights - Articles 22 to 26 of the Universal Declaration of Human Rights concern the rights of the individual to social security, employment, leisure, basic needs, and education. All of these rights concern social justice rather than individual freedom (Miller, 1976:79) Article 25(1) states:

> "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care . . ." (in Sieghart, 1985:176)

This article refers to the basic biophysical human needs. Without food, the child whose rights concern us here will surely die. Indeed, according to Unicef, these children have been dying from starvation and preventable diseases at

the rate of 250,000 every week (see Vallely, 1990:3). Such statistics would tend to make this assertion of human rights a claim based on universal and urgent need, that of survival itself. As the right to live is affected by the access to food, so too is it affected by access to housing (see Hardoy et al, 1990).

The right to housing is acknowledged in many other international covenants as well as in the constitutions of an increasing number of nations. Through these documents the philosophical recognition of basic needs is grounded in law. If we accept the right to live, then we must accept the right to those basic needs that support life. Housing is one of those basic needs.

.3) Needs as rights - Is there a right to survival? Is the fulfillment of these basic needs a right? Schachter suggests that the question is essentially rhetorical.

> "It has become virtually platitudinous to suggest that everyone is entitled to the necessities of life: food, shelter, health care, education, and the essential infrastructure for social organization. At the same time, it would be considered quixotic to suggest the classical Marxist maxim 'to each according to his need' as a criterion of distribution. Even Marx regarded that principle as the distant goal of a classless and abundant society. Yet when construed as a standard of minimal need it loses its utopian quality. (Schachter, 1977:7-8)

It has been further stated that there are ideological implications to such a question. For some it is not quite rhetorical. If phrased in a different way, it could, and has been asked, 'Can society afford it?'

> "The conservative counter-attack on the welfare state is above all an attack on the idea that these [basic needs for food, shelter, clothing, education and employment] make rights; an attack

> on this idea puts into question the very notion of a society as a moral community." (Ignatieff, 1985:13)

Ignatieff's statement strongly suggests that we cannot legitimately ask this question within a moral framework (see also Bradley, 1951). If we accept the concept of morality at all, then we must view basic needs as rights. The definition of these needs will vary with circumstances, but there is a basic level of need that crosses the boundaries of circumstance.

Miller (1976) refers to three different kinds of needs: instrumental, functional and intrinsic. The first two are means to other ends while the last is an end in itself. Needing a key to enter a house is an example of the former and needing food is an example of the latter. With food and other intrinsic needs we must consider "the harm which the person will suffer through not being given what we say he needs." (Miller, 1976:130) The satisfaction of these intrinsic needs can be considered as a matter of humanity or as a matter of justice. The premise that underlies the former is the avoidance of suffering and the premise that underlies the latter is the principle of equality. There is, Miller points out, an intimate relationship between the satisfaction of needs and equality. In turn, "justice consists (minimally) in a distribution of resources according to need, and that this forms a primary part of [the egalitarian] conception of equality." (Miller, 1976:149)

Streeten argues that the cost of implementing the access to basic needs is prohibitively expensive, to the point, he says, that "few would assert such a right even in rich societies such as the United States . . . In poor, developing societies such 'rights' have to be even more carefully examined." In addition to the expense and the

troublesome choices in resource allocation for poor countries, such a commitment "would blunt incentives for work and saving." (Streeten, 1981:189)

Beyond the fact that this weekly tally of 250,000 children will hardly have the opportunity to have their incentives blunted, Streeten's argument concerns only the difficulty in implementation, not the existence of these rights. Further, it assumes that the fulfillment of these basic needs is confined by national boundaries. He reluctantly accedes the concept of positive rights:

> "If it is accepted that our common humanity and our membership in specific societies such as the state impose some obligation on us, the right to a fair share of the available resources would appear to be a human right . . ." (Streeten, 1981:192)

While accepting the notion, he still places the responsibility firmly within national boundaries. For example, in implementing the right to education in poor countries, he suggests that:

> "A vastly greater share of a much smaller national cake (and budget) would have to be devoted to education, with the inevitable result that less would be left over for the implementation of other objectives, including other social and economic 'rights'." (Streeten, 1981:190)

When the United Nations referred to this document as the Universal Declaration of Human Rights, it would suggest that, through its universality, these rights hold irrespective of national boundaries. The existence of economic hurdles to the implementation of these rights does not address the validity or existence of the basic needs or the rights to which they are attached. These basic needs,

though, must be seen within the wider context of the needs of non-human nature.[11]

.4) Environmental Rights - John Passmore has proposed that the environment itself cannot be seen to have rights as such, but we can talk about the rights of humans being limited in their options to do whatever they like with the environment. This can be seen more in the nature of responsibility rather than a limitation of rights. (Passmore, 1974:116) De George indicates that to use the term 'rights' in this context is to create confusion. "The usual ways of unpacking rights in terms of justifiable moral claims, or in terms of interests, or in terms of freedom do not apply to nature or trees." (De George, 1979:94) The ability to choose between acts, or to have interests implies the ability to act consciously.

William Leiss, though, following Christopher Stone, equates the natural environment to other entities such as corporations, states, or infants. Although none of these has the ability to represent its own interests, people can and do act as advocates on their behalf.

> "Under the law of guardianship a natural entity (a living thing, group of things, or part of terrain) could be represented in a regular legal proceeding, where the present or projected human impact on that entity would have to be explicitly defended and assessed. (Leiss, 1988:120)

Whether we consider it to be a human responsibility to the natural environment or as a right with which nature is imbued, these rights or responsibilities extend across

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11. See William Leiss, *The Limits to Satisfaction: An essay on the problem of needs and commodities*. Kingston: McGill-Queen's University Press, 1988. He argues that, in any discussion of basic human needs, there must be awareness of the environmental impact of those needs.

national boundaries and require moral action from human beings. Acid rain in the northeastern North America or the fallout from Chernobyl indicate the irrelevance of these artificial boundaries particularly with regard to the effects of irresponsible human behaviour.

From another stance, however, we might suggest that, aside from the contentious issue of rights-claims by the environment itself, human beings have a right to a healthy environment. Certainly by implication in Article 25(1), human beings do have the right of access to a healthy environment if only in the sense that by their right to "a standard of living adequate for [one's] health and well-being" can only be achieved if the support system for that well-being exists. If we can agree that human beings, if not all lifeforms[12], have a right to live, then we cannot remove the vital support systems that maintain that life without injuring the life and its rights.

.5) Responsibilities - The existence of universal rights implies that the corresponding obligations hold across state boundaries as well.

Prior to the Second World War, the concept of human rights did not extend beyond national borders. In international affairs, the way in which a sovereign state treated its citizens was not the legitimate concern of any other state. In 1936, any complaint about the treatment of the German Jews through the enactment of the Nurnberg laws would have been readily dismissed in the still well-used phrase, 'an illegitimate interference in the internal affairs of state.'

12. see Albert Schweitzer's ethics of 'reverence for life in his *Civilization and Ethics*.

Paul Sieghart points out that since the war much has changed.

> "For since Hitler's and Stalin's time there has been a change in international law so profound that it can properly be called a revolution. Today, for the first time in history, how a sovereign state treats its own citizens is no longer a matter for its own exclusive determination, but a matter of *legitimate* concern for all other states, and for their inhabitants." (Sieghart, 1986:vii)

This 'legitimate concern' might be taken further to a legitimate responsibility to see that these rights are honoured. To suggest that this responsibility exists for individuals itself implies that one should be moral.[13] Leaving that question aside, though, the nature and legitimacy of this responsibility can be challenged. Rawls puts forward the concept of natural duties as principles that apply to individuals "without regard to our voluntary acts . . . [and] . . . are owed not only to definite individuals, say to those cooperating together in a particular social arrangement, but to persons generally." (Rawls, 1971:114-5) These duties include:

> - the duty of helping another when he is in need or jeopardy,
> - the duty not to harm or injure another
> - the duty not to cause unnecessary suffering
> (Rawls, 1971:114)

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13. See F.H. Bradley, *Ethical Studies*. New York: The Liberal Arts Press, 1951. In "My Station and its Duties" he suggests that the reality of the individual is as a social being. The individual's station in society entails obligations that the individual should fulfill in order to act morally. As with his concept of duty for duty's sake, Bradley makes the point about the question 'Why should I be moral' that it "assumes that virtue is a means to something not itself." The question does not make any rational sense.

How far, though can these natural duties extend? If we accept Leiss's point concerning the context of human needs within the limits of non-human needs, we must consider the notion of a natural duty that extends the requirement of mutual aid and non-harm beyond other human beings to the environment itself.

In light of this expanded responsibility, Hans Jonas has referred to the need for a new ethics, in part because "no previous ethics had to consider the global condition of human life and the far-off future, even existence, of the race." (Jonas 1984:8) He suggests a rewording of Kant's categorical imperative[14]. Such an imperative must account for the new dominion over which technology has made us responsible. It might say:

> "Act so that the effects of your action are compatible with the permanence of genuine human life." (Jonas, 1984:11)

Another way of putting this imperative lies in the definition of sustainable development:

> "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meed their own needs." (WCED, 1987:43)

If we accept this as a basis for ethical action, then conflicts will necessarily arise between these rights and responsibilities.

.6) Rights in Conflict - If we accept the Universal Declaration as a recognition of the rights to housing, food,

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14. Kant's categorical imperative states: "Act only according to that maxim by which you can at the same time will that it should become a universal law." (Kant, [1959]:39)

employment, education, medical care and other social and economic rights, we are still faced with growing conflicts between those basic human rights and the fundamental responsibility to the future that we have as human beings.

In the Pacific Northwest of North America, the right to employment is currently seen to be in conflict with the needs of the environment. The spotted owl, considered to be endangered, has had its habitat threatened by the logging industry. The choice has been presented as either the demise of yet another wildlife species or the continued right to a livelihood.

Farmland is destroyed by urban development.[15] Transnational corporations seek alternatives to tight environmental controls by relocating to Third World countries that have a more immediate need for hard currency than they do for downstream environmental health. These illustrations can be found in the daily newspapers in any city in the world. One group believes that the natural habitat is more important than money. Another group believes that progress and development are more important than birds. Yet another group wants affordable housing more than wildlife sanctuaries or locally grown food.

Are we dealing here only with different ways of perceiving the problem? In other words, loggers perceive environmentalists as stealing jobs from their resource industry, while the environmentalists perceive their work as an attempt sustain an environment and, in so doing, preserve

15. British Columbia, for example, has only 2% of the total Class 1 prime agricultural land in Canada. Of that, between the years of 1981-86, 21% of it was converted to urban use. In Ontario, with the highest percentage of total Class 1 land, 78% was converted to urban use. See Environment Canada, A State of the Environment Fact Sheet No. 89-1

an industry in an altered (and more sustainable) form. If this is the case we are dealing then with a paradigm shift towards sustainability. Such a shift is beginning to occur, albeit at a glacial pace.

Still, these are competing groups with First World options. In the Third World, the choices between housing and food, employment or environment are more immediate, profound and, finally, untenable. Like William Styron's novel, *Sophie's Choice*, communities in the Third World now have grim options thrust upon them.

These options faced by the Third World suggest that, aside from shifting our perceptions of development, we are reaching the limits of frontiers. If this is the case, the conflict between rights will grow even with a paradigm shift.

In exercising our rights, we will be faced with increasingly untenable choices. In contrast to the overdeveloped world, these choices are already occurring in Third World cities. The poor have no choice about the location of their housing. It is typically in the most fragile and/or the most degraded. (Hardoy & Satterthwaite, 1989:159). Nor do they have choices about the availability of infrastructure. The either/or choices into which they are forced are not lifestyle choices, they are matter of survival.

Within the framework of the market economy the tragedy of the commons[16] will persist. And yet the centrally planned

16. From Garrett Hardin's essay, "The Tragedy of the Commons", in which he posits that rational beings will competitively overexploit that which they do not own. He concludes that the logic of the commons can only be overcome by mutual coercion. We must choose then between life or liberty. He suggests that "injustice is preferable to total ruin." Garrett Hardin, *Exploring New Ethics for Survival*, p. 261.

economy cannot respond with any sophistication to the infinite variety of information that allows individuals to participate in the process of allocating resources for commodity use. (Daly & Cobb, 1989:46) If development is to function at all, it must move beyond the radical opposition of competing ideologies. While the environmentalist is correct in saying that there will be no future in which to exercise the human right to housing unless we make the choice for the sanctity of the environment, we cannot at the same time say that this precludes or postpones the right to housing or employment.

Our decisions about development must change to accommodate global reality and responsibility. This cannot be accommodated within the framework of existing political structures, at the local or the national level. If we continue to deal with policy as the result of competing interests, then we continue to be faced with these untenable choices between the environment or economics, food or housing, life or liberty. To choose either is inhuman. Sustainable development can only mean a third path between them. In the context of these difficult choices, an understanding of the concept of distributive justice is important.

3.3.4. Distributive Justice

Similar to our obligations to the future and the physical environment, we have, by dint of our birth into privilege, social obligations to our neighbours and our community. Fulfilling these obligations requires us to consider issues of social justice and equity. To some the relationship between the distribution of the world's resources (wealth) and social justice, or for that matter, social conditions

is, at best, a tenuous affiliation - one better left to outmoded and utopian Marxist economic theory than to the world in which we live. The world in which we live, however, is filled with evidence of the inequitable distribution of resources. The tools by which we decide on the distribution of the world's goods and services is the domain of distributive justice.

From Plato's *Republic* to Rawls' A *Theory of Justice*, we, as human beings, have been concerned about the moral concept of justice. Justice involves "restoring the moral equilibrium by the appropriate action - giving a reward, repaying a debt, passing sentence, administering punishment, and the like." (Baier, 1958:207) Retributive justice concerns punishment for wrong action. Distributive justice concerns equity and the repaying of 'debts'. The term that is commonly used for distributive justice is 'social justice'. Miller defines social justice as "the distribution of benefits and burdens throughout society "(Miller, 1976:22). A distinction should be made here between conservative and, what Miller and others have termed prosthetic justice (Raphael, 1964). The object of the former is "to preserve an existing order of rights and possessions, or to restore it when any breaches have been made." (Miller, 1976:25) The object of the latter is to change that existing order to reflect a more equitable distribution of goods and services. Prosthetic justice has also been referred to as reparative or restorative justice (Smith & Churchill, 1986:92). The rights and entitlements of the individual tend to be the concern of conservative justice while the unrealized needs of the many tend to be the concern of prosthetic or restorative justice. This gives rise to a conflict between rights and needs, the former being conservative and the latter restorative.

Typically this conflict is centred on the concept of market justice, the dominant model of justice in the capitalist state. Under market justice needs are satisfied on the basis of one's ability to pay. In meeting basic need for food, the farmer is not required by law or by duty to honour that right of others by giving away the crops or produce. The baker sells his/her bread for a price that is based on supply and demand not on rights. While it would be unacceptable to say that the producer of food alone has an obligation to meet basic needs outside of the jurisdiction of market justice, there is still an individual human responsibility to distributive justice. Justice, then, is both personal and public. It defines both personal virtue and, to use Ignatieff's term, 'the moral community'.

With the rise of the market system, the moral community began to be governed by the economic relations. Distributive justice arose out of economic justice (see Macpherson, 1985:3-4) as early as the fourth century BC with Aristotle[17] a distinction was made between two branches of economic justice: commutative (in acts of exchange) and distributive (in the allocation of society's whole product). Macpherson points out that Aristotle,

> ". . . saw that his own society had moved well along the read from the simple to the advanced market economy. And he made a strong ethical case

17. see *Politics* 1257a - 1259a in which the fundamental distinction is made between *oikonomia*, or household management and *chrematistics* or 'wealth-getting'. "Hence some persons are led to believe that getting wealth is the object of household management, and the whole idea of their lives is that they ought either to increase their money without limit, or at any rate not to lose it. The origin of this disposition in men is that they are intent upon living only, and not living well . . ." (*Politics*, 1257b). The distinction between *oikonomia* and *chrematistics* and the rise of the latter in the market economy has profound effects on both ethics and the environment (see also Daly & Cobb, 1989:138-158)

> that the latter was destructive of the good life. He called it unnatural, on three grounds: it makes acquisition the goal instead of merely a means of the good life; the accumulation process is without limit whereas the good life requires only limited material wealth; and it is a means by which some men gain at the expense of others, which is unjust." (Macpherson, 1985:6)

The relationship between justice and the well-lived life is integral to Greek thought. Human integrity, as the Greeks defined it, "is taken for the whole of morality, ... the sum of the virtues. The Greeks also called this sum of the virtues 'justice'." (Kaufmann, 1973:174)) These four cardinal virtues were:

> "*justice, prudence, temperance*, and *courage*. *Justice* means a fair distribution of costs and benefits, *prudence* a due regard for one's own welfare and wisdom in handling one's affairs, *temperance* a moderate way of life and self-control, and *courage* the ability to face danger for the sake of principle. To the cardinal virtues theologians added the "theological" virtues of *faith, hope* and *love* - *faith* meaning the confidence that the unseen truths of God are real, *hope* that the future will be superior in a significant way to the past, and *love* that one ought to give of oneself and one's skills to others in need." (Reeck, 1982:44)

The act of becoming more fully human, then, requires our attention to distributive justice. A sustainable future depends on our concept of distributive justice as well. This leaves us with a profound responsibility.

3.3.5 Responsibilities

As a result of the fortuity of birth, then, those of us who have access to the resources have a responsibility to use them wisely. Those resources give us the wherewithal to effect distributive justice and thereby honour basic human rights. An example in the field of architecture give us

some idea of the responsibilities that flow out of this understanding of rights, distributive justice and the use of resources.

The RIBA and the Department of Energy in England sponsored a conference in January 1990 entitled "The Architect: Energy and Global Responsibility". During this conference it was pointed out that building stock currently consumes 50% of all energy in the UK (Lorch, 1990:50). This raised the issue that, beyond the need for architects to be technically competent in energy efficient design, we have an obligation to society as a whole to contribute to the reduction of energy use in buildings. The Secretary of State for Energy went so far as to suggest "that energy efficiency should be incorporated into the RIBA Code of Conduct" (Lorch, 1990:51)). This expanded obligation to the environment has many implications. On the one hand, it expands our professional responsibilities beyond the merely technical. On the other hand it can make us all culpable in environmental degradation. This would hardly meet with Jonas' categorical imperative (see 2.3.2.5). On a small scale, if we design houses with hot tubs or, worse, heated driveways, we may serve our clients' needs at the expense of the greater needs of the environment. How much can we support conspicuous consumption in design before we could be charged with aiding and abetting what, at some point in the near future, might be considered a criminal activity in the same way as dumping toxic waste into our rivers? How do we respond? Do we refuse the job? Argue against the use of such items? Acquiesce to client demands? "I was only following orders.", has not often worked as a defense. In addition to that, though, at least for engineers, the Code of Ethics gives a clear answer (see 2.2; Appendix C; McLachlin & Wallace, 1987:38)

The borders of our traditional ethical systems were closed; that is, the effects of actions were not cumulative. It is not self-contradictory to will that one's present well-being is worth the sacrifice of the future good. However, within the context of a closed pre-industrial universe, in which Nature was immutable, the choice between a future or no future could only apply to individuals, not to the human race or to Nature itself. The actions of individuals were limited both in space and in time. With technology those borders have opened and cumulative actions can have powerful effects on remote time and space. Under these conditions the future can, in an all too real way, be sacrificed to the present. Kant's categorical imperative cannot circumscribe the ethical actions of this world. The Jonas redefinition and the WCED definition of sustainable development both attempt to recognize this potential. Neither of these statements, though, addresses the question of whether or not there should be a future or why we have any obligation to something that does not yet exist. As Rawls and others have pointed out, this obligation is non-reciprocal. It is in one direction only in that, "each generation makes a contribution to later generations and receives from its predecessors." (Rawls, 1971:290) While Kant and others have found this relationship 'unfair', Rawls suggests that because the condition is unalterable, "the question of justice does not arise." (Rawls, 1971:291) The obligation, however, is there and it is assumed without proof. It is assumed in the same way as the individual parent's obligation the his/her child is assumed and non-reciprocal.

If this obligation is to be met, those whose actions in the world most dramatically affect the future - that is, those who have been born into this privileged environment of conspicuous consumption - must be the first to recognize it and act accordingly.

3.4. KNOWLEDGE

> The importance of knowledge lies in its use, in our active mastery of it - that is to say, it lies in wisdom.
>
> *A.N. Whitehead* ([1967]:32)

Knowledge is the vehicle through which we, as professionals, enact our broader human responsibilities. Unlike birth, about which we have no choice, each of us makes a decision about the pursuit of knowledge. Responsibilities flow out of that choice. We choose to become architects, engineers, interior designers, planners, doctors or lawyers. The availability of the knowledge of these professions is only as a result of the existence of a society that is capable of providing and supporting the education systems - schools, books, training programs - that supply that knowledge. As such it is a benefit provided by society. What we do with knowledge, then, involves the repayment of a debt to society. It is a debt that goes beyond student loans and vestigial alliances with alumni associations. The student and society enter into a tacit agreement by which the student expects to get knowledge from society. Sometimes, as with professionals, this is a special knowledge - a 'guilty knowledge'[18], as Herrick called it - that presents potential dangers to society. Design professionals have

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16. Just what 'guilty knowledge' is in architecture will, of necessity, remain open. The domain of architectural knowledge continues to be disputed and redefined and, indeed, attacked by other organizations involved in the built environment. As Schon understates it: "the boundaries of architecture are continually shifting." (Schon, 1983:77) Chapter 2 indicated some of the reasons for the difficulties in definition. One of the intentions of this paper is in expanding or shifting that boundary once again through the examples that follow in Chapters 3 - 8.

attained this knowledge. What does society expect in return?

Although, as individuals, there is a 'return' in the form of taxation, there are additional expectations that society has of the professional. It expects two things: that this potentially dangerous knowledge is used without malice by its holder and that it be used for the betterment of society. We are obliged, therefore, to use knowledge to its highest and best use. What we mean by highest and best use is, of course, contentious in exactly the same way that the uses to which our tax dollars are put are also controversial. As professionals, entrusted by society with 'guilty knowledge', we must address how we use and misuse the knowledge with which we have been entrusted, what that highest and best use might be and who decides.

3.4.1 Use and Misuse of Knowledge

Buildings and urban design are an integral part of our social environment. As such, design can act to support or thwart social justice and equity. It can do this in two ways: acts of omission or commission in design and the act of development.

.1) Design - We often fail to notice examples of design 'negligence' because, more often than not, they form a background of daily life. For instance, curbs at street corners are now typically ramped so that people in wheelchairs or parents with babies in strollers can cross the street without assistance or inconvenience. Before this program was in place, most of us (those not in wheelchairs) rarely, if ever, considered the curb as an example of inequity. Yet for some it presented a barrier. That barrier was placed there by design, or rather by an omission in design. This obstacle excludes some people from the

convenience of being able to cross the street. The exclusion of some members of society from a convenience that is assumed by others can be seen an infringement of rights. It has, in fact, been so described by the initiators of the Fair Housing Act of 1988 in the United States. This Act expands nondiscrimination provisions to include disabled people and families having children. Under this Act, the provider of housing "may not treat handicapped applicants or tenants less favorably than other applicants or tenants." (Federal Register 1989:3245) This means that, if the design of the housing unit is such that it restricts its use by the handicapped, the building owner is as much as saying, "You can't live here because you're handicapped (or black, or Jewish, or Asian, or female, single, etc.)." This kind of discrimination is outlawed because it infringes on the civil rights of people. In the case of the handicapped, it infringes on those rights by acts of design. Architects, then, have the opportunity to act for or against equity in the design of housing. Their knowledge and the use of it can dramatically affect people's access to civil rights.

A broader point concerns what we design. Just as we have to consider the end uses of our financial resources and our natural resources, we should consider the end uses of our intellectual resources. Stephen Kurtz made this point in reference to design and aesthetic judgment.

> "The development of architecture is thus a record of deeds done. As such, it is, of all the arts, most subject to moral judgment. For buildings create and perpetuate environments for social interaction. In this, they are more similar to bodies of law than to paintings. And although one might scruple to condemn a still life on moral grounds, such legal acts as the fugitive slave law are readily censured. Why not, then, the plantation architecture that was as integral a part of slavery as the laws supporting it? (Kurtz, 1973:5)

In the same vein, the Nuremberg rally was a spectacularly staged event, seen strictly as an example of technique. Albert Speer, in designing this spectacle, helped to make it the success it was. Many professionals now would feel somewhat uneasy about providing their expertise to Nazi rallies. Many architects at that time felt the same way and were forced to leave their homeland in the face of this sickness. In hindsight it would seem easy to make that choice and to condemn Speer's amoral opportunism. The line drawn between right action and wrong action appears obvious. When one draws back from these extremes, though, the clarity of that line erodes. it is here that most of the daily decisions are made by design professionals and, while most of them may be innocuous, some carry with them, as Kurtz suggests, broader implications. Here, the professional must be aware of the implications of policies - policies, indeed, that may not be related directly to architecture at all - on his/her decisions.

.2) Development - Any development creates displacement. Even the development of social housing or a hospital will involve the uprooting of something else. In any design exercise tradeoffs are made. We are constantly making some things easier for one group while creating obstacles for another. How does one set the priorities?

The Probe action against the Canadian engineering consortium is an example of conflicting priorities (see 2.2). On the one hand the engineers, acting on behalf of their clients - the Chinese government - set their priorities on the basis of the expressed needs of the Chinese authorities. This would concern long term energy needs, particularly for energy - starved central China. Meeting those needs will involve the displacement of more than 1 million people and the flooding of dozens of villages and more than 40,000 hectares of farmland. The engineering report recommended

that one of the various alternatives studied "is economically viable and environmentally sound" (Farrow, 1989). Obviously the priorities here are still contentious. The engineers, acting on behalf of their client believe they have met the needs and addressed the priorities of their client. Probe International believes otherwise. It implies that, although the consortium may have met the immediate priorities of the national government, they have not met the broader priorities of the society as a whole, nor have they met the environmental needs of the planet itself. Can this argument be relegated to a technical dispute about the interpretation of scientific knowledge? I expect not. Although certainly the interpretation and weighting of facts will be disputed, the greater issue is one of parameters. Probe has included in its decision-making process about development a broader set of parameters than have the engineers. Naturally enough, the design professionals believed their first obligation was to their client and their second to their profession. What Probe is implying is that, for these professionals, the first order of obligation is to the planet, then society as a whole, then perhaps the government, the client and finally the profession. Their set of parameters is larger. Consequently they have made quite different decisions about the use of professional knowledge. What the engineers consider as the professional use of their knowledge, Probe considers to be negligent use of the same knowledge.

These conflicting priorities and the parameters out of which they develop are further evidence of the obscured line between right action and wrong. Within the narrow parameters of the engineering consortium, their actions were right both to their profession and to their clients. Within the broader parameters of Probe, their actions were not only professionally negligent, but were thwarting justice and equity for nearly a million Chinese citizens who would be

displaced by such a project. But are not the power needs of millions of other Chinese citizens important? At what expense are these power needs met? Is the individual professional in a position to make these decisions?

Again, when one moves away from extreme situations, the clarity between right and wrong action is obscured. Is it in the interests of justice and equity to even consider the design of a dam that displaces a million people in central China, or destroys an indigenous culture in northern Quebec? What about hotel resorts that displace indigenous culture along the south coast of Thailand? Or condominium projects that destroys existing housing and displace elderly renters in a stable neighbourhood.

One can readily see from these examples that the design professional, through his/her knowledge and access to decisions, is entrusted by society with a great deal of power. Knowledge can be used by professionals as a leverage point to effect social justice and equity in a variety of ways from the local to the global scale. An example from the medical sphere might serve as an illustration of this use of knowledge.

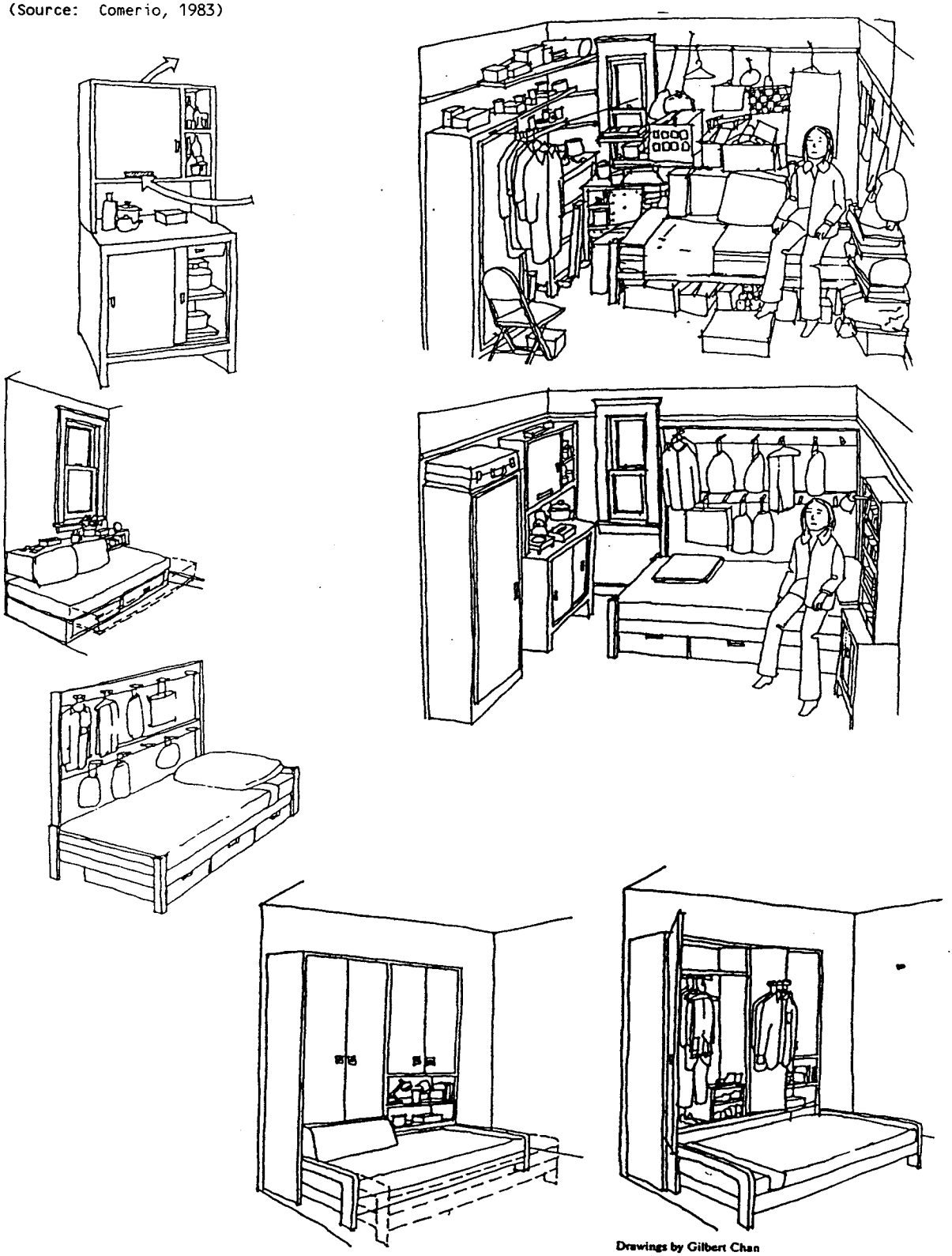
Medecins sans Frontieres (Doctors without Borders), an organization formed in 1969, is headquartered in Paris. While it performs similar functions to those of other relief agencies such as the Red Cross or Care - building hospitals and irrigation systems, training local people as midwives and surgical assistants, and providing clean water, nutrition, vaccinations and other health-promotion measures - it does something that these other organizations don't do. It does not wait for the official invitation of the government before entering the country and providing these much-needed services. This basic distinction has made all the difference in the world to civilians caught between

warring factions in Mozambique or Ethiopia or to the rebel factions in Afghanistan. What MSF has done is organize the medical and technical knowledge of trained professionals and directed it towards immediate need. Because MSF is politically independent and neutral, it can stand behind its belief that "all victims have a right to humanitarian aid." In those cases where authorities are reluctant to let MSF provide for the basic needs of victims of war, famine or other natural disasters, the organization will seek other, sometimes illegal, ways to reach these people. In this way, MSF can use medical and technical knowledge to meet the basic needs of people. In meeting these basic needs, the beginnings of social justice and equity are achieved. Beyond that, they have chosen to meet these needs where the need is the greatest - not where it is convenient, not where it is politically acceptable, but where it is actually needed. The resource of specialized medical knowledge is brought to bear in meeting basic needs and in honouring the right to medical care as outlined in Article 25 of the Universal Declaration of Human Rights.

Another example involves design professionals working in San Francisco's Chinatown. A community design centre called Asian Neighborhood Design (AND), working with tenants in the SRO (single room occupancy)[19] hotels, were trying to make improvements to the accommodations for these tenants. The initial response for architects under these circumstances would be the design of new accommodations. The difficulty with this approach is that it results in the displacement of the very community that such a scheme is intended to assist. AND cast a broader net with their design expertise. Rather than looking strictly for architectural solutions to the problem of space for people living in these 8' x 10' rooms,

19. For a detailed description of SRO housing see Franck & Ahrentzen, *New Households, New Housing*.

Figure 3.1
Asian Neighbourhood Design
SRO furnishings
(Source: Comerio, 1983)



they focused on improvements to the space itself. Because furnishings were the only feature that the tenants themselves could control, AND developed some prototypical furniture designs (see Figure 3.1) that would make these tiny spaces work more efficiently through the design and construction of multipurpose furniture. (Comerio, 1983) By their changing the nature of the problem, something was done to improve conditions for the tenants. The alternative, given the standard architectural response - that is, that the solution to any problem is a building - would have been to wait until some form of funding could be secured. In the meantime conditions for the tenants continue to deteriorate instead of improve. By taking action, AND not only demonstrated their fundamental skills of design, in part by viewing the problem from a new perspective, but they responded at an appropriate level to the problem. Through this response, although they may not have met "a standard of living adequate for the health and well-being" (Article 25) of the tenants, they did effect an improvement in their existing standard. Knowledge, then, was used towards the aim of meeting basic needs.

In both of these cases, sophisticated professional knowledge was being used to improve the lives of people in need. Such improvement begins the process of social justice. It does this not only through the 'revaluation' of people's lives in the improvements themselves but through the redistribution of resources (in this case, design expertise) that meet these basic needs.

The way in which the professional chooses to use knowledge will vary according to the individual and the profession. The 'leverage points' of knowledge can be local or global, small or large but in some fashion fulfilling the responsibility to use knowledge to its highest and best use

requires a commitment to social justice. Even with this commitment, however, difficult choices must be made.

3.4.2 Triage

To expand on that point it would be useful to look at the medical concept of triage[20]. The term comes out of military medicine's method of classifying casualties according to medical need. Casualties are separated into three groups:

> ". . . those who cannot be expected to survive even with treatment, those who will recover without treatment, and the priority group of those who need treatment in order to survive." (Winslow, 1982:1)

In order for triage to be necessary at all, there must be a basic precondition - the dire scarcity of resources. This scarcity of resources may be of trained personnel, equipment, or finances but it is this condition that gives rise to the need to allocate resources.

The basic utilitarian principle is that these scarce resources must serve the greatest good for the greatest number (see Mill, 1957). This principle represents either a 'maximizing' or a 'minimizing' strategy which seeks, respectively, to "achieve the greatest amount of good . . . or . . . to reduce the amount of potential harm." (Winslow, 1982:63) The basic egalitarian principle, on the other

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20. While its use in the medical sense raises controversial issues about access to resources in that decisions are made that write off 2 out of 3 potential patients, what is of interest here are the tools of decision-making under such extreme circumstances. These tools can be and, indeed, have been used under less extreme medical circumstances and used to some reasonable effect. I do not propose to take the concept to the extent that Garrett Hardin does in suggesting that "the life we save today breeds more lives in need of saving tomorrow." (Hardin, 1980:65)

hand, looks to "the maintenance or restoration of equality for the person in need." (Winslow, 1982:87)

The literature of medical ethics is full of examples of the difficulties of acting upon these principles. In the First World War, for example, in order to save as many casualties as possible "surgeons were encouraged to avoid the badly wounded in order to work for the 'greatest net profit' [and] . . . there was an increasing emphasis on giving priority to the slightly wounded in order to return them quickly to the battle." (Winslow, 1982:6)

Outside of military conditions, similar issues arise in the use of new medical technologies. When new techniques of hemodialysis made it possible for patients to be kept alive indefinitely, the issue was raised about which tiny fraction of these terminal patients would receive treatment. The cost and the availability of trained personnel restricted the access to this technology. A means had to be devised to select the patients receiving treatment. If one applies the principle of 'greatest good for the greatest number', the question of who gets treatment is still not answered. Should the rich be treated first if they can pay a premium? If the hospital can make a profit on the treatment they can invest the money in more machines and more staff to treat more people. Surely this would ultimately be serving the greatest good. What about social worth? Would that mean that preachers with large families would be given preference? On the other hand, if one were to apply egalitarian principles, would we give treatment first to someone who is the sickest? Someone who is the poorest, the most helpless?[21] As difficult as these questions are, they

21. This well-documented case involved Dr. Belding Scribner's development of non-surgical dialysis and the establishment of the Seattle Artificial Kidney Centre. (see Winslow, 1982:13)

must be answered. Winslow has developed five utilitarian and five egalitarian principles that apply in situations of scarcity of resources:

> "Utilitarian Principles:
>
> U-1 The principle of medical success. Priority given to those for whom treatment has the highest probability of medical success.
>
> U-2 The principle of immediate usefulness. Priority given to the most useful under the immediate circumstances.
>
> U-3 The principle of conservation. Priority given to those who require proportionately smaller amounts of the resources.
>
> U-4 The principle of parental role. Priority given to those who have the largest responsibilities to dependents.
>
> U-5 The principle of general social value. Priority given to those believed to have the greatest general social worth.
>
> Egalitarian Principles:
>
> E-1 The principle of saving no one. Priority given to no one because none should be saved if not all can be saved.
>
> E-2 The principle of medical neediness. Priority given to the medically neediest.
>
> E-3 The principle of general neediness. Priority given to the most helpless or generally neediest.
>
> E-4 The principle of queuing. Priority given to those who arrive first.
>
> E-5 The principle of random selection. Priority given to those selected by chance." (Winslow, 1982:105-6)

Typically in triage, combinations of these principles are used but, in some way, whether intuitively or rationally, a decision will be made about who gets the use of scarce resources. These broad questions of ethics and moral action

come down to a moment, particularly in emergencies. In that moment the professional decides towards whom his/her expertise is directed. Even outside of emergency situations, these decisions are ultimately made. Who will get the use of hemodialysis or a new experimental drug such as AZT? The financial costs for such treatment are high. The availability of the means of treatment is low. Some people will live and some will die based on the decisions made by professionals or society as a whole. As members of that society, we hope, even if only for our own sakes, that these decisions about the allocation of resources are fair and just, equitable and compassionate.

That moment of decision raises other questions, not just about rational action, but about professionals and about justice. It asks about the relationship of the individual to his/her profession, about the relationship between the profession and society at large and, out of that relationship to society, it asks about justice. "Defining the good in relation to life in the larger community completes ethics and prevents it from becoming parochial." (Smith & Churchill, 1986:92)

Can we extrapolate from these extreme examples of life and death decisions to the just allocation of other resources besides medical? I think we can.

Are people's bodies not ravaged in the same way by lack of food as they are by lack of medical care? Are they not destroyed by lack of shelter or unsafe shelter? By the lack of clean water? Are their spirits not just as thoroughly destroyed by the lack of education, the lack of opportunity, or of dignity? The decisions we have made as a society have determined the allocation of resources - our knowledge, our materials, our money and time - and the ethical decisions we have made have excluded about 1 out of every 4 of us that

enter this 'emergency room'. Did we exclude them because they have no social worth (U-5), or because they have no dependents? (U-4) Perhaps they aren't the neediest (E-3) or they aren't 'immediately useful' (U-2). It grates on one's sensibilities to even ask these questions, but surely we have some reason, some way to justify this apparent inequity in the allocation of these resources. If we can't rationalize our actions, should we not change our actions?

That may be possible in the medical profession, where the choices are much more graphic and immediate, but what about other professional knowledge that lacks the kind of immediacy of medical knowledge and resources. Not all medical decisions, however, are emergency decisions. While the concept of triage is directed first towards those emergencies, the principles out of which decisions are made are equally applicable to other decisions about patient care and to macroallocation decisions. For example, here in British Columbia, with a current shortage of medical personnel in the area of heart surgery, there is a waiting list of people awaiting this surgery. How one is placed on that list and how we set the priorities for treatment are questions dealt with through the same basic principles. Some will wait up to a year for surgery and many can wait that long. Occasionally, through mishap or misdiagnosis, some can't wait that long. The decisions made about who waits and who gets immediate treatment, though, are made on a similar basis to the decision-making process in triage. These are not emergency situations, in general, but priorities are still set.

Similarly, we allocate research funding towards some diseases and not others. The competition for dollars is fierce as we see in our daily mail. Heart disease or cancer, MS or MD, diabetes or aids? When the dollars are scarce, we are forced to make choices between these

competing and equally valid efforts. The way we make our decisions, whether intuitive or rational, is based on the same principles. Again, these are not emergency situations of life and death; rather, they are lingering situations of life and death. Nonetheless, a decision will be made about who will get treatment and who will die. In the early days of hemodialysis, a decision was made that the treatment would not be made available to children or people over the age of forty-five. To a fourteen year old or forty-six year old patient needing treatment, that decision is likely to seem arbitrary and unfair, particularly if it is the only justification for refusing access to these medical resources. Such decisions are not made in the highly dramatic atmosphere of disaster and emergency, but they do have similar results for those whose access to medical resources is denied.

Given that these principles apply at the emergency level of care, at the long term level as well as at the macroallocation level, it is possible to extrapolate their occurrence across professional boundaries as well.

3.4.3 Triage in Architecture

Do these concepts have any relevance to the design profession? I believe they do. By this I mean not that we should write off two-thirds of the population when we consider the allocation of architectural resources, rather that we can apply the principles of decision-making that we use in the allocation of medical resources, whether in the emergency circumstances that require triage or the less dramatic macroallocation issues.

When we consider the resources in this profession, - that is, the special knowledge that defines the profession - we are not dealing with anything similar to, say, penicillin,

hemodialysis machines or artificial hearts. Medicine is concerned with the human body and the advantage that profession has in the allocation of its knowledge and other resources in the field is that the human body is much the same everywhere. Disease will differ according to geography and the means of treatment may often differ according to cultural restrictions or taboos, but the body's reaction to medicines is predictable. In architecture, the only consistencies are in the laws of nature. The forces that act on buildings - gravity, wind and earthquake - must be considered in any location. The degree to which earthquake and wind are considered, however, will vary considerably according to location and the availability of materials. In other words, there is little in architectural resources that transfers as readily throughout the world as medical resources. In addition, medicine is far closer to the 'front lines' of basic need than are the design professions. In relief work conducted by organizations such as the Red Cross or Doctors Without Borders (MSF), the supply of food, medicine, surgery and so on will take priority over the establishment of hospitals or shelter. In situations of emergency, it is possible to consider the extreme measure of triage. As we recover from emergency, though, while we may use similar principles we will use them in a different way. In that regard, when, as Hardin does, the concept of triage is applied at a global level, it becomes far more problematic to write off whole countries as being beyond help. Bangladesh is often cited as an example. At this point a substantial portion of the African continent is undergoing the same grim analysis, not by medical professionals but by financial institutions. The problem with a direct transference of the principles of triage from individuals to whole societies is that the life of a society is more complex and variable. It is possible for a doctor to make a judgment about the ability of an individual to survive strictly on the basis of a scientific understanding

of the workings of the human body. That level of understanding does not apply to societies. Where medical knowledge deals first with the individual, and second with the macroallocation issues of medical resources, architecture and other design professions will focus their resources towards society first. When they are focused on the individual, the use of this specialized knowledge is not dealing with scarcity or general need but personal desires, typically in the design and construction of a single family house.

Notwithstanding the disparities between these two professions, we are dealing with two basic issues: scarcity of resources[22] and, given that scarcity, towards what we allocate these resources. From the standpoint of actual numbers, there is about 1 architect for every 3500 in the Canadian population compared to 1 physician for every 640. This would suggest that architectural resources are far more

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22. A number of questions are raised here that cannot be answered in this context. The first concerns the knowledge base of the profession of architecture. What is it that the professional architect is expected to know? It is again the question of the nature and extent of the 'guilty knowledge' that the architect possesses (see Appendix A, D, and E for an outline description of the requirements of the traditional architect). The second question concerns scarcity. Are architectural resources - that is, professional knowledge - scarce? While numbers may indicate that there are fewer architects serving the population than doctors, that doesn't necessarily say anything about the scarcity of a professional resource. Scarcity, by definition, means that there is not enough of something that is desired. As Winslow points out, "if only one mosquito arrives at a picnic, it is unlikely that anyone will speak of a scarcity of mosquitos." (Winslow, 1982:40) In other words, if it is not desired, it certainly wouldn't be considered scarce. To ask, then, if architectural resources are scarce is to ask not only about the availability of the service where it is needed, but also about desirability of the service. Both of these questions are somewhat contentious, particularly given the difficulty in defining the boundaries of architectural knowledge.

scarce than medical resources. More likely it would suggest that the need for medical resources is greater and that this demand is met by a greater supply. In China the ratio is closer to 1 architect serving a population of 165,000 (see Schmertz, 1982:92). That represents a total of 6000 architects in China compared to about 7000 currently practicing in Canada. Under such circumstances, the scarcity of this professional resource in China does have a clear impact on society from the loss of cultural history to the lack of safe and adequate housing. Accepting the fact of that scarcity and its consequences, the situation demands the allocation of those resources on some basis[23]. Based solely on the responsibilities of birth towards distributive justice and the honouring of human rights, we might lean towards an architectural variation of Winslow's egalitarian principal of 'general neediness.' This principle follows Hans Jonas' maxim: "Utter helplessness demands utter protection." The extent of our civilized behaviour can be judged by the treatment we afford our most vulnerable citizens. In terms of needs we would begin, at the macroallocation level, with basic needs before psychosocial needs. For the allocation of architectural resources, this would mean a recognition of a responsibility to direct those resources first towards the basic need for shelter.

3.4.4. Knowledge and Resource Allocation

Specialized or 'professional' knowledge is scarce. When we consider the relatively low numbers of professionals available - one architect serving a population of 165,000 in

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23. see Nevis for a discussion on the development of a hierarchy of needs in Chinese management. He suggests that Maslow's hierarchy is Western - based and focuses on the individual while a Chinese - based hierarchy relates self-actualization to service in society. In addition Marxist principles will tend to favour equity over wealth.

China, or 3700 in Canada - and the concentration of those professionals in urban areas, it becomes important to review the way we distribute knowledge and the way society uses professionals effectively in addressing its basic needs. In undertaking a review other basic duties such as those towards distributive justice and human rights must be considered.

3.5 PROFESSION

> Once institutionalized, professionalism quickly passes over into mere protectionism.
> *Saint* (1983:164)

Of all of the responsibilities that professionals face, probably the most narrowly defined of them is what we term 'professional responsibilities'. These concern issues in two areas of work:

1) professional liability and contractual obligations as defined by standard documents such as those signed between client and architect and those between owner and contractor.

2) obligations to the profession itself as defined by the enacting legislation and the bylaws of the professional body.

In addition to these duties, there will be others that emerge from the way we define the term 'professional' (see 3.1.) in relation to society.

3.5.1. The Professional

The profession depends on the good faith of the public for its legitimacy (Smith & Churchill, 1986:85) and, therefore, for its continued existence. In return for this good faith professionals are expected to use their specialized knowledge in the service of society and they are expected "to be ethically discriminating about the way this knowledge should be employed." (Burnham, 1988:54).

> "The importance of the professions turns on the relevance of their work to basic biological needs - food, shelter, health, disposal of the dead, etc. - and basic instrumental needs generated by modern society - education, transportation, sanity, order, legal counsel, energy, disposal of wastes, etc. The importance of the needs they meet distinguishes professional work from other highly skilled activities. (Kultgen, 1988:73)

Not only does the professional direct that knowledge towards the service of society, s/he also sets the terms of reference by which this knowledge may be considered. The medical profession not only defines the terms of its practice, it also "tries to define for all of us the very nature of health and disease." (Hughes, 1958:79) In architecture this is equivalent to the definition of the built environment. The extent of this responsibility suggests that the professional ensure that the public's faith in the profession is well founded.

3.5.2. Professional Obligations in Society.

Relative to the broader ethical issues arising out of birth and knowledge, those that arise out of contracts are clear and resolved with relative ease (although at great expense) through the legal system. Although these documents are open to wide interpretation, there is something written concerning the extent and the limits of responsibility.

If we look again at the architect's oath, we are reminded that our obligations to society are minimal and are enacted through the profession itself. In other words, if the individual acts within the parameters of 'professionalism', as defined by the profession, then the individual is acting ethically and professionally. The main responsibility, then, that the architect faces is to uphold the limited values of the profession itself. Most of these values are defined by the scope of service and that, in turn, is defined in the standard contractual documents. These documents describe the professional obligations to: clients, consultants, and contractors. The responsibility to the users of buildings is seen only in tort, not in contract. Even here, though, in these areas of narrow 'legal' ethics, problems can arise that begin to extend the existing limits of responsibility. The Probe action against the Association of Professional Engineers illustrates how these limits can expand.

Probe's challenge was based on the Code of Ethics of the Bylaws of the Association of Engineers and Geoscientists of British Columbia. In Section 2 (d) of the Code, the engineer is called upon to "guard against conditions which are dangerous or threatening to the environment" (see Appendix C). In those projects that can have a detrimental effect on the environment such as, say, nuclear reactors or pulp mills, the engineer can easily be placed in a position of conflict between his duties to his client and his obligation to uphold the Code. Under such circumstances, the engineer's duty to the public takes precedence over his duty to his/her client. If the client continues on a course of action that exacerbates this conflict, the engineer,

> " . . . may be required to inform his employer or client that he is ethically bound to present his concern to the governing body of his professional

> association or to an appropriate public authority and perhaps even to disassociate himself from the project." (McLachlin, 1987:38)

Architects suffer under no such codified restraint. In Canada, only the provinces of Quebec and Newfoundland have any provision in their By-laws concerning the professional's obligations to the environment. In Newfoundland the architect must be *conscious* of the relationship of his/her project to the environment. In Quebec the architect is required to take into account his obligations towards man and his environment. Only in Quebec, then, is there any reference in the by-laws to the architect's *obligation* to the public and to the environment. Unlike the engineering profession, the architect's obligation to the public is one of tradition rather than decree. Perhaps, given the nature of the specialized knowledge that defines the profession of architecture, this is as it should be. On the other hand, the public, which, through legislation, gives the right and responsibilities of practice to architects, does have the right to know where the profession stands in regard to its responsibilities to society and the environment - both built and natural.

Architects have, for many years, designed office buildings without natural ventilation. The dependence on mechanical ventilation has led to increased energy loading on buildings (with its consequent effects on global warming) and to a variety of health problems from chronic headaches to Legionnaire's disease. While there is growing recognition of the relationship between sealed indoor environments and health problems, most architects still persist in maintaining the curtain wall as the *sine qua non* of aesthetic judgment. They then depend on the mechanical engineer to provide improvements to their systems to overcome air circulation problems and airborne contaminants. Why? Is it aesthetics? Is it client demand? It certainly

isn't user demand. It is not that great a leap to argue that such acts of design constitute possible exposure to liability for professional negligence, particularly given the consequences to health, much less the longer term possible consequences to global environmental conditions. To persist in designing systems that have such potential repercussions, is little different from the stance taken by design engineers at Ford with the recognized design flaws of the Pinto.

The Probe action, though, went further and suggested professional negligence for a feasibility study - a written document. Nothing had been built here. In fact, little, if anything had been designed. The claim of negligence concerned recommendations that may or may not be acted upon by the client. Because the engineers' recommendations describe an intention to do what Probe would consider grievous harm to the environment, the question of negligence concerns the contradiction between those stated intentions, however sincerely maintained, and the Code of Ethics by which the engineers are bound. Did they not consider the Code at all? If they did consider it, was their interpretation of it that radically different from Probe's interpretation? The Association of Professional Engineers has yet to publicly address these questions.

For architects, however, such questions do not arise. As previously noted, there are no admonitions in the Bylaw or the Act that govern architects to suggest that, as professionals, we have any more responsibility to the public than technical competence. As a result the only commitments that the architect makes to society will arise from a personally felt responsibility that is determined by the individual's definition of the professional and the role that the professional should play in society. Given that the public has conferred the right to establish the

architects' "monopoly of competence" (see Blau, 1983:4), they do have a reciprocal right to expect a more concrete statement concerning the architect's responsibilities to the environment and society. They have a right to expect more than technical competence as indicated by standard contractual documents[24].

3.5.3. Obligations to the Profession

Unlike the Bylaws of the Engineers Association, which includes the aforementioned Section 2 of Article 14 on the welfare of the public, the Bylaws of the Architectural Institute of BC, in its comparable sections of professional ethics, concerns solely the relations between architects and between the institute and individual practitioners. Clearly the Institute has placed great importance on these relations - far greater than the relations between the profession and the public. These bylaws affect the relationship between architects in:

- speaking about other architects,
- conflicts of interest arising out of possible involvement in the building trades or the promotion of a specific building material,
- their means of advertising,
- competition for work

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24. The standard construction documents, such as CCDC 2 (see Appendix K) in Canada outline the architects responsibilities to the client and the contractor. The standard contract form CCAC 6 (see Appendix L) governing the agreement between client and architect covers the extent of responsibility between the contracting parties. The Bylaw of the Architectural Institute covers some of the general responsibilities of the professional to society, but these are quite general in nature as indicated by the Oath (see 2.2). The Architects Act itself only gives power to the Institute to govern the affairs of its members and states the requirements for that membership (see Appendix I).

In addition to these written bylaws, though, the Institute's interests can be judged by its actions. As Saint pointed out above, those interests lean strongly towards policing. This comes in two forms:

1. Action against those individuals or corporations that the Institute considers to be practicing architecture without a license.

2. Action against registered members that have committed infractions against the bylaws.

The first action concerns the maintenance of that 'monopoly of competence'. The second action concerns the public appearance of a self-policing organization that is protecting the public from the unscrupulous behaviour of some of its errant members.

There are two other major initiatives of the Institute: the marketing of the service of architecture and professional development courses. The former is intended to suggest to the public that architects are good people and they can help in the efficient completion of buildings. The latter is intended to keep the practicing professional up to date on developments in current practice. Many of these courses concern construction law and loss prevention with the balance focussed on technological developments in materials that may require some rethinking of some specific aspect of the details of a building.

Other intraprofessional responsibilities are those of the practicing architect to his/her employees. In addition to responsibilities governed by the Employee Relations Act, dealing with payment and benefits, there is a professional obligation to the 'Intern Architects' and their training.

While this is not specifically outlined in Act or Bylaws, this responsibility is a traditional one for the practicing professional.

3.5.4. Professional Responsibilities.

Architects have, then, professional responsibilities to their clients, their fellow professionals, the institute and contractors working on their buildings. These responsibilities are written in a variety of standard contractual documents, legislative acts and institute bylaws. In addition to these cited duties, there are traditional and largely unwritten duties to the 'intern architect' and to the public. It is interesting to note that the Hippocratic Oath is specifically addressed to these last two obligations, while the architectural profession omits any mention of them in writing.

3.6 SELF

> The only right motive for duty done is the service of the Self within, that the Self, the more quickly purged of the consequence of error, may the more swiftly find Enlightenment.
>
> *Christmas Humphreys* (1971:80)

As human beings we have obligations that govern our actions in the world, but we also have commitments to ourselves. These commitments range from the fulfillment of our basic biophysical needs (see 2.3.2.) to psychosocial needs. The latter extends to what Maslow termed self-actualization. Maslow, in fact, went further to say that "all basic needs may be considered to be simply steps along the path to general self-actualization, under which all basic needs can be subsumed." (Maslow, 1968:153)

A commitment to our own lives is different from the selfishness described and promoted by Ayn Rand and her protege, Nathaniel Branden in the philosophy of Objectivism. In Rand's 1943 novel, *The Fountainhead*, she first presented this viewpoint through the voice of the protagonist, the now-famous fictional architect, Howard Roark. In defending himself against the crime of having destroyed a near-completed housing project that had not followed his original design concept, he explained, in a rather lengthy testimony to the court, his reasons for blowing the building up. In addition to a rationale, he believed he also had a right to destroy his creation. Reminiscent of the stance of market justice (see 3.3.1.), his "independent work of his own mind" (Rand, 1968:681), was his to do with as he pleased. Furthermore, destroying the housing project was an exemplary moral act committed by, what Rand termed, "the projection of an ideal man" (Rand, 1968:vii). Roark states, at one point in his defence:

> "The first right on earth is the right of ego. Man's first duty is to himself. His moral law is never to place his prime goal within the persons of others. His moral obligation is to do what he wishes, provided his wish does not depend *primarily* upon other men. . . .
> The only good which men can do to one another and the only statement of their proper relationship is - Hands off!" (Rand, 1968:683,684)

Rand's expansion of laissez-faire capitalism into a moral philosophy begins and ends with the individual. While there are personal values that are associated with this philosophical stance, they are necessarily limited to the individual and not to the relationship between the individual and society as a whole. Roark's universe is solipsistic.

With Jefferson and the framers of the American constitution, Rand calls for the individual's pursuit of happiness. Even

here, though, without any consideration for the effects of individual acts on the world, we can see that the objectivist must determine what happiness is being pursued. For *anyone* to pursue happiness requires something other than random acts. It necessitates directed acts by individuals with purpose.

> "Too many humans have no aim or purpose of any kind; . . . Flabbiness of purpose, vagueness of means, inefficiency of action, these and wasted effort on all planes are ripe causes of unhappiness, and happiness, however vaguely conceived, is the goal of most of mankind." (Humphreys, 1971:19)

We don't normally consider the pursuit of happiness an obligation to one's self. But, if the pursuit of happiness is to be something more substantial than mere gratification, then there are obligations that we owe ourselves.

In understanding the extent of these obligations, what we are really asking about is "the right conduct of life" (Plato, *Republic*, 352d) The consideration of this fundamental question is, of course, intimately tied to the pursuit of happiness both as individuals and as a society. When we enter this sphere of inquiry we are concerned, though, not only with conduct or action but with character and those traits of character that contribute to happiness and so to good lives.

Socrates, in his *Apology*, explained to his fellow citizens his actions and convictions that led him to be charged with corrupting the morals of youth. He declared:

> " . . . that to let no day pass without discussing goodness and all the other subjects about which you hear me talking and examining both myself and others is really the very best thing that a man

> can do, and that life without this sort of examination is not worth living . ." (Apology, 38a)

Certainly it is possible to live without such self-examination. There are many of us who do. There are some, in fact, who would go further and suggest that such endeavors contribute nothing to happiness. Hamlet, for all his self-examination, died most unhappily. So, why should we bother making ourselves miserable with all this navel-gazing? Why not just get on with living? Besides, such opportunities for reflection are offered only to the leisure class - students or the rich. The rest of the world is simply trying to survive. Socrates, himself, was able to engage in these daily examinations because there were slaves who could attend to fulfilling his basic physical needs while he attended to fulfilling the more lofty psychosocial needs. Aside from making us miserable, perhaps we can't really afford this luxurious pursuit of self-examination.

Socrates may not be able to be dismissed so quickly, though. The troubling fact is that he was prepared to die for the convictions he held as a result of his ongoing self-examination. In *Crito*, in fact, despite the injustice of his sentence, he argues for his own death. His convictions, then, outvalued his own instincts for self-preservation. Convictions held so strongly would seem to deserve further scrutiny.

We can all think of examples of people who were willing to make the same sacrifices for principle. An indelible image from June of 1989 comes to mind. A lone Chinese student standing in front of a tank was obviously prepared to die for something in which he believed strongly. Many of us who saw these events unfold on our television sets were moved by this demonstration of courage. What moved us, I would

suggest, is the recognition of what might be called high principle. It often leads us to ask ourselves: Could I have done such a thing?, Are there principles for which I am willing to sacrifice so much?

One does not have to be of the leisure class to afford such speculations. Every soldier who has ever gone to war has risked his life for the sake of some ideal. While we may disagree with some of these principles such as blind patriotism, religious fanaticism, or hatred, (see Hoffer, 1966) the fact remains that people have taken these risks for principle. It might be argued that such people have been manipulated into these beliefs; that these principles were derived from external forces rather than self-examination. In many instances - perhaps most - this may be true, but not in *all* instances. Where self-sacrifice implies the denial of individual identity, we can see manipulated beliefs. This manipulation involves,

> " . . . the complete assimilation of the individual into a collective body. The fully assimilated individual does not see himself and others as human beings. . . . He has no purpose, worth and destiny apart from his collective body; and as long as that body lives he cannot really die. (Hoffer, 1966:60)

Between the solipsism of Howard Roark and the assimilation of the 'true believer', there are individuals who live *in* the world. The principles these individuals hold go beyond the self, but they do not deny the self.

The question still remains, then: For which principles am I willing to sacrifice everything? Are there principles for which I am willing to die?[25] Barring this, are there principles for which I am willing to live?

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25. This question is not as outlandish as it may first appear. At the 1991 conference of Habitat International

If there are such principles, should these not develop out of an examination of one's own life rather than out of those that are derived from outside forces? In addition, one would expect that actions derived from such principles are more than impulsive. We expect them to be premeditated. Premeditation entails self-examination.

3.7. RIGHT ACTION

> " [Man] has only one thing to consider in performing any action - that is, whether he is acting rightly or wrongly, like a good man or a bad one."
>
> *Socrates* (Apology, 28b)

As individuals we bring something to the world that is unique - unique talents, unique perspective and values. As professionals we bring a body of knowledge that is informed and directed by this unique perspective. Society places these attributes in a context out of which flows a reciprocal responsibility between the individual and society. The way in which we respond to these conditions and the extent of responsibility that we are willing to carry will depend, in part, on the depth of our convictions. It will depend as well on the circumstances in which these convictions are tested. There may be a tendency to believe that these conditions must be extreme, giving rise to acts of heroism that would display the individual's depth of

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Coalition, several Salvadoran architects who had attended the conference had lost colleagues to the death squads. They pointed out that to work with the poor in obtaining housing brands one a communist. Such subversive activity is punishable by death. Yet these architects made that choice.

conviction. A countervailing tendency might be the belief that one is not excluded from the possibility of right action simply because one is unable, for any number of reasons or obstacles, to act so dramatically. In architecture we could come to the mistaken conclusion that right action is narrowly defined and easy to judge. So, those architects who work for the poor in Africa would be ranked more highly on the morality scale than those architects who work for community organizations in the rich countries of the West. In turn, they would be rated more highly than those who design homes for the rich. This hardly seems to be a fruitful conclusion to make about right conduct for professionals.

Such judgments are not meaningful or useful. Each of us does what we can with whatever it is we have in whatever circumstances or obstacles that confront us. It is only as individuals that we can we ask whether what we do is appropriate or enough, given our unique conditions. This is not to say, though, that we can define wrong action out of existence by saying that such an action is the inevitable result of these unique conditions. We can and do make judgments about people's actions or inaction. I am suggesting here that when we make these judgments, it is helpful to do so on the basis of the fulfillment of these four levels of responsibility. That said, though, while the first three levels of responsibility are externalized, only the individual can make judgments about those responsibilities to the self. We can see evidence of right action through an individual's acceptance of responsibility. Conversely, we can see evidence of wrong action through the denial of responsibility or failure to act on recognized obligations.

3.7.1 Denial

We can accept responsibility only insofar as we are capable. We do what we can. However, for many people, this will be little or nothing. Most will reject the argument for responsibility out of hand, depending on market justice to provide just deserts for both the 'industrious' and the 'lazy'. The argument against responsibility takes many forms:

1. We should take care of our own first; that is, first our family, then our neighbourhood, our city and at the end of that list, other countries.
2. To redistribute wealth is to infringe upon the property rights of those who have rightfully gained the wealth.
3. If we interfere with the natural order, population growth will ultimately exacerbate the problem. In other words, if we help the poor of other countries now, their populations will increase to the point where resources will no longer be sufficient to support life and there will be even more death than there would be if we let nature take its course now. This is Garrett Hardin's "lifeboat" theory.

Even with personal principles and ideals, the actions of the majority, like Howard Roark's action in blowing up the badly designed housing project, will have little regard for their meaning in the world. Actions, under these circumstances, are entirely self-referential. Without even these self-referential principles, though, actions tend to be little more than a constant search for gratification. These are unexamined and undirected lives. In this state, no level of responsibility is engaged. The human responsibility towards distributive justice is denied. The use of one's special

knowledge is undirected and the responsibility towards self-examination is lost in the search for gratification. Denial is wrong action.

3.7.2 Inaction

Others may accept the fact of responsibility and yet not act on it. They may, like Hamlet, understand the need for their own action upon events, but not engage in those actions they know are necessary. There are always reasons for inaction. "I don't know what to do." "I'm powerless. What can a single individual do in the face of such enormity." Like the egalitarian principle put forward for triage (see section 3.4.2) - "if everyone cannot be saved then no one should be saved" - the refusal to act is, in itself an act of negligence. This, too, is wrong action. As Christmas Humphreys points out, one of the four kinds of wrong action arises from "lack of willpower, lack of precision of thought, doubts about rightness, indecision about means . . ." (Humphreys, 1971:53). Again, inaction fails to fulfill our responsibilities at all levels.

3.7.3 Right Action

Acting rightly does not require us to become saints. It only requires that we act responsibly. It has been suggested that this is a definition of adulthood. Right action can occur, of course, at many different levels.

Some will engage their modest financial contributions to help adjust distributive inequities by donating some small sum to their favourite charity. Singer suggested setting a standard that is not so high as to be counter-productive to action. He chose, on the basis of the traditional tithe, that 10% of one's income is appropriate.

> "No figure should be advocated as a rigid minimum or maximum; but it seems safe to advocate that those earning average or above average incomes in affluent societies . . . ought to give a tenth of their income to reducing absolute poverty. By any reasonable ethical standards this is the minimum we ought to do, and we do wrong if we do less. (Singer, 1980:181)

There is still a sense, though, of disengagement or of distance with such actions. Even with these voluntary contributions there is a deliberate distance between those who give and those who receive, between those who act and those who are acted upon. Except for the voluntary aspect of this form of redistribution, this is little different from submitting taxes to a government that, in turn, uses this money for the redistribution of wealth through an agreed-upon set of regulations that establish 'fairness' and also maintain anonymity.

> "My encounters with [the poor] are a parable of moral relations between strangers in the welfare state. . . . The mediated quality of our relationship seems necessary to both of us. They are dependent on the state, not upon me, and we are both glad of it. Yet I am also aware of how this mediation walls us off from each other. We are responsible for each other, but we are not responsible to each other. (Ignatieff, 1986:10)

This disengagement provides a level of comfort and we may believe that the acceptance of responsibility need only go as far as it is comfortable to us. This brings to mind 'the widow's mites':

> "And he looked up, and saw the rich men casting their gifts into the treasury.
> And he saw also a certain poor widow casting in thither two mites.
> And he said, Of a truth I say unto you, that this poor widow hath cast in more than they all:
> For all these have of their abundance cast in unto the offerings of God: but she of her penury hath cast in all the living that she had." (Luke 21:1-4)

Responsibility is not meant to be comfortable. The widow gave all that she could. She gave, in fact, "all the living that she had." To give all the living that one has is to be fully engaged. For the professional that means more than simply the anonymous donation of money to an organization that will further distribute it. Right action for the professional involves greater engagement in the world than a simple recognition of distributive injustice. What is called for in responsibility is engagement not distance and anonymity. It is only through engagement that we can avoid the dehumanization of others as objects of charity. It is only through engagement that we can face responsibility directly rather than hide behind the skirts of anonymity and make private decisions about the acceptance or avoidance of responsibility. This means that all one's faculties are committed to the fulfillment of responsibility: one's humanity (wealth, compassion, justice); one's knowledge (expertise); one's profession; and one's self.

With all our faculties committed we can be said to be 'living well'. This does not mean, however, that we must all strive for sainthood. It only means that we have used what resources we have to meet the responsibilities that we can. I am reminded here of yet another parable that William F. Buckley described:

> "This is the arresting and affecting tale of the young monk who aspires to express his devotion to the Virgin Mary, having dejectedly reviewed, during his first week as a postulant at the monastery alongside Our Lady of Sorrows, the prodigies and gifts of his fellow monks. Oh, some sang like nightingales, others played their musical instruments as virtuosi, still others rhapsodized with the tongues of poets. But all that this young novice had learned in the way of special skills before entering the monastery was to entertain modestly as a juggler. And so, in the dead of night, driven by the mandate to serve,

> walking furtively lest he be seen and mocked by his brothers, he makes his ardent way to the altar with his sackful of wooden mallets and balls, and does his act for Our Lady.
>
> This account of the struggle to express gratitude is unsurpassed in devotional literature. The apparent grotesquerie - honoring the mother of the savior of the universe, the vessel of salvation, with muscular gyrations designed to capture the momentary interest of six-year-olds - is inexpressibly beautiful in the mind's eye. The act of propitiation; gratitude reified. (Buckley, 1990:xiii)

Our special skill is architecture. The architect's expressions of gratitude and his/her fulfillment of obligation must be seen through actions in the world - as social beings, as professionals and as individuals. The degree of our engagement will depend, in part, on our abilities and in part on the circumstances that are presented to us. Within those parameters, we go as far as we can.

Some might argue that one can go too far, ignoring some responsibilities for the sake of other, perhaps more vague responsibilities. One can recall any number of times in conversations about foreign aid that the argument arises about CUSO, WUSC, Peace Corps or other volunteers. Typically, it is said that they should be putting their energies and compassion towards the poor in their own backyards rather than going halfway around the world to exercise their principles or sense of duty. This point was raised to a representative of Medecins Sans Frontiere, Jos Nolle. His reply was provocative. He said that while it was true that one does not have to leave one's own city (or occasionally, one's own house) to recognize and respond to need, there are many people here available and willing to respond. There are far too few who are willing or, often even able, to sacrifice a home and/or career to address those responsibilities towards need in some far off place.

If one is willing, and circumstances are such that one can go that distance, then individual convictions and the context in which these convictions are placed lead to the conclusion that a responsibility exists. One acts accordingly. In other words, if you can go, you should go. On the other hand, this is not to say that right action only exists for those that are able to go that distance. We may still have the same deep convictions and be in no position to travel outside of the city limits much less halfway around the world. But right action is not a matter of geography, it is a matter of conviction.

3.7.4 Right Action in Architecture

The inquiries conducted by the RAIC and the AIA regarding the role of the architect in society were only the most recent in a long line of debates concerning the profession. In seeking to define what role the profession plays in society, conclusions that come out of a Lou Harris poll hardly seem appropriate to the problem. The conclusion that the public needs to be educated about the value of architecture in society seems equally misdirected. The problem is not in the trends or the ignorance of the public, it is in ourselves. We have established a profession with the intent of protecting the public from wrong action, but we have yet to determine the extent of right action in the profession. I suggest two conclusions:

1. That right action entails the fulfillment of these four levels of responsibility.
2. That we must redefine or expand the definition of the profession of architecture to include not only the professional level of responsibility but the other three levels as well.

If the profession is, as the RAIC seemed to think when it launched its inquiry in 1984, invisible, then it is not because the public is ignorant of its value, but because the profession has been defined so narrowly that the public can no longer see it. If the profession wishes to be seen, it must be seen to be responsible to society in more than just the legal or professional sense. It, and, by extension, its membership, must become more fully responsible. There are many examples of individuals who have taken that step. By looking at their work, we can begin to see, through their right action, how the definition of architecture might be expanded, not only to make it visible but for the personal and professional satisfaction of acting rightly in the world.

CHAPTER 4
SELF HELP AND ADVOCACY

> "Thus the word 'city' conveys clearly defined icons: high-rise towers, automobiles and clover leafs, and so forth.
> Yet, quite soon, by the year 2000, there will be about 50 cities of 15 million around the globe - of which more than 40 will be in the Third World! Most of these are cities whose images are foggy in the extreme - if any image at all is conjured up by the sound of their names: Dhaka, Jakarta, Bombay, Canton. Like the Tondo region of Manila, they evoke in your mind, one suspects, an amorphous undifferentiated mass of humanity, on cycles and on foot, clogging the roads in all directions. Just as the icon of the mushroom cloud has dominated our consciousness in the last four decades, so this new urban image will determine the moral issues of the next century." (Correa, 1989:12)

The history of housing is essentially the history of self-help and mutual aid in housing. People have been housing themselves since they formed social groupings. Why, then should, this venerable tradition be disturbed by the intervention of professionals or the formal sector as a whole? Bernard Rudofsky's eloquent testimony to the inventiveness and sensitivity of the 'vernacular' builder/architect in his 1964 book, *Architecture Without Architects*, would suggest that our modern dependence on professionalism to 'solve' the problems of housing have meant the loss of something precious in our regional traditions. Hassan Fathy referred to the "collapse of cultural frontiers in the last century" (Fathy, 1973:19) to account for this loss of traditional culture and building techniques. Often the Modern Movement or the 'International Style' is seen as the culprit. Both this collapse and the

influence of the Modern Movement involve colonialism of one kind or another. Whether it was Raffles in nineteenth century Singapore or modern office towers in contemporary Nairobi, there have been fundamental changes to our cities that demand, as well, different approaches to housing.

Beyond these cultural influences that break down traditional patterns and create a greater homogeneity, there is the more overt problem of numbers. The rate of urbanization, particularly in the Third World, is astonishing. Correa refers to Bombay.

> "Twenty years ago there were fewer than 400,000 squatters in a population of 4.5 million. Today there are almost 4.5 million in a population of 9 million. Thus while the nation has grown by 50% and the city by 100%, the squatters have increased more than 1100%! (Correa, 1989:11)

This must change the way we view cities and the way we view the delivery of housing in cities. In the rural areas, despite the grinding poverty and the lack of access to arable land (that drives people ultimately to the cities), it is still possible to find materials with which to build. It is still possible to find a plot on which to build. In growing cities like Bombay, both land and materials are luxuries. Consequently people are living on the pavement, in crevices, stairways or any protected area that they might be able to find for the night. The fact that this is happening, as well, in major cities in the First World suggests that something is seriously wrong with the way that professionals and governments alike have been addressing the issues of housing delivery. The role that the formal sector - both professionals and government - plays in housing has been the source of considerable dispute, particularly over the last thirty years. The formal sector has often been seen as an obstruction to housing affordability and accessibility. In the Third World, building codes, for

example, usually imported wholesale from First World nations (see Hardoy & Satterthwaite, 1989:35, Laquian, 1983:70-86, Turner, 1972b:148-51, Burgess, 1982:82-5)) create barriers to housing for substantial portions of a city's population. Much of our modern housing in Third World cities is, therefore, illegal and done without any assistance from architects. Why, then, would we need the involvement of professionals? As Rudofsky points out:

> "Part of our troubles results from the tendency to ascribe to architects - or, for that matter, to all specialists - exceptional insight into problems of living when, in truth, most of them are concerned with problems of business and prestige." (Rudofsky, 1964:5)

Like similar arguments made for other professions, a case could be made that part of the problem of housing stems from the involvement of professionals[1]. They are, after all, seen as the enforcers of those regulations that make housing unaffordable and illegal. Yet, with increasing urbanization, the complexity of human relations often precludes the ad hoc approaches to built form that Rudofsky extols. Although self-help housing is more accessible and affordable, it is also often unhealthy and unsafe. The earthquake centred in Tangshan, China in 1976 is testimony to the hazards of poorly designed urban housing. Unfortunate examples of this inadequacy in construction method continues to plague the daily news from Mexico, Nicaragua, Italy, Armenia, Iran and other locations in which the built form is largely 'vernacular'.

But the problems are not just structural, they also involve, as Correa outlined above, the speed with which settlements are occupied, the density in which people live, the health

1. Ivan Illich and John Turner have both decried the professionalization of many aspects of life. See *Deschooling Society*, *Medical Nemisis*, and *Tools for Conviviality* by Illich and *Housing By People* by Turner.

hazards that arise from lack of planning for physical and social infrastructure and the environmental hazards that develop out of the typically problematic site conditions on which the urban poor must build.

There is, however, a more recent history of people attempting to address these issues within the framework of the availability of capital, of land and materials, and of technical assistance. These individuals, and the communities they represent, have been responsible for a dramatic shift in the way that development occurs. Among them are: Charles Abrams, John Turner, Hassan Fathy, and Chris Alexander. Abrams, with his ongoing work with the United Nations and with the publication of his book, *Man' Struggle for Shelter in an Urbanizing World*, defined and described the problems and approaches to the delivery of housing. Turner changed the term housing from a noun to a verb. Fathy showed us that the poor, as well as the rich, have a right to a well-designed environment. Alexander, with *A Pattern Language*, tried to develop some of the tools to make that rich environment accessible.

4.1 SHELTER AND SELF HELP

> "A finished house is something the urban poor can no longer afford unless they build it themselves." (Laquian, 1983:7)

Governments, professionals and the poor have had to accept Laquian's statement as a fact. Hamdi gives these telling statistics:

> "An estimated 53,000 new houses a day are needed globally to keep pace with demand. And the cost is enormous. Providing a 30 sq. m. finished house for

> every poor family would consume 25 - 50 percent of the gross national product (GNP) in most countries. Yet most nations spend only 3 - 6 percent of their GNP on all forms of shelter, and the poorest spend as little as 0.5 percent. (Hamdi, 1991:4)

With these facts, it would seem that Laquian's statement is, if anything, optimistic. Any form of shelter at all, much less a 'finished house' seems to be out of reach of the poor. Governments do not have the means at their disposal to meet these growing needs.

When the community itself recognizes this fact - and they do long before professionals and the government - there follows an evolutionary process in the supply of housing. It begins with disorganized invasion, followed by the development of mutual aid amongst the squatters themselves. As social organization coalesces and communities become entrenched, governments are forced to recognize their existence in some way. This tolerance, although not guaranteed, usually begins with an inventory that is subsequently used for taxation purposes. As the population increases and housing conditions and supply worsen, the government is compelled to address the problem more directly with sanctioned development (Van der Linden, 1986:2-8).

Abrams suggested that this first stage - formerly described as slums - were not the symbol of retrogression that they had been thought to be, particularly in the post-war period prior to the 1960's.

> "It may in fact be the first advance from homelessness into shelter, or the way station on the road from abject poverty to hope." (Abrams, 1964:5)

This statement, something of a quiet revolution in itself, was to be echoed not only by Turner (see also Laquian, 1968:21-6) in his descriptions of the Peruvian project on

which he had worked as an architect during the 50s and early 60s but also by those planner/advocates in the West such as Davidoff and Goodman[2] who saw urban renewal as a similar kind of threat to communities and families in the First World city as did Turner and Abrams in the Third World city. Abrams indicated that slum clearance,

> ". . . is generally justified only when a country can afford it financially, and then only after sufficient vacancies have been created." (Abrams, 1964:126)

With Hamdi's statistics about the discrepancy between the need for capital and its availability for housing, it would seem unlikely that governments would ever be in a position to afford it. With growing demand, it unlikely that sufficient vacancies could be created to meet the conditions justifying slum clearance. Despite the limitations that have been placed on governments - and on communities - in responding to this need, there are responses that have been attempted over the years within that evolutionary spectrum of housing delivery.

Abrams describes some of these, now traditional, forms of development. In general these were public housing, urban renewal, and new towns for those governments with the available capital for such investments; self-help, core housing, installment construction, roof-loan schemes for those communities without ready access to government-supplied housing; and, in addition, others have since put

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2. See Paul Davidoff, "Advocacy and Pluralism in Planning." American Institute of Planning Journal, 1965:31, pp. 331 - 338 and Robert Goodman, After the Planners, New York: Simon & Schuster, 1971. Both authors saw the destructive force of urban renewal as a force against which they believed design professionals had to rebel. This rebellion involved providing advocacy assistance to communities in their efforts to keep municipalities from seeing their neighbourhoods as a blight to be razed.

forward alternatives such as: squatter upgrading, land sharing, urban homesteading and other variations of these. Architects have been involved, to varying degrees, in many of these areas of housing supply.

4.1.1. Self-Help

The term has been used to describe 'sweat equity', mutual aid (see Turner, 1972a:130), or owner-built housing. As such there is a broad range of activity to which the term can apply. As stated at the outset self-help housing is traditional housing. Abrams indicated that "for most of the world's people, there have been no major changes in housebuilding since Neolithic man produced his first flint ax." (Abrams, 1964:164) This, he says, does not signify stagnation, rather, it suggests that man's minimum needs in housing have not changed substantially over time. What has complicated matters, though, is urbanization and the resulting problems of health, sanitation, and overcrowding. The methods of rural prehistory are no longer applicable to the modern industrialized city. Yet, self-help does happen there. When governments and communities alike became disillusioned with technological solutions of the post-war period, governments sought a solution in the opposite extreme.

> "If man's skills were employed and some materials were supplied to him, he might be induced to build as he once did (and indeed as he was still doing wherever industrial progress had not encumbered him). The formula seemed logical. By shifting the onus from technology back to the individual, there would be hope for a cheap solution. (Abrams, 1964:168)

The problem that quickly developed from this change of attitude was that the poor found that they were already quite busy surviving. The added burden of spending weekends and evenings building houses was often more than the family

could bear (see Harms, 1982:20, Laquian, 1983:40-2). It implied, besides, a certain middle-class view of employment; that is, one had weekends and evenings away from paying work and so could afford the time to spend in any way the family chose. The poor had fewer options.

While governments may have seen self-help as a 'cheap solution', for the poor, it was often the only solution. Others, particularly John Turner, saw it as means to greater autonomy for communities. He recognized that at the same time he was calling for autonomy through self-help, governments called,

> "for 'harnessing' and 'mobilizing' these popular forces and resources. . . . The implications of words like 'harnessing' and 'mobilizing' tend to reinforce an elitist assumption that underlies and even motivates certain self-help lobbies. The elitist assumption is that *the* resources of 'the people' or 'the masses' is in their hands and the strength of their bodies. Their heads, by implication, are rather small." (Turner, 1982:101-2)

The term is used in a variety of circumstances. Peter Ward refers to two levels of self-help: a simple level,

> "in which an individual or group takes partial responsibility for organizing and carrying through the installation of a particular work . . .

and a second, more complex level, in which a group,

> "may involve itself in several actions integrated vertically and aimed at transforming the local social and economic structure in a dramatic way . . . (Ward, 1982:7)

Self-help, in other words, does not necessarily refer only to housing. It can apply to any, or many, areas of community development. It can also apply to individual families or to groups (the latter tending to be termed

'mutual aid'). Mutual aid can be practiced in conjunction with individual self-help (see UNCHS, 1986:5-6) in housing programs.

Hans Harms also makes a distinction between "self-help that is initiated and controlled by the workers . . . and those self-help schemes that are initiated and controlled by the State, or by external international agencies" (Harms, 1982:20) The latter has also been termed 'aided' self-help. All of these distinctions and definitions make the term 'self-help' very difficult to define. In 1964, the UN recognized the difficulty of formal definition.

> "This is because the variety of ways in which families can build their own houses - with and without aid, technical assistance, hidden or direct subsidies, government support, tools or machines, etc. - make it virtually impossible to provide a definition that fits all cultural, economic, political and physical situations." (UNDESA, 1964:10)

These definitions have broadened to include now 'sites and services' as a form of aided self-help.

Burgess believed that all of these variations shared the same presumptions about the nature of development. The notion that governments could find cheap solutions to the housing problem belied a philosophical stance that,

> "people *should* do more for themselves. They should do a lot more of what other people are at present doing for them, and they should by encouraged to carry out themselves a lot of what they currently *expect* other people to do for them. (Burgess, 1982:57)

Society, then, is failing to take up its fundamental responsibility toward housing if it 'expects' people to do it for themselves. What Turner saw as autonomy, Burgess and others saw as neglect of basic responsibilities. This

debate is a continuation of one between the communists and the anarchists of the nineteenth century.[3]

The relationship between autonomy, responsibility, participation and the act of self-help construction are all sources of confusion within the meaning of 'self-help. For Turner, an anarchist, what is most important to answer in this process (and something he restates with some consistency) is: "*Whose participation* in *whose decisions* and *whose actions*?" (Turner, 1976:139) He continues to emphasize that participation in housing does not necessarily mean forced free labour on the part of the poor. The Marxist criticism of self-help as a means of further exploiting the labour of the poor (see Harms, 1982:20, 34; Burgess, 1982:70) was addressed, at least in part, by Turner.

> ". . . the obligation to build your own house could be as oppressive as being forbidden to do so - the corollary of the freedom to literally build your own house is the freedom *not* to have to. . . . The central issue is that of control or of the powers to decide . . . (Turner, 1976:128

Another of Turner's points about self-help housing is that there are appropriate roles for each of the participants: local community, suppliers (private commercial sector), municipal government, and central government. He suggests that many of the difficulties that arise from housing financing and delivery stem from the mismatch between the

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3 See Engels, *The Housing Question*. See also Colin Ward, *Housing: An Anarchist Approach*. London: Freedom Press, 1976. for the continuation of that debate about autonomy vs. responsibility. Turner is quoted by Ward: "The man who would be free must build his own life. The existential value of the barriada is the product of three freedoms: the freedom of community self-selection; the freedom to budget one's own resources and the freedom to shape one's own environment" (Ward, 1976:79)

participant and the appropriate role. Large organizations, such as governments, for example,

> "should have little or no business building or managing dwelling environments. Instead, they should be doing a great deal more business installing infrastructure and manufacturing and supplying tools and materials that people and their own small enterprises can use locally." (Turner, 1976:123)

One of the means that governments and international funding agencies saw, then, as an appropriate response to this reapportioning of responsibilities was the development of 'sites and services' projects and other forms of housing consolidation[4].

4.1.2. Sites and Services

Although sites and services projects had been implemented before, it was not until the early 1970's, when the World Bank began to approve lending for such schemes that such schemes began to proliferate. Prior to that, as Abrams described, there were core housing schemes, installment construction or roof-loan schemes that followed variations on the concept. A broad term that includes all of these variations, the basic intention of sites and services is the provision of serviced lots rather than dwelling units themselves. The alternatives that preceded it offered various levels of completion for the prospective user.

.1) Installment Construction (see Figure 4.1) offered the family owning a particular plot the opportunity to finish their house as they could afford the time, money or the materials. The advantage of this method is that the family

4. Laquian defines 'housing consolidation' as "the process by which families allocated plots in a project progressively develop their houses over a period of time." (Laquian, 1983:54)

can wait until it accumulates enough money to undertake the work instead of paying for financing. Often the ability to finance a project is dependent on the regularity of family income. If this is derived, as it often is, from the informal sector, the family will not likely qualify for financing. By doing work in installments, the family can set its own pace, according to its needs and available capital.

One of the problems that came with this method is that governments are not disposed to allow people to occupy unfinished homes. Not only does it reflect poorly on the efficiency of State-sponsored schemes, but it also presents a potential health and safety hazard that the State can then be seen to be condoning.

.2) Core Housing - With core housing (see Figure 4.2), the State provided enough of a shelter that the family could actually live on the building site while construction continued. The design of this core should provide two rooms and allow for expansion. The core should be placed on the plot to allow for this future expansion. (see Abrams, 1964:175-81) Land costs and availability were seen as critical issues to the success of core housing. Unfortunately undeveloped land was typically well away from the city, from adequate transportation and from employment opportunities.

.3) Roof Loans - Putting up a roof is the most difficult and expensive part of a structure. It depends upon the availability of material that can span distance and support weight and material that can effectively protect from the

Figure 4.1
Installment Construction
(Source: UNCHS, 1984b)

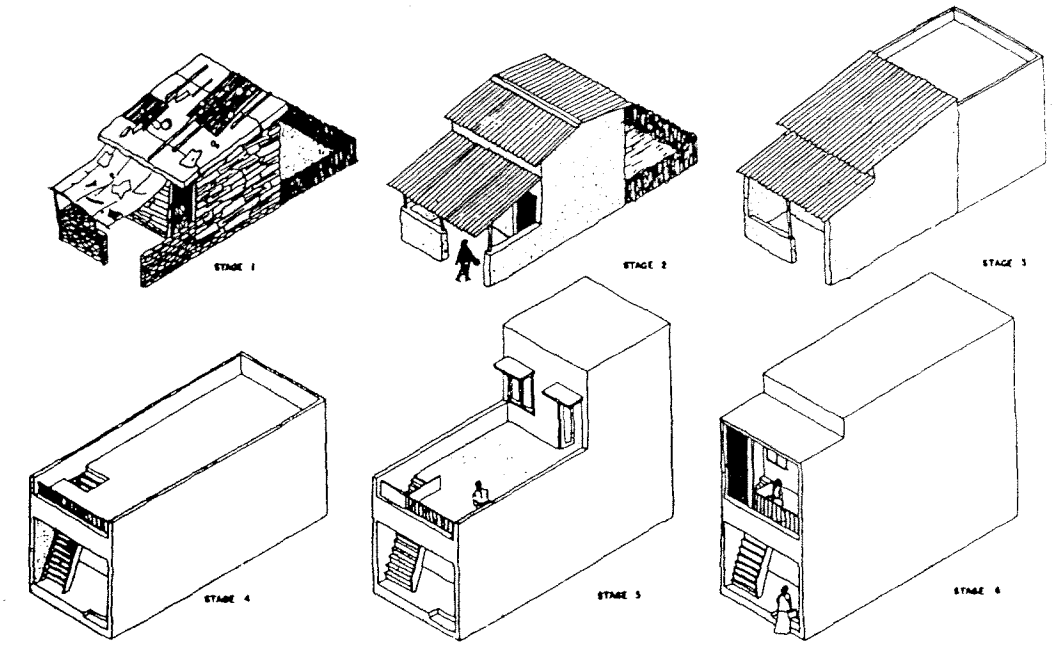
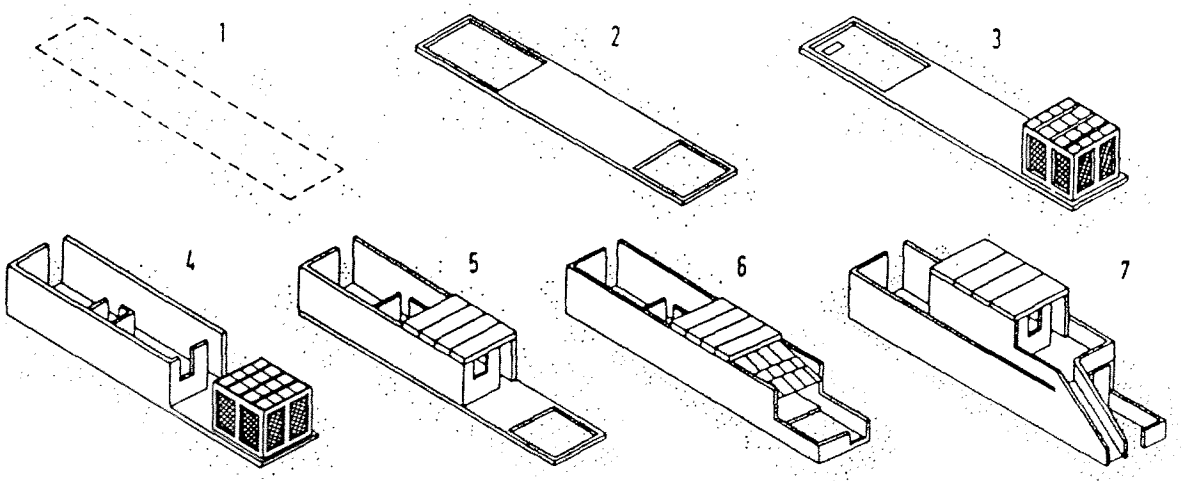


Figure 4.2
Core Housing Variation
(Source: Dwyer, 1975)



1 Stage One : 10 by 50 foot lots are laid out by the association
2 Stage Two : Foundation walls and plinth are constructed to assure urban control and structural security
3 Stage Three: The hutment association distributes the land and the dwellers move onto their lots
4 Stage Four : Working together with technical assistance,the community builds common walls
5 Stage Five : Individually or in groups,one section is covered over.Ownership officially goes to the dweller
6 Stage Six : Porch is covered and front yard enclosed
7 Stage Seven: According to the needs and means of the inhabitants,more sections are added and additional floors are constructed

weather.[5] It is here that the poor often require more financial and technical assistance. Abrams described one of the early efforts by the United Nations in 1954 to implement such a plan in Ghana. This involved the granting of loans to those members of a village society that had built their houses up to the wall plates according to specifications. Prefabricated roofing materials were purchased in bulk by a public agency.

> "Sizes and specification could be standardized and arrangements made with foreign firms for manufacturing roofing material of prescribed size and quality." (Abrams, 1964:187-8)

What was seen as an advantage in 1964 by Abrams came to be seen as a disadvantage, though, later. With standardization and specifications came the necessity to construct within the framework of the requirements of building codes and the products of foreign suppliers.

.4) Sites and Services - Like core housing, sites and services projects were intended to provide the user with infrastructure on a plot of land. While reducing the direct capital investment in housing, the government can still maintain control over land assembly, tenure, subdivision planning and, to some extent, the building process.

There is a range of perceptions on the nature and purpose of sites and services projects:

- the provision of serviced plots
- the freedom to build
- access to employment

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5. Fathy's return to the traditional vaulted roof form in his work in New Gourna provides a vivid description of one inventive design solution to the problem using mud as a material. (Fathy, 1973:8-12)

- access to loans
- access to construction materials
- core housing (see Van der Linden, 1986:15-6)

In addition these projects usually involve access to credit, technical assistance, and, most importantly, security of tenure. What they did not usually offer was location. This is, for the poor, more critical than housing itself. Those who depend on the informal sector for economic survival need access to the inner city. Most of the earlier sites and services schemes were located at the periphery of the city where land costs were significantly reduced (Peattie, 1982:135). However, transportation to and from the city centre was woefully inadequate. As a result, those relocated, faced social dislocation as well as difficulties in getting to and from their places of work. "In many countries, projects were abandoned after the initial resettlement; in others the projects were not settled at all." (Laquian, 1983:18)

What the government achieved by sites-and-services was the opportunity to "to gain some control over national urban growth patterns and to reduce one of the biggest obstacles to low income housing, namely land speculation." (Swan, 1983:3) The initial policy mechanism for avoiding speculation was to buy up tracts of land on the city's periphery thus keeping initial land costs down and mitigating market demand in future growth. With downward raiding this failed to materialize to the extent expected.

Quite aside from the ability to reduce housing costs, there was a widespread aversion on the part of government officials to handing over this much responsibility and autonomy to the people. This, in part, stemmed from the belief that both professionals and bureaucrats would be rendered redundant. Instead, what it fostered was the

development of a more appropriate level of professional or institutional involvement that was one step removed from direct "top-down" participation. The issues that proved to be appropriate for professional involvement related as Swan suggested, "to the availability and suitability of community organizations, of building materials, of building and design skills, of finance and of public urban priorities in general." (Swan, 1983:4).

In many instances, sites and services schemes failed as a result of the lack of sufficient or insufficiently trained administrative personnel or to the inflexibility of architects and planners to changes in conventional standards. (see Swan 1983:4-5; Laquian, 1977:294) However, largely because of the locational issue, many governments found that upgrading existing settlements was a more appropriate response to the complex relationships in human settlements.

.5) Squatter Upgrading - In a response to the fact of illegal settlements, governments have attempted to upgrade or install some level of infrastructure to existing squatter settlements. This will often, though not always, involved the legalization of existing settlements. Even in those areas where settlements are not legalized, such as Hong Kong (see 5.4 below), there is at least a provisional acceptance that results from the recognition of the existence of the settlement and the installation of permanent infrastructure. (see Van der Linden, 1983:251-2) Typically, this infrastructure includes some of the following: drinking water, garbage collection, electricity, street lamps, paved paths, surface drainage, toilets, sewers, and community services such as schools and health clinics.

Reblocking is another form of upgrading that incorporates the relocation of existing dwellings to accommodate new

roads and pathways and the provision of utility services. Extensive reblocking was first conducted in the Tondo Foreshore upgrading in the Philippines. This project, begun in 1976, had three main principles:

> "1) maximum retention of structures and minimum displacement of families; 2) maximum community participation in planning and implementation; and 3) provision of basic services and utilities." (Reforma, 1983:25)

With these principles in mind, detailed surveys were conducted of neighbourhoods from which alternative development plans could be prepared for presentation to the affected neighbourhoods. Of the 27,500 families that lived on the 137 ha of land in Tondo, some 4,000 were eventually relocated to a neighbouring sites and services project nearby.

With the legitimation that comes with upgrading, there is consequent inflation of land prices. Middle income families start competing in this market place. So-called 'downward raiding' that occurs in public sector housing, will tend to affect the availability of housing and land for the poor (see Ward, 1982:2) in upgrading schemes as well (see Van der Linden, 1983:252). Speculation in land was mitigated in many cases by anticipatory policy mechanisms and by the dweller's stronger interest in security of tenure over immediate returns.

4.1.3. Land Sharing

Originating in Bangkok, land sharing involves a negotiated agreement between squatters and the owner of the land to share the land between them. Each party in this process has some incentive to enter into negotiation. For the squatters, it is the threat of eviction. For the landlord

it is the threat of organized resistance to eviction. In order for the latter threat to be effective, one of the ingredients of land sharing is community organization. The other principles integral to its success are: a land sharing agreement, densification, reconstruction (often involving reblocking) and capital investment (Angel & Boonyabancha, 1988:109).

The threat of eviction is, in Bangkok, usually from public land (Boonyabancha, 1983:257). From a 1984 survey, off the total 383 slum land parcels in Bangkok, more than 80% (311) were owned by five major landlords: temples and mosques, the Crown Property Bureau, the Royal Irrigation Department, the Treasury Department, and the State Railways of Thailand (Angel and Pornchokchai, 1989:140) Because more than 60% of those 311 parcels are owned by government agencies, the question of rights becomes more dominant. On the one hand, there is the protection of the legal right to the land and on the other, the moral right to housing and the claim to the land through sustained occupancy. Beyond that lies the social responsibility of the government to house its citizens (Angel and Boonyabancha, 1988:108). At the outset, the landlord's position in these negotiations is burdened by these conflicting rights, responsibilities and claims.

When the process is initiated, the threatened community will often engage professional community organizers as advocates to assist in the preparation of proposals and to aid in the negotiations. A number of articulate and assertive indigenous community leaders have emerged from this process (Angel and Boonyabancha, 1988:120) around which additional community support has been mobilized. Participation of the community itself is critical to the success of land sharing (as it is with reblocking schemes). Within the framework of existing ownership patterns this can often raise difficulties. With the greater percentage of slum land

under the ownership of public agencies, it has been suggested for Bangkok that a global agreement be prepared "between the NHA [National Housing Authority] and each agency to prepare a master plan for transforming all these land parcels into proper residential communities within a given time period." (Angel and Pornchokchai, 1989:144) Master plans of that magnitude have the potential of circumventing this important aspect of land sharing. The participation of those people who are most affected by redevelopment, densification or relocation is critical to the success of the program, if only to redirect community resistance towards concrete and shared goals.

4.1.4. Training Programs

Recognizing the fact that governments could not meet the demands for shelter, infrastructure and services, and recognizing that self-help through the means described above is a fact of urban life, one of the consequences was the development of training programs for individuals and groups so that they could better undertake the implementation of improvement in housing.

A 1978 report from the UN Centre for Human Settlements (UNCHS, 1978), describing a training programme for the improvement of slums and squatter areas in urban and rural communities, indicated a top priority in the training of community coordinators, community workers as well as the community itself. In addition to this, though, the recommendations of the meeting called for the retraining of professionals, planners and mid-level technical staff who are, partly because of their Western training, out of step with the needs of the poor and therefore are unable to provide for effective policies that can actually reach those in need. One Latin American report noted that

> "present training programmes have a tendency to be divorced from reality, particularly in relation to needs of low-income populations. Even training of the traditional basic professionals - architects and engineers - did not equip them to deal with the social and environmental questions which lay behind the material aspects of human habitat." (UNCHS, 1984a:7)

The wide variety of people involved in the process of developing and managing human settlements suggests a wider variety of training possibilities. Each group should receive, in other words, specific as well as general training. The policy-makers - politicians, civic leaders and senior administrators - will have different training requirements from planners and technical staff. In turn, they will both have different requirements from the 'implementors' - the community workers and leaders. The closer one is to the street the less one needs sensitization to the reality of the streets. Conversely those from the streets would need more skills development at the administrative and policy level. All groups would require training in the understanding of the incremental process involved in development (see also below 4.2.1).

In the West training programmes have been attempted in several areas. The Neighborhood Youth Corp (NYC) and Job Corps were two such efforts that were developed in the 1960s (see Bullock, 1985:79-164). With the rise, during this period, of community-based organizations, the civil rights movement and community action groups, these antipoverty programmes also received support from inner city communities who were also the beneficiaries of the youth employment projects. Aside from the goal of keeping low-income students in school, the NYC program offered employment and modest income to those who had dropped out of school. These former students received valuable work experience for their work on public service projects.

The programme was popular with legislators who saw a number of benefits from the scheme: it was inexpensive to run (the employees received only minimum wage); cheap labour could be provided to government projects; and, it could pacify inner city youth. It was thus regarded as "riot insurance" (Bollard, 1985:84).

Although the NYC provided employment training at a menial level, some programmes trained young people construction skills that would allow them to use these skills in the improvement of neighbourhood housing conditions.

4.1.5. Urban Homesteading

Urban homesteading was and is largely a phenomenon of First World cities. It depends on a stock of abandoned buildings and vacant lots usually in inner cities neighbourhoods. Essentially, homesteading, at least in the United States, began as a legitimized form of squatting. For authorities it provided a middle option between confrontation and concession. The Homesteading Act of 1862 was directed towards the urban poor as a means of both developing the frontier and of providing and escape valve for the urban poor (Borgos, 1984:18). One hundred years later the new frontier was the inner city.

Two problems precipitated the development of the inner city as a frontier. The first was the flight of private capital from these areas of the city and the second was "a growing inventory of vacant federally-owned houses, generated mainly by foreclosures of FHA-insured mortgages." (Borgos, 1984:19) In 1974 this resulted in a new federal homesteading program. Under the terms of this program, low-income families could buy these abandoned buildings for a nominal fee and rehabilitate them. In order to qualify for the program, though, the prospective buyers had to prove their capacity

to undertake the repairs. This meant that the program was ultimately directed towards middle-income rather than low-income applicants. As a result the program was not well subscribed. By 1977, in Philadelphia, the number of abandoned buildings had grown to 40,000. It was in this atmosphere that the Association of Community Organizations for Reform Now (ACORN) formed.

ACORN's response to the growth of two sectors - those who could not afford housing and abandoned building - was to organize a squatting campaign. When the first squatters began to move into abandoned houses, they did so with the knowledge that what they were about to do was illegal, physically taxing and risky. With that knowledge, they agreed to a set of rules:

> "First, squatters were asked to identify five vacant houses in which they were interested [in order to allow for a check on the deed and property tax records]. . . Next, they were required to sign a 'squatters contract', which obligated them to participate in meetings, rallies, and other activities . . . Finally, squatters were instructed to obtain the signatures of 75 percent of their prospective neighbors on a petition endorsing the squatting action, and to obtain concrete assistance from these neighbors wherever feasible." (Borgos, 1984:20)

With order established, it was more difficult for the local authorities to react with cries of 'Anarchy in the streets', although, at the outset of the squatting campaign, the HUD Secretary "described the squatters as 'no better than shoplifters'" (Borgos, 1984:19)

In addition to their own rules, the squatters received some help from City Council in Philadelphia in the form of an ordinance that would ultimately expand the pool of properties far more quickly than the up two years it normally took for the proceedings of a tax foreclosure. The

ordinance adopted permitted the City "to declare an abandoned house a public nuisance and contract with the [ACORN] applicant to occupy the house immediately and commence improvements." (Borgos, 1984:23)

As this model was refined, it spread to other cities including Phoenix, Brooklyn, and Detroit. At this point, they gained enough legitimacy that Congress introduced legislation to revamp the federal homesteading program along the lines of the Philadelphia model. Out of their militancy, came some sense of legitimacy and out of that came the insistence by the squatters "that they had a right to decent housing, and that this right took precedence over the rights of property." (Borgos, 1984:24) Although the radical political principles of the squatters did not receive wide public support, their actions gained currency because they upheld many of the virtues held dear by the American public (particularly during the Reagan era): home ownership and self reliance. For the squatters, homeonwership meant, most importantly, security of tenure.

Homesteading has been a continuing force in low cost housing. In the South Bronx the Inner-City Homesteaders have been active in squatting and rehabilitating abandoned buildings for the last three years. Their efforts to house themselves were not met with support from the city. Indeed, according to the Department of Housing Preservation and Development (HPD), these squatters are nothing more than 'queue jumpers' and trespassers who are undertaking illegal and unsafe renovations to apartments that the city either wants demolished or itself wants to renovate to house the homeless. The suggestion HPD had for the squatters was that they "drop their hammers and brushes and head for city shelters and welfare hotels" (Batista, 1990:44) The city plans to renovate all the vacant buildings it owns by 1993. According to city reports, some 4,300 units have been

completed and another 15,400 units are under construction. The Housing Justice Campaign has claimed that only a small percentage of these units is going to low-income families. They, with the Association for Neighborhood and Housing Development, have sued the city with the claim that homeless people would be receiving only 16% of these projected units, low income families would receive one-third of 1%, while middle-income households (representing 6% of the population) would receive 37% of the new units. A significant portion of the proposed new housing units are to be located in the Homesteaders territory in the South Bronx. One large project of 3000 units on a 40-acre site is expected to require the relocation of 500 workers from local businesses and will directly displace 382 families. The new development, though, will be made available to households earning between $25,000 and $50,000. The median income in this neighbourhood, however, is only $9,000. (Batista, 1990:45)

As of October 1990 the court case against the city was under appeal. HPD was continuing, intermittently, to attempt to evict the Homesteaders from their homes.

4.1.6. Conflicts

These conflicts between authority the formal sector - and the poor are not uncommon. The issues they raise are becoming more complex. The conflicts raised between those homeless who are able to organize and those who are not; between affordability and city health and fire safety bylaws; between self-reliance and dependency.

Borgos points to the irony that opposition to squatting or urban homesteading was

> "the opposition it generated from liberal mayors, housing officials and their allies. This opposition was attributable in part to crude political considerations: squatting was a rebuke to those in power at City Hall, regardless of their political complexion. But there was also a strong odor of paternalism in the resistance of some officials to the idea that poor people could renovate and maintain their own homes. . . . Mixed in with a low estimation of the capacities of poor people was an attitude that homeownership was an expensive luxury, along with a deep reluctance to take programmatic risks of any kind - a fear of being associated with 'another failed program'" (Borgos, 1984:26)

The sense of caution on the part of the formal sector - both government administrators and practising professionals - is not matched by the private sector or the poor themselves. Both are prepared to take risks on the possibility of the rewards - for one, profit; for the other, survival in the city.

In architecture, the practising professional - if s/he is to side with any risk taker - will side, most often, with the private sector. It is entirely possible for architects to take on these risks on behalf of those whose needs are the greatest. Indeed, architects have been doing so for some time.

4.2 ADVOCACY AND THE DESIGN PROFESSION

Architects have been responding to these events, both in the First and the Third Worlds, over the last 25 years in a number of areas. There is a similarity in approach and in ideological intent. For many it meant renouncing their professional stance in order to do the work they felt was required. For others it meant using their expertise on behalf of the poor so that, as professionals, they could act

as advocates on behalf of those who would otherwise have no representation before the government and its planning officials. In the Third World, where professional expertise was spread quite thinly in the population, this demanded the development of paraprofessionals, or 'barefoot architects'. In the First World, conditions demanded the development of Community Design Centers (predominantly in the U.S.) and later, Community Architecture (predominantly in England).

4.2.1. The Barefoot Architect.

In the early 80's, the grim facts of Third World urbanization and rural stagnation made it clear that there will be a highly increased demand for "professional services tailored to meet the specific needs of communities who find themselves at the bottom of the economic ladder" (Saini, 1984:34). This demand is impossible to meet solely at the professional level. The Indonesian government has "acknowledged that they do not have enough architects and other technical people to improve housing." (Busuttil, 1987:158) Turner pointed out that "even when the money is made available by a foreign agency, it has not been possible to find and train the army of dedicated field workers and local program administrators demanded."(Turner, 1972:144)

In the Kampung Improvement Program (KIP) in Indonesia (see 5.2, below), one of the oldest improvement programs in the world, training projects were implemented by UNESCO working with the International Union of Architects (UIA) and the Institute of Indonesian Architects (Silas, 1984:76). Silas makes an important point, though, about the knowledge that has come out of this long term project. It is valuable information that is:

> ". . needed to help the transfer of skill from one official to another, or from one place to another. It will also be an important tool for future evaluation

> purposes. However, the awareness of this need among decision-makers in the government and research workers in the universities has yet to appear. . . . only a little has been learned by these [training] centers from the experience of Indonesia which has implemented the largest and longest site improvement program in the world" (Silas, 1984)

Clearly, the co-ordination of this information and its dissemination is a difficult process to organize effectively.

Between the high demand and the low interest on the part of the professionals, communities in Indonesia, as in the rest of the developing world, are having great difficulty getting any kind of technical aid.

> "Often, there are few if any architects or engineers who have actually received training relevant to the problems of mass houselessness. Architects and engineers are trained academically and trained for excellence, for producing outstanding structures that they will be remembered by. Then they want to build something out of which they can make money. There is not a very big profit margin in mass housing or slum upgrading schemes. There is a corresponding reluctance among professionals to get involved in such schemes (Busuttil, 1987:155)

This lack of appropriate assistance from the professional community is similar to the experience in the West. Typically, the response of architects to the problems associated with homelessness is simply to design more shelters. This one-dimensional response can lead to the erroneous conclusions that, a) the provision of shelter alone will solve the problems associated with homelessness and, b) the problem is, in fact, solved because there are enough beds to satisfy the immediate needs of the 'homeless'. These conclusions are as common in the developing world as they are in the developed world. It is difficult in either location to rally professionals around a cause that is not seen to exist, or, even if perceived, is

not seen as appropriate to the traditional education of the architect. In the developing world this reluctance is coupled with a lack of resources, not only in materials, but in technical expertise. In order to effectively address this need, there is a requirement for the retraining of professionals for new and broader responsibilities (see Chapter 6). In the developing nations, particularly, there is an additional need to train laymen for technical support to communities.

The 'barefoot architect', like the concept of barefoot doctor developed in PRC, meets this need at an intermediate level.

> "An important advantage of this scheme was that the training program was highly simplified and was of relatively short duration, thus making it possible to train large numbers of these 'sub-professionals' within the limited resources available".(Saini, 1984:35)

The UNESCO-sponsored workshop held in Bangkok in June 1983 addressed the issue of training barefoot architects. Their tasks would include

> " . . . roadways, water supply, and drainage as well as the construction of houses, and community buildings such as schools. He or she would be able to guide local people in the introduction of simple technologies which enhance the use of locally available resources.
>
> Above all, this person would be able to mobilize community support for the various projects which would be undertaken to physically improve or expand such settlements." (UNESCO, 1983:3)

In order to work effectively, these barefoot architects should be found within their own community because of the "obvious need for some background and familiarity with local environments" and because they "are part of the cultural environment in which they are likely to operate." (Saini, 1984:35).

Within the educational framework of the professional, this role could not likely be filled by an architect. The professional, whether trained in the West or in schools of Architecture in the Third World , tend to "isolate themselves from the mainstream of building activity in the Third World" (Saini, 1984:35)[6] since the greatest proportion of the overall construction activity is not the office, hotel or government buildings. In fact much of the total construction in cities of the developing world does not occur in the formal sector at all, but in the informal sector[7]. It is here that the paraprofessional, or 'barefoot architect' can act as intermediary between the formal, professional sector and the community itself.

The UNESCO workshop identified two kinds of people in the communities that should be trained. They are the community workers who, in addition to their leadership skills have enough understanding of technical problems to be able to seek appropriate outside help, and tradesmen, who, in addition to their technical orientation have enough understanding of their strengths and weaknesses in their communities to garner whatever assistance they can. The workshop also identified three basic prerequisites for the barefoot architect:

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6. Walton comments that the international consultant may have some advantage over local professionals because s/he is from the outside and seen as both more objective and as a symbol of new initiative. Local professionals and administrators "are often unaware of the conditions poor people actually live in; or if they are aware, they may refuse to acknowledge it." (Walton, 1984:195)

7. James Lewis pointed out that "only a fraction of city populations receive any benefit from architects; spontaneous, self-built peripheral squatter settlements are where up to a third of Third World city populations live (46 per cent in Mexico City)" (Lewis, 1987:31)

> "to act as go-between for government authorities and the people; to primarily identify with the community's interests; and to firmly believe in the ability of the people to help themselves." (Saini, 1984:36)

They suggested that training should be in three broad areas - technology, management and community development and planning. The expected duration of such a program would likely be 1 year. (see Appendix F)

Turner has expanded on the notion of the 'barefoot architect'. However, for essentially the same reasons that Jones preferred the term 'technical aid' instead of 'community architecture', Turner uses the word 'habitat worker' (Turner, 1985) instead of 'barefoot architect'. In order to function effectively, the habitat worker must be closely associated with the community with which s/he works, and be proficient within the political sphere of the community.

From a Steering Group Meeting of UNCHS (North America Office) held in Vancouver in 1985, the participants developed a set of requirements for this community worker. These were in the areas of recruitment, training and practice.

Recruitment - The emphasis is on personnel trained in either Social Techniques or Technical Skills. They should have proven practical experience within the community; should be chosen and approved by agencies within the community having control over planning design and implementation; should have the capacity to communicate effectively; should have a practical skill; and should be keen to learn generalist skills. (Bijlani, 1985)

Training - This is a process involving technical, social and political skills, so both informal and formal training are

required. Training in political skills will involve leadership skills and techniques for fostering team work. Those who are working within local government organizations would need training in local community development. Local university graduates interested in habitat work would require a reorientation of their existing curricula in order to develop a more appropriate response to human settlements issues. Projects themselves should be used as vehicles for the training of habitat workers and training institutions should be located in the project communities.

The focus of training should be a three levels: "the local community, local government and non-governmental organizations." (Trivelli, 1985:49) For all three initial training must include some aspects of the interrelationships between the three participants.

For local community leaders this training should include: leadership, political education, government policy, community motivation, and negotiation as well as the more administrative areas of planning and project formulation, management and operation programming, and urban analysis. In addition, community workers should be trained in basic technical skills such as: shelter construction, water supply and sewage, land development, building maintenance and rehabilitation, health and sanitary improvements.

For the local government workers, training should include: communication skills, legal, administration, procedure, budgeting, and project formulation.

Practice - What does the worker do? The focus should be on the kind of work rather than the type of person. (Turner, 1985:63) The habitat worker should be capable of facilitating the progress of program development under the categories of organization, land, planning, finance,

implementation, transfer and tenancy, and management operations. He/she should be a skilled enabler, and must be capable of functioning effectively in the local political sphere.

Yahya indicates more attributes of the 'habitat worker' through a list of the field personnel doing similar work. In this list he includes: Building Technician, Teacher, Architectural Assistant/Technician, Sewerage/Drainage Technician, Revenue Officer, Health Worker, Surveyor, and many others. (Yahya, 1985:15) He calls this the role pool that would form the resource base within the community for the habitat worker. The broad range of jobs in this list indicates the extent of the habitat worker's understanding of the general requirements of community building and the need for communicating and negotiating abilities.

In addition to these attributes, he must have a clear body of knowledge and technical skills, the ability to work well with people, maintain a clean and dignified lifestyle with a strong sense of ethics, have a defined set of responsibilities, access to the required resources and facilities. He must have sympathetic and supportive superiors, recognition by professionals, and adequate remuneration. (Yahya, 1985)

With all these requirements, it seems unlikely that such an individual could ever be found. But there is more. The demands of his job would be to: teach, plan, design, build, supervise, prepare records and reports, communicate, inform, disseminate, organize resources, labour, materials and support, learn, observe, evaluate, investigate, mobilize people and funds, link/network, facilitate, expedite, enable, struggle, defend, protect, be an activist/militant, initiate, maneuver, budget, estimate and control funds. (Yahya, 1985:19-20)

As Saini pointed out, at the level of the local community, there are two types of habitat workers- community leaders and tradesmen. At the NGO level, they will need training to develop broader perspectives and more varied methodologies. Those from local government would channel demands from community self-help projects and mobilize available resources. He also points out that there are many deficiencies in the education of university graduates with regard to their potential value in work in this field.

At the level of the local administration, "planners, architects, economists, lawyers and other technical personnel could be enrolled as local community Habitat Worker teams within local governments." These professionals would perform a function somewhat akin to the Technical Aid groups as developed in England.

4.2.2. Community Design

The architect's role in 'advocacy architecture' seemed to centre around the obvious need for better communication between the professional and the people for whom s/he was working. Out of this need Community Design Centres sprang up in inner cities throughout North America. The first of these was The Architects Renewal Committee in Harlem (ARCH) which started in 1964[8]. The focus of these CDC's in the early years tended to be political and theoretical in nature. Who should participate? When does the design process become manipulative or, worse, exclusive? (Comerio, 1984) These and a multitude of other ethical questions placed the emphasis on being politically correct before

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8. For a brief history of ARCH see R.H. Cheney, "ARCH: Black Advocates, Advocacy Planning." *Progressive Architecture*, September, 1968.

proceeding to action. The aim, though, was nothing less than the movement towards the direct popular control of the environment. It was little wonder, then, that, in these early years, although the young professionals took their inspiration from the participatory designers of European social housing - Erskine, Kroll, Habraken - "their political heroes were the rebellious and self-reliant Third World squatters." (Comerio, 1987:19) These were people - communities - that took direct action to supply their needs in shelter, land, and community.

These early years were powered by idealism, enthusiasm and liberalism. Unfortunately, having become ideologically ostracized from the mainstream, they were unable, in many instances, to implement much of what they had designed. In addition, the people with whom they were trying to work, were less concerned with the righteousness of the political stance than they were with getting something done about their neighbourhood. To the ideologue, this kind of localism was seen as narrow, reactionary, parochial, selfish and basically unrevolutionary. What seemed to be developing was the Left's version of intellectual imperialism. There was an unfortunate, though sometimes justifiable, perception that the 'advocacy architect', despite his good intentions, appeared to be yet "another professional who knows what is good for the poor" (Harms, 1972:188) He would not be led from the paths of righteousness by the mundane needs of filling potholes and repairing gutters or by the corrupting power that would fund the larger community designs. As this conflict between ideology and action neared a stalemate, federal funding for CDC's, and community development in general, began to slow to a trickle. That turn of events led quietly to the next phase of community design.

In what Comerio calls the entrepreneurial phase of community design, there was a recognition in the late 70's that local

action was cumulative. It was possible to start with the potholes and move out from there to larger issues of community control. ACORN (Association of Community Organizations for Reform Now) in Philadelphia as well as DERA (Downtown Eastside Residents Association) (see 8.4.3) in Vancouver are clear examples of this kind of thinking. These groups "shied away from universal solutions to society's problems and focussed on self-reliant economic and community development strategies that served locally specific needs." (Comerio, 1984:235)

With the change in the funding base, CDC's had to support themselves. In order to do so, they expanded their base of support to include services such as, contract work, funded research, training programs, construction and furniture design along with the ongoing technical assistance and political advocacy.

These new necessities in themselves have helped to redefine the role that the design professional can play in community development.

One of the most visible proponents of this altered vision of architecture is John Turner. Along with his well-documented views on the nature and value of self-help housing, he has also written about the role of the architect in community-building. From a traditional point of view, the 'community architect ' is often "suspected of abdicating professional responsibilities and mainstream skills" (Turner, 1987:277). In fact, according to Turner, this community orientation requires additional skills and greater responsibility.

> "She or he applies more skill in communicating with people, and seeks greater knowledge of the requisite tools, as well as all the knowledge and other skills any competent architect must have." (Turner, 1987:278)

Our role as professionals implies, in turn, the responsibility to communicate this knowledge and skill to those in need. This "represents the addition of a moral and political content to professional practice." (Comerio, 1984:228)

In order to develop an effective and communicative relationship between the design professional and the community, the 'community architect', as Turner suggested, takes on more rather than less responsibilities and needs a greater variety of skills to work effectively than does the traditionally trained architect. What are these skills?

Ward points out that the kind of service that community groups need is "not at all architectural, it is more akin to that of the 'fixer' in Eastern Europe, who gains a living from his knowledge of the System and How to Manipulate It." (Ward, 1987:11) This service is not usually that which calls for the capacity for the kind of design which is associated with the education and training of architects. What they need is "a guide through the thickets of legislation and regulation that stand in the way of anyone doing anything." (Ward, 1987:11) Yet, customarily architects perform these broader tasks for clients in interpreting and synthesizing the great variety of codes, economic and physical forces that govern any building project. Ward is suggesting that the 'community architect' must expand his service to include the ability to interpret a multitude of other regulations that are less directly involved with buildings and more directly involved with the community.

This shift in focus from buildings to the community which they are intended to serve led Christopher Jones to make a distinction between 'Community Architecture' and 'Technical Aid'. The former is "the work with the voluntary sector

carried out by standard private practices", whereas, the latter "is the third force of professionalism, and, . . . offers a multi-disciplinary, user-controlled facility which seeks alternative funding for its service." (Jones, 1987:38) The use of the phrase 'community architecture' is seen here to focus unnecessarily on only some aspects of the needs of the community and implies that those needs can be satisfied through the provision of built form. In order to move beyond the restrictions imposed on problem-solving by such a limited architectural response, the term 'technical aid' puts forward a much broader definition of the role that a multi-disciplinary team might play in the community.

One such technical aid organization is the Community Technical Services Agency (COMTECHSA) Limited in Liverpool. This agency is a non-profit distributing co-operative. Shareholders are other voluntary organizations that become members of COMTECHSA by buying a share for $ 1.00 . In turn the Agency provides its members with "the services of architects, planners, landscape architects and related skills." (Forsyth, 1987:30) The shareholders control the agency through the Committee of Management which oversees policy and direction of the agency as well as reviewing, on a monthly basis, the requests for assistance from members. In this way control of projects within the community remains in the community.

Typically, the architectural solutions to the housing problems that people face are not likely to be the first priority. Indeed, Tom Wooley's research in England found that even within the sphere of design, the community's satisfaction with the final product "had more to do with the co-op's role in the development than with the design process as such". (Owen, 1986:25) COMTECHSA's organizing principles tend to confirm these findings.

Some years ago Comerio developed a definition of 'Community Design' with four features that distinguished it from traditional architectural practice:

1) "Community design focuses on the client type, rather than the building type.
2) "Community design requires a variety of tasks to solve problems because the end product is not clearly defined from the outset."
3) "Community design problems are generated by a grassroots or bottom-up process."
4) "Community design combines principles of empowerment with enabling products." (Comerio, 1984:237)

With the second point, the end product may not be plans or a building. It may be training programs for homesteaders or paraprofessionals, such as Barefoot Architects or, as with the experience of the Asian Neighborhood Design (AND) in San Francisco, furnishings (see 3.4.1)[9]. This, in itself represents a shift in focus, in Schon's terms, from 'problem solving' to 'problem setting' (Schon, 1983). As such, the term, 'Technical Aid' provides us with a broader horizon from which to assess the needs of the community from the perspective of the multi-disciplinary team of which the architect is a member.

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9. Comerio gives the example of Asian Neighborhood Design in San Francisco. "In order to keep the neighborhood intact, and thereby continue to supply affordable housing for the very poor, it seemed the only option was to keep the buildings in their existing unsafe and unpleasant conditions. Determined to do something about the situation, AND proposed an alternative to the deathtrap versus displacement dilemma. For a small sum of money, they could build furnishings and help tenants fix up the interiors of the hotels and apartments in which they were currently living. This would at least improve the day-to-day quality of life for some tenants - without displacement. The project proved to be a good interim solution for the tenants and served to focus political attention on the larger housing problems in the community." see (Comerio, 1984:238)

PART II
ARCHITECTURE AND DEVELOPMENT

> "The certified professional makes a fool of himself, and often does a great deal of harm to other people, by assuming that he knows more than the 'uneducated' by virtue of his schooling. All that second- and third-hand information and intellectual exercising does for him, however, is to reduce his ability to listen and learn about situations significantly different from his own social and economic experience - with consequences which can be tragic when he has the power to impose his solutions on those who are not strong enough to resist." (Turner, 1972:146-7)

We are often far more aware of those things that make us different from one another than those that bind us together. The case studies that follow are meant to act as examples that can work towards an understanding of those similarities. As such they are intended to follow general approaches to the issue of development, rather than country or community specifics. Rather than review these examples on a country by country basis, then, they have been divided into three broad groupings: government, education and NGOs. These groups allow for the specific examples to be seen in a broader context that might be, then, more widely applicable. These institutions exist, in some form, in most social groupings. While differences in national policy, per capita income, social safety nets such as welfare, availability of land, transportation or employment cannot be discounted, and must be recognized, the similarities in response are more important signs of the ability of the poor than are national responses to unique housing issues.

There is always a danger in being overly generalized and, thereby, missing details that are critical to the outcome of a specific situation. However, when outsiders observe personal and local environments, the only perception they have available to them is broad generalization. These generalizations can be used for some parts of the decision-making process and not others. We can't make detailed decisions at the community level from such sweeping perceptions. On the other hand, communities themselves will have difficulty in seeing the larger environment in which they function. Scale is an important constant in development. Sometimes it is important to see the trees and sometimes it is important to see the forest. Often, the outsider, the professional expert, can only see the latter while the insider, the community itself, can only see the former. Both perceptions are equally important, but one cannot substitute for the other in the formulation of vision, policy or implementation. Turner points out that:

> "These complementary kinds of essential expertise must work in co-operation, in order to achieve an economic, convivial and environmentally sound use of non-polluting, renewable or long-lasting material resources. The relationship between insiders and outsiders is critical. As their influence or effective authority over resource use is complementary and equal in practice, there must be sufficient equality to ensure mutual respect." (Turner, 1988:15-6)

These case studies, then, are looking for the broad generalizations that can be derived from the work that architects are doing in specific environments. In all of these cases the focus of professionals is in the provision of expertise to those who cannot afford it. The circumstances in which that expertise is used in the delivery of housing to the poor will vary according to the environment in which it is applied; that is, in government organizations, educational institutions or with non-

governmental organizations or in combinations of these organizations.[1]

The other variable is in the application of resources. The appropriate application of specific kinds of knowledge, of capital, of materials, and of time are critical to development. Each of these three actors - governments, educational institutions, and NGOs - will operate more effectively in one area than another. Turner, again, makes this point about the role of governments in housing when he said: "large organizations should have little or no business building or managing dwelling environments." (Turner, 1976:123) The fact remains, however, that they are often involved, at various levels, in the dwelling environment. City states such as Hong Kong and Singapore are directly involved in both building and management. They are, though, exceptions to the current practice.

The shift in thinking over the past 30 years has been away from direct government involvement in housing, putting the burden, some would say, on the individual family. (see Burgess, 1982, Harms, 1976, 1982) Out of this, new configurations have evolved in the relationships between the participants in development. In these new relationships, the central question is, as Turner put it:

> ". . . who decides and who does what for whom (Turner, 1976:12)

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1. The private sector and the community itself (organized or unorganized) are also central participants in the development of housing. The former will include architects acting as consultants to the three groups chosen and, as such, are considered as integral to all three. The commercial supply of materials and the market supply of housing are not considered here. The community, like the private sector, is clearly integral to all three groups and the relationship that the local community has to each is of central importance to this paper.

For architects operating in this environment, these case studies present some alternative answers both to Turner's broader question and to the architect's question concerning professional responsibility and action in the world.

CHAPTER 5
ARCHITECTS AND GOVERNMENT

> "If governments persist in current attitudes and approaches, they will never successfully meet the basic needs of their urban populations. (Hardoy & Satterthwaite, 1989:60)

5.1 THE ROLE OF GOVERNMENT INSTITUTIONS IN HOUSING

Governments play a central role in housing in all countries. From sites and services models that rely on the active participation of the end user to government agencies such as the Hong Kong Housing Authority that is more directly involved in provision, housing does not get built without being touched in some way by the state or by government bilateral and multilateral aid institutions such as US AID, CIDA, the World Bank, UNESCO, UNDP and so on. The lending or granting policies that these funding agencies have adopted affect the relationship that design professionals have to the governments and, ultimately, to the communities that are the 'targets' of this funding.

Ideology affects the nature of policies towards housing. It determines the way housing is funded and the way it is delivered.[1] There are two co-existing types of objectives

1. Burns and Ferguson refer to two types of policies: explicit and implicit. The former have "the goal of raising quality or expanding the quality of shelter and related services. Implicit policies, on the other hand, have other aims but nonetheless indirectly impact shelter and settlement." The latter - policies such as job creation industrialization or import controls - may have "even

in housing policy: supply objectives and equity objectives (Headey, 1978:13) The former is concerned with the total supply of housing while the latter is concerned with the equitable distribution of resources - both financial and material. Supply objectives can be met by such policies as tax incentives to developers of housing or the direct capital expenditure in the construction of housing. Equity objectives are usually implemented by income supplements, tax rebates or means-tested access to government-financed housing. The ideological underpinnings of the conceptions of equity affect the methods of implementation and the relative intervention of the government. These conceptual foundations also determine the emphasis that is placed on different forms of tenure. The concept of "liberal equity", for example, tends to be more dependent on the market's ability to regulate access to and private expenditure on housing. It also tends to favour ownership as the prevailing form of tenure (see Headey, 1978:20-28; Hulchanski, 1985).

Whether housing is identified as consumption or production is affected by ideological principles.[2] (see Burgess, 1982:89) In turn, these principles determine the priorities of the rights of individuals - whether, for example, the rights of property take precedence over the social right to housing (see 3.3.3.).

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greater impacts on shelter and settlement than those intended by explicit policies." (Burns and Ferguson, 1987:283)

2. During the industrialization process in post-liberation China, for example, housing was considered as a consumptive rather than a productive part of the economy. As such, capital was invested in the productive sector (ie., industrial production) rather than the consumptive or 'social welfare' sector (housing). While housing was a guaranteed right, the Chinese government could not afford to fund it. (Bristol, 1989:12)

The implementation of policy can be delegated to different levels of government - regional or provincial and local - or to the private sector. The relationship between these levels and between governments and bilateral funding agencies such as CIDA or US AID and multilateral agencies such as the World Bank or UNDP also have an important effect on the implementation of policy. Indeed, with the funding agencies, that relationship also affects the formulation of national policy in much the same way that structural adjustment affects national policy in economic matters (see 3.3.1.)

Another policy instrument affecting housing is the standards that apply to their construction. It is here that architects claim direct expertise and influence. These standards include zoning and building bylaws. The former governs the use of land and the latter governs the health and structural safety issues of the constructed product - including infrastructure such as sewers, roads, and water supply and the safety of buildings. Each of these instruments affect policy objectives concerning supply and equity.

Zoning bylaws are used as a means of controlling the growth of a community, but in so doing they can effectively control affordability and access to land for those in greatest need (see Orfield, 1986:225-9; Babcock, 1983; Davidoff, 1983:195-201) For example, the setting of *minimum* lot sizes alone will effectively put the price of land out of reach of the poor. Such zoning bylaws create exclusivity that, increasingly, have been viewed as discriminatory. The Mt. Laurel case in New Jersey in 1975 is one such example of this view. The New Jersey Supreme Court struck down this community's exclusionary zoning with the reasoning that:

> "The state controls the use of land, *all* of the land. In exercising that control, it cannot favor the rich over the poor. It cannot legislatively set aside dilapidated housing in urban ghettos for the poor and decent housing elsewhere for everyone else. The government that controls this land represents everyone. while the state may not have the ability to eliminate poverty, it cannot use that condition as the basis for imposing further disadvantages." (in Orfield, 1986:226)

In addition to keeping people out of housing opportunities, zoning can effectively remove them from existing housing by altering the zoning requirements to encourage development of certain kinds. Evictions of the poor, particularly from inner city land, is done in the name of beautification, of health and safety concerns or in order to redevelop land for higher economic use (see Hardoy & Satterthwaite, 1989:45-51; Linn, 1983:169).

Similarly, building codes are policy instruments of governments to control the construction of buildings. In much the same way as zoning bylaws, the standards that are applied typically exclude the poor from legitimate access to housing.

> "Historically, housing codes were not the beginnings of a benevolent concern for the housing of the poor; they were a continuation of the use of state power to prevent any disturbance - physical, social, or political - of the private conduct of economic affairs. (Marcuse, 1986:252)

The setting of high standards, then, can be an effective means of controlling development. Such standards, though, also create, through their rigidity, complexity and implicit costs, conditions in which the poor must act outside these standards - and, therefore, outside the law - in order to obtain housing. In Third World countries standards that are often imported from First World cities are used to govern the built environment. Without taking local conditions into account, these standards fail to reflect the availability of

local material and financial resources, and, as a result, actually exacerbate the illegal environment. It has been estimated that 70 percent of the population of Lima lives in such an illegal urban environment (De Soto, 1990) While the poor need protection for their health and safety, the application of rigid or inappropriate rules often creates systemic injustice in the access to affordable housing. It has been recognized in some development circles that this issue must be addressed in the development of appropriate codes that can account for the informal sector.

> "The concept of injustice was a valid starting point for identifying deficiencies in existing codes and regulations and for developing a range of requirements to form the basis for new codes and regulations. A basic injustice as the socioeconomic duality of the informal and formal building sectors. Moreover, in addition to the lack of realism and the injustice inherent in existing codes and regulations, their enforcement in low-income settlements was often unjust also. Justice required that the regulations be changed. Land-use policy, financing and technical knowledge could also be used as tools to remove some injustices, whilst others could be dealt with by introducing more flexible rules and guidelines. (UNCHS, 1981:18)

Architects operate in this environment as well. All of these government institutions use architects in some way in the course of their work. Traditionally, architects have been involved solely with the implementation of the policy objective of supply. But they are also involved, as representatives of the formal sector, in the implementation of standards. In this position, the architect is faced with potential conflicts between his professional obligations as a representative of the formal sector and his obligations as a professional to the needs of the public (see 3.2, 3.3). These conflicts are not often resolved, in part because the professional is unaware that the conflict exists. This unawareness is a result of the resistance to the

considerations of the implications of the policy environment in which s/he is working.

The architect's work in implementing either the supply or equity policy objective implies an understanding of these goals and their implications on action. Understanding the policy context will affect design decision as well as decisions about the management of the delivery process (including the management of design, construction and maintenance of housing).

Within the framework of government as the central authority in the formal sector of housing, one of the more formidable challenges that architects face is in bridging the gap between their obligations to the formal sector and the obligation to consider the basic needs of the public it serves.

There has been work done that has attempted to bridge the gap between informal and formal sectors within the context of, on the one hand, consultants to government agencies, and on the other, employees of government agencies. The BKPN in Indonesia and the National Housing Authority of Thailand have both initiated programs that deal with slum and squatter settlements in their urban areas, which, with varying levels of success, have involved architects in addressing policy objectives of supply and equity. In this the traditional role of the architect acting as consultant to government agencies in the development of new housing has not been discussed.

5.2. INDONESIA

5.2.1. Background

Of the more than 13,000 islands that make up Indonesia, Java is by far the most densely populated which, with 6.7% of the land area of Indonesia, holds more than 60% of the population and four out of its five largest cities. The annual population growth rate for Jakarta, the country's capital and largest city is 5.8% (Karamoy & Dias, 1986:193). Such a high rate of urbanization and the continuing emigration to the cities of Java from the outlying provinces, required some response from the government. Attempts to overcome this influx of people to the cities have been made through 'transmigration programmes' as far back as 1905 when the Dutch attempted to decongest Java by moving families to other islands (Laquian, 1982:40). This policy peaked in the late 70's and early 80's when several million households were sent from Java to the outer islands (Douglass, 1991:246). Despite this, urban centres continue to grow. Indonesian urbanization is now approximately 25% with nearly half of that total net migration going to Jakarta (Armstrong & McGee, 1985:97) The estimated 1990 population of Indonesia was 180 million with about 9 million in metropolitan Jakarta.

Prior to the 1960's, economic growth was not necessarily funnelled through Jakarta. Other coastal cities took the agricultural surpluses. In addition the climatic and health conditions of Jakarta slowed its growth. When the economy shifted from the peasant production of cash crops to the resource exports of oil and timber, Jakarta, as the seat of the central government, became the centre of trade as well as the centre of foreign investment (Douglass, 1991:242).

Other pressures leading to urban migration[3] included improvements to transportation to Jakarta (for the purposes of trade efficiencies), improved educational opportunities, and the increasing mechanization of agriculture.

> "Rice harvesting, for example, which once allowed up to 500 workers per hectare (almost all of whom were women) now employs from 10 to 20 men for the same area. (Douglass, 1991:247)

.1) Kampungs - The urban settlements that grew from these influences were not the unorganized or mass invasions (Noormohamed, 1980:501) that are more typical of squatter settlements in Latin America. Rather migrants to the city are absorbed by unplanned village-like settlements called kampungs[4]. These form the basic residential units in Indonesian cities (Silas, 1983:212). They cannot be considered as synonymous with slums although they do have a relation to lower standards of living. In its development, though, there is an historic connection with the rural village.

> "The kampung is a settlement which has been transformed from a rural village into an urban village with minimum but directly available urban services and utilities." (Silas, 1983:214)

It is here that some 70% of the urban population lives[5].

3. It should be noted, however, that there is no strong trend towards urban primacy. The highest growth rate during the 1971-80 period was in cities with populations from 200,000 to 500,000 (Jones, 1988:144).

4. It has been pointed out that, in Surabaya, "nearly one-quarter were formed by squatting, mainly in the post-war period. The rest developed from villages." (Maskrey & Turner, 1988:70)

5. Figures vary from city to city. Bandung was estimated at 50% (Benjamin, 1985:91), Surabaya at 70% (Silas, 1983:220) and Jakarta at 70% (Clarke, 1985:37). Benjamin stated that, while estimates are not consistent, "it is

.2) Kampung Conditions - A number of conditions are common to the kampungs. The housing is informal rather than public or private as is the 'planning' Because of this rural history, the way of life in the kampungs "is still largely agrarian in nature" (Darrundono, 1975:8). This has an effect on the growth patterns of the kampung, on the nature of residential construction, and on the nature of the community organizations that govern the daily life of the kampung. The patterns of growth reflect an organic or more informal arrangement than the formal and geometric principles of Western planning (Silas, 1983:212). Kampungs range in area from 15 ha to 120 ha with a population range from 6000 to more than 35,000 and a density ranging from 350 persons per hectare to over 1250 (Silas, 1984:72). The total area of kampungs in Jakarta is approximately 11,000 ha. (18% of the total area of the city) and houses about 70% of the total population (Darrundono, N.D.:179). In Surabaya "kampungs occupied only 5% of the total built-up area, but accommodated 72% of the total population (Silas, 1984:72). The income mix in the kampungs, unlike squatter settlements, is heterogeneous (Benjamin, 1985:95; Silas, 1984:73).

The houses are small, most being three rooms or less (Silas, 1983:218) and averaging in size around 59 sm. Two-thirds of the plots on which they are built are under 100 sm. (Silas, 1983:220). As many as 40% of the plots in surveyed kampungs in Bandung were below the minimum standard of 60 sm established by the government (Benjamin, 1985:107).

The government has classified housing according to three types: permanent, semi-permanent and temporary (Benjamin, 1985:100) based on the materials used in their construction. 'Temporary' construction uses wood as a primary construction

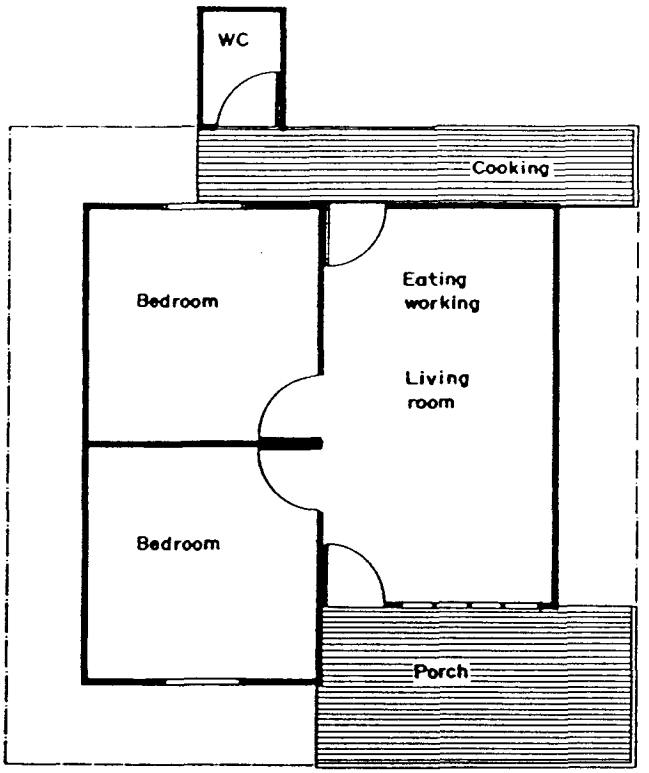
clear that the vast majority, as high as 80%, of urban Indonesians live in kampungs." (Benjamin, 1985:95)

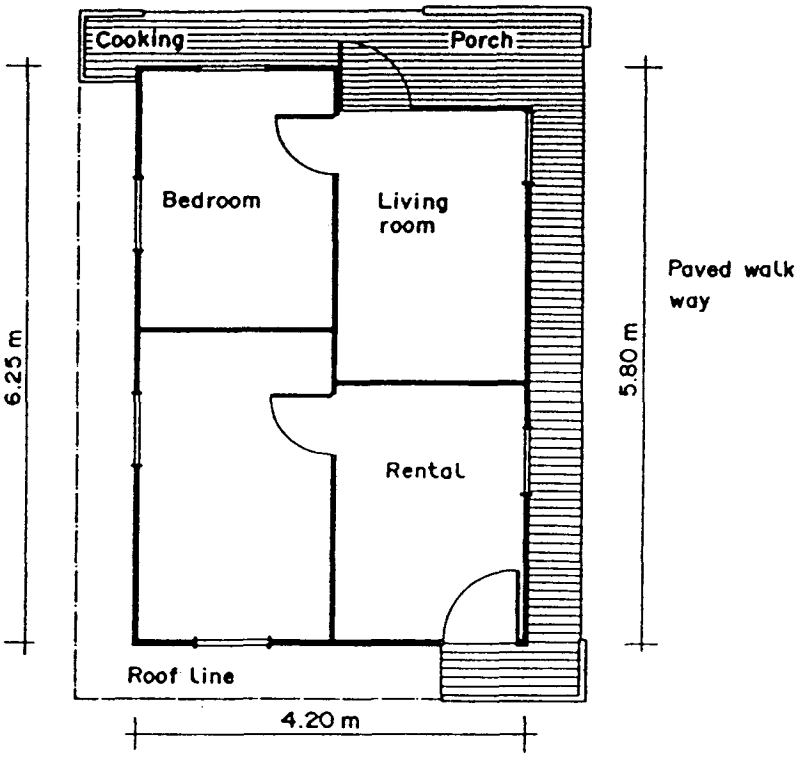
material and consequently comprises 70 -80% of all shelter in Indonesia. Most of it is rural and includes some of the more beautiful examples of vernacular architecture. Semi-permanent shelter uses both wood and brick in its construction. Permanent shelter is considered to be built entirely of brick and concrete. This comprises the majority of housing stock in urban kampungs (Benjamin, 1985:101,106; Silas, 1983:218) Two-thirds of these houses have their own bathing facilities. Only a small percentage, in the poorer kampungs, use public bathing facilities (MCK) which are constructed, maintained and shared by as many as 50 households.

The layout of the house (see Figure 5.1) usually includes a porch for entertaining guests, a living room for work, evening sitting, children's study and eating, two small bedrooms and a semi-enclosed kitchen. Most are one storey in height - in Surabaya as many as 95% (Silas, 1984:74) and most are used for additional income generating activities (Benjamin, 1985:95; Silas, 1983:220) for a family whose average size is around five.

The construction process for these houses takes place over an extended period of time beginning with the collection of materials. When enough materials and money have been collected, the construction stage begins. The poorest households build themselves with help from their extended families, but the most popular construction method involves hiring a foreman and his skilled crew for specialized work such as roof construction, and door and window installation (Benjamin, 1985:99)

Figure 5.1
Sample plans
Kampung House
(Source: Benjamin, 1985)





.3) Land Tenure and Use - In the kampungs, land came largely under the control[6] of the government as a result of the Agrarian Land Law of 1960 (Silas, 1984:73). Land in the original settlements was held under traditional tenure law. After the Agrarian Land Law formal law covering tenure was developed. With this dual system a hierarchy of rights was created such as: the right of ownership, the right to build on and manage land; the right to lease, and to lodge (Silas, 1983:228). In all there are some 9 different types of tenure (Devas, 1981:22) that allow the vast majority of residents to occupy the kampung land with some level of legitimacy. Each layer is controlled by different parties but formal law taxes only one layer of tenure. Traditional law recognized and depended upon the community for the endorsement of land transactions between community members. Formal law shifted this emphasis away from communal responsibility to individual responsibility and the more extensive use of the law and therefore of central authority.

The government was not interested in the adoption of 'negative' land use controls such as zoning. The position has been taken that "the individual property owner should have maximum freedom in using land." (Douglass, 1991:260) As a result, permits for changes in the use of land are issued on a case-by-case basis. In addition there continued to be unplanned subdivision of land in the periphery of the cities.

> ". . . during the 1970's approximately 30,000 hectares of land in the Greater Jakarta region were converted from agricultural to urban uses." (Devas, 1983:215)

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6. Silas points out that "government cannot own land. It can only control lands not owned by individuals and other legal bodies on behalf of and for the benefit of the people." (Silas, 1983:229)

Such activity led to an acute need for a regional approach to the management of land and the environment (Douglass, 1991:252) and a response to the unplanned nature of the kampungs. The 'Guided Land Development Program' (GLDP) resulted. Among its intentions were the guidance of the transformation of the urban fringe areas, the stimulation of the informal housing sector (enabling strategies), and the inducement of urban development and employment to preferred geographic areas (Clarke, 1985:48). Among its strategies for implementing these intentions was the further revision to the land tenure registration system, a reduction of the minimum standard lot size to 20 sm., the purchasing of key land parcels for community facilities, and the provision of technical assistance to help households with land registration and building issues (Clarke, 1985:49). In Jakarta, where only 17 - 20% of all new construction had the required permits (Devas, 1983:211), technical assistance may have been the only effective response to the problem.

.4) Community Organization - The administrative system in Indonesia channels policies and programs downward to the neighbourhood level. Although it is strong vertically (see Figure 5.2), it does not respond well horizontally (Devas, 1983:24). In other words there is overlap and conflict between ministries attempting to provide services to the kampungs. The other weakness in this hierarchical structure is that

> "The type and nature of programs conducted depend upon the judgment of those at higher administrative levels. Often, the special needs of each area are neglected and an 'average' package is presented instead." (Karamoy & Dias, 1986:199)

The heterogeneity of the kampungs is often not reflected in the response of the administration to these differences. It is through the Kelurahan level (see Figure 5.3) that most

Figure 5.2
Organizational Structure
Gov't of Jakarta
(Source, Karamoy & Dias, 1986)

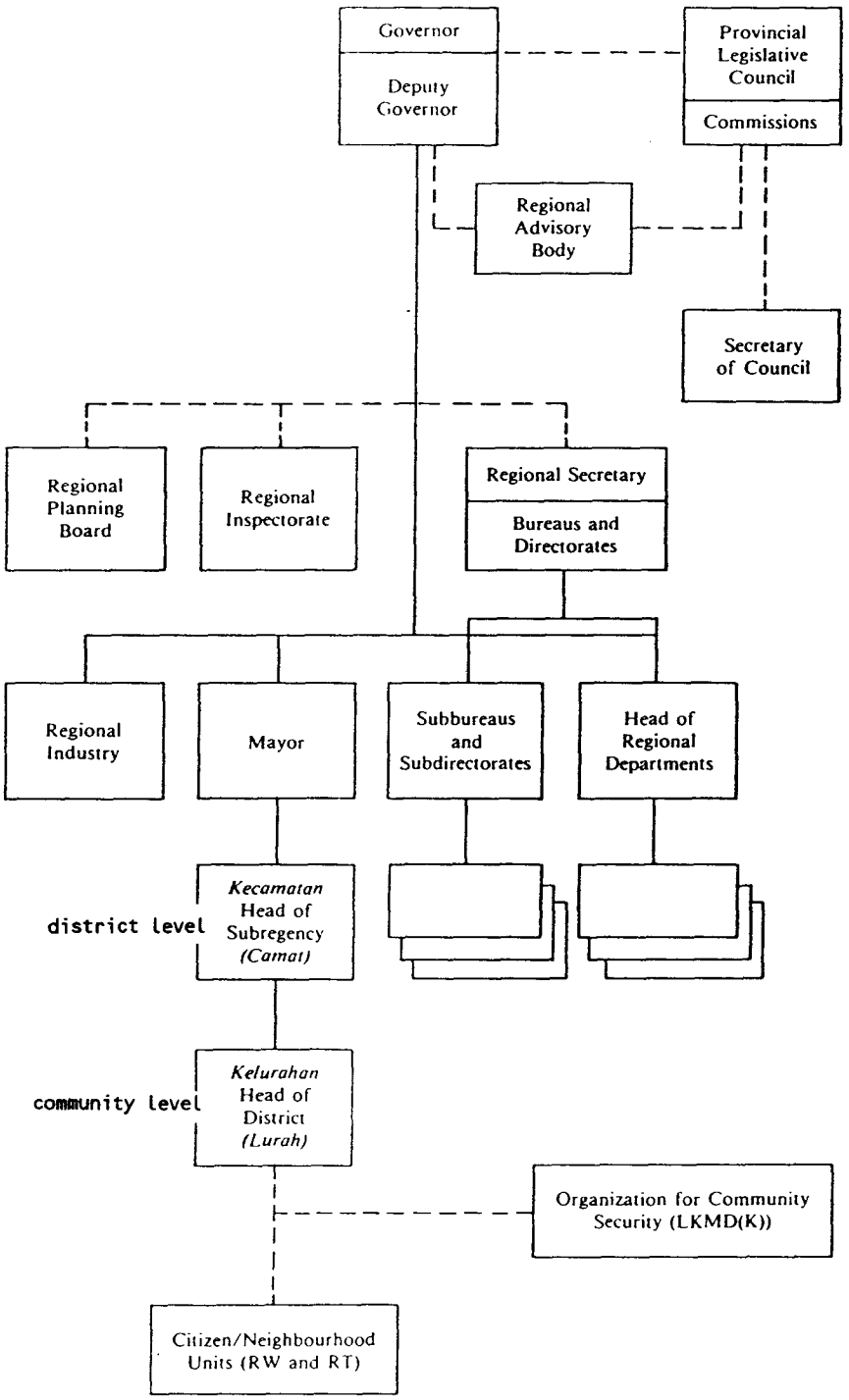


Figure 5.3
Organizational Structure
Kelurahan
(Source, Karamoy & Dias, 1986)

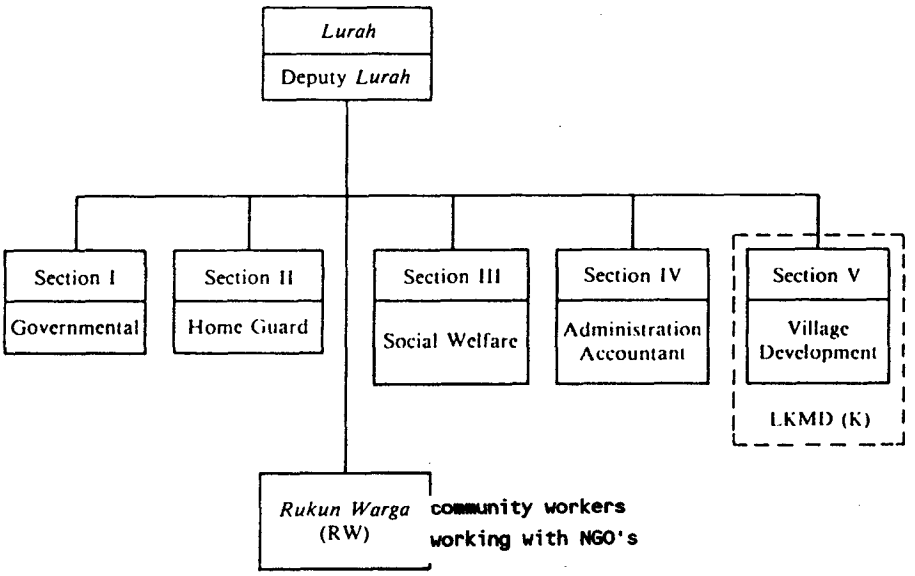
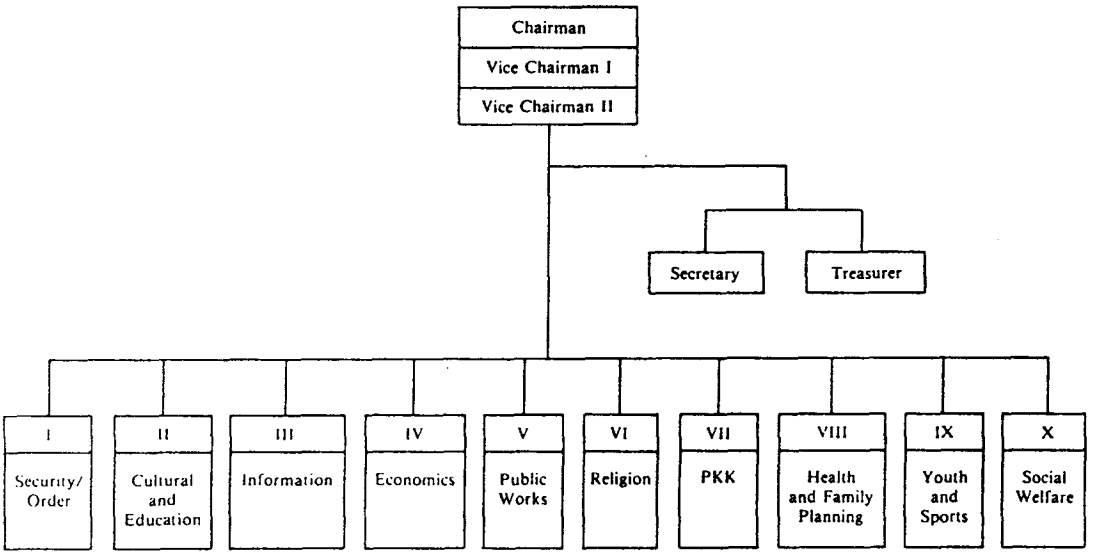


Figure 5.4
Organizational Structure
LKMD(k)
(Source, Karamoy & Dias, 1986)



programs are available. The Lurah (village chief or head of the Kelurahan) is the administrator of policy at the local level and is also the head of the Organization for Community Security (LKMD(K)). It is at this level that activities are organized by and for the community with the guidance of technical field workers. Each of its ten sections (see Figure 5.4) are "aimed at fulfilling the basic needs of a certain group" (Karamoy & Dias, 1986:201). The LKMD(K) not only distributes funds from the government but collects funds and labour from within the community itself. Contributions of labour are made through the ancient tradition of *gotung royang*, or mutual aid. It is characterized by "strong obligations between people who are mutually dependent upon one another." (Herlianto et al, 1985:241) This system is organized at the neighbourhood level (RW) with the popularly elected neighbourhood council or with the informal block level (RT) committees. This enduring rural tradition, along with much of the traditional local knowledge has been diluted and diffused by telecommunications, mass education and mass transportation. Silas pointed this erosion out with regard to the shift towards the formalization of land registration and tenure. It has been further eroded since.

> "One could specify similar changes in animal husbandry, medicine, handicrafts, religion, house construction, recreation, entertainment, dress style, food consumption, and a dozen other domains. Simplification and standardization have taken place to some extent in virtually every cultural domain in almost every village in Java." (Jamieson, 1991:278)

The verticality of the administration and the close coordination of the cultural process by the central government helps to accelerate this process.

5.2.2. Policy Response

A public housing program was not initiated by the government until Soeharto assumed the presidency. With the first five-year plan (Repelita I) initiated in 1969, the groundwork was laid for a housing program. From the start the Kampung Improvement Program played a role in these programs as a result of its long history.

In the first Repelita [National Development Programme](1969-74) the government emphasis was on: the establishment of institutional framework, the development of an urban housing prototype, and the utilization of local building materials (Silas, 1987:137). One of the major concerns of the government was that the annual need for some 300,000 new units of housing far outstripped the government or the market capacity of only 40,000 units. In addition, in both urban and rural housing, quality of the existing stock was an issue. Access to water and waste disposal was a continuing problem. This latter concern was addressed in this Repelita by the local government of Jakarta when it proposed (and funded through its own resources) to upgrade the basic services on some 2,400 ha of the city's kampungs (Devas, 1981:21)

In the Second Repelita (1974-79) the National Housing Policy Board (BKPN) and the National Urban Development Corporation (PERUMNAS) were established. BKPN formulated policy and coordinated between ministries with regard to housing plans and programs. Perumnas, under the Ministry of Public Works and the Directorate General of Housing, Building, Planning and Urban Development(Cipta Karya), was charged with production of housing and the improvement of infrastructure. It also managed the allocation and use of lands under its control.

Perumnas had a target in Repelita III (1979-84) of 30,000 units per year for the nation. Jakarta alone was growing by some 250,000 per year (Hardoy & Satterthwaite, 1989:127). The argument for KIP was strong, strictly from a distributive perspective. In Repelita IV (1984-89), though, US$933 million was allocated to build 300,000 houses for 1.5 million people, but only US$13.3 million was allocated for kampung improvement for 1.5 million people.

> ". . . if the budget currently being spent on low-cost public housing were instead allocated to the KIP, it would then be possible to serve some 105,000,000 people. This is more than 3 times the total kampung population of Indonesia. But if the current KIP budget were allocated to low-cost public housing, only 21,425 people would be served. (Maskrey & Turner, 1988:72)

Despite these financing anomalies, KIP is a widely regarded approach to meeting the needs of the poor in housing. It, along with the Building Information Centre (BIC), involves architects directly in its implementation.

5.2.3. Architectural Response

The response of the architectural profession to these conditions and policies has been generally traditional. However, in the Kampung Improvement Program and in the Building Information Centre there has been a response that has placed the professional in less than traditional circumstances.

.1) Kampung Improvement Program - Although KIP has been attempted in a variety of forms since the 1920's (Cobban, 1988), it was not until 1969 that the current program was initiated, and then only by the local governments of Jakarta and Surabaya. The World Bank provided support in 1972 to Jakarta to accelerate this program. In 1976 it expanded its funding support to assist in the improvement of kampungs

Jakarta and Surabaya. The US$52.5 million was for a three part program. The first part covered the ongoing improvements to the kampungs in Jakarta. These improvements covered an area of 3000 ha and included footpaths, secondary road, surface drainage ditches, public water supply, sanitary facilities, schools, health clinics, and garbage collection. It also provided funds for a pilot program for the training of about 360 community health workers.

The second part, for the kampungs of Surabaya, included similar improvements to some 374 ha and a training program for 100 community health workers.

The third part involved a training program for the engineering and accounting staff of the projects, and a research program for the feasibility of extending similar projects to medium size Indonesian cities, for the evaluation of the impact of the first and second parts of the program, and the evaluation of alternative economic and physical growth strategies for the Greater Jakarta area (Jabotabek). About 7% of the total funding was allocated for consultants and experts. All three parts were to be carried out by Cipta Karya. The design standards for improvements were set by the Bank as part of the loan agreement (see Appendix H)

In 1979 the Bank expanded its funding, on the basis of the research done through the 1976 loan, to include other cities. In 1981, additional provincial cities were added, including Denpasar.

Selection criteria were established in order to choose those kampungs most in need of improvement. These criteria considered the population density, physical condition, age of kampungs, and location (Suyono, 1983:178). The selection is made on the basis of surveys by city officials who,

because of the nature of the criteria (see Figure 5.5) may weight their scores quite subjectively.

Figure 5.5
Kampung Selection Criteria
(Source: Darrundono, 1975:12)

LIST OF CRITERIA FOR SELECTING KAMPUNGS FOR IMPROVEMENT.

		CRITERIA WHICH DETERMINES VALUE		
		VALUE 3	VALUE 2	VALUE 1
a.	Age of kampung	Growing till 1945	1945 - 1960	After 1960
b.	Population density (person per hectares)	551 - 900	326 - 550	96 - 325
c.	Monthly income (US$)	Upto 16.9	17 - 43.3	Over 43.4
d.	Frequency of flooding	high	medium	low
e.	Environmental hygiene	low	lacking	high
f.	Condition of clean water	bad	medium	good
g.	Building structure	irregular	medium	regular
h.	Building conditions	temporary	semi-permanent	permanent-new
i.	Road networks	Upto 7% of area irregular network	7 - 10% of area irregular network	more than 11% area regular network
j.	Road condition	dirt roads	unbound stone roads	damaged paved roads
k.	Self-sufficiency of the inhabitants	good	medium	lacking
l.	Land allocation according to Master Plan	housing	mixed housing	non-housing estate
m.	Acceptance of improvements	good	medium	lacking

The main stages in KIP procedure are:

1) Preliminary survey: This information is collected from local leaders (Lurahs) and officials (Camats).
2) Selection of kampungs: using the information collected against established criteria, the City Planning Department and the KIP staff select those kampungs to be improved during that fiscal year.
3) Planning: once kampungs are selected, Planning Division does further survey work. Further

meetings are held with the local leaders in which policies are explained and proposals for specific work are exchanged between Kip Unit and the community leaders.

4) Land Clearance: this reblocking procedure allows no compensation to owners for alterations that he may have to do to accommodate new roads. With real hardship or where a property must be removed entirely, Camats can find alternative sites and collect money from neighbouring residents. If land is required for clinic or school the city will compensate.
5) Detailed Design: contract documents are prepared by design professionals for tendering in March, prior to the approval of the city's annual budget.
6) Contracting: prequalified contractors bid and contracts are awarded on a kampung by kampung basis according to World Bank standard procedures.
7) Supervision and Monitoring: consultants are employed by the Ministry of Public Works to check all the completed work on the site before filing the reimbursement applications to the World Bank. (Devas, 1981:26-7)

This process is essentially top-down and the role that design professionals play in it is traditional. They are hired by the government for the purposes of preparing the design drawing and then, after the approval of the plan by the local and city officials, they prepare the construction drawings for tender.

In a 1983 KIP project in Denpasar, an engineering firm, Fenco Consultants, prepared a feasibility study in 1980 from which the project consultants, pt. Alfacon, hired under contract by Cipta Karya (see Figure 5.6), took their base information. Between the KIP Unit and the project

Figure 5.6
Organization of
Government Authority
(Source: Yunadi, 1987)

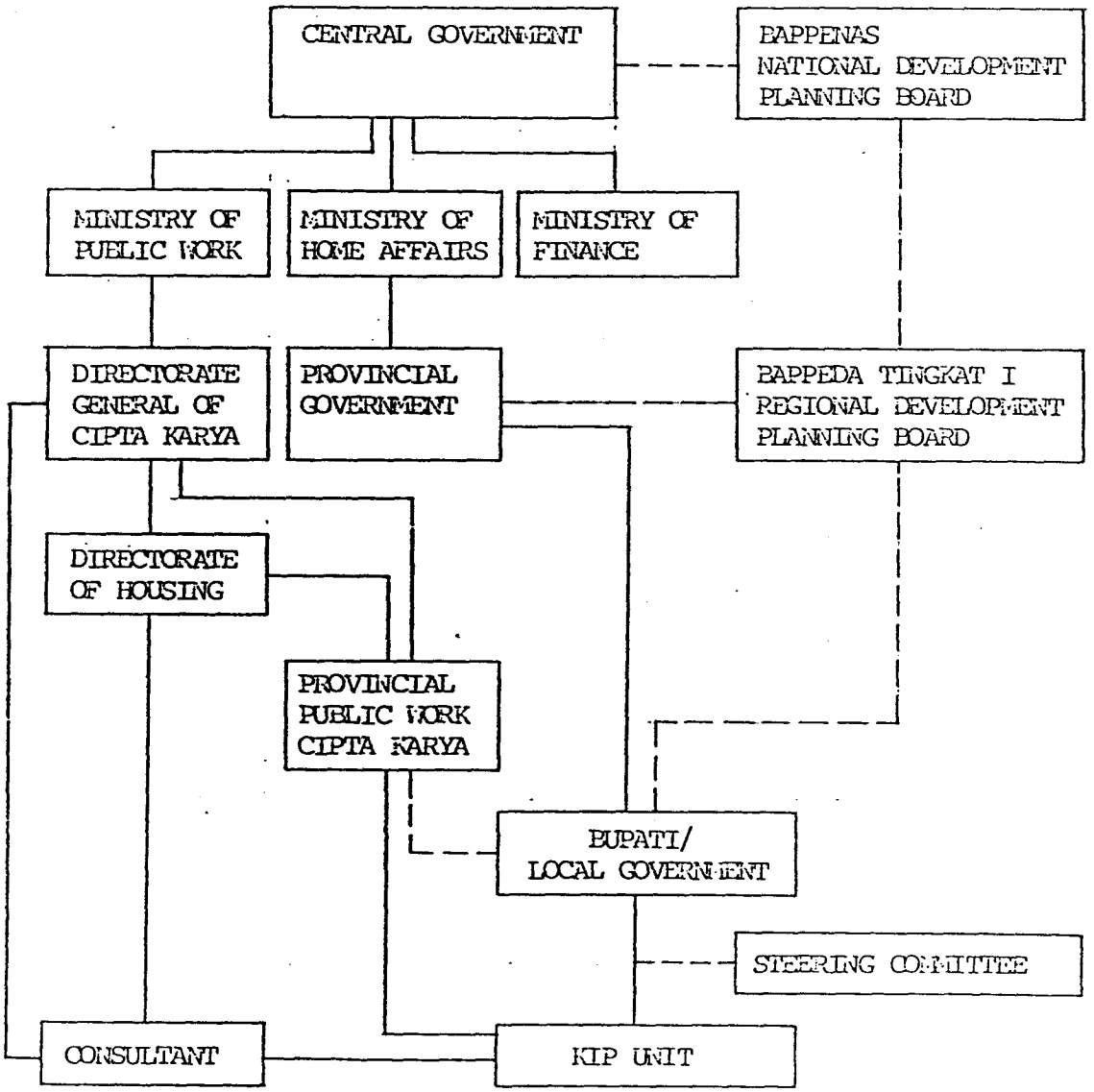
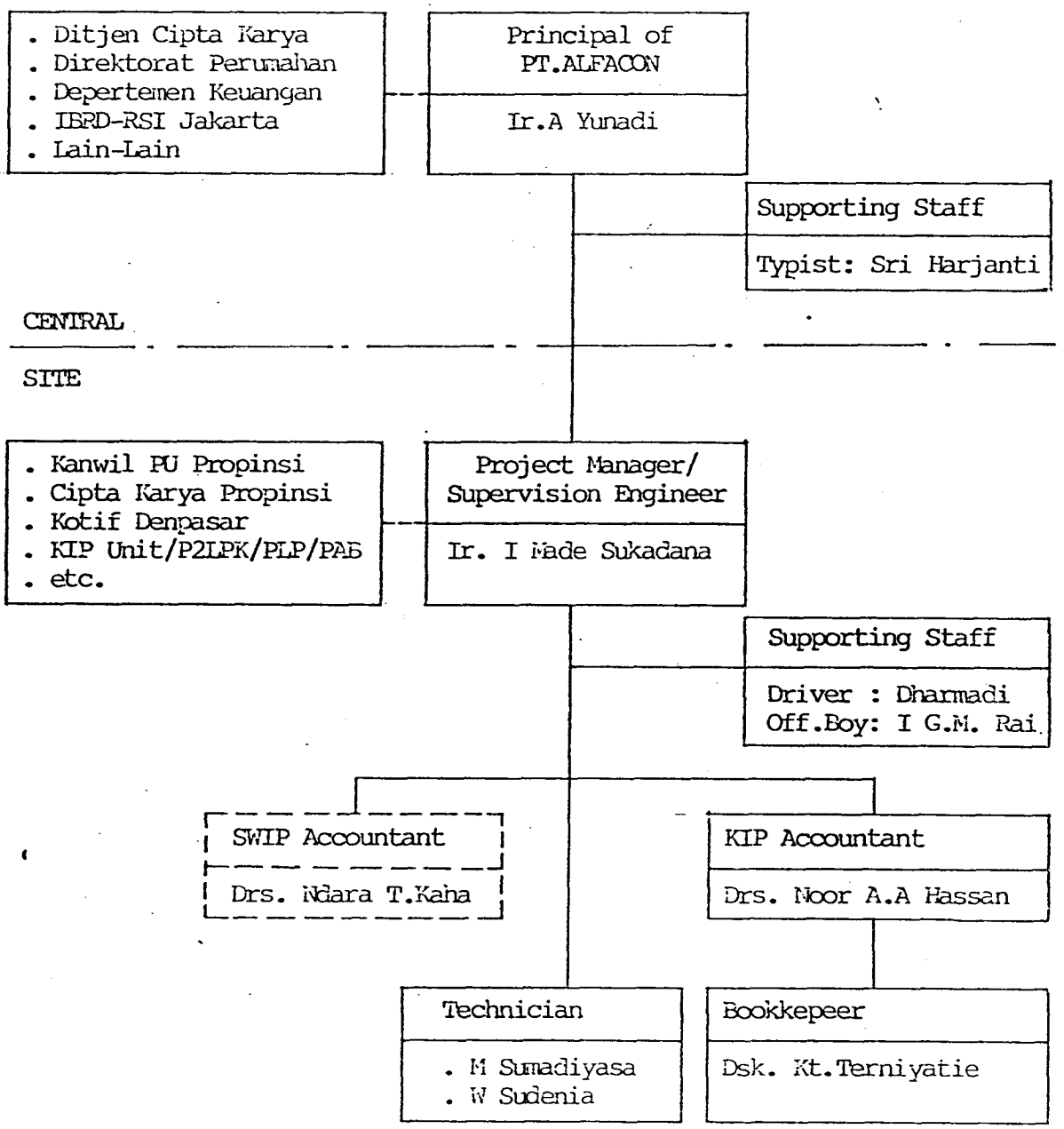


Figure 5.7
Consultant Organization
(Source: Yunadi, 1987)



consultant, the selection of the kampungs was made. This was on the basis of three main criteria: socioeconomic conditions, housing conditions, and lack of infrastructure. In addition, Fenco gave priority to villages with a land use plan and to those kampungs whose area was not beyond the budget capabilities. The KIP Unit had additional criteria. These included:

- priority to villages in which most of the inhabitants are indigenous,
- lack of drainage and roads,
- recurrent flooding
- high population density
- high public interest

Surveys of 9 different kampungs were undertaken with the help of Lurahs. Not only could the KIP Unit and the consultant gather additional information to aid in their selection, but the Lurah could inform the community each represented "on the process of selection of the kampung to be included" (Yunadi, 1987:20).

With financing from the World Bank, the Central Government and the local government, the project funding was directed towards: footpaths, vehicle roads, drainage, public bath, toilet and washrooms (MCK), garbage boxes, water supply, health clinics and schools. the program affected more than 114,000 people or about 40% of the population of Denpasar. As with previous Bank-related KIP, this project also involved a training program for community health workers. In 1983, 92 people form the community were given a two week training course. These people included: RT and RW leaders, non-formal leaders, LKMD managers, as well as civil servants and army personnel living in kampungs.

Several government agencies were involved in the decision-making process throughout. These included: Drainage (P2LPK), waste disposal (PLP), water supply (PDAM), Federal financial authority (APBN), Provincial funding authority (APBD). Alfacon had to maintain a central office and a field office to be able to coordinate not only the work to be done, but the officials at all levels that must be consulted (see Figure 5.7).

In the planning and design of the Denpasar KIP project Alfacon and the KIP Unit had to consider local conditions and culture. The city of Denpasar, for example, has different requirements for housing, in part because of the cultural differences to Javanese KIP. This, along with in situ conditions, require flexibility in executing the operational instructions and design parameters of the central government and the World Bank. The World Bank design standards for the footpaths require a 1.5 metre path with a .75 drainage channel on one side. In this project Alfacon changed the dimensions for a variety of reasons. These included:

- leaving more funding to increase the area improved
- following the existing example built by the community
- narrower footpaths do not allow the passage of becaks and thus reduce the maintenance costs
- house form in Bali is typically protected by high stone walls. The space between these walls was often not wide enough for the wider footpaths required by the Bank.

The participation of the community was considered to be an important part of the project. In Bali the central neighbourhood social institution is the Balai Banjar. At regular meetings issues affecting the community are raised by anyone. The issues are discussed and decisions are made

for future implementation. The KIP project had to be raised at the Balai Banjar to elicit the participation of the community. Consultations and presentations by Alfacon, the KIP Unit and the Lurah were made during at least three different stages.

a) Prior to conduction the survey, a meeting was held to explain the objectives of the survey. The community participated in setting the priorities and in itemizing of the work.

b) Prior to the physical implementation, the Consultant described and explained to the community the objectives of the project. The community, in turn had the opportunity for input and response. They also assisted in the control of the contractor's work.

c) At the completion of the project the community, in an official ceremony, is handed over the project. This symbolized the responsibility of the community for the maintenance of the project components.

Among the problems identified by Alfacon in the project were:

a) The unavailability of expertise at middle administrative level,
b) Staffing at the local level was inconsistent.
c) KIP Unit planners did not have the expertise for coordination of infrastructure with other institutions,
d) The construction and use of the MCK's. Land was not available for the use of these public facilities. Most open land was near public

buildings such as the balai banjar, markets, mosques or temples. In such locations it was poorly used. In addition people still clung to the rural habit of using the rivers and streams as a toilet.

e) Similar problems of location were found with the public water taps. In addition, it was assumed by the community that it was free water and, as a result, PDAM had difficulty in cost recovery. Many of the taps were sealed.

f) Garbage carts were handed over the Kelurahan to be operated by the LKMD. The operation and maintenance by LKMD was inadequate.

In addition to these recognized problems, the nature of the consulting team does little to strengthen the horizontal linkages between ministries supplying services to the kampungs. The management structure remains traditional and hierarchical.

In soliciting community involvement, the consultant typically relies on the Lurah and the Camat, both for information and for organizing community participation, both of which are considered to be part of the traditional administrative machinery. The kelurahan has been further described as, " so bureaucratic that it is difficult for a person with little education to understand the necessary procedures for requesting service." (Karamoy & Dias, 1986:207) It was often left up to the community itself to make the first move in requesting assistance. This often left the poorest kampungs out of the available programs.

Despite these problems Alfacon, in the Denpasar project, was able to go directly to the Balai Banjar. While the Lurah was involved in these discussions, the traditional form of community decision making was utilized. In addition, they

managed to reflect existing conditions and needs in reducing the standards for footpaths rather than following the guidelines directly.

.2) Building Information Centre - In 1976 BIC was initiated from an original concept of Baucentrum. By 1979 it had been established in four regions: Jakarta, West Java, Yogyakarta, and Denpasar. Currently there are 27; one in every provincial capital city to disseminate information on a variety of building concerns:

- materials
- training for housing specialists
- sanitation
- community health

Each province has its own specialty. Denpasar, for example, has a particular concern for traditional housing that arises from the reflection in design of the Balinese cosmology. In addition to these specialties, each BIC is involved in the training of local community leaders. Although it is usually training by example, it is also done through the distribution of pamphlets (see Appendix I) and books. Robi Sularto, the noted Balinese architect created a book that dealt with seismic design in traditional Balinese wood construction (see Appendix M). Some 20,000 copies of these pamphlets are distributed through community workers who, in turn, pass them on to the community itself.

5.3 THAILAND

5.3.1. Background

Prior to 1972, with the formation of the National Housing Authority, the interest of the political elite in housing and shelter policy was limited. Four different agencies dealt with housing from the 1940's to 1972: The Housing Bureau which was concerned with increasing the supply of housing to low-income families; the Housing Division whose purpose was to conduct studies to determine shelter needs and develop government housing plans; the Housing Scheme Bank which granted loans to individuals for the purchase of land or for construction of housing; and the Community Improvement Office which, under the authority of the Bangkok municipality, was concerned with slum clearance and the relocation of residents (Chiu, 1984:31-2). Funding for these agencies was poor partly because of the prevailing traditional attitude of the Thai people towards the provision of housing through 'self-help' rather than government provision and partly because of the paternalistic attitude of the Thai political elite (Chiu, 1984:32). This attitude led to such paternalistic conclusions as the 1960 statement from a Bangkok planning study:

> ". . . in many sections the land is excessively crowded with low buildings, and these overcrowded areas should be cleared wherever possible." (in Tanphiphat et al, 1977:326)

As the population of Bangkok climbed through the 1960's this attitude became increasingly untenable. Between 1965 and 1975 the population growth in Thailand reached a high of nearly 3%. For the Bangkok Metropolitan Area growth peaked at 5.3% in 1975, giving it 62% of the share of the total urban population of Thailand in that year. This continued

to increase through the 1970's (Tanphiphat, 1983:103). With such a rate of population growth, the demand for new housing reached a point that it could no longer be ignored. An estimated 40,000 units per year were needed, three-quarters of which were required by middle and low-income families whose demands were not being met by the private sector. The shortfall in supply meant growth in the slum and squatter settlements (Wonghanchao, 1987:176). In 1974 25% of the total residential units in Bangkok were in slums (Angel & Pornchokchai, 1989:137) These slums were characterized by high-density low-rise development, little or no tenure rights, and poor servicing with electricity, roads, and drainage. These conditions typify housing for the bottom quintile of income distribution.

.1) Housing Characteristics - Housing in the informal sector - that is slums and squatter settlements - is similar in size to that provided by the government (Tanphiphat, 1983:109). The average floor area is between 30 and 35 square metres (sm) on a plot whose median size is 69 sm (Wegelin & Chanond, 1983:79). More than half of these dwellings are one-storey and, although in urban areas more buildings are constructed from masonry, nearly two-thirds are built with wood. Those using indigenous and reused materials are almost exclusively in squatter housing or temporary shelters for construction workers (Tanphiphat, 1983:109).

The densities of these communities range from 125 to 188 families per hectare (Angel & Chirathamkijkul, 1983:433). The average family size has dropped from 5.7 in 1970 (Tanphiphat, 1983:109) to 4.95 in 1985 (Angel & Pornchokchai, 1989:137). The average number of households per unit was, in 1984, 1.15 giving an estimated population in slums and squatter housing of about 900,000 with another estimated 100,000 living in mini-slums.

Conditions for these slum dwellers reflect on the health of the residents. In addition to the general conditions of poverty, the lack of proper sanitary and storm drainage[7] as well as the location of the dwellings predominantly over ponds or damp ground create a variety of respiratory and skin diseases (Buranasiri, 1983:123)

.2) Land Tenure - For the poor the most common form of tenure is land rental. Only 16% of the total slum communities live on land without the owner's agreement (squatting) (Murphy, 1990:56) The majority enter into an arrangement with the landlord to rent the land. The landlord will often prepare the site with basic infrastructural services such as water and electrical supply and walkways. The rents are typically well below market value, ranging between US$5 - 8 per plot (Angel & Pornchochai, 1989:138) but cost recovery is made from the sale of water and electricity to the residents at rates well above market value. Two-thirds of these rental agreements are with private landholders, while the other third is with a variety of public agencies - about 40% with temples and mosques and 25% with the Crown Property Bureau (Angel & Pornchokchai, 1989:140). Largely because most of the Crown land is located closer to the city centre and work opportunities, the residents on these lands are more prone to eviction than those on private land located further from the city centre (Boonyabancha, 1983:258) The economic value of these lands creates pressure for development and the response by these government agencies to these pressures and

7. Because Bangkok is only 1.5 metres above sea level, and sinking at a rate of 4 cm/year due to the depletion of groundwater for city use, flooding is increasing and the installation of infrastructure is made more difficult and expensive. Flood protection plans, in turn, are forcing the relocation of existing squatter settlements on the klongs (canals).

the response they have to the residents will vary with the agency, with the reaction of the residents to threatened eviction and with the participation of intermediaries in the process. However, within Thai legislation there is no protection for tenants from displacement by landlords. "Thai Law is very clear about property rights and consistently supports the legal owner of the land." (Angel & Pornchokchai, 1989:141) As a result, those threatened with eviction depend on media attention and advocacy to avoid relocation to outlying areas.

5.3.2. Policy Response

The early years of the National Housing Authority were marked by a focus on the supply of housing. Its overall objective was,

> ". . . to provide housing for the public to rent, to hire, purchase or to sell; to render financial assistance to members of the general public who wish to have their own house or who wish to provide housing aid; to conduct business in housing construction and land procurement." (NHA [1973] quoted in Chiu, 1984:33)

Its intended concentration was on urban housing and on the needs of low and middle income residents. These objectives were addressed by construction and subsidies for those families who could not afford the newly constructed housing. In addition land acquisition was an important priority. By 1978 more than 2000 ha. had been purchased. Most of it, however, was outside of Metropolitan Bangkok with only 27% purchased in suburban areas and 3% in the inner city. (Chiu, 1984:37) The cost of assembly in the inner city was prohibitive. This, along with the continuing cost overruns on projects, high standards for construction, increasing cost of construction materials and payment delinquencies from existing occupants of NHA housing, created cashflow

problems. Without an effective mechanism for obtaining land below market value, the NHA was driven to buy and develop cheap land in the outer fringes of the city. This often created more problems than it solved for the poor who were targeted for this housing. As a result many slum dwellers "sold their right of occupancy to higher income families and moved to new slums." (Angel & Chirathamkijkul, 1983:436) All of these conditions meant that low-cost housing alternatives were not available to the lowest income households.

Despite these conditions recognized by NHA, the 1960 attitude towards slums persisted, not within National Housing Authority circles, but within the government reviewing NHA policies and programs towards slum upgrading. The Prime Minister in 1978 "rejected the NHA concepts in favour of 'nice' housing and clearing of slums" (Tanphiphat, 1983:115) Notwithstanding this official attitude (politically motivated as a platform for the elections of April, 1979), NHA began their slum upgrading program.

5.3.3. Architectural Response

The traditional architectural response in this policy environment was the design and construction of new housing. Typically these would be walk-up apartments of high structural quality with a modest unit floor space.

> "The prevailing concept in design was minimum architectural and engineering standards set by technocrats who would not compromise their professionalism for anything less, even if the low-income population was willing to accept less-expensive solutions. (Tanphiphat, 1983:113)

This applied to both consultants to and employees of NHA.

An alternative approach to this high-standard, new construction approach to housing was in the Slum Upgrading Department of the NHA. In the Accelerated Plan of 1979-82, government ministries reviewed with NHA the shortcomings of its First Plan[8] and developed a plan that introduced Sites and Services and Slum Upgrading programs. Both of these programs were developed to implement the policy to target low-income families; the former by the provision of core housing on new sites and the latter by upgrading the communities in which they live rather than relocating them. In this way, the limited funding of NHA could benefit far more families than a housing program centred on more expensive construction projects. In the Accelerated Plan more than 50,000 units would be created or improved. Only 5,596 units of new construction were to be built over that four year period, but more than 50% were expected to be under the Slum Upgrading program.

The communities targeted for upgrading were designated to continue as low-income residential areas. Implementation involved the improvement of services and of land tenure security. It also considered means of increasing income for the residents as well as improving education and community organizations.

The Department's overall program had three components (Figure 5.8): the land tenure program, the socioeconomic improvement program, and the physical improvement program.

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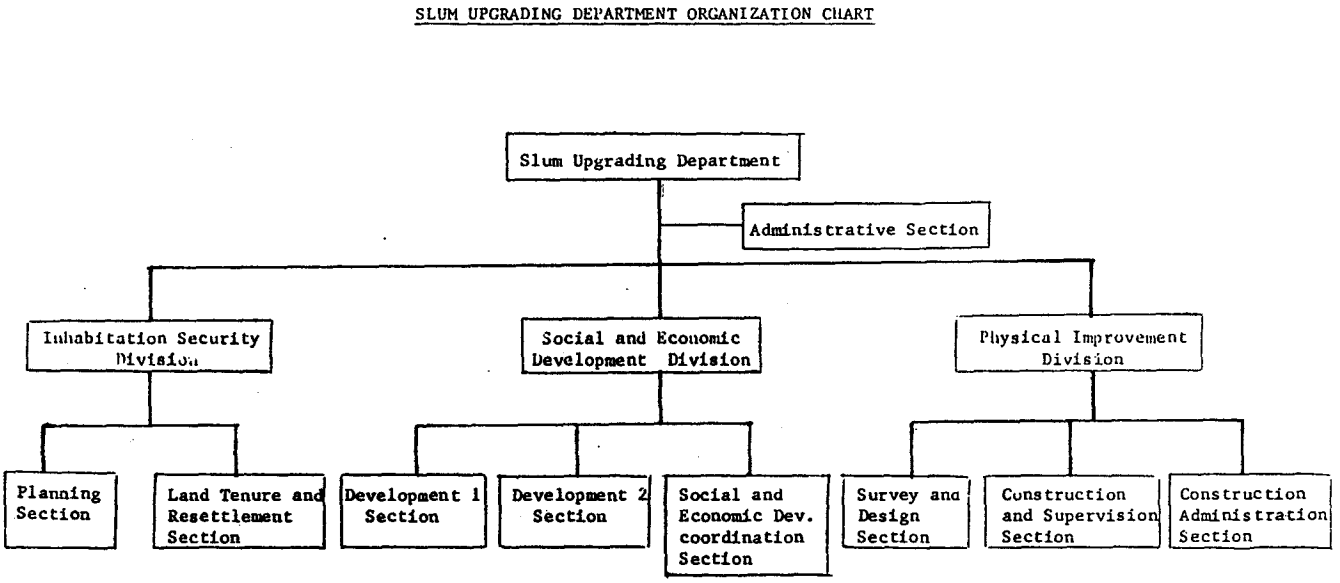
8. The First Plan was initiated in 1975 and ambitiously called for the construction of 24,000 units a year over a five year period. During the first two years of the plan 37,188 units were built but by the end of 1977 the government would not continue to subsidize the program (Wonghanchao, 1987:179)

Figure 5.8
Administrative Organization
Community Development Dept.
(Source: Hirikul, 1986:17)



.1) Land Tenure - This program was directed towards the question of land ownership or long term rental for the affected community. It had to deal also with ensuring that,

> "when improvements are made the dwellers will receive the improvement benefit without paying more than is necessary and without the land-owner profiting from such improvements at the expense of the dwellers."(Hirikul, 1986:6)

Both of these issues required negotiations on the part of the Department in order to obtain long term leases from land owners. These land owners included other government agencies as well as private sector landholders.

To accomplish these ends, the program staff had to collect data on land tenure, coordinate these data with the requirements of the physical plan, negotiate with government agencies, private landlords and the slum dwellers. They had to act, as well, as intermediaries between landlords and residents.

.2) Socioeconomic Improvement - This program was directed towards increasing income for the community and towards the provision of social services including schools, health clinics, and security. For the program to be effective, a staff social worker had to be in constant touch with the affected families and there must be "well organized participation by residents" (Hirikul, 1986:8). This was accomplished by the staff through surveys to collect information on slum activities, and through the organization of community meetings and self-help programs. When these tasks were underway, the team prepared a socioeconomic plan and got the assistance from relevant government agencies in the implementation of the plan.

.3) Physical Improvement - This part of the program included the infrastructure improvement of the slum areas. These improvements - walkways, drainage, water supply, garbage collection, fire protection - were carried out by the National Housing Authority. This was performed by obtaining an aerial survey, a survey of existing conditions regarding public utilities and relevant engineering data. From this information, a plan was prepared. Like the socioeconomic program, the staff had to obtain the cooperation of the relevant government agencies in order to implement the plan.

There are three divisions in the Community Upgrading Department: the Inhabitation Security Division, the Socioeconomic Development Division, and the Physical Improvement Division. The first acts as the coordinator of the program. Staff members of Inhabitation Security negotiate with the land owner, buy the land and survey the existing conditions. The Socioeconomic Division organizes committees, develops programs and coordinates with outside agencies. Physical Improvement is involved with physical surveys, design and construction.

In the course of any program, the first step is an aerial photographic survey of the site followed by a survey of existing conditions. With these data collected, the social organizers will go into the community. Their purpose is to determine community needs. From this information, the design staff of the Department can begin to develop a plan. The preliminary plans are presented to the organizing committee of the community for revisions and approval. Once the committee has approved the plan, construction can begin.

The staff is composed of engineers, social workers, economists, architects, planners, lawyers, enumerators, and administrators. For the program to be successful, each

division, and all of the staff members must work together as a team.

Up to the sixth national five year plan, the program was involved with infrastructure only. Under the sixth plan, the program expanded into upgrading improvement and land consolidation improvement. In 1988 the name of the Department was changed from the Slum Upgrading Department to the Community Development Department. Although a symbolic gesture, it indicated that the approach of the Department was to be much broader than simple infrastructure upgrading.

5.4. CONCLUSIONS

In these examples, architects, working as consultants to the government and as employees of it, were acting in a variety of roles. There are three central issues that arise from them: the relationship of the architect to the administrative order, the role that the architect plays in the implementation of policy, and the role that the architect can play in distributive justice.

The most traditional role was in the Kampung Improvement Program. The services performed by Alfacon were little different from the standard services described for the traditional North American architect in 2.4.3. (See Appendix A). The least traditional role was Sularto's cartoon training manual for seismic design in traditional Balinese communities. All of them, however, express some of the issues with which architects are faced when attempting to reconcile their responsibilities to a public in need with the more rigid bureaucratic needs of the government.

5.4.1. Administration

The KIP projects were typically rigidly hierarchical (vertical) in their administrative organization. While this suits the implementation of bureaucratic policy well, it does not reflect the broader needs of planning for housing for the poor. Overlap readily occurs between ministries offering services to communities and at the same time the programs offered by individual ministries tend to far more homogeneous than the heterogeneous communities they serve.

It is here that the Community Development Department worked in a more accommodating manner. The organization of professionals in teams that crossed ministerial boundaries (such as architecture, planning, social work, engineering and so on) led to a more holistic approach to the housing problems of the poor in Bangkok.

The profession of architecture is traditionally associated with the vertical administration of housing delivery, but, as a discipline, it is uniquely capable, among the professions, of dealing with the less rigid and more horizontal organizational structures that are more common to the issues of human settlements development.

5.4.2. Distributive Justice

Because architects are more directly involved with supply objectives than equity objectives, particularly when dealing directly with government bodies, it would seem that the opportunity to consider the issues of distributive justice in the framework of practise, would be remote. They tend, though, not to be identified as such. Alfacon, for example, in coming to the decision to reduce the minimum standards of the World Bank for the width of footpaths had a number of reasons for doing so but one of these was, simply "more area

can be renovated" (Yunadi, 1987:23). In a small, seemingly insignificant, way the consultant had made a decision to redistribute funds so that more people could be reached within the limits of the Bank funding. Because, as design professionals, they were able to recognize and manipulate the parameters of standards, planning requirements, limits of materials and traditional culture, they were able to recognize the opportunity to reduce standards without compromising the project and still be able to reallocate the funding within the terms of the existing project.

5.4.3. Policy

Both the NHA of Thailand and Perumnas of Indonesia were seen to be unable to address the needs of their poorer citizens by means of new construction of housing units. Architects, though, are involved in the implementation of explicit housing policies generally with supply objectives. As a result they are often directly involved in the allocation of limited financial and material resources towards a segment of the population that even the policy makers recognize as not being in direct need of the assistance for which the policy is intended.

The more recognition there is on the part of architects of the implications of policy (both explicit and implicit), the more opportunity they have to overcome or manipulate existing policies that are inappropriately allocating these scarce resources. Clearly, despite its drawback, KIP reaches more people in need than does the construction of new public housing units. Those architects working in the program are more able to address issues of the equitable distribution of scarce resources than those who do not. This is not to say that all architects *must* work for KIP, but it does suggest that, at the institutional level, the Institute of Indonesian Architects, with the support of its

membership, should be involved, as, indeed it is (see 4.2.1.). Those who are building public housing for the government, can, in recognition of the implications of policy on resource allocation, direct their design efforts more towards the issues standards, in much the same way the Alfacon did with the Denpasar KIP.

The implications of policy go beyond the local or even the national level. Working within the sphere of government, architects are faced, particularly in Third World countries, with the influence of the World Bank and, more indirectly, the IMF. The policies of each, as indicated in 3.3.1, are implicit housing policies. Structural adjustment, as with taxation or employment policies, have an indirect, but important effect on the distribution of resources. The allocation of housing resources for the poor will be affected by these international policies. The awareness of their implications gives the architect more opportunity to direct the results.

CHAPTER 6
EDUCATION AND ARCHITECTS

> ". . . design decisions are replete with political and social ramifications, and they represent value judgments which are unconscious for the most part.
>
> These relationships, consciously or unconsciously established, become the values which architecture students carry into their professional and personal world. These values are also the foundation upon which future values will be built and decisions of moral choice will be made. (Domer, 1983:94)

6.1. THE ROLE OF EDUCATION IN HOUSING

There are two central issues that relate education to housing: the relationship between the profession and education, and the relationship between the educational institution and society. With the former the concern is more with what we are training[1] people to do (content/theory/education) than with how we train them to do it (method/skills/profession). With the latter the concern is with the role and responsibility of the institution and its members to the needs of society.

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1. Underlying these two concerns is the ongoing argument about professional education as 'training' or as 'education'. Are students being trained for professional practice or are they to engage in the "intellectual exploration of ideas at the very foundation of society"? (Dinham, 1987:3) In the academic realm of the University, the debate concerning 'professional' schools sides with education. The practicing professionals expect trained graduates.

6.1.1. Education and the Profession

With great consistency, the profession has complained[2] about the quality of graduating students from the universities who, as they would see it, are intended to serve the needs of the profession. This creates a conflict in perception between the needs of the profession and the intentions of education. The profession is looking to the schools to provide them with competent employees; that is, employees who are capable of understanding and reacting positively to the current conditions of the profession in the marketplace of services to the construction industry. Schools, on the other hand, have developed a growing interest in the formal aspects of architecture in response to the theoretical bent that has been taken by the new formalism ushered in by Venturi, Stern and others in the early 70's (see 2.3.3.).

Embracing this theoretical foundation has been a strategic benefit for schools of architecture who have been threatened within the university system itself. Some universities have looked on their school of architecture as being weak in academic research. The administration expects the faculty to be more involved in the 'publish or perish' stream that governs other disciplines in the university. Although this stance on the part of the university has an internal logic[3],

2. Complaints about the newly graduated employee by the profession range from 'too slow' to 'never should have graduated' (Biskaps, 1977:49) The most common of these complaints is that the employee has little or no knowledge of professional practice, or of construction technology and procedures. Such complaints suggest a narrowly focussed and short term view of the intent of professional education.

3. Dinham states this argument: "since a university exists to provide leadership to society by advancing the state of knowledge in its various fields, it follows that in a professional school a faculty member's responsibilities should include forms of scholarly inquiry that challenge the fields' frontiers." (Dinham, 1987:5)

it raises yet another wall between the profession and education. The school of architecture is being forced to be increasingly theoretical while the profession is getting graduates that can speak effectively about semiotics, post-structuralist theory and 'architecture as text', but are at a loss when asked to undertake some of the more mundane tasks of an entry level employee in an architectural firm. Not only are they unprepared, they are frustrated with the apparent banality of daily practice. The semiotic implications of flashing details are not readily apparent. The profession, naturally is equally frustrated by what it perceives as incompetent graduates. In addition, under the pressures of the modern practice and the erosion of the client base to a wide assortment of building professionals (see 2.3.2.), architects,

> "are puzzled how to meet the challenge, and they are looking to the schools to produce graduates who will be able to assume the new roles required for the profession. The young people who come for interviews are often disappointing in this respect. (Gutman, 1987:24)

Between the two poles of the University and the Profession, the professor at the architecture school is caught in the middle. While the University expects more scholarly work (theory/education), the profession expects a more practical graduate with some understanding of the real world of architecture (skills/training).

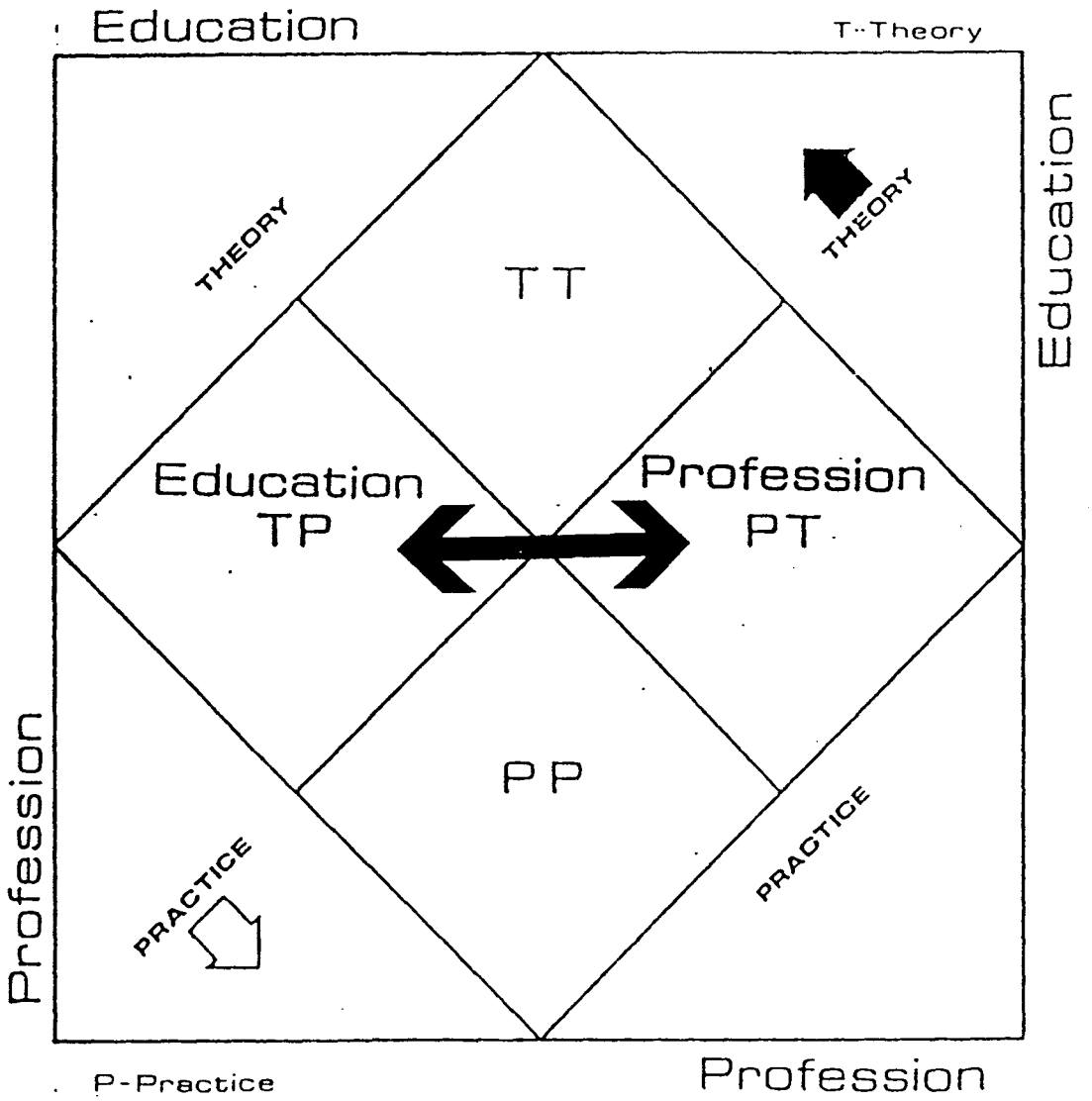
The scholastic demands of University environment affect hiring practices and the resulting faculty teaching students. It also affects the experience to which the students are exposed. The conflict, however, remains unresolved. It is, in fact, exacerbated. One professor commented,

> "Many of us teaching design had come to the University on the understanding that private practice, the making of place, was to remain an important part of our responsibility. With a growing emphasis on more traditional scholarly research, this professional commitment came under scrutiny. In 1978, our university [the University of British Columbia] issued a decree that limited outside involvement to one-half day per week. One hell of a way to run a practice! The design staff that were actively involved professionally were forced to make a choice. Our choice left us cut off from building and from making place, except as consultants on a very limited basis. Yet we considered that our best work, both in teaching and in making place, has been made in collaboration, where ideas and the profession come together in a real situation. Isolated at the University, glutted with fashionable ideas and beautiful drawings, we were separated from the real urban process of change. (Walkey & Wood, 1987:3)

This conflict between theory and practice continues unresolved. Without some resolution that allows for a more fluid relationship between the two, both are diminished. Of the two, the profession is more threatened by the existing conflict.

.4) A More Dynamic Model - William Rudd suggests a possible resolution to this conflict that is based on a four stage relationship between theory and practice. Each side - education and profession - has its own area of expertise but there are areas of overlap in which "practice can expand educational experience and theory can inform professional activity." (Rudd, 1987:2). These areas of overlap occur in the 'Theory of Practice' for the educator and in the 'Practice of Theory' for the practicing professional. The four stages are:

Figure 6.1
The Relationship of
Theory and Practice
(Source: Rudd, 1987)



"TT - Theory of theory = basis of ideas and concepts

TP - Theory of practice = basis of interpretation - understanding[4]

PT - Practice of theory = basis of action - doing

PP - Practice of practice = Application of ideas and concepts (Rudd, 1987:1)

In order for that convergence to occur, there must be a vehicle that satisfies the needs of both. The 'basis of interpretation' to which Rudd refers can be taken to be, in this context, the ethics of development. in order for this understanding to be meaningful, though, it must entail a responsive action. The vehicle that can satisfy both of these conditons is the community itslef. Both, as institutions of professionals, have an overarching responsibility to society. It is here that the coherence between education and the profession can be found.

6.1.2. Education and Community

The conflict between theory and practice has implications in society as well. The emphasis on the theoretical and on design education, or aestheticism (see 2.3.3.), promotes a studied avoidance of the social implications of architecture. Robert Stern commented, in the midst of the 60's campus rebellions that "there was a danger in students 'going out into the community' in that 'it might take them too far from their craft'." (Plunz, 1980:63). This increasing focus in the architecture curriculum on design to

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4. Hirshen, speaking of the inadequacies that graduating students feel when faced with the reality of the profession suggested that "what students need to take with them in moving from school to practice is a strong theoretical grounding in the reality of practice." (in Dovey, 1981:31)

the exclusion of other influences helps neither the profession nor the society.

> "Our profession attempts to ensure that designers are equipped with knowledge about the physically correct way of doing things but design education often fails to demonstrate that knowledge about manipulation of physical things can only be effective in a simple and static society. Such education limits architects abilities to respond to complex and changing social situations. It results in design professionals who can only talk to themselves." (Joiner & Daish, 1989:260)

If neither the profession nor the professional school has the interest or ability to respond to these complex situations - as is the case in housing and human settlements issues - then there is every expectation that society will deem the training and practice of the architect as irrelevant to its needs.

This connection between the University and the community has always been a tenuous one. In the case of professional schools such as architecture, planning and engineering, that relationship has been, at best, slight, and, at worst, hostile. The University is often seen by the public as the 'ivory tower' in which a large group of overpaid people get paid to think about things that are of no use whatever to society. As simplistic and misdirected as these opinions may be, they are still persistent. While it may be expected that disciplines such as philosophy or the study of Medieval English poetry would have little relevance to the immediate needs of the public, professional schools are viewed differently. Here the public may have some expectations about a relationship to the needs of society. These expectations can be extended into perceived responsibilities. Like the profession itself, the educational institution has similar obligations to basic needs. The use of knowledge (see 3.4.) is of critical

importance not only to those practicing but to those educating future practitioners. Expanding on Reeck's point (see 3.1) concerning professionals, Elie Wiesel, in a speech to the Global Forum in 1990, questioned the education of the German elite in the war years. How was it possible for these heirs of Kant and Goethe - in some respects the best educated people on Earth - to have perpetrated this barbarity? Their education, he said,

> ". . . emphasized theories instead of values, concepts rather than human beings, abstraction rather than consciousness, answers instead of questions, ideology and efficiency rather than conscience." (in Orr, 1991:99)

Education, like the profession, has a responsibility to justice. It has a responsibility to the environment, just as businesses, professions and individuals do. In order to meet those responsibilities, there are a number of principles it can adopt. David Orr suggests six:

1) All education is environmental education. There is a relationship between the theoretical and the natural world that can, and should be explored in all disciplines.
2) The goal of education is not mastery of subject matter, but mastery of one's self (see 3.6)
3) Knowledge carries with it the responsibility to see that it is well used in the world. (see 3.4)
4) We cannot say that we know something until we understand the effects of this knowledge on real people and their communities.
5) The power of example over words - of 'minute particulars' - is important to education. Faculty and administrators must provide role models of integrity, care, and thoughtfulness.

6) The way learning occurs is as important as the content of particular courses. (Orr, 1991:101)

Principles 4 and 6 relate education more directly to the community. The specific resources of a discipline will affect communities. There is a relationship between these resources and values. One way that we can learn about this relationship is in the process of learning. That learning does not necessarily occur only within the classroom. The classroom and lecture courses may induce passivity rather than activity. For a professional school passivity is not a useful result.

Occasionally institutions have reached out beyond the borders of academic exercise to affect the community at large. Community Design Centres are examples of this effort.

6.1.3. CDC's as an Educational Tool.

In the 60's and early 70's many North American universities responded to the social unrest that surrounded the institution by attempting to use their resources - both knowledge and manpower - to address many of the social needs that were coming to light through such organizations as the Students for a Democratic Society (SDS) or the Black Panthers, and through such events as the protests against the Vietnam War and riots in the streets of Detroit or Watts. The architecture and planning schools were involved in many of the movements towards social change. One of the vehicles that developed for the involvement of students and faculty was the Community Design Centre (see 4.2.2.). Although some were developed outside of the educational environment, as non-profit agencies, most were affiliated with schools of architecture. The oldest and best funded of

these is still operating. The Pratt Institute Center for Community and Environmental Development (PICCED) was founded in 1963. The Center acts as a bridge linking the faculty and resources of the Institute with individual neighbourhood groups engaged in the process of community development. It reinforces the Institutes curriculum with staff participation in formal classroom training and through opportunities for students to learn through experience by means of internships and work/study programs. It also provides educational opportunities for non-traditional and adult students from the local community.

Of the 26 members of the Association of Community Design, half of them are affiliated with schools of architecture. Such an organizational structure has many advantages for the community, the profession, the faculty and the students. The community has access to expertise that can assist them in initiating programs and projects that they would otherwise not have thought of or have been able to fund. The professional, if preliminary design concepts or programs do get funding, will have additional work that otherwise would never have been done. The faculty gets a more motivated and committed class of students which makes teaching more enjoyable and rewarding (Osterberg, 1987:1) The student gets hands-on exposure to the multi-faceted problems that the community faces in its development. Multi-faceted problems often require that students work in multi-disciplinary teams with students and faculty from other disciplines.

6.1.4. Applications of the Model

The Community Design Centre is not a model that developed solely in North America, nor solely because of the social conditions existing in the 60's that demanded social

relevance from university as well as other institutions. In other parts of the world, the arguments put forward about the distinction between theory and practice, education and training, were, under the circumstances, arbitrary and often not very useful distinctions. The graduating students needed both, as did their nation. In developing countries, in market or non-market economies, the "largest single obstacle to improving living and working conditions in the major settlements of the developing countries is the lack of effectively trained personnel." (Oberlander, 1984:ii) Overcoming that obstacle through appropriate programs has been has been a more central issue to those nations with fundamental problems in the provision of basic needs.

In China, the Department of Architecture at Tsinghua University in Beijing initiated a program in 1958 that they called 'real sword and real spear' thesis design projects (Gao & Liu, 1981:40). The intention of these thesis projects was to give the students the opportunity to undertake real projects as part of their academic study. One of the immediate difficulties with this idea is that the design and construction of a building project does not often coincide neatly with the student's semester. As a result, the student would not often be able to follow the process through. It was felt, though, that even partial exposure to the complexities of an actual project would be a great benefit to the student.

In order to institutionalize this program within the university, the Architectural Design Research Institute was formed as an adjunct to the Department of Architecture. It was able to take commissions in the same way that any other active Design Institute could. There was a regular staff that consisted of professors, engineers and technicians but in addition to that full-time staff, students and their

instructors from the Department of Architecture and the Department of Civil Engineering were also engaged in working on selected projects. In addition to taking undergraduate students in their final year, the Institute also engaged in applied research with faculty and students enrolled in post-graduate studies.

When they have taken on housing as a practical thesis design topic, they have recognized additional requirements that are expected for the training of students. Among these were:

> "First, public policy and direction regarding housing and housing design standards; second, our country's current family structure and housing demand in terms of type and size of unit; third, people's everyday living standards, the different uses of housing, and users' opinions and needs; and fourth conditions of technology, such as structure, construction and materials. (Gao & Liu, 1981:40)

Because of the broad range of disciplines required to effectively study and deal with the issues of housing, the student is exposed to experts from a variety of fields related to housing, such as planners, administrators, economists, sociologists and so on.

Because this is the training group for future professionals, the relationship between the school, the community and the professional association is important. There is often little opportunity for the student to gain understanding of the relationship between the theoretical concerns of the profession and its practical concerns as it relates to the community. How is this knowledge cultivated and enacted?

6.2. TSINGHUA UNIVERSITY - SCHOOL OF ARCHITECTURE

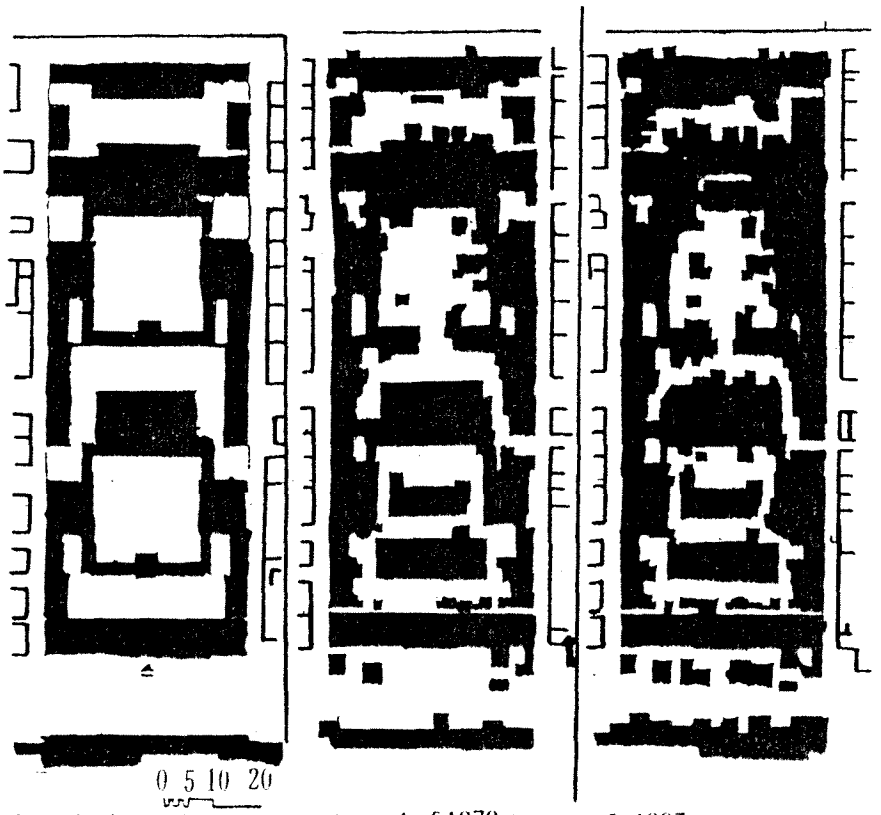
Beginning in 1978 with a group of Master's students, Professor Wu, head of planning at Tsinghua, undertook research on the problem of increasing inner city density while recognizing the importance of the historical character of the courtyard housing in Beijing.

This was not an 'academic' issue. The Beijing Municipal Government was faced with a growing problem with the condition of existing housing stock in the inner city, with the need for more housing, with the tradition of courtyard housing, and with the preservation of the historic character of the capital city.

The condition of existing brick and timber single-storey housing stock in Beijing is poor. There are some 29 neighbourhoods covering more than 4 square kilometres of land with a total of nearly 2 million square metres of floor area (Wu, 1992:3). After the Tangshan earthquake of 1976, many of these courtyards were infilled with temporary shelters. These were never removed and more households moved into them. The density increased and living conditions deteriorated. The average floor area per person is now 5.2 sm and the floor space ratio (total floor area/site area) for these mainly one-storey structures was .83 (see Figure 6.2)

The students and Professor Wu set out to research first the planning issues of the inner city. It was the intention of the government to retain some areas of inner city housing for renovation and to replace most of the housing stock. Of the original 10 million square metres of floor area, only 3%

Figure 6.2
Courtyard Infill
(Source: Wu, 1990)

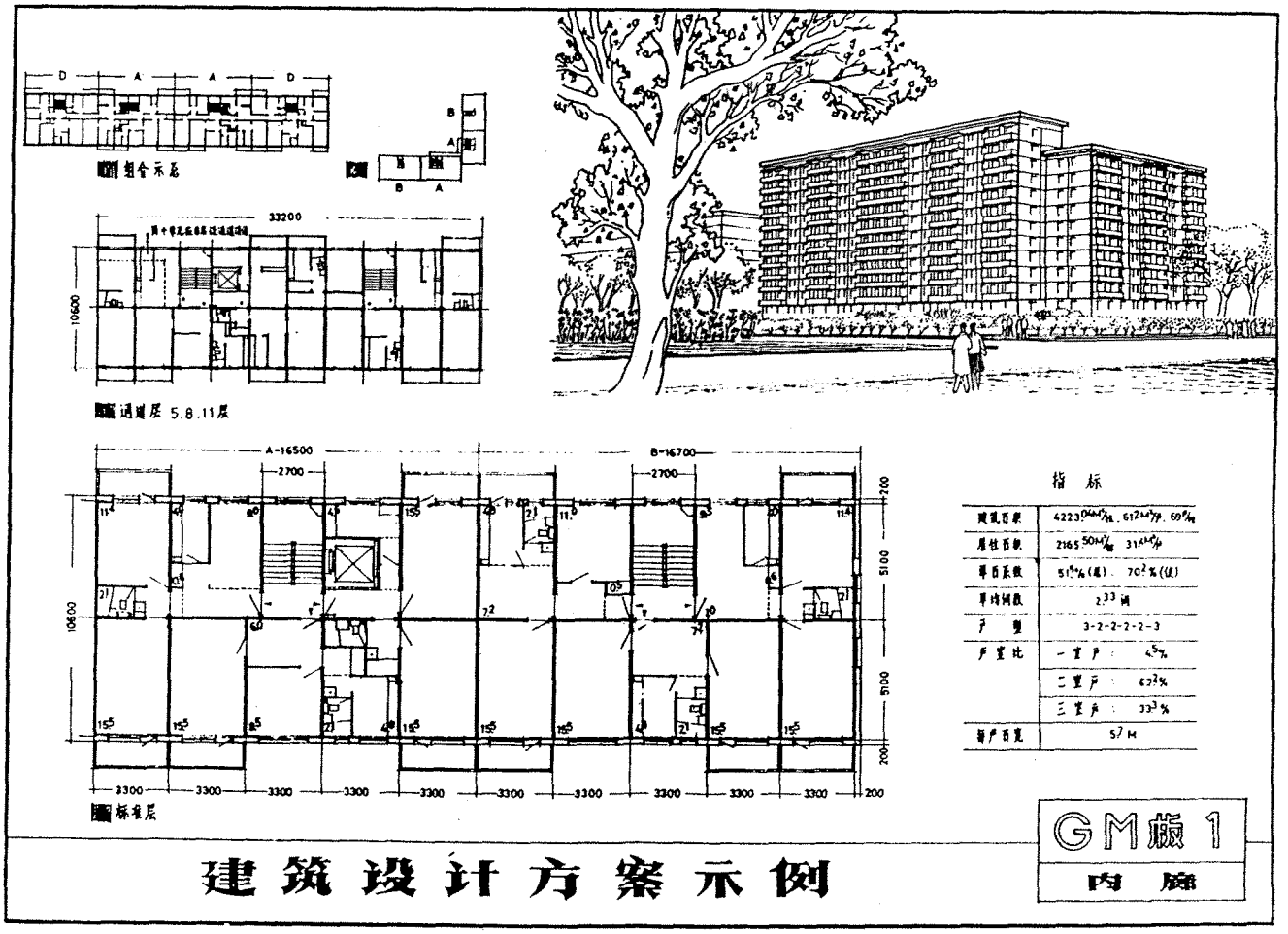


1. early days of liberation: 2,440.5 m² of floor space

2. the end of 1970s: 3,196.5 m² of floor space, 31% up compared with early days of liberation

3. 1987: 3,786.5 m² of floor space, 55% up compared with early days of liberation

Figure 6.3
Typical Apt. Block



was slated for preservation. The rest was to be replaced by standard apartment-type construction (see Figure 6.3)

This design standard would have utterly destroyed the sense of cultural continuity (Wu, 1992:5). In addition to research on the planning principles for the inner city, then, the students undertook to study alternatives to the standard apartment-style house form that proliferated in Beijing. These alternatives were meant to address the cultural and historical significance of this housing to the capital city. They also tried to retain, while dramatically increasing the density, the intimacy of the existing neighbourhood patterns that developed in the framework of the traditional courtyard housing. Over a period of years, the faculty and students devised a number of alternative schemes (see Figure 6.4)

By 1987, after a great deal of research at the planning as well as the architectural level, the Institute, with the help of the City of Beijing Municipal Housing Renovation Office, selected an area by the Drum Tower - the Ju'er Hutong - as a pilot project. At that point another phase of student research began.

Physical and social surveys were undertaken in order to determine the condition of the existing houses and landscape as well as information on the residents: population, needs, age, family size and so on. The physical survey (Figure 6.5) helped to determine which building could be retained, which needed repair and those that required replacement.

From the results of this survey, one neighbourhood, some 2000 sm in size with 7 courtyard houses - was chosen for the first phase of the pilot program. There were 44 households, totalling 149 people in this neighbourhood. The condition

Figure 6.4
Student Model of
Courtyard Scheme
(photo: Bristol)

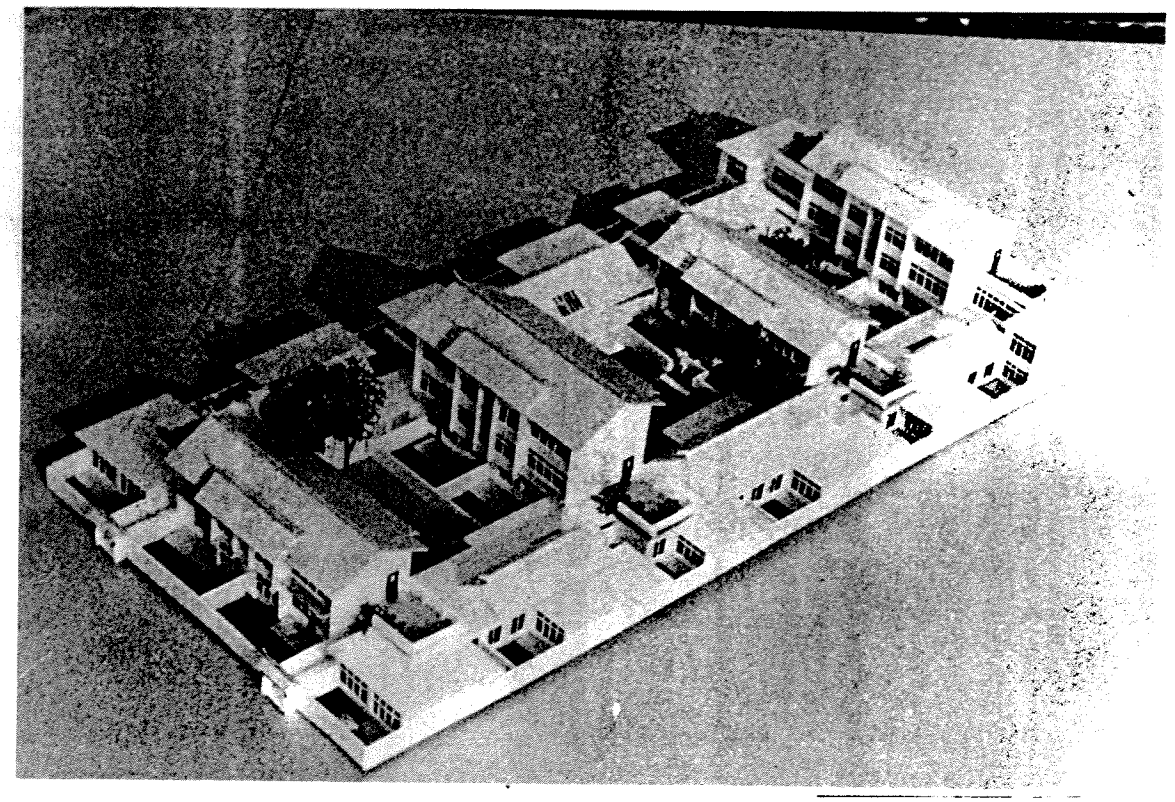
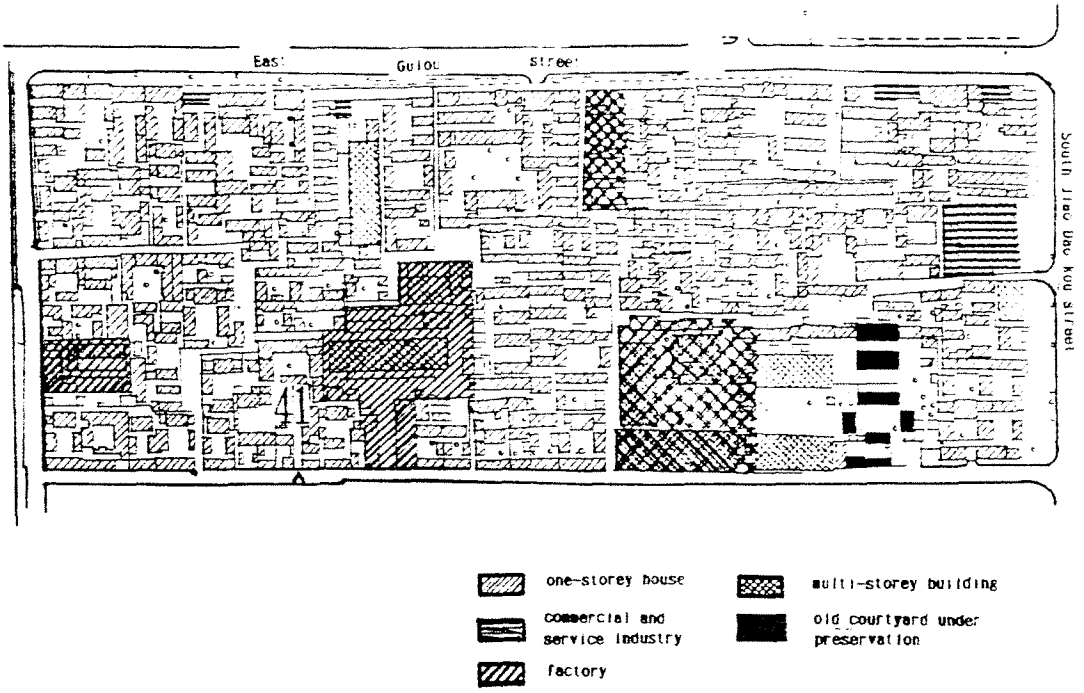
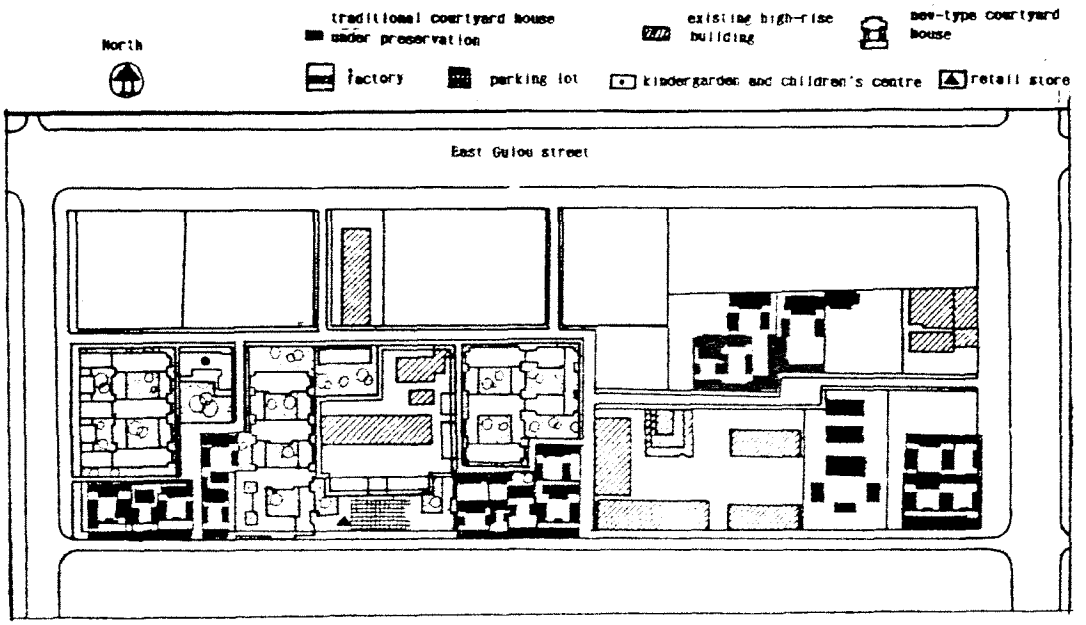


Figure 6.5
Land Use Planning
Ju'er Hutong
(Source: Wu, 1990)



Land Use of Juer Hutong District



Short-term Renewal Plan of Juer Hutong

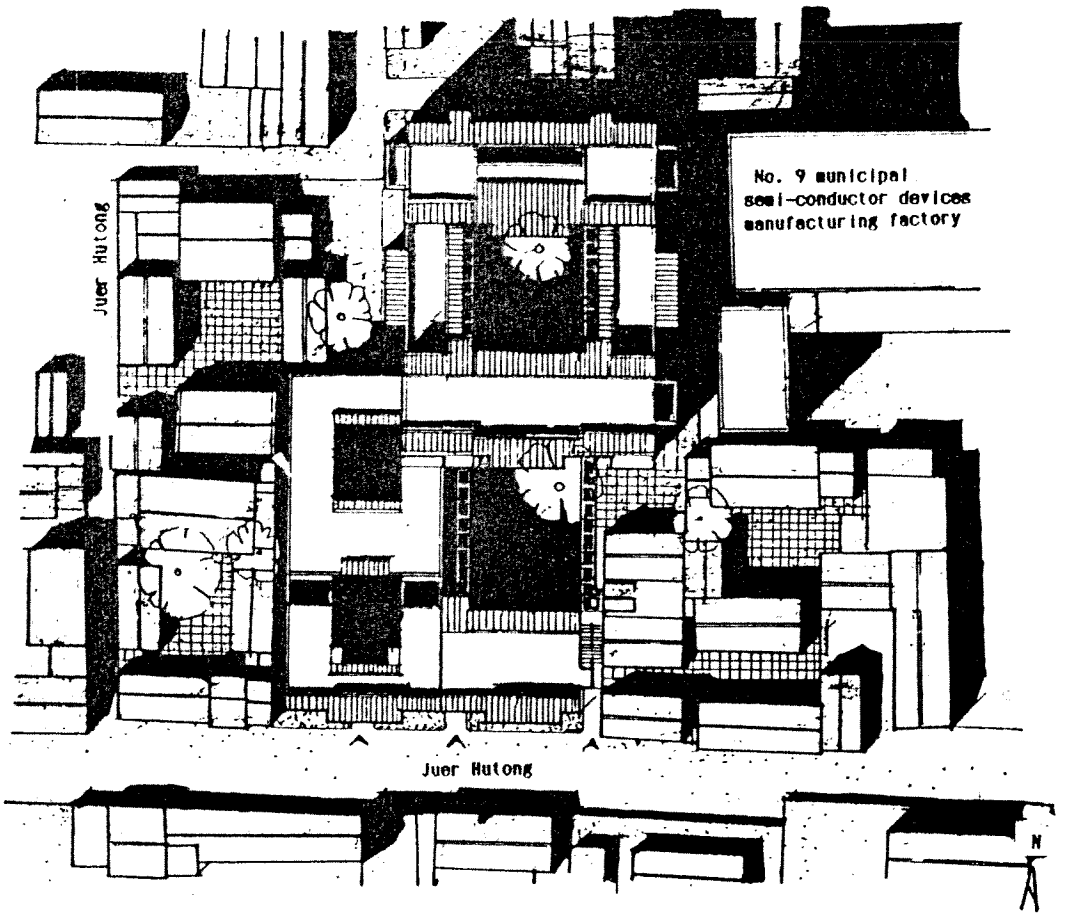
of their housing was poor and in need of replacement. What replaced these houses was the 'fifth generation' design that had been developed at the Department of Architecture in Tsinghua University. The design was organized around a basic compound with 30 units in an area of 30 m by 30 m. In addition there were 'variable compounds' that were developed as an alternative in order to allow the new design to avoid disturbing those existing buildings that were well preserved.

The first project had 46 new units and a floor space ratio 2.5 times greater than the original. The breakdown of units was:

8 - single room units (between 39 - 49 sm)
28 - two room units (between 54 - 66 sm)
12 - three room units (between 66.5 -76 sm)

User participation - One of the other problems they faced typifies inner city redevelopment throughout the world: the dislocation of residents. There were 44 households there that were to be accommodated on the site after the redevelopment. These residents formed a housing cooperative. The members of this cooperative, together with the planning and architecture students of Tsinghua first conducted a user survey which recorded existing physical conditions such room sizes and services as well as social conditions. From this user survey a series of proposed plans were drawn up by the students for the approval of the cooperative as well as the local housing authority. The plans attempted to be responsive to the users needs and comments.

Figure 6.6
New Courtyard Housing
(Source: Wu, 1990)



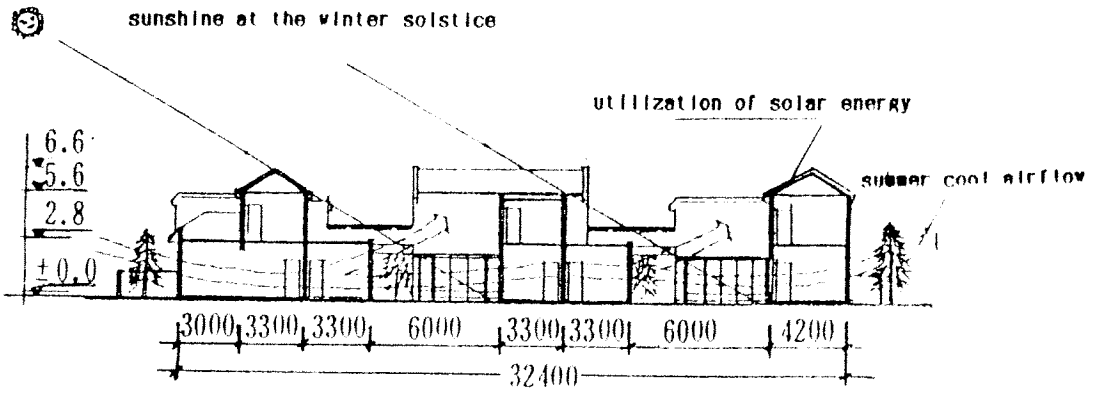
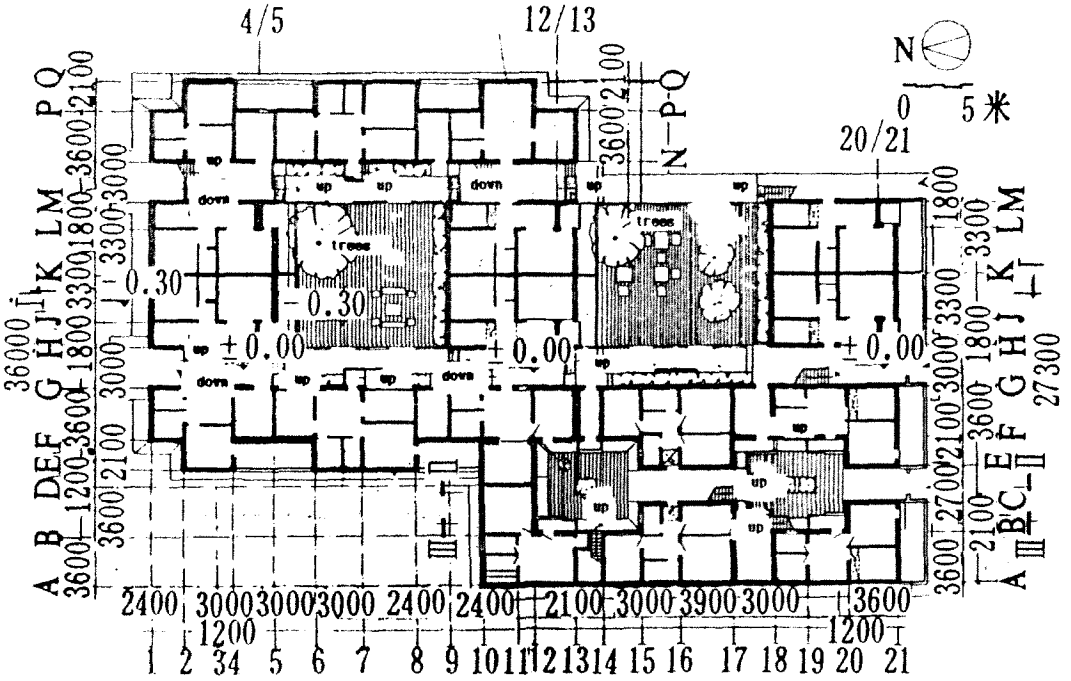
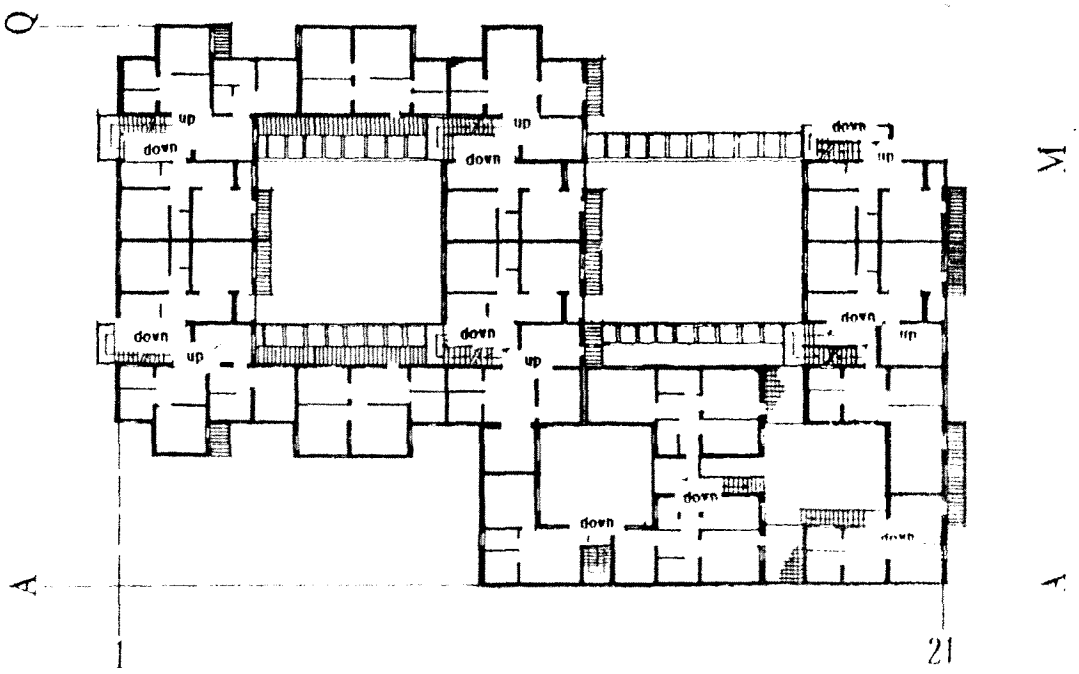


Figure 6.7
Plans of Pilot Project
Ju'er Hutong
(Source: Wu, 1990)



First-floor plan in Juer Hutong's Pilot Project



Second-floor Plan

Financing - The cooperative itself, under the movement towards commercialization[5] in housing, had to bear a greater burden of the cost than was typical for previous housing standards that kept the rent for houses artificially low - an average of 3 - 5% of a family's income.[6] Here the cost of construction was to be distributed between the local government, the residents' work units, and the residents themselves. The residents paid 350 yuan per square metre and the work units paid 250 yuan. Where the work unit was unable to cover their cost, low interest loans were made available. One-third of the residents were able to stay in the neighbourhood. The rest were relocated. The other units not occupied by the residents were sold to the public for 2,500 to 3,000 yuan per square metre which "will enable the development agency to pay off the cost incurred as well as to have reasonable profit." (Wu, 1992:5)

Within the narrow focus of architectural design, this project, with some considerable success, addressed some complex issues of urban housing development including: increasing density in the inner city, the preservation of historical character, and the retention of existing neighbourhoods. Wu also established, with his students, a working relationship that "incorporates the initiatives and

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5. The policy, initiated in 1982, involved increasing the user's financial involvement in the supply and maintenance of housing. The intention was that the State, the work unit and the household would split the cost equally. (see Chen, 1988)

6. Over the years since liberation rents actually dropped. In Wuhan in the 1950's rent accounted for 14% of a family's earnings. By 1980 it was down to 2.3%. The average rent per square metre amounted to 0.13 yuan, while a 1977 estimate put the cost of maintenance and repair at 2.10 yuan and the cost of construction in 1982 at 155.17 yuan. (Bristol, 1989:10)

efforts of local authorities, planners, designers, academics and residents." (Wu, 1992:2)

While the response of government in China has been enthusiastic, there were many issues that this project did not address in its particular focus on architectural fabric. One of the central points in which it fell short was its replicability. The cost of each unit was too high for the majority of residents who, in turn, were forced to relocate. If the project is to be replicable and therefore useful in the supply of replacement housing for these neighbourhoods, it should do so without the disruption of existing communities. Many of these residents had been living there for generations.

This project will undoubtedly have a significant effect on the development of urban housing policy in China and on the ongoing policy of commercialization. However the pilot project itself managed to minimize the intrusion of policy in their design development while maximizing its effect on two-thirds of the users. Clearly, as mentioned above, the attention that the Tsinghua students paid to the physical complexity of the project left them neglecting "the social processes of satisfying the objectives, values, interests and images of others." (Joiner & Daish, 1989:260) Their ability to respond to policy was compromised by the emphasis on the physical parameters.

6.3. ASIAN INSTITUTE OF TECHNOLOGY

The AIT located some 40 km north of Bangkok, is an international organization funded largely by governments. It was founded in 1959 as a graduate school of engineering.

Figure 6.8
Enrollment by Country
and Division
(Source: Kammeier, 1984)

	COUNTRY																							DIVISION/CENTER														
PROGRAM	Afghanistan	Bangladesh	Brunei	Burma	Honduras	Hong Kong	India	Indonesia	Iran	Japan	Korea	Malawi	Malaysia	Nepal	Pakistan	People's Republic of China	Philippines	Republic of China	Singapore	Sri Lanka	Tanzania	Thailand	Vietnam	Agricultural & Food Engineering	Computer Applications	Energy Technology	Environmental Engineering	Geotechnical & Transportation Engineering	Human Settlements Development	Industrial Engineering & Management	Structural Engineering & Construction	Water Resources Engineering	Regional Computer Center	TOTAL	%
Doctoral		1					2	1			1			2			1	2		1		8		1	1		4	2		6	2	3		19	3.3
Master's	2	25	1	8	1	2	40	31	1	4	12	1	28	13	26		52	59	2	47		122	8	62	68	52	34	44	68	52	35	70		485	83.0
Diploma		4											2	3		1	1				1	4					7		5	4				16	2.7
Certificate	1							2					3									5	7		2		7		-		1	8		18	3.1
PCAD/ARRSTC								3			1		2	2	2	2	1	1	9	1		21	1										46	46	7.9
T O T A L	3	30	1	8	1	2	42	37	1	4	14	1	35	20	28	3	55	62	11	49	1	160	16	63	71	52	52	46	73	62	38	81	46	584		
%	0.5	5.1	0.2	1.4	0.2	0.3	7.2	6.3	0.2	0.7	2.4	0.2	6.0	3.4	4.8	0.5	9.4	10.6	1.9	8.4	0.2	27.4	2.7	10.8	12.1	8.9	8.9	7.9	12.5	10.6	6.5	13.9	7.9		100 %	

Figure 6.9
HSD Tasks and Targets
(Source: Kammeier, 1984)

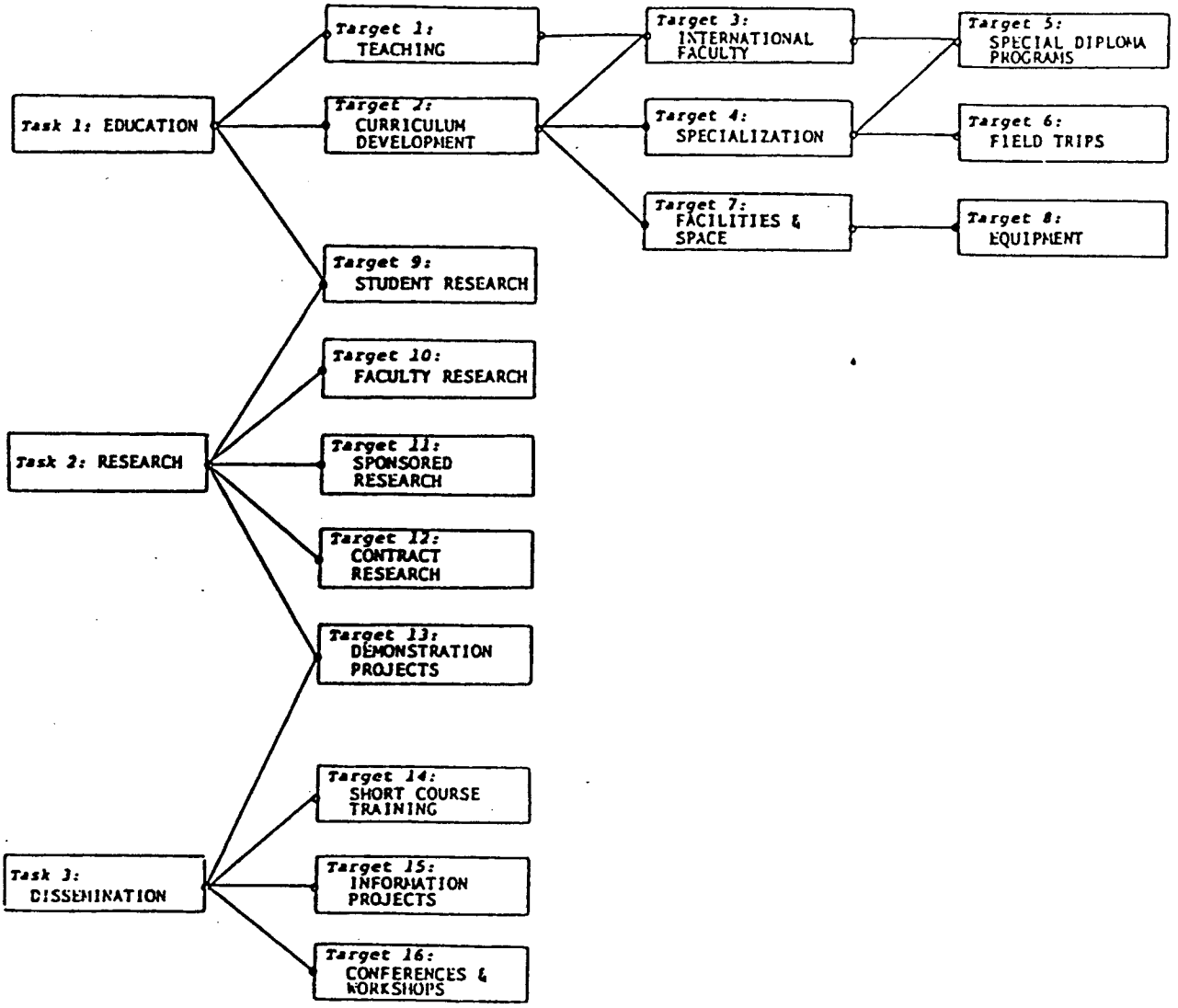
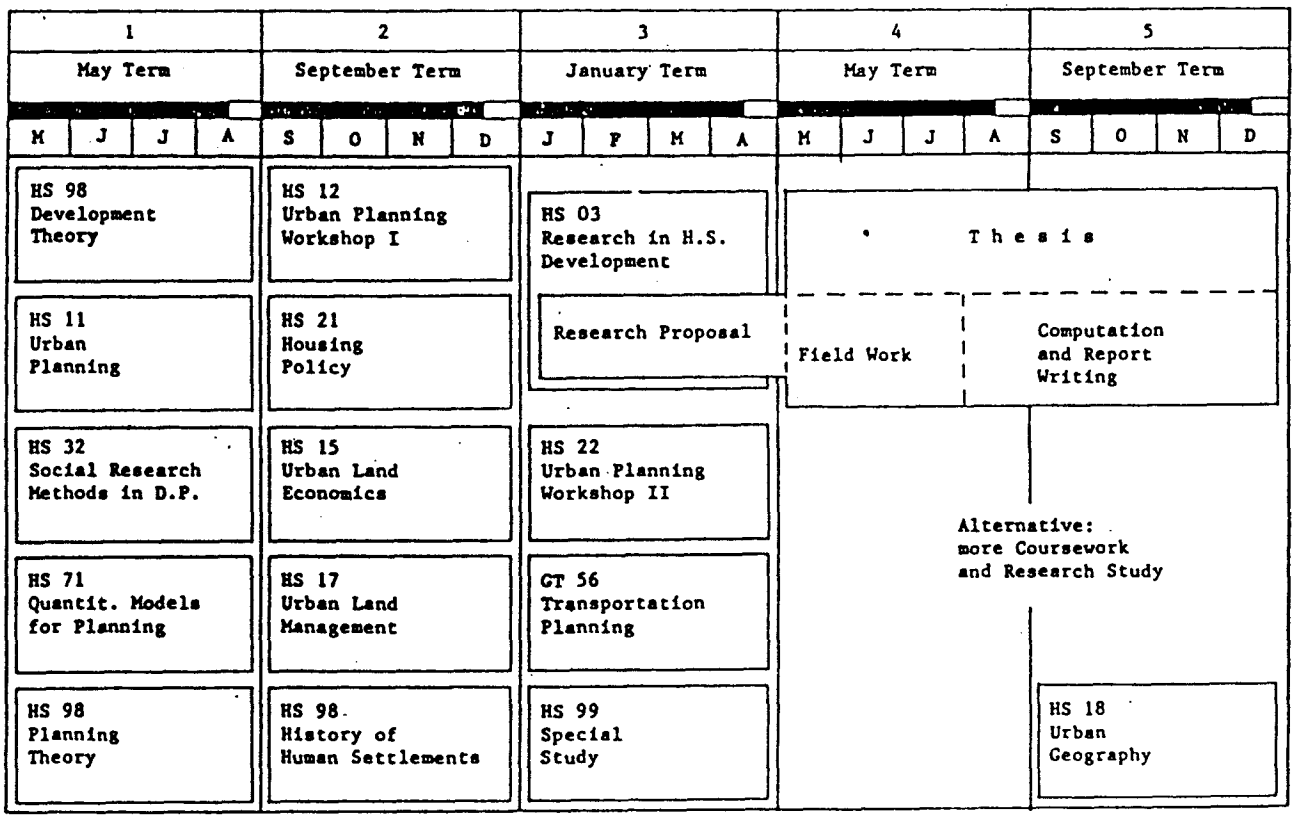


Figure 6.10
Urban Land & Housing Development
Course Sequence
(Source: Kammeier, 1984)



Its academic curricula are related directly to the development needs of Asia. Its student body is largely drawn from Asian countries. It has nine divisions (see Figure 6.8)

One of its nine divisions is Human Settlements Development. Its faculty is composed of planners, architects, engineers and social scientists. Its programs,

> place emphasis on direct involvement with the poor members of society to advise them on problem identification and project planning, and assist them to organize themselves for project implementation and management on the basis of self-help, mutual aid, cooperation and self reliance. Simultaneously, they attempt to raise public concern and awareness among officials of feasible innovative approaches towards fulfilling the needs of the poor. (AIT, 1989:32)

In addition to teaching and research, the institute is involved in demonstration projects and the dissemination of information on human settlements planning and development throughout Asia (see Figure 6.9)

The HSD has two streams of study: Urban Land and Housing Development and Rural and Regional Development. The students are usually people who are already involved in low-income housing through their work within government authorities, NGO's, the private sector or universities. In addition to practicing architects and engineers, the students may be economists, sociologists or geographers.

The students in the Urban Development section take part in a 3 month urban workshop (HS 22) as part of their training.

This workshop involves 20 students split into two groups. Each group has a diversity of professions represented by the students. Each year members of the faculty take these

students to a slum area in Bangkok in order to assist these communities in a variety of upgrading projects. This usually involves infrastructure planning.

The workshop will begin with a socioeconomic survey and a physical survey of the community. For the former, a social worker will live on the project site. When these surveys are complete, a proposal is then prepared and presented to the community leaders. Upon their approval to proceed, the group engages in fund raising so that the project can be completed.

In the summer of 1989 Dr. Yap, the professor in charge of the urban workshop program, expected to work on another, more controversial, project. In early 1989, the Bangkok Post reported (12 FEB 89) that over 100 families in the community of Pang Muang in Bangkok were to be evicted. The land on which these families lived is owned by the State Railways of Thailand (SRT) and is located reasonably close to the city centre. It had not been developed by the SRT because no access roads had been provided to it. When, in December of 1988, a new road was completed, the SRT acted quickly and leased 14 hectares of the land to a company for a commercial development.

The development company, in turn, served an eviction order to the families but they refused to leave. The Railway then promised 8500 baht to each family to cover moving expenses. When no money arrived, the families stayed put and proposed land sharing (see 4.1.3.) The SRT and the developer did not find this offer attractive. Some 30 workers were then sent into the slum area with an escort of 50 police to begin demolishing the homes of these families. The community staged an immediate protest and finally achieved a temporary reprieve from the Ministry of Communications.

The Human Settlements Division had been involved in the negotiations between the squatter community and the State Railway and in assisting the community in organizing. This reprieve left the community in an increasingly precarious position. At some point the offer from SRT could be pulled. As the negotiations went on, many households took the compensation offered and left. They dismantled their homes and left. One of the three communities in Pang Muang disintegrated after their leader accepted 12,000 baht and left (Yap, 1989)

With the help of the students and faculty working with the remaining 40 families from Pang Muang, they negotiated a compensation of 18,000 baht for each household and relocated in May of 1989. Together with 50 other households from two other slum areas they were able to purchase 1.1 hectares of land in Bangkapi at 375 baht per square metre. There was an existing unpaved road providing access to the site over the property of four other land owners. There was no drainage, water supply or electricity.

The NHA assisted in a layout plan for the site and with a loan repayable at 650 baht per month. The families made a down payment of 10,000 baht each leaving only 8,000 for the construction of their new homes. Because that was insufficient, most used materials from their former slum settlement. The students and faculty of the AIT were continuing to assist the families in their resettlement by raising funds for the supply of basic infrastructure services.

This project was one of many that the AIT has undertaken in meeting its goals of assisting the poor and raising public awareness. This three month workshop provided the students

with experience in a variety of areas of housing development, from financing and negotiation through to the technical aspects of infrastructure improvements.

6.4. KING MONGKUT INSTITUTE OF TECHNOLOGY

Since 1981 the undergraduate students of King Mongkut University have won three awards from the UIA International Competition for Students of Architecture. Each of these award-winning projects involved a similar approach to the needs of communities in which the role of the architect was expanded to included broader areas of concern in the development of human settlements.

Within the framework of their undergraduate program in the School of Architecture, faculty and students worked in the inner city of Bangkok in assisting a community recover and rebuild after a fire. This involved community planning, design of housing units and infrastructure as well as community organization. The students themselves, in addition to training in these specific areas, were responding to the theme 'The Architect as Enabler' in which the role of the architect in community-building was examined and expanded.

Their concern in this award-winning project was in the balance of participation between the user and the architect. They believed that too little or too much participation by either is problematic. With a low degree of user participation, users become little more than statistics with little or no opportunity to plan their own environment. On the other hand, without the contribution of the architect,

the health, safety and value of the user's environment is compromised.

The intention of the faculty and students working together in this project was to overcome the obstacles between the professional and the informal sector through training in the field.

In order to be an asset to the community they had to be able to communicate with them they needed to share a medium for the exchange of ideas. They set up five stages of action and the media that could communicate the intent.

"A. MOBILIZE PEOPLE TO PARTICIPATE IN DESIGN
Suggested Media: meeting, literature, audio-visual materials on like experiences.

B. DISTRIBUTE BASIC PLANNING & DESIGN INFORMATION TO USERS AT LARGE.
Suggested Media: manuals, leaflets, or posters of written & graphic presentation of basic information, examples of building materials and construction systems

C. ENABLE USERS TO EXPRESS IDEAS IN DESIGN.
Suggested Media: activity demonstration, jigsaw planning modules, model simulation technique.

D. ASSIST 'BAREFOOT ARCHITECT' TO RECORD USERS' DESIGNS.
Suggested Media: photographs, sketches, written record, taped record, etc.

E. PRESENT ARCHITECT'S DESIGN DEVELOPMENTS
Suggested Media: models, graphic drawings."
(KMITN, N.D.)

In this process the role of the architect was,

" - Research & Observe users' environment
- Inform users of the 'Architect - Barefoot architect - users' mechanism and roles of each group in the design process.
- Train Barefoot Architects and also being trained themselves as community workers.
- Prepare survey work sheets, questionnaire, etc.
- Process acquired information
- Analyze users' needs & constraints

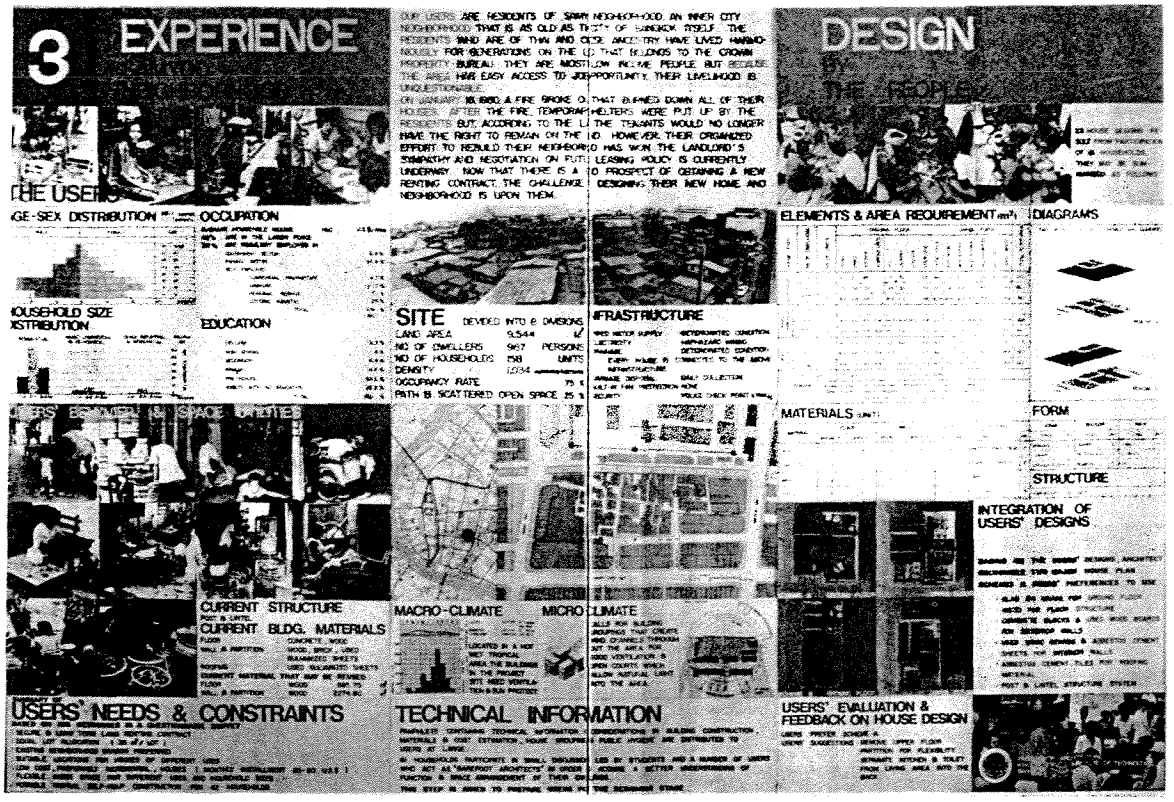
- Preparation of cheap, easy and easily manipulated media
- Prepare necessary planning-design information using appropriate media
- Integrate users' designs into implementable scheme with respect to Architectural elements, Structures, site planning and cost control. (KMITN, N.D.)

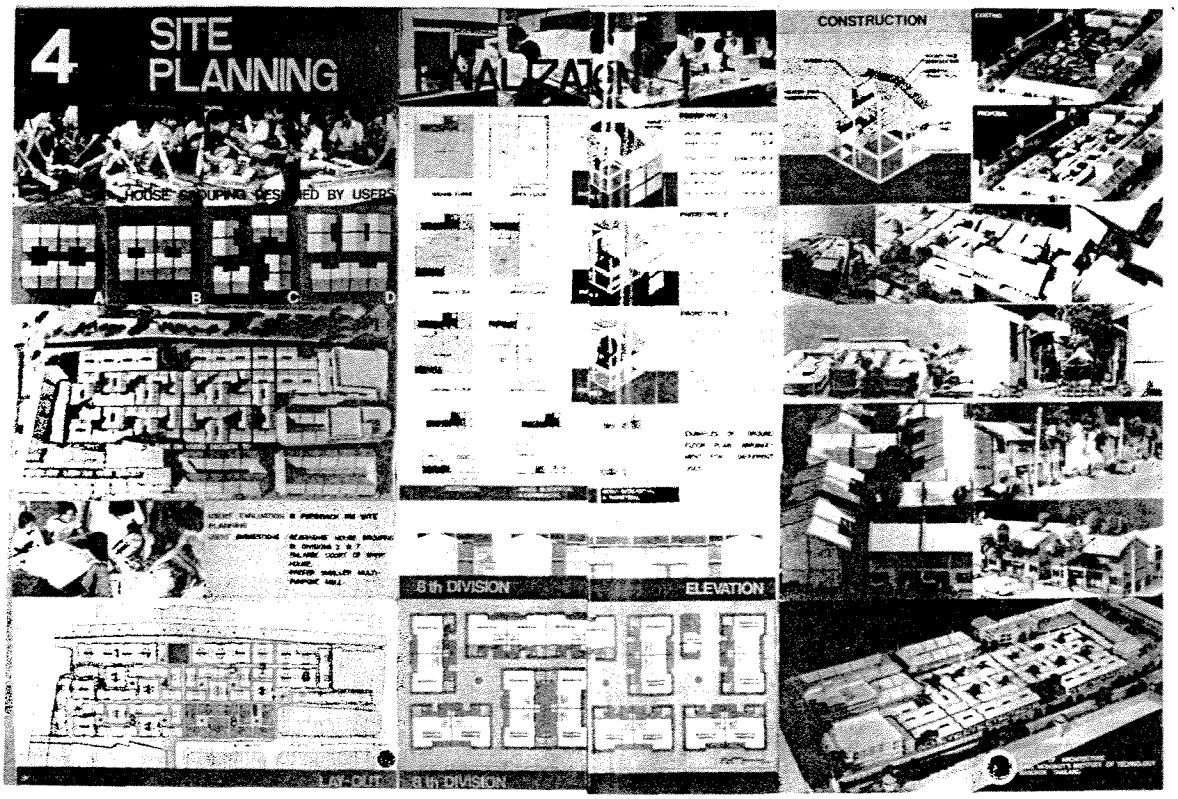
the community that they chose to assist way Samyod, a community of 967 people on a site close to the commercial centre of Bangkok. The residents rented land from the Crown Property Bureau but these leases were not renewed after a fire in 1980 burned down all the community's buildings. The community continues on this land without any security of tenure. The process that the students went through with the community and the organization that the students developed for that process allowed both the users and the students to gain from the experience (see Figures 6.11a-d). The students were involved in a wide range of activities that placed them well beyond the theoretical or 'pure' design.

Because the project was real and important to the users, there was an increased need on the students' part to communicate clearly and effectively. This involved them with the use of a wide variety of media and also with training.

Figure 6.11a
KMITN Presentation Drawings
(Source: KMITN)

Figure 6.11b
KMITN Presentation Drawings
(Source: KMITN)





6.5. INSTITUTE OF TECHNOLOGY IN BANDUNG.

In July of 1976, an earthquake occurred in Bali. In addition to injuries and extensive loss of life, subsequent surveys "revealed that 85,000 houses, 346 temples and mosques, 7 community centres, 20 markets as well as hundreds of shops, factories and other buildings had been destroyed." (Sularto, 1980:65) The emergency required immediate action on a large scale. Sularto and another architect, working from the Institute of Technology at Bandung formed a team with the Building Information Centre (BIC). They took architectural students who were originally from these villages and, after training them, brought them into the field to help with the daily work of reconstruction.

The students went through a one week training course in preparation for the work in the field. Part of that training included a demonstration of the ability of people to build for themselves - without professional technical assistance. Sularto pointed out to the students that anyone can build without the plans that the students found so critical to the housing delivery process. To demonstrate that, he gave one of the office workmen building materials but no plans, telling him, instead, to build it the way he would have traditionally. Within 5 days, together with 5 of his friends, the house was finished. Sularto said that this proved two things to the students: that plans were not what the villagers would need from them in the field, and that traditional building through mutual aid is still a viable process for housing delivery (Sularto, 1989). The same demonstration was repeated with the students building their own houses.

When these architecture and civil engineering students began their field work, they had to conduct a survey of existing conditions and materials. This included a review of: materials that could be recycled from debris; material needs and availability of materials on the market. With these data gathered, it was possible to develop a range of alternative housing models that could be built using these materials.

The students were divided into three groups, one for each region affected by the earthquake. Each of these groups was divided into smaller groups of two or three people that moved from village to village providing technical aid.

> This work included the formulation of self-help housing programmes for specific villages and the distribution of information and technical advice about building processes and environmental rehabilitation. They also acted as construction supervisors where necessary. (Sularto, 1980:73)

In the period of 6 months, the architects and their students visited some 300 villages and completed about 4000 emergency housing units. These units were a modern variation on the traditional six-pole village housing (see Figure 6.12). These simple six pole two-room structures (each 3m by 3m) had a 1.5m verandah in front and were flexible enough to allow extensions if they were required (see Figure 6.13)

Currently many of these simple structures have been, after 13 years, replaced. Those buildings that are left have been altered and added to by the resident families (see Figure 6.14).

Those that have been replaced were largely the result of improvements to the economy over that period. In addition to these immediate and long-term benefits to the community,

Figure 6.12
Traditional 6 Pole building (Sakanem)
(Source: Sularto, 1980)

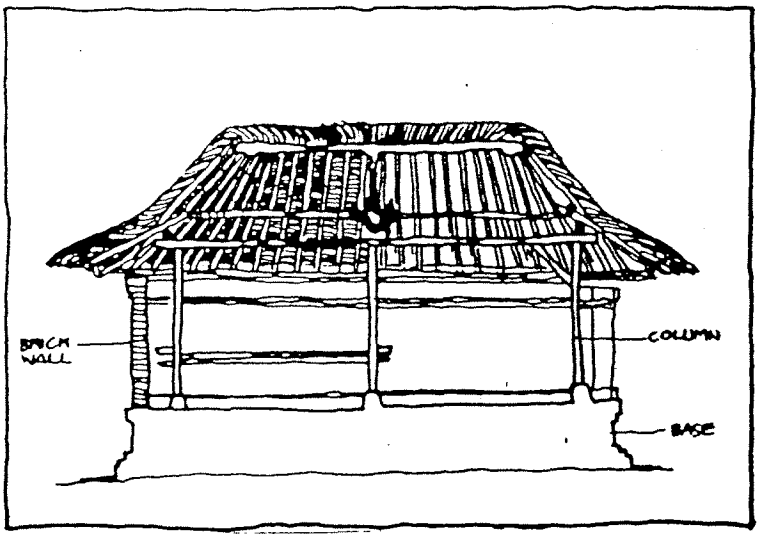
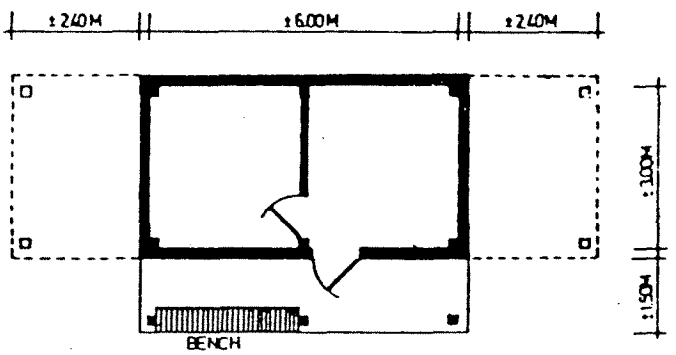
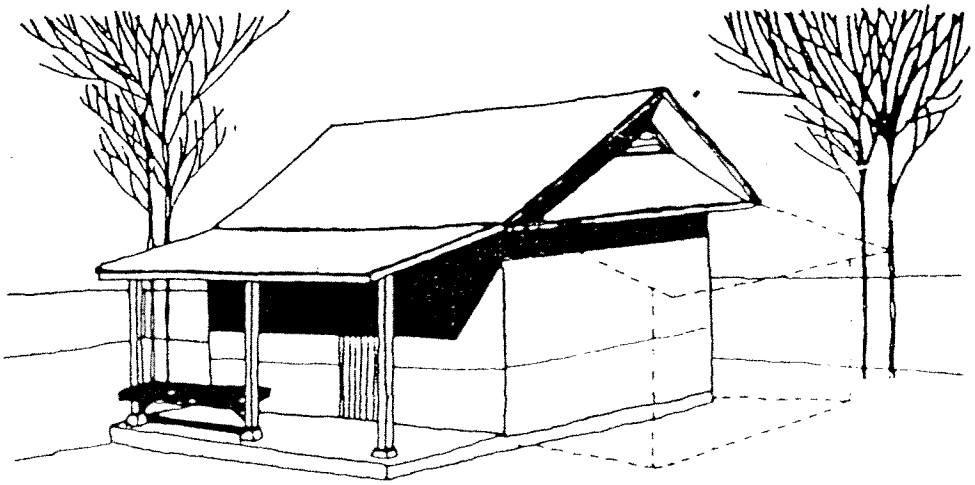


Figure 6.13
Plan & Perspective of 6 pole Housing
(Source: Sularto, 1980)



PLAN



PERSPECTIVE

there were other benefits. Community participation in decisions about the programme were encouraged and reinforced over time. The technical ability of the community was revitalized by the process. There was considerable growth in the self-confidence of the communities. With skills improvements and building improvements, there was subsequent stimulation of the local economy.

For these architectural and civil engineering students, the results were equally valuable. They learned not only about the basics of technical aid to communities, but they also began to understand the cultural restraints of simple design.

> The role undertaken by the staff and students of the Building Information Centre of Bali of being both an intermediary between the people and the various government and other relief agencies and a participating coordinator of the overall effort, was an excellent example of gearing education to the welfare of society at large. (Sularto, 1980:77)

Figure 6.14
Student-built shelter after 13 years.
(Photo: Bristol)

6.6. CONCLUSION

These examples indicate the range of opportunity that is available to educational institutions in the training of students and in meeting their institutions responsibilities to the basic needs of society. It raises a number of other concerns about the training that architects receive and how it does or does not prepare them for the needs.

One of these concerns was raised by Robert Gutman about North American architects,

> "The profession needs young architects who can speak knowingly and with feeling about problems of public policy that impinge on architecture. (Gutman, 1987:25)

Gans echoes this concern with his suggestion that "architecture schools should provide more courses on the economics and politics of building, housing, and related subjects." (Gans, 1983:317)

Another concern is for the relationship between architecture and other disciplines. In most of these instances of students working in developing countries, there has been a recognized necessity of working in teams that include many other disciplines. Again, Gutman, in the North American context makes the same point when criticizing the five-year program in architecture,

> "These programs isolate students from contact with other fields and disciplines before they understand the nature of their commitment to architecture and the place of the profession in society. . . . [These programs] also prevent social contact with other young men and women whose ways of thinking do not have the special slant of architects, but who in later years will become the audience and clients of the profession.

> It is worth noting that architecture remains the only major profession which clings to this model. (Gutman, 1987:25)

This isolation from other disciplines is seen, as well, in the isolation of the school from the community. This occurs when the relationship between theory and practice is weakened or obscured. What strengthens that relationship (and so strengthens both the value of education and the profession) is the direct relationship with a community's needs. The relationship is strongest when the community brings something to the school (a recognized need) and the school brings something to the community (expertise).

CHAPTER 7
ARCHITECTS AND NGOs

> "NGOs define their lines of action based on an understanding of one essential principle: that all people have the right to control their own destiny, with a preference for shelter solutions based in their own community." (from the Limuru Declaration. Turner: 1988:187)

Non-governmental organizations[1] are widely varied, ranging from transnational institutions such as the Red Cross, to local community organizations such as neighbourhood associations. The size of the NGO dramatically affects its ability to act at a local level.

Large NGOs such as CARE or the Red Cross, tend to organize, because of their size, hierarchically. They also have less direct awareness of local conditions in the field unless specific provisions are mandated in the structure of the institution to allow for that kind of input at the outset.

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1. Objections have been made about the term "because it implies that government is the centre of society, and people its periphery." (Nerfin, 1987:173) It has also been termed the 'popular' or 'third sector', with the other two being public and private sectors. These terms imply "the existence of two separate spheres within the boundary of a country - one public, one private." (Chaing, 1981:3) By implication, too, this has meaning only in those countries whose principles are founded on the Western liberal tradition that sees the rights of individuals, and therefore of private association, as paramount. In some countries, the term 'non-governmental' is synonymous with 'anti-government'.

Smaller organizations have a far better understanding of the daily life and daily needs of the community. This understanding and their strong relationships with community-based organizations (CBOs) makes them a very responsive force in development. Additionally, they have the ability often to circumvent the obstacles created by policy. This is not often so with the larger NGOs such as the Red Cross[2]. The drawback of many of these more flexible and mobile agencies is that they lack the funding and the administrative support to be able to implement change in the community.

7.1 NGOs AND DEVELOPMENT

The approach that NGOs take to development - from its concept to the specific projects - is different from that of institutions or the private sector. Part of this difference in approach stems from the history of NGOs and part from their organizational structure.

7.1.1. History

Historically, the concept of NGOs emerged out of the Western liberal tradition that focussed on the individual's right of freedom of association. Linked to those rights of the individual was the rise of entrepreneurial capitalism, and with it colonialism. Counteracting, in its own small way,

2. In many instances the Red Cross has been hampered in its ability to provide necessary aid - Biafra and Cambodia, for example - because it had not received official permission to enter certain parts of the country. The aid agency Medecin Sans Frontiere was formed by a doctor working with the Red Cross in Biafra who was outraged at the inability of the organization, as a result of national politics, to get aid where it should have gone.

the forces of exploitation, were the forces of humanitarian aid. It is not surprising that one of the early prototypes of the modern NGO was the British and Foreign Anti-Slavery Society which was established in 1823.

The other philosophical thrust (although with similar colonial underpinnings) were the Catholic and Protestant missions working in education and health. These agencies still figure prominently among NGOs today.

It was only in the post-war year, though, that, with the need for relief, NGOs grew in numbers and in size. The Oxford Committee for Famine Relief (OXFAM), founded in 1942, was one such agency that was focussed on food, medical supplies and clothing aid to European refugees of the war. Immediately following these post-war emergency relief situations, that precipitated the formation of many of these agencies, many other situations arose (and continue to arise) that called for immediate relief. The focus of many of these NGOs moved from Europe to other parts of the world.

> "Gradually, a number of NGOs also become involved in work of a developmental nature as their horizon widened and as they perceived that in these parts of the world emergencies were often only the tip of an iceberg of chronic deprivation." (OECD, 1988:19)

This shift in direction and focus was further reinforced by the church organizations. They were the first to promote the concept of 'partners' in development. Because of the universality of their constituency, they were more able to effectively develop relationships with local organizations in developing countries. It was through two encyclical letters in 1963 and in 1967 that the principles of this new development approach - of self reliance and international solidarity - were enunciated:

> "These documents listed the 'legitimate aspirations' of populations in developing and newly independent countries: freedom from poverty, greater assurance of finding their sustenance, health, stable employment, more responsibility, freedom from all oppression, more education, and, in newly independent countries, autonomous growth and dignity . . . (OECD, 1988:20)

To honour these aspirations required a different approach to the organization of assistance.

7.1.2. Organizational Structure.

With the exception of the larger organizations such as CUSO or the Red Cross[3], NGOs operate formally as charities and their funding comes directly from the public. They are non-profit organizations that receive most of their money from fundraising with the general public. It has been said that this is beneficial in that,

> ". . . their dependence on voluntary donations keep them small, by itself a pressure to do more with fewer resources. This means that NGOs can and must work with local groups and individuals . . ." (OECD, 1988:15)

Their general impoverishment, though, is not the motivating factor for their approach to development. Rather, it is the philosophical stance that creates the structure. NGOs like Oxfam, or the much smaller Inter Pares[4], relate directly to the agencies and organizations of the country in which they work. The local organization takes the lead in

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3. These may be more appropriately termed Non-governmental Institutions (NGIs). Although they are to be distinguished from governmental agencies, such as the Canadian International Development Agency (CIDA), they are sustained, unlike NGOs, by core funding from the government.

4. The term means 'among equals' which quite clearly identifies the philosophical stance of partnership that they have towards development.

implementation and the international organization contributes funds and, when required, expertise. Although some NGOs work with local governments, many do not. Instead, they support the efforts of local organizations or institutions. As a result they often do not have field offices overseas, choosing instead to relate directly to local structures.

Like many NGOs, Inter Pares, for example,

> " . . . tends to be very open and clear about the politics of development and the politics of poverty, and tends to support organizations who have developed a clear analysis which guides their efforts to bring about change in their communities and their society. . . . the relationships we develop and our approach to our work very much focuses on a belief that we and our partners are truly equals in common cause to confront social and economic injustice, to improve the planet, and to promote more sustainable models of human community and interaction. Explicitly, we do not see our work essentially as charity, but as an ethical duty to ourselves and fellow human beings around the globe." (Murphy, 1991:4)

Such a stance often places an organization in conflict with the aims of government and it places the NGO clearly in the arena of politics. In the religious sector of NGOs, liberation theology has taken the same stance.

7.1.3. NGOs and Architecture

Because of the philosophical and funding foundations from which NGOs work, the relationship that architects may have with them as a 'client' group will necessarily be non-traditional, if only in funding.

Pedro Moctezuma, a director of the Mexican NGO, CONAMUP, was asked about this relationship and whether private consultants were ever hired for their technical portions of

a project. Not surprisingly, he said, "We have avoided private consultancies as they have to make a profit and this increases the costs." (Davila, 1990:49) As a result they always work with other NGOs. This may account for the observation made by the RAIC that "there has been very little involvement by planning and design professionals in Canada's broad-based NGO movement." (Chreod, 1987:15)

Another requirement for design professionals is, again, a keen awareness of the implications of policy - both national and international - that affect the development of programs and projects.

The examples that follow place the design professional in a more immediate sphere of need rather than that of political conflict. They do, however, serve to indicate the possibilities for architects working with NGOs.

7.2. GREAT EARTH RURAL DEVELOPMENT FOUNDATION

The Foundation was organized in January 1985 at the same time as the architectural firm with which it is affiliated: Great Earth Architects and Engineers International (GEAEI). The intention of the Foundation is to address the planning and architectural needs of rural China in a multifaceted way. Its organizing terms of reference were:

1. To carry out studies of rural housing conditions;
2. To promote pilot projects of rural community planning and rural housing design;
3. To train personnel in rural areas to handle planning, design and construction tasks;
4. To sponsor or participate in exhibitions, public lectures and symposia on relevant themes;

5. To establish links with interested bodies both at home and abroad sharing similar aims.

In order to carry out these aims, the Foundation depends on donations received from its associated architectural firm and from other concerned individuals. In that first year of operation it received funding from GEAEI, Alfred Peng, Tao Ho, and T.J. Meng totalling 120,000 RMB (about C$40,000). To the end of 1988, the greatest portion of its funding was from GEAEI. Their donations for 1988 amounted to 104,000 RMB. With this slim budget, however, they managed, in that four year period, to undertake 34 project, 22 of which were in 1988 alone.

The projects that the Foundation has undertaken over those years have dealt with a variety of issues including:

- town planning
- historical preservation
- building inventory
- training programs
- physical improvements to:
  - infrastructure
  - structure & seismic upgrading
  - ventilation

7.2.1. Site Specific Projects

There are several channels by which a site specific project can be chosen for assistance by the Foundation. The three main channels are: through the rural construction bureaus, through the universities or villages themselves, or through the Foundation itself.

.1) Construction Bureaus - Each provincial government has a rural construction bureau. They may put forward several potential projects from which the Foundation can choose. The basis of their choice is the enthusiasm of the village and its leadership for the proposal, and the availability of sufficient funding in the village for them to carry out the project.

.2) Universities - A village may have had some previous association with someone in the university faculty who will, in turn, bring a proposal to the attention of the Foundation for its approval. Again the basis for choosing such a project is leadership and the funding to complete the project.

.3) Foundation - Occasionally the Foundation itself will select a project. The basis for their choice is:

- its potential influence as a prototype
- the physical needs - eg. in earthquake zones, particularly those areas using rammed earth construction
- the preservation of historically important architecture
- complementing existing government planning - eg. the development of coastal towns is part of government policy but they have no town planning and, as a result, grow haphazardly. The Foundation assists in the provision of planning expertise.

.4) Funding - The Foundation funding is used for administrative purposes and not for capital projects. They will, in other words, provide funding for a professor to provide assistance to a community, but not for the actual construction project. This money must come from other

sources such as the community itself, the rural construction bureaus or the Ministry of Construction. Half of the Foundation funding is given out at the beginning of the project and the balance on completion.

One project started in 1987 concerned a small water village in Zhouzhuang county, not far from the more famous water town, Suzhou. This village was completely cut off from land transportation. Roads that could accommodate cars or trucks were impossible to build. Part of the reason for this arose from the curved shape of the beautiful Ming Dynasty bridges (see Figure 7.1) that provided the only links between the village and the rest of the county (see Figure 7.2). The local community was eager to establish transportation links that would allow them to live a more modern and productive life.

Their solution to this was to destroy these obstructive curved bridges and build new flat ones that could accommodate vehicles larger than a bicycle. When they sought funding from the county bureau of the Ministry of Construction for this project, the county, together with members of the architectural staff of Tongji University in Shanghai suggested another course.

The Foundation was approached for a small amount of funding that would allow one of the professors from Tongji - Professor Ruan - to take a group of students to the village during the summer months. The village itself supplied the food and shelter for the professor and the fifty students. The Foundation provided for the professor's time.

Their first operation was to complete an inventory of these Ming bridges. This included measured drawings of each in order to maintain a permanent record of the style and

Figure 7.1
Water town bridges
(Source: Mirams, 1940)

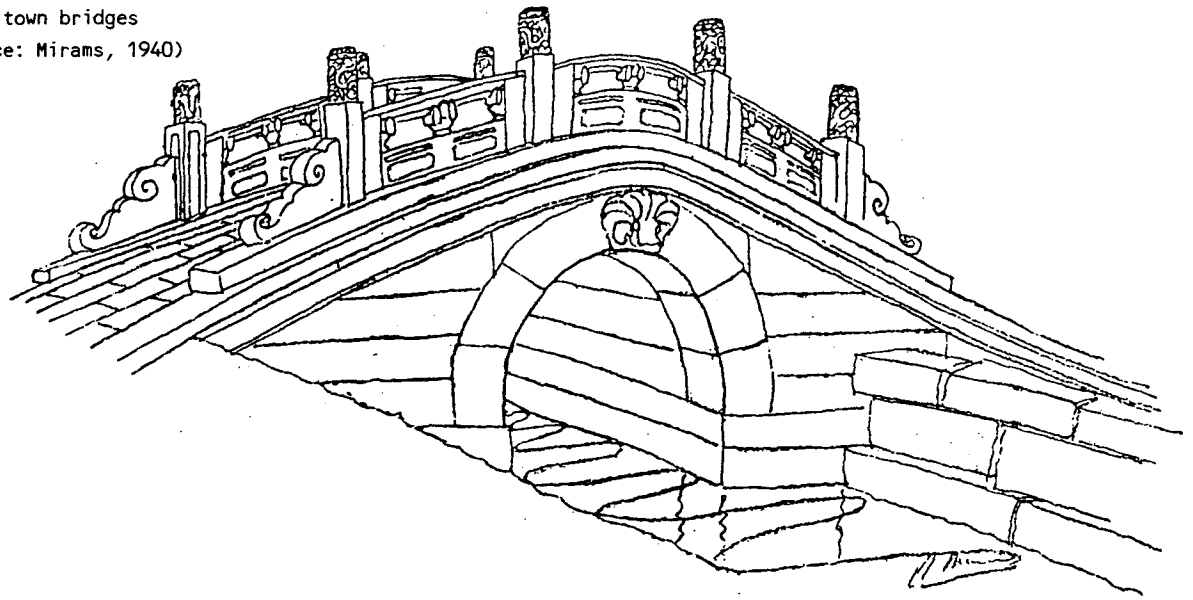
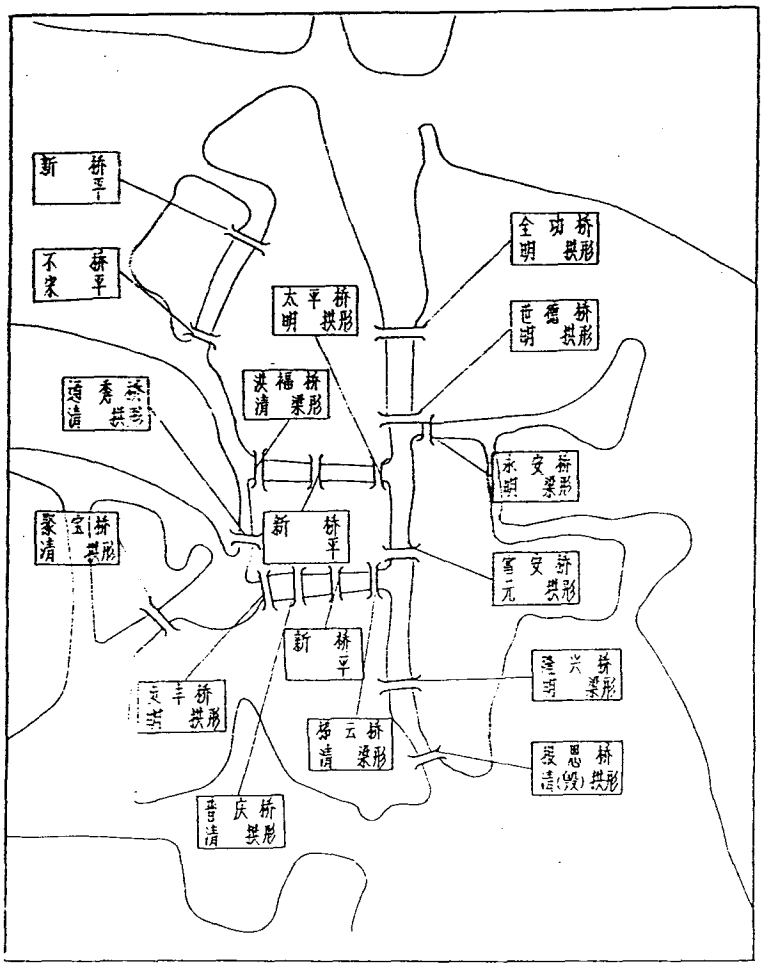


Figure 7.2
The bridges of Zhouzhuang
(Source: Great Earth)



周莊歷代橋樑分布

— Distribution of bridges of past ages in Zhou zhuang

construction method. Through this effort the students were provided with training in three areas: historical preservation, traditional Chinese architecture (design and construction methods) and field work techniques.

When this inventory was completed, their next task was to find a way to provide for the community's transportation needs without destroying the architectural tradition of the area. A village plan had to be developed that could accommodate these conflicting requirements.

A compromise was reached after much negotiation with the villagers. Through the funding of the Ministry of Construction, a new flat bridge was built at the edge of the village. Although this new bridge was sure to affect the development of the village, the professors, students and the villagers themselves had worked together to devise an overall development plan that could achieve both the preservation of their architectural heritage and the modernization of their community.

7.2.2. Training Programs

In addition to site specific projects, the Foundation is actively involved in training programs. There are three different areas towards which they have directed funding: publication, training classes, and scholarships.

.1) Publication - The Foundation publishes a small bimonthly magazine called "Town and Village Development" This journal is distributed through the bureaus of county construction in each province. The information contained in the journal ranges from basic town planning principles to interior layouts for houses. in addition they provide technical information on structure, water supply, seismic

Figure 7.3
Sample contents
Town & Village Development

村镇建设 双月刊

1988年第4期（总第27期）

1988年 8 月27日出版

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本期彩色照片均由宁夏区建设厅乡村处提供

TOWN & VILLAGE DEVELOPMENT

(Bimonthly)

No.4(Serial No.27)

August 1988

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Figure 7.4
Planning Principles
Town & Village Development

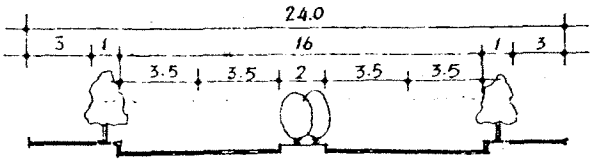


图3a 主干道宽度

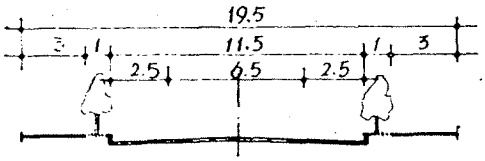


图3b 次干道宽度

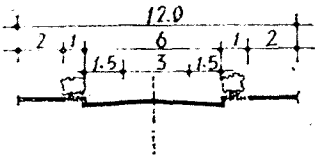


图3c 支道宽度

5.停车场：在工业发达的国家，一提到汽车，立刻就联想到停车场。因为它与交通的畅通、安全、效益以至城市景观、效率关系极大。我国汽车较少，但对停车重视更少。大多数城市都有“欠帐”。而在小城镇中就考虑更少了。对交通（机动车、非机动车、人流）带来了影响。在城镇中设立停车场地的必要性是无容置疑的。停车场有广场停车和路侧停车两类。其场址和规模应在交通

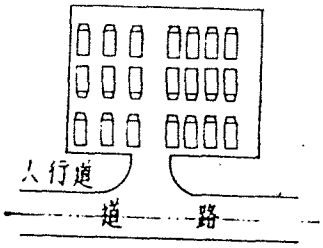


图2a 广场型停车场

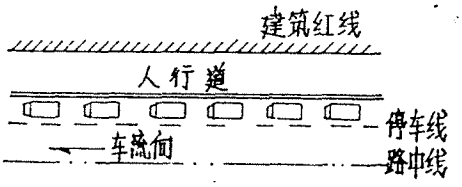
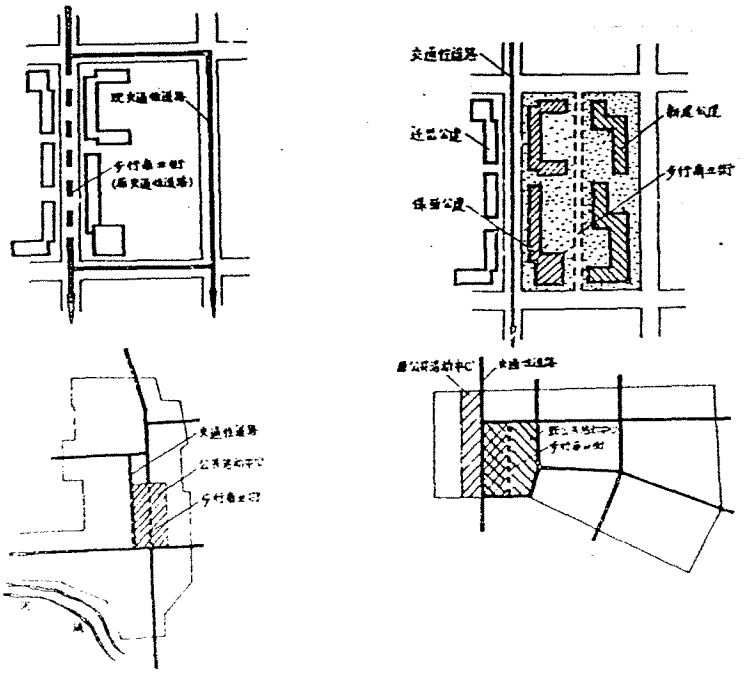


图2b 路侧型直线式停车场



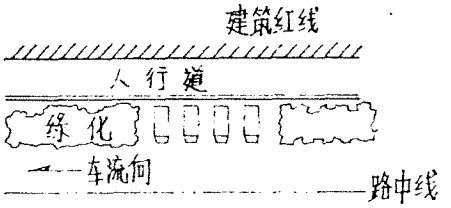
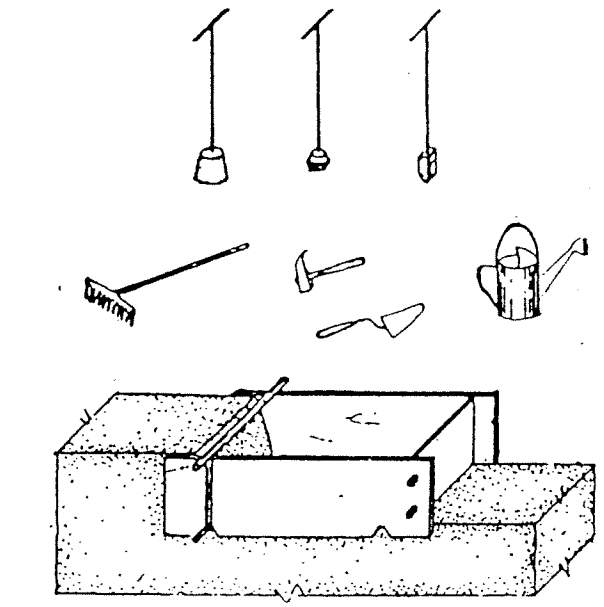


图2c 路侧型港湾式停车场

Figure 7.5
Construction Details
Town & Village Development



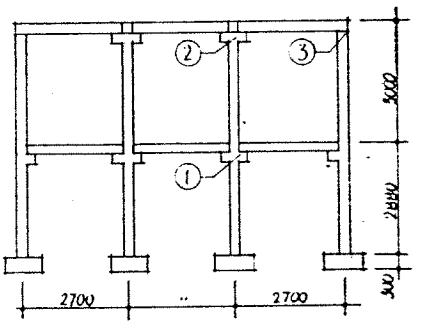
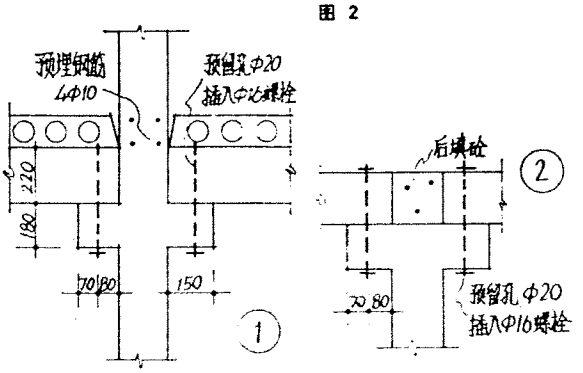
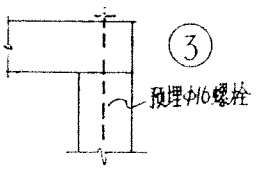


图 2





problems in traditional structure and the appropriate and safe use of indigenous materials.

.2) Training Classes - In 1988 the Foundation developed a one month course on town planning with the help of Chongching Architectural College. They prepared a textbook and the course was then conducted by professors as well as some students during the summer vacation period. In addition to these courses they also offer a correspondence course for those people living in more remote areas. These courses are intended to train the peasants in building construction technique. This includes foundations, structural knowledge, building materials and construction theory.

One of the problems they had with the training programs and their use of students was that the peasants didn't believe they needed any help on construction design, particularly from students. When these programs started, they found upon return visits that the peasants had gone back to their old ways of construction. The problem, as the Foundation saw it, was that the peasants would only change their construction techniques if the theory behind the proposed change could be explained to them in an understandable and convincing way. When, for example, they were being trained in reinforcing steel placement, many peasants would put the steel on the top of beam instead of the bottom. Until they received appropriate training in the structural theory that gave the rationale for the placement, they would not do it correctly.

.3) Scholarships - Beginning in 1989 the Foundation began a scholarship program for students interested in rural development and architecture. In 1989 they awarded more than 20 students with a scholarship of about 1000 RMB each

to help with their living costs. Every school presented the qualifications of 3 or 4 students to the Foundation for their approval. These students must not only be academically good, but have shown an interest in rural construction issues through their current academic or practical studies. Those students granted the scholarship are expected to produce a document on some issues of rural construction.

7.3. BUILDING TOGETHER

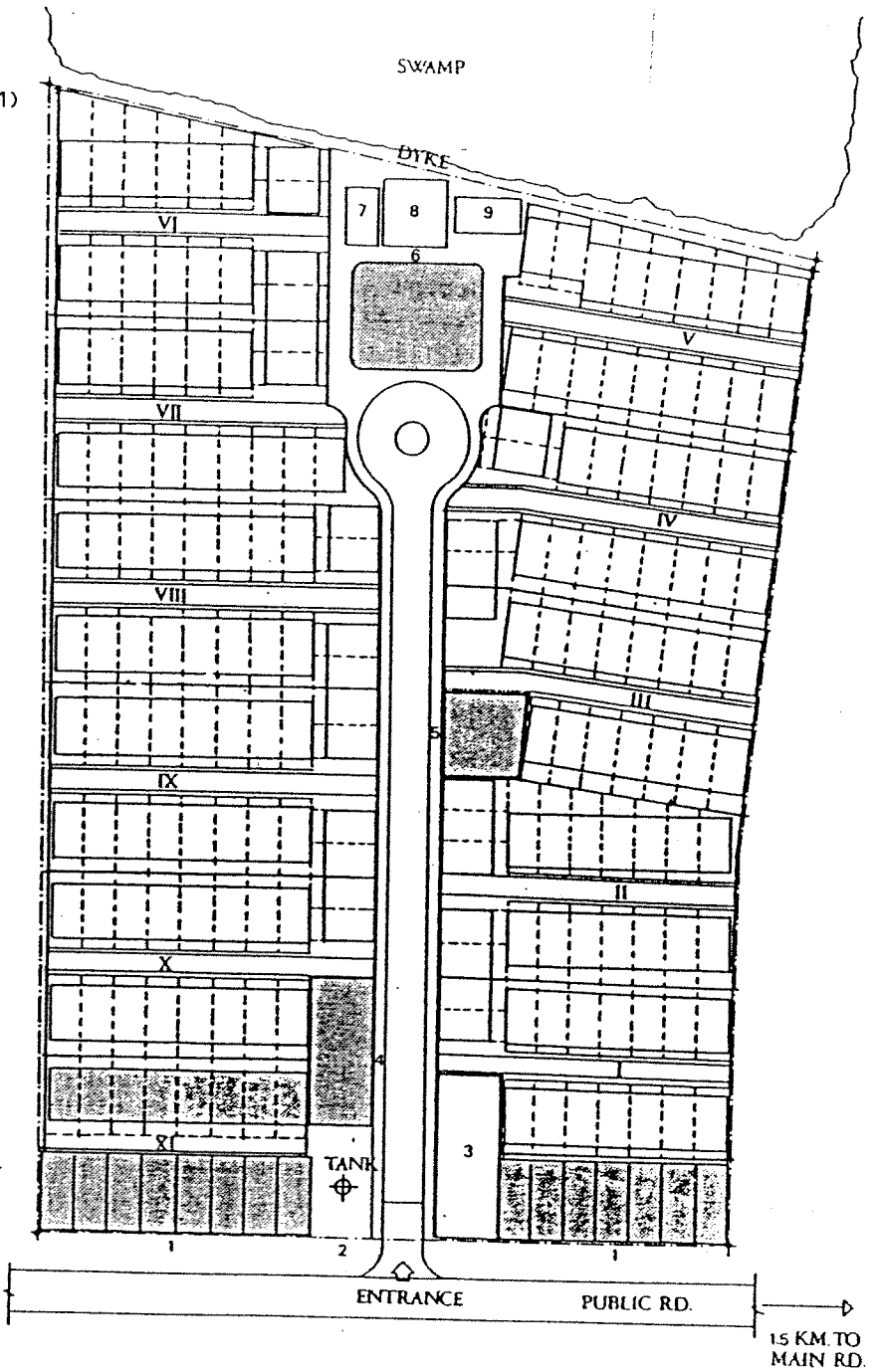
The Building Together project began in 1978 with the formation of the Building Together Company (BTC). It was this legal entity that purchased the 1.7 hectare plot of land in Bangkok on which the development took place over the following 4 years. The intention of the project was to provide low-income people with the opportunity for *home-ownership*. The organizers of the project hoped to accomplish this end by the active participation of the community in the financing and construction of their houses. The participation did not extend, though, to the purchase of the land, or the planning of the site. These matters had to be in place while the selection of applicants was being made.

7.3.1. The Site

The land was chosen on the basis of three key criteria:

1) Less than 1 km. from a major bus route
2) Inexpensive land price
3) Sufficient land area to house 60 to 600 families.

Figure 7.6
Building Together
Site Plan
(Source: Angel &
Phoativongsacharn, 1981)

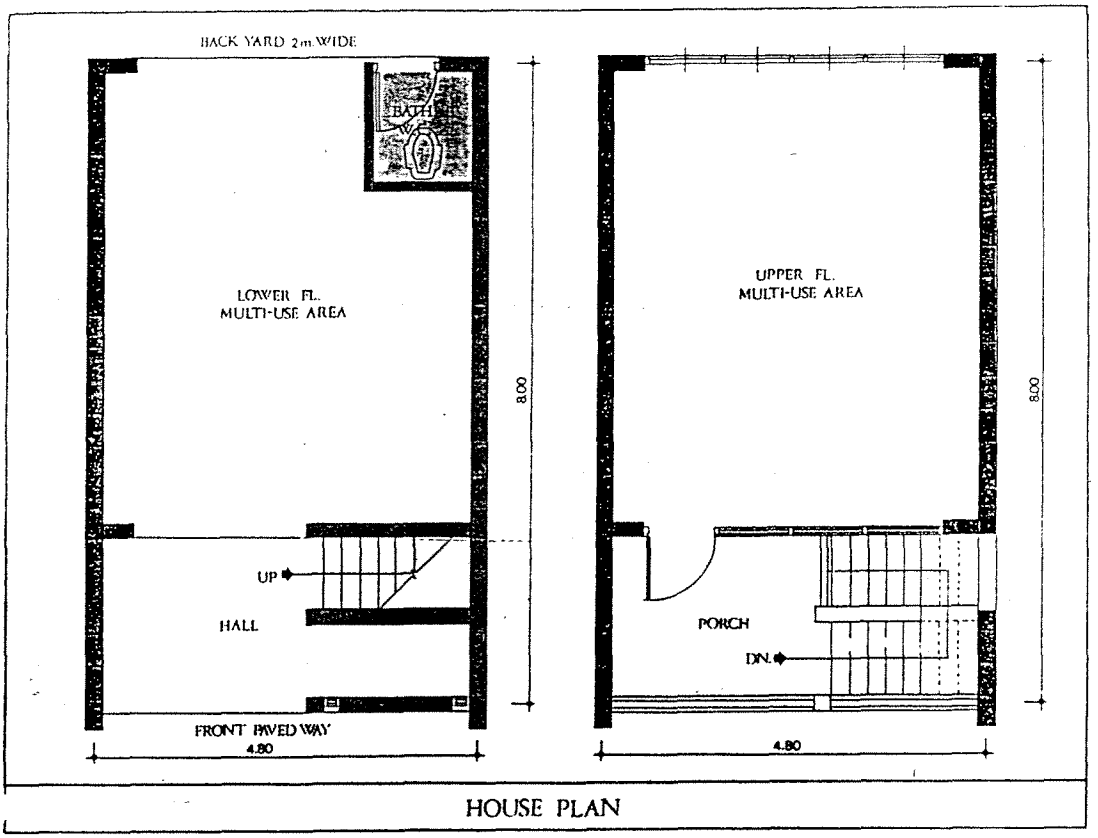


LEGEND:

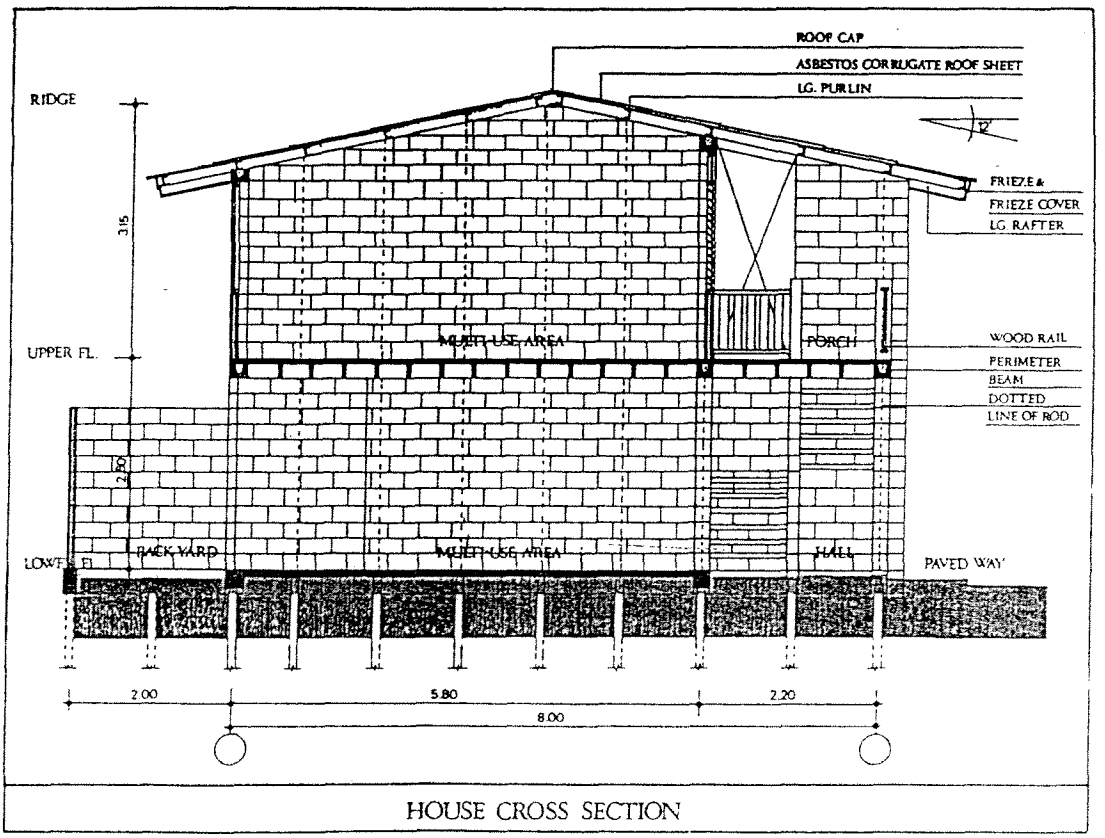
1 SHOPHOUSES
2 PLAZA
3 MARKET
4 FACTORY
5 WORKSHOP
6 PLAZA FOR PLAYGROUND
7 CHILD CARE
8 SALA (PAVILLION)
9 SUMP

CLUSTER LINE
LOT LINE
BUILDING LINE

Figure 7.7
House Plans
(Source: Angel &
Phoativongsacharn, 1981)



HOUSE PLAN



HOUSE CROSS SECTION

The site selected was 1.7 hectares. This was divided into 11 clusters of 15-20 plots. Each plot in the cluster was 4.8m by 12m which together occupied about 68% of the total site area. The clusters were arranged around a centre spine. All the community facilities - the community hall, market, factories, workshops and playground - were located along this centre road. Each cluster had a 3 metre wide walkway bisecting it. In total there were about 200 plots. The Netherlands government provided funding for the construction of the infrastructure. This was designed by the organizing team and carried out by outside contractors so that by the time the applicants were chosen for the first cluster, the plots were serviced and prepared.

7.3.2. The Process

The core group that organized the project was composed of Paul Chamniern of the Asian Institute of Technology, a social organizer; Narin Sakul Clanuwat of the National Housing Authority, a civil engineer; Shlomo Angel of the AIT, an architect; and Bruce Etherington of the AIT, an architect. Each had their own area of expertise and, depending of the stage of the process, would alternate as team leader.

Chamniern worked with the selected applicants from the outset. Because of the selection criteria of BCT, individual families were chosen instead of existing groups. This created the task of building a new community from the ground up. It required "a transformation of the participants from strangers to friends that can trust each other, work together, and enjoy living together." (Angel & Vorratnchaiphan, 1980:166).

Once the individual families were divided by lottery into cluster groups, each group went through a ten session training course that covered aspects of urban housing problems in Thailand, issues of community development, finances and credit unions, as well as the more basic issues of building techniques. Beyond the transfer of information, the course provided the cluster group and the organizers the first opportunity to build a commitment to the project and to one another.

Angel provided expertise in the design of the site and, with the technical expertise of Etherington and Narin, the design of the houses themselves. This work was substantially complete before the cluster groups were chosen. The two-storey row houses shared a common wall between each. At 4.8m in width, the unfinished shell could be partitioned into two 2.4m wide rooms by the new owners. The upper floor, with a verandah overlooking the walkway below, is used for living quarters and the lower floor with the kitchen and bathroom at the back, can be used as residential or commercial space. In the front and back of the house are 2m wide courts. The design of the house allows for flexibility both physically and economically.

Narin provided technical expertise in the infrastructure and structural components of the project. He was instrumental in developing the system for flood control, the water supply and the drainage for the site. On the houses themselves, he designed the foundation system for the structure and assisted Etherington in the development of the design for the interlocking concrete blocks.

Etherington acted as a project manager or 'master-builder'. Because on of the intentions of this pilot project was the participation of the users in the production of materials, a

system on which Etherington had been working for some years was put into practise here. The interlocking concrete blocks were produced on site with a block-making machine. The thin concrete floor joists for the upper floor were fabricated on site as well. All the components are light enough that the use of cranes was eliminated.

Prior to construction on the site, Etherington built two demonstration houses on the campus of the AIT (see Figure 7.8). These were used to test different building materials and techniques, to analyze costs and manpower requirements and to allow the first cluster group to evaluate and understand the design and construction of the house before they went on the site and started building.

When they began the education process prior to construction, the four organizers made the point to the first group that they were acting as technical advisors only. They wanted to make it clear that the project belonged to the community, not to the community's professional advisors. Despite that, the community initially invested too much authority in the team. (UNCHS, 1986:11) At community meetings, if some decision was required, the group would often wait for the team to make that decision rather than recognize it as a community decision. The group would still not believe that the project was, in fact, theirs. Developing that fundamental sense of responsibility for their own future was a gradual process. Angel pointed out that,

> ". . . the people cannot be rushed to take decisions and to assume strange responsibilities for which they have no experience. Leadership must be allowed to develop naturally and gradually . . . Assistance must be tailored to the people's willingness to help themselves and not bestowed as a form of patronage in exchange for their loyalty or the creation of dependence. The aim must be self-reliance."(Angel and Vorratnchaiphan, 1980:174-6)

Figure 7.8
AIT Demonstration House
(Photo: Bristol)

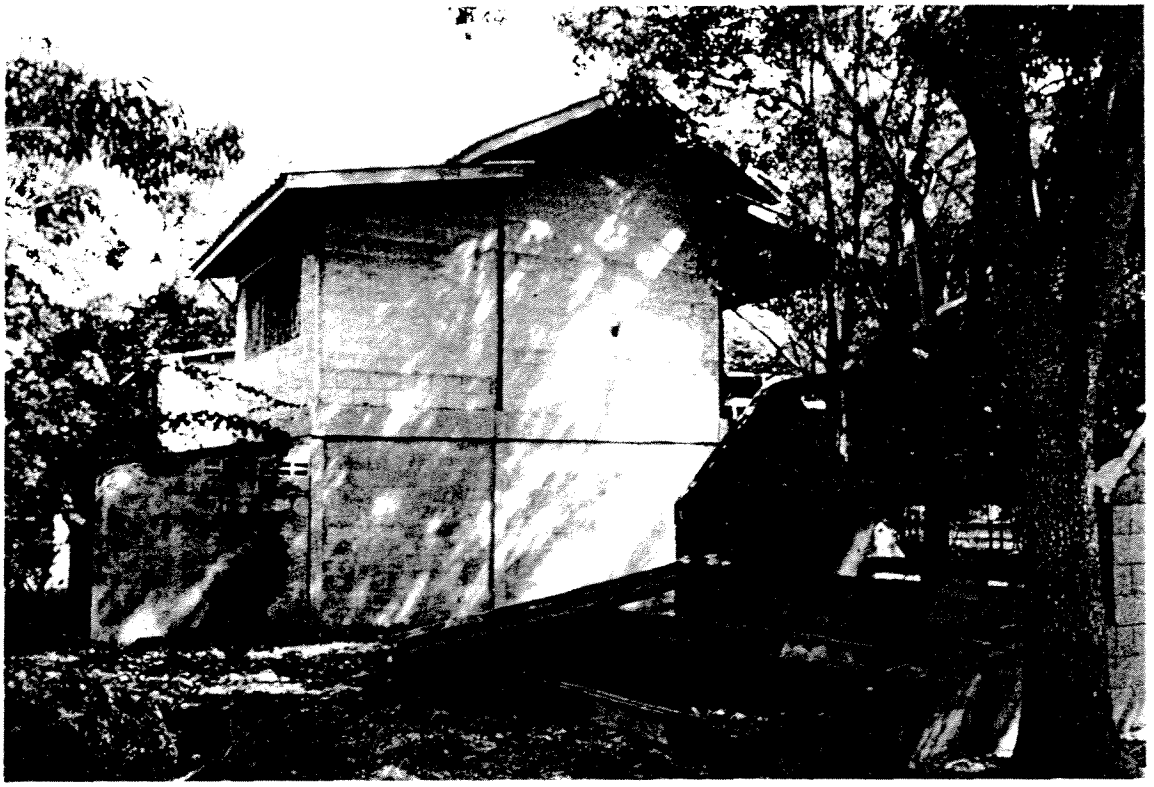


Figure 7.9
Commercial Spine
Building Together
(Photo: Bristol)

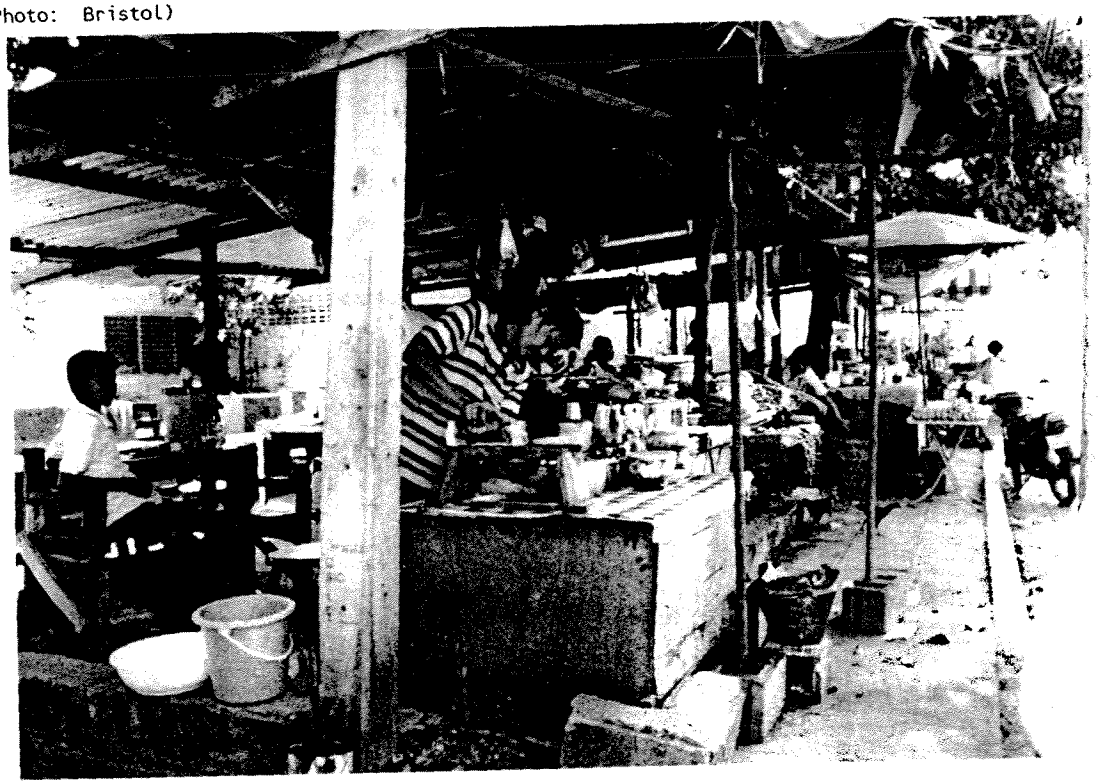


Figure 7.10
Building Together Mural
(Photo: Bristol)

The process of political involvement as well as the construction process itself took a great deal of effort both from the cluster group and the team itself. Supervision of the work meant the at least one of the team had to be there at any point during the construction. Over the ten month period that it took to complete the first cluster, the community worked on weekdays from 6pm to 10pm, on Saturday from 1pm to 7pm and all day Sunday. Each family was required to commit 1,500 hours to the mutual construction of the houses. This necessitated a similar kind of commitment of time from the team. Although the man-hours required to complete the cluster was within 6% of the original estimate, no one anticipated that those hours would be spread over ten months. This required, not only a readjustment to the financial strategy and the construction process, but it also required, on the part of the team, the maintenance of morale and motivation in order to keep the project going despite the extended duration. A significant and symbolic part of that morale was the design and execution of the Building Together Mural that depicted the community building process. This mural is a permanent reminder of both the process and the bonds of the community.

7.4. CONCLUSION

The central role of the NGOs in the process of housing is in shifting the perceptions of development away from 'provision' to 'enabling' communities to develop themselves. There has been a growing recognition in development circles that governments are increasingly unable to deal with the complex of problems associated with human settlements development. Governments have been attracted to the concept of 'enabling' strategies as a means of reducing this complex

of problems. These strategies, however, are acts of decentralization of power that, in the end, are political acts. NGOs, whether they are explicitly or implicitly political, are central to that movement towards decentralization and, to use another overused word, 'empowerment'. Where government concepts of 'provision' operate, by definition, from the top down, NGOs, by their organizational structure, operate from the bottom up. They are pivotal, then, in connecting government programs to the needs of people. Arcot Ramachandran, the Director of UNCHS, reflected on this,

> "NGOs have a crucial role to play in bringing together these two partners, to match the incentives offered by the public sector with the resources available within the formal and informal private sectors and the community at large. (Ramachandran, 1990:6)

Architects, as part of the formal sector with vested interests in the concept of 'provision' have, in their relationship with NGOs, developed an enabling partnership with communities.

Both of these examples of NGOs are unusual but both share some similarities. Unlike many of the more traditional NGOs, they both have some involvement with government organizations. Great Earth, in the case of planning for coastal towns, used some of its project funding for the implementation of government policy. Building Together seconded an engineer for its team from the NHA and sought formal funding from them as well. In both instances, though, their relationship with government organizations is of far less consequence than is their relationship to communities in need of assistance.

The other element that they share is the involvement of educational institutions in their projects. Because of

severe funding limits placed on NGOs, this relationship is important in order to be able to execute these programs. In addition, as the examples from the field of education indicated, it provided an opportunity for the students and faculty to implement an "action-research model of field investigations" (Laquian, 1991:2)

Finally, the involvement of professionals in this process provides an opportunity to overcome the obstacles between the formal and informal sectors. It depends, though, on the approach taken. The Great Earth Foundation tended, in general, to be more traditional in its approach to site specific projects. Laquian suggested that,

> "The role of the professional in human settlements work is not to deliver services but to act as a catalyst, a motivator and facilitator to enable people to set up and achieve their own goals." (Laquian, 1991:2)

The Building Together team attempted to act as catalysts for the empowerment of communities. As such, whether overtly or covertly, they were involved in the political process of empowerment.

PART III
A CHANGING ROLE

> "What architects produce is no longer only how they will be recognized; it is also what architects do that will enable us to adopt approaches and styles of working which can be integrated more closely with the urgent social needs of our time . . ." (Lewis, 1987:31)

Like other countries, Canadian government bodies play a pivotal role in the distribution and supply housing. The policy environment in which Canadian architects work is, then, central to the work they do and to their opportunity to meet their responsibilities to housing and community. In part, because of this policy environment, and in part because of the regulations that govern the practice of architecture in Canada, the opportunity to meet these responsibilities in an organized, but less traditional way, is reduced. There are, though, possibilities for action. If, however, architects, planners and policy makers in the West continue to consider that the problems of housing in urban centres of the Third World have little to teach them, these possibilities will be limited.

The work that has been done by communities, planners, architects and other professionals to address basic needs in Canada can be examined in the context of the work described above. By looking at the way they work with government bodies, with existing policy, with educational institutions, and with community based organizations and NGOs, it is possible to extrapolate some recommendations that can provide these professionals with options for action.

CHAPTER 8
THE CANADIAN EXPERIENCE

> "The ultimate objective of the national housing programme should be the provision of a decent dwelling for every Canadian family. From this it follows that the crucial and ultimate test of the effectiveness of housing policy is the condition of the worst housed families in our communities. The task will not be completed until obsolete housing has been removed and every Canadian family has been given the opportunity to enjoy healthy and satisfying living conditions. It is a task which undoubtedly requires all the technical ingenuity and administrative skill which the Canadian people possess. (Carver, 1948:123)

Canada does not differ markedly, in terms of the players in housing delivery, from the countries, situations, and examples that have been described before. The involvement of government in housing, whether through implicit or explicit policies, is central to the access to housing for its citizens. Educational institutions, NGOs (or Community Based Organizations - CBOs) and design professionals are all involved, at varying levels, in this process. For architects, in the provision of that technical ingenuity that Carver found critical to the development of housing, it is critical to their ability to meaningfully address the issues of housing to be able to understand the policy environment in which they are working. Housing policy has implications on the way in which these organizations and individuals are able to use their expertise.

8.1. THE HOUSING ENVIRONMENT

Like the population of other industrialized countries, Canadians believe their housing needs are well-served by both the market and the government. This is largely true. According to the 1986 census, about 56% of Canadian households were living in single detached dwellings. The number of households has increased dramatically since 1941 - from 2.6 million to 9.3 million while the number of people per household has decreased from 4.5 persons to 2.7 persons. (Hulchanski, 1988:3-6) In the thirty years between 1950 and 1981, the number of single person households increased from 8% to 20%. In Vancouver that figure is 40%. (Hulchanski, 1989:3) This has a dramatic effect on house form, availability and affordability.

Housing quality has increased over that period as well. Access to facilities, infrastructure and equipment have improved tremendously. Government involvement in the formulation and enforcement of building codes, in the evaluation of materials, in the fostering of community planning and in housing research has helped to raise the standards of living conditions for most Canadians. (CMHC, 1988:4-8)

For all the apparent intervention, though, there are areas of the population that government has addressed inadequately or not at all. For low income households, despite the policy initiatives to target their funding, the situation has grown worse. In the lowest income quintile, the percentage of homeowners has dropped from 62% in 1967 to 38% in 1987 (Hulchanski, 1988:7) More low income households and fewer upper income households are becoming renters. Seventy-six percent of renters making under $10,000 per year are paying more than the recommended 30% of their income.

In some areas this will amount to more than 50% of household income. (Green, 1988:12) From 1984 statistics it was determined that about 27% of British Columbia's 1.1 million households had incomes under $15,000. Such an income would not allow these families access to adequate housing. If they could find adequate housing it would be beyond their means. (Kamenz and Hulchanski, 1987:1) In Vancouver in 1990 the income required to carry mortgage on an average was $59,853 (CMHC, 1990:5). By June of 1991 that figure had dropped to $55,050 as a result of lowered mortgage interest rates and reduction in house prices (Canadian Press, 1991) For the nearly 15% of the Canadian population living below the poverty line, or the nearly two million Canadians that will require emergency food assistance (Valpy, 1991)[1], such statistics are of little help.

With such figures, there has been a broad recognition that, unless there is some action to alleviate the growing disparity in the availability and affordability of housing, the situation would get worse. The initial question, as Hulchanski described it, was one of definition. What was the problem that created these symptoms? In one way of thinking, the problem is,

> "that the housing system is not functioning adequately . . . and in many major metropolitan areas, especially Toronto and Vancouver, market failure has occurred in the private rental sector. (Lang-Runtz, 1990:103)

The other approach to identifying the housing problem is,

> "that Canada's housing problems are temporary aberrations owing to macro-economic conditions and

1. About 700,000 of these people in the food bank lineups were children in 1991. This figure was up by 40% from 1990. In 1989, children "under the age of 17 made up 40 percent of the total number of people who received food from public agencies or charitable organizations" (Underwood, 1990:63)

> government-created market imperfections . . . any problems that may exist from time to time are temporary and not inherent to the structure of the housing institutions themselves. . . . Canada has an income rather than a housing problem. (Lang-Runtz, 1990:103)

Hulchanski suggests that Canada's record on income redistribution is worse than its record on housing. We do not talk about education or health care as an income problem, yet we have persisted in the myth that for housing, it is a problem of 'effective demand'. The way we choose to define the problem will affect the way we approach the formulation of policy.

8.2 THE ROLE OF GOVERNMENT IN HOUSING

The focus of government involvement in housing has been in financing and regulating housing that is produced by the private sector. This occurs at three levels of government: local (municipal or regional), provincial and federal. Legislation and bylaws at each level can, and often do, conflict. This can result, as indicated in Chapter Five, in a wide variety of obstacles to the development of affordable housing.

8.2.1. Federal Government

At the federal level, housing policy is, largely, economic policy. The fact that it has some relationship to social policy is incidental. Following on Marcuse's argument of the myth of the benevolent state (see 5.1), the initial involvement of the government came with code enforcement "following the outbreak of cholera in 1832" (Sayegh, 1987:77). The 1918 Royal Commission on Industrial Relations expressed concern about postwar unrest and tied that "to the

scarcity and poor quality of houses." (Sayegh, 1987:77) Both of these interventions in housing along with the 1930s debate linking housing to employment[2], indicate that the motivating force behind government involvement in housing was largely,

> "a continuation of the use of state power to prevent any disturbance - physical, social, or political - of the private conduct of economic affairs. (Marcuse, 1986:252)

The first formal involvement of the federal government in housing began as a result of the explosion of a munitions ship in Halifax harbour in December 1917 which destroyed much of the housing adjacent to the harbour. More than 1600 people died. The government's response came under the War Measures Act since the disaster was linked to the consequences of war. A $30 million pension fund was set up for the survivors and their families. Money from this pension fund was invested in housing. The huge Hydrostone Project was completed in 1920 with the generous cooperation of all levels of government - waiving all taxation - and of contractors who gave materials at cost in order for this project of 326 buildings on 24 acres of land to be built.

Unfortunately, because the project was tied to pension funds,

> "the profit margin from all this cheap housing went not to reduce rents but to enhance the capital in the pension fund. As a result, by 1923 about half the units in this project were vacant because people couldn't afford to live in them. The [Halifax Explosion Relief Commission] continued this policy until about 1948 when it got fed up and decided to sell the housing. (CMHC, 1987b:4)

2. It also reinforces Burns and Fergusons's observation that implicit shelter policies, concerning taxation, job creation and so on may have "even greater impacts on shelter and settlement than those intended by explicitly policies." (Burns and Ferguson, 1987:283)

It might be suggested that this inauspicious beginning was a harbinger for the future involvement of the government in housing. Marcuse suggested that, in the U. S., the term 'housing policy' itself is built on the myth that government actions in housing are coherent and rational and that there is a path of progression in housing towards increasing sophistication and social amelioration. (Marcuse, 1986:249). This is demonstrably not the case. Even CMHC would apparently tend to agree:

> "Some may think that policy is created in a rational environment. That is not always true. It often happens in crisis; it sometimes happens in the back of taxi cabs; it can happen for the wrong reasons. (CMHC, 1987b:5)

In 1935, in the face of a continuing decline in housing construction, in real estate prices (which made mortgage lenders nervous), and a heavy increase in unemployment and in municipal taxes (since it was the municipality that faced the burden of the welfare rolls), the House of Commons set up a special Parliamentary committee to consider a national housing policy. The ulterior motive this time was not a war measure but job creation. In both cases, it had an excuse to remove itself from the responsibility - in 1918, the end of the war or in 1935, a drop in unemployment figures (see CMHC, 1987b:10). The Deputy Minister of Finance, W. C. Clark, drafted what would become the Dominion Housing Act of 1935. From Clark's viewpoint,

> "a housing policy should concentrate essentially on the immediate emergency problem of using housing as a stimulant to business recovery and, in his terms, 'as an absorber of unemployment'. . . . He emphasized that government should not commit itself to long term expenditures in this field, since this 'would have a negative effect on the housing market'." (CMHC, 1987b:11)

Like subsequent housing policy, the focus of the 1935 Act placed the federal government in the position of financial backer to private housing initiative. They offered to advance to approved lending institutions 20% of the construction cost of a house at a 3% interest rate (2% below the prevailing rate). Mortgage lenders were not that well disposed to lend the other required 60% on depreciating property. The 20% down payment that was required by the prospective homeowner was also too much for low income groups (of which there were many during the depression) Some 3100 loans were made, though, in the 38 month life of the Act which, in 1938, was replaced by the National Housing Act. This Act, in three parts, dealt with loans to homeowners of small income, and to local housing authorities to assist in the construction of rental housing for low income families. The third part concerned tax compensation to municipalities so that property taxes could be lowered. This became an administrative problem between municipal and provincial jurisdiction and enabling legislation. These administrative issues have yet to be resolved.

The level of intervention of the government in housing, at this point, was essentially followed by subsequent Acts and by its main instrument of administration, the Canada Mortgage and Housing Corporation which was formed at the end of the Second World War with the CMHC Act of December 1945. That is,

> "The federal government confined itself to the kind of stimulation that avoided the conflict with the private development and construction industry. (CMHC, 1987b:14)

In 1941 the Advisory Committee on Post-War Reconstruction was formed with its subcommittee on Housing and Community Planning formed the following year. The report that the subcommittee published in 1944, under the hand of W.A. Curtis and Leonard Marsh, put housing policy in a social

context for the first time. They recommended "that the formation, institution and pursuit of a policy of adequate housing should be accepted as a social responsibility." (Sayegh, 1987:127) Among their other conclusions were the need for 606,000 new urban units and the substantial improvement to an additional 355,000 existing dwellings. (CMHC, 1987b:17) In itself, these startling figures began to suggest to the policy makers that further action in housing was needed. The National Housing Act of 1944 was drafted did not show the same conviction of the people who prepared the report on which the legislation was meant to be based.

> "The Act was not designed to ensure shelter for Canadians as a right in and of itself, but to promote the construction of new houses, and the improvement of housing and living conditions and the expansion of employment in the post-war period. (CMHC, 1987b:18)

This sense of apprehension about the relationship between housing and social justice has continued.

> "Canadian housing policy has focused almost exclusively on the supply of housing units in the private sector. Rather than a housing policy as such, there have been a series of housing programs designed to stimulate private residential construction as an instrument of macro-economic policy. There has been little concern over distribution issues." (Hulchanski, 1988:16)[3]

These programs are administered by the CMHC, which, since its inception in 1946, has been philosophically stable in

3. Rose makes a similar point that "none of the various governments in Canada [federal, provincial or municipal] ever really came forward with a clear statement of their goals and courses of action . . . There was no clear statement of what might be termed 'federal housing policy', but a series of statements and pronouncements each year with respect to the overall housing situation and, in particular, with respect to the total number of dwelling units likely to be constructed, under construction, and completed during that year." (Rose, 1980:32-3)

its approach to housing. The focus has been on production as opposed to distribution and, therefore, has attended to the needs of the private market.

> "In 1986 CMHC stated that its objectives were: 'to assist in developing a climate of stability for the private market so that it can function effectively . . ." (Hulchanski, 1988:17)

CMHC had great faith, as did the politicians, in the private sector and in the 'filtering' process. If production goals were met, it was expected that the market would take care of low-income households and the problems of location, price, tenure and so on by filtering down. In this process, those who are well enough off to buy new houses create demand for new construction. They leave their older homes behind and these 'second-rank' homes become available for lower income households. This process continues until the least desirable units become available. Filtering, however, has not worked for a variety of reasons. Because housing is a necessity, rapid declines in value are not as apparent as they might be in the consumer market. However, even if it did filter in the way market theory predicts, it would leave the low- income households with the greatest burden of maintenance costs. (see Sayegh, 1987:339)

Within this philosophical framework, though, by the late 1960s, Canadian housing policy had met with success in the financing of housing and in house building. It "helped shape the mortgage lending system, helped develop the house building industry and played a significant role in the municipal land servicing process." (Hulchanski, 1988:18)

The Hellyer Task Force on Housing and Urban Development in 1968, laid the groundwork for a change of focus in housing programs. The report proclaimed: "Every Canadian should be entitled to clean, warm shelter as a matter of basic human

right." (Lithwick, 1985:42) Its recommendations covered four broad issues:

> "to facilitate and expand home ownership; to reduce the cost of housing; to de-emphasize the nature and role of public housing; to suggest the most appropriate forms of urban development during the last quarter of the twentieth century. (Rose, 1980:46)

Although there was significant opposition to the recommendations resulting in Hellyer's resignation from the cabinet, the report "developed the parameters of what become federal housing policy in the first half of the 1970s." (Rose, 1980:48) This report, along with subsequent critical research by Lithwick[4] and by Dennis and Fish[5] and the fact that the 1972 election returned the Liberals with a minority dependent on the NDP for support, created an atmosphere in which amendments to the NHA could be made that would have a more direct effect on housing supply and distribution. There were ten new programs:

1) Assisted Home Ownership (AHOP)
2) Non-Profit Housing Assistance
3) Co-operative Housing Assistance
4) Neighbourhood Improvement Program (NIP)
5) Residential Rehabilitation Assistance Program (RRAP)
6) Land Assembly Assistance
7) New Communities Program

4. In his report, Urban Canada: Problems and Prospects. (Ottawa: CMHC, 1970.) he painted a grim picture of housing need (an estimated 2.65 million units required between 1971 and 2001).

5. Their report, Programs in Search of a Policy: Low Income Housing in Canada, (Toronto: Hakkert, 1972) was quite critical of the political neglect of the poor in the formulation of housing programs. These programs were directed, they argued, to the development and financial sectors, to the detriment of those in need.

8) Developmental Program
9) Housing for Indians on Reserves
10) Purchaser Protection

Both the NIP and the RRAP programs were responses to the old urban renewal schemes. The Co-operative program, although it had existed before, was now made accessible to low-income families through amendments that encouraged individuals and groups to organize themselves into eligible co-ops to build new or to rehabilitate existing buildings. These programs demanded the cooperation of both levels of government in a way that had previously not been necessary. This cooperation, in part, led to rapid growth in non-market housing such as non-profit housing corporations and cooperatives. Between 1974 and 1975 the number of completed co-op units increased tenfold (76 to 785) (see Schmid, 1983:9) Cooperatives, in addition to involving no equity investment (rather a membership share), involved the members of the housing co-op directly in the management of their housing.

The shift away from public housing and the direct involvement of the government in its supply was accelerated by the co-op sector. As Schmid put it: "the co-operative sector does not market houses; it markets a philosophy." (Schmid, 1983:10) Part of that philosophy involved security of tenure without dependence on the market. By being outside the market housing has the possibility of being affordable. The drawback is that those co-ops trying to get housing have to compete in the marketplace for land and funding. As a result, co-ops and other non-market housing organizations have been moving more towards the Turnkey approach to development. With this system, a developer approaches the organization with land and development team in place. The non-profit organization is used, then, as a

vehicle for development. This condition applies today in the programs administered jointly by CMHC and the provinces.

8.2.2. Provincial Government

Under the British North America (BNA) Act of 1867 the Dominion of Canada was created. This Act divided the powers of the levels of government. The provincial governments were given exclusive authority over "municipal institutions, property and civil rights, as well as all local and private matters." (Sayegh, 1987:167) With these powers, little can be implemented in housing programs without the cooperation of the provinces.[6] Federal legislation,

> "must afford an opportunity for the governments of the provinces, if they have the constitutional responsibility, to participate actively in the implementation of the particular course of action planned by the central government." (Rose, 1980:17)

In British Columbia, the B.C. Housing management Commission was the body created in 1967 to administer those programs. Currently non-profit housing is administered by BCHMC and is funded by both the federal and the provincial government.

According to BCHMC, the provincial role in housing is:

- To assist people in need to secure affordable housing
- Encourage ownership
- Increase supply of housing
- Administer related government programs (SAFER)

(City of Vancouver, 1989:5)

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6. With the first federal foray into housing in 1919 Alberta and Saskatchewan did not pass the enabling legislation to allow municipalities to take advantage of the low-interest loans for housing. (Sayegh, 1987:78)

There are two basic approaches the province takes towards housing: supply and demand[7].

.1) Demand - These programs are generally income-oriented programs that are designed to affect the affordability of housing by increasing the household income. This is done through shelter allowances such as the GAIN or SAFER programs administered by the Ministry of Social Service. In addition, there is a rent reducing program administered by BCHMC.

.2) Supply - The production-oriented programs increase the stock of housing. At the provincial level the non-profit rental housing program is administered by BCHMC and funded by both the federal and provincial governments. This program involves an annual proposal call in which sponsor teams usually composed of a non-profit housing group, an architect and a developer or general contractor prepares a submission for presentation to BCHMC. The Commission chooses appropriate projects from those submitted based on several criteria: location, size, design, amenities and cost. The total number of units receiving funding in 1991 were 1280. The sponsors (the non-profit group) manage the property once construction is complete. The subsidy provided by BCHMC is applied for by the individual tenant but made directly to the sponsor to cover the deficit between the break-even cost of operating the project and the tenant rent based on 35% of income.

The difficulty in developing housing under this program is that, while most of the unit allocations are given to the Lower Mainland (Vancouver and surrounding municipalities) the land available for development is scarce and there is

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7. See Headey (in 5.1) on supply and equity objectives in housing policy.

great competition for it. With escalating costs for land, it is nearly impossible to stay within the limits of the Maximum Unit Price (MUP) that the federal and provincial governments allow for subsidized housing.

As a result, both the federal and the provincial governments look to the municipalities themselves for solutions since they have control over zoning and development approval.[8]

8.2.3. Local Government

The terms of the BNA Act gave the provinces power over municipalities. In turn, two Acts delegate municipal powers: the Municipal Act gave municipalities the means by which their power is exercised; the Planning Act gave them ability set up the procedure and content of the bylaws related to land use such as zoning, subdivision and building bylaws.

While the funding base at the local level was, and remains, relatively weak (confined essentially to property taxes[9]), local governments have the ability to affect development directly through zoning bylaws governing the use of land, through the regulation of the pace and nature of development and through the development of standards of maintenance and occupancy. (Rose, 1980:4) Building codes, one of the central instruments of housing policy in setting the

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8. Ian Lehman of BCHMC suggested that municipalities "must assume the leadership in solving housing problems and, while Federal/Provincial funding is important, the municipalities decide where and when . . ." (City of Vancouver, 1989:5)

9. Residential land is the major category of in that tax base. As a result, the municipal tax base is a major factor in housing. (Hulchanski, 1990:8)

standards by which people build, are enforced at this level.[10]

With these powers, local government is the jurisdictional 'front line' particularly considering the predominance of the population in urban centres. In 1981 over half of Canada lived in cities of over 100,000 population. At present more than 75% of the population lives in urban areas. It is at this level of government that the community has the most direct effect on the development of policy. It is also at this level that the private sector is most influential. While the municipality has a primarily negative role, in that it can more easily inhibit than initiate development, the private market, stimulated by provincial and federal policy as well as market forces, will define the nature of investment in housing in the community. Politicians at this level of government,

> "characteristically support the concept of unfettered growth, economic development, and renewal and expansion of the city . . . the role of the municipality is generally one of facilitating and promoting unbridled private sector investment in housing. (Hulchanski, 1990:11)

These conflicting pressures on municipal government - the participation of the community (in direct democracy) and the influence of the private sector (as a source of tax revenue) - created a climate, particularly in the larger cities, that tended to become more divisive and balkanized. Neighbourhood organizations sprang up to fight any development or change. Public hearings on new development became battlegrounds between developers and citizens. Neighbourhood organizations saw change occurring at a far

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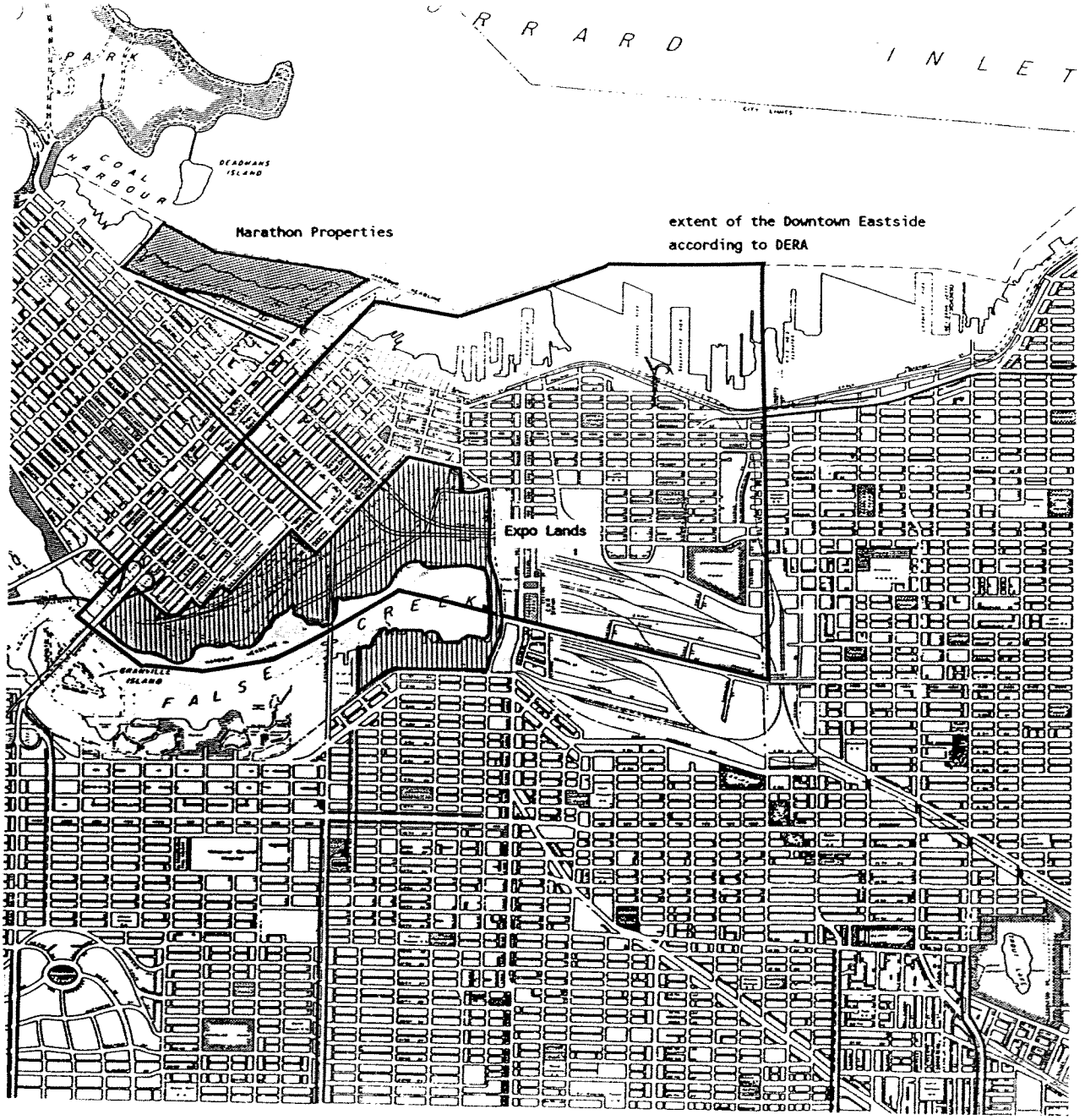
10. It has been noted that "Nothing it seems is too inconsequential for city hall to regulate." (Stanbury and Todd, 1990:4)

more rapid rate than expected or than they felt could be controlled. They felt that the planning department of the city was acting on an agenda about which they were neither consulting or even informing the community. Participation came to be seen by the community as being allowed to observe other people - developers and city council - make decisions.

With large scale development occurring in False Creek South, Toronto Harbourfront, and later on the old Expo lands in Vancouver (see Figure 8.1) and the Marathon properties in both Toronto and Vancouver, the inner city was changing rapidly. This change brought with it further problems in the level of participation by the public in the development planning of these sites. Complaints about the process of planning the 'Expo' lands in Vancouver, for example, were vociferous. DERA, representing the neighbourhood abutting these lands was left, it felt, on the sidelines in a planning process that would dramatically affect their neighbourhood. In August of 1988 they were only one of some 40 delegations given 5 minutes before council to make their arguments for or against the concept. Jim Green, their spokesperson, was critical of this kind of 'public input' and said, "it's insulting to be told we have five minutes to have input into this project." (Hunter, 1988) Subsequently DERA sought funding from the city so that it could hire a planner to act as its advocate in the ongoing planning process. This funding was turned down by the city with the rationale that DERA already had a planner acting on its behalf - the planners working for the city. DERA, with some justification, claimed that the city's planners were in meetings on a daily basis with the developers - meetings behind closed doors - and that the neighbourhood input into those deliberations was limited to a five minute response to

Figure 8.1
Downtown Vancouver
Development Pressures



the conclusions that the developer and the city planners had reached already.[11]

With suspicions raised in the public's mind about the nature of their participation in the development of the city, other major developments - any major development - and any major zoning changes proposed by the planning department would be met regularly with hostility. This hostility included not only community organizations. The 'Coal Harbour' project in the heart of Vancouver, overlooking the Burrard Inlet and the mountains to the north, received similar complaints about process from development and investment firms owning the neighbouring properties. One of them, Geoffrey Lau of Golden Properties Ltd., went to Supreme Court to have the results of a public hearing overturned because as his lawyer put it, "it is a process flawed by rushed planning, late changes to important documents, and a denial to adjourn the public hearing to allow neighbors more time to examine the project." (Lee, 1990) Unlike DERA, Golden Properties was able to hire "a barrage of architects and consultants" and spent up to $200,000 on traffic and view studies in order to assess and rebut the information arrived at by the city planner and the developer.

In addition to the issue of participation in the process, these developments also brought with them rising land costs and growing unaffordability. These rising land costs precipitated the conversion of existing rental accommodation to condominium development[12] and the demolition of existing rental units to make way for new development.

11. The development of the railway lands at Toronto's harbourfront had a similar story of flawed public process. See Waxman, 1991.

12. This was particularly the case in the Kerrisdale district of Vancouver where aging rental units were bought and redeveloped as condominium units. In Downtown South

The crunch on rental accommodation increased as it ceased to be economically viable to build it and as existing stock was demolished to make way for new development[13]. With 58% of Vancouver's households being renters (Stanbury and Todd, 1990:6), illegal suites proliferated in the basements of many homes in the single-family (RS1) zone. People buying into this market needed additional income to afford the payments on the house and the demand for more affordable housing was there. It was estimated in 1976 that there were possibly 6,000 illegal suites in Vancouver. By 1986, when the city began its attempt to enforce the RS1 bylaw, there were as many as 26,000. As Michael Geller put it:

> "Vancouver is the only city in Canada where private homeowners have created 26,000 bootleg units of low-income rental housing - more than double all government programs - 'and become criminals doing it!'" (Lang-Runtz, 1990:221)

With an increasing shortage of affordable rental housing, the City Council moved in 1986 to enforce the regulations[14] over which it had direct power - zoning and building bylaws. The results were far from satisfactory. (see Stanbury and Todd, 1990:55-98)

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where redevelopment is underway, there is anticipated loss of existing Single-room Occupancy (SRO) hotels to new development. The gentrification of the central area of the Vancouver has resulted in the net loss of about 3,000 units over the ten year period between 1978 and 1988. (Hulchanski, 1989:7)

13. "In 1986, only 88 market rental units were completed. In 1987, the figure was 398. At the same time, in 1986, 264 rental units were converted to condominiums." (Murphy, et al, 1988:30)

14. Technically the city's failure to enforce the bylaw was a violation of their own City Charter S.565A(e). Vancouver's enabling legislation from the province is separate from but similar to the Municipal Act.

The increased pressure for rental housing created an effort by the City of Vancouver to ameliorate the condition. The Vancouver Land Corporation (VLC) was formed to create a minimum of 1200 new, affordable, and secure rental housing units in 1990 and an additional 1200 to 2000 per year thereafter. The housing developed by VLC is to be built on City land offered to VLC on a long term lease arrangement. In turn, VLC is obliged to maintain the units as rental accommodation for the term of the lease and limit the rent increases to the Consumer Price Index (CPI). The financial arrangements and the relationship between city and VLC are novel. The delivery process for this housing is quite traditional in terms of the relationship between participants in the development.

In addition to this program of supply, though, the city has taken some regulatory steps to improve the housing capacity through zoning amendments. In commercial districts, for example, disincentives have be removed for residential space above shops at grade thus allowing effective access to land for residential use. It was expected form the city reports that an additional 5,500 units could be allowed as a result of this change. Similar changes were made to industrial zoning regulations to improve capacity. These actions remove obstacles to development while still depending on the market to provide the units. An additional zoning regulation attempted to direct the market on major redevelopment sites by establishing a policy that on these sites - the 'Expo' lands, the Marathon lands and so on - there must be a minimum of 20% of the units made available to 'core-needy'. (see Hulchanski,1990:41-46)

8.3. EDUCATION

Some of the initiatives that were described in Chapter 6 have been in place in a somewhat different form in schools in Canada. Although they have not typically been involved in development issues (with the exception of some graduate level work), they have been involved in work or in explorations at the community level.

8.3.1. UBC Workshop and Studies Abroad

.1) Workshop - In 1968, the University of British Columbia, School of Architecture, conducted an experimental preliminary workshop course for students entering their first year of architecture school. For three weeks just prior to the start of the fall term, 55 students, along with six staff members, began this experiment formulated by the Director of the School, Henry Elder.

The experiment began with the students and faculty being dropped off on the deserted Defense Island, a few miles off the coast from Britannia Beach. By noon all of the participants had been dropped off by the boat which then left them there with whatever they wore and carried in their pockets. It was then that they were told that the boat would not be back for 48 hours.

Left without food or shelter, the students were provided with not only a fundamental understanding of the meaning of shelter and its relationship to the environment, but also an understanding of the relationship between food and social coherence. While the experiment was couched in terms of the fundamentals of architecture, it could have been just as easily focussed on the concept of basic needs and the relationship that architecture has with it.

> "In just forty-eight hours the props of a quarter century of customary daily activity had been knocked flat. They were ready for a new beginning. (Brauner, 1969:452)

Their next beginning was from 6500 feet up the Garibaldi glacier. The students were dropped off by helicopter with the faculty - one of whom, fortunately, was a seasoned climber. Breaking up into teams, the first task was to build shelter. This would be home for the next 36 hours. This time, at least, they were left with food.

Upon their they return to the base camp, they headed for Port Alberni, a MacMillan Bloedel company town. After dealing with the concept of shelter as a primitive relationship between available materials and the inventive use of energy, the group spent its first night in a motel room in a town that Brauner described as enjoying,

> "polluted streams, hepatitis, noxious air, odours, that would stun a horse, soot, fumes, loud traffic, periodic layoffs, alcoholism and treeless hills as side benefits of having but one major employer." (Brauner, 1969:459)

For the next three days, the students were plunged into the modern industrial state. Here, the relationship between people and their natural environment was eclipsed by the relationship to machines. Seen in the juxtaposition with their previous experience, this relationship seemed all the more destructive. It was, in some sense a preparation, for what Brauner termed "a more advanced stage" of human devastation.

At two students per room, and $1.50 each, they checked into the West Hotel, just at the edge of Chinatown in Vancouver. For the next four days they had the opportunity to explore what was to become, a few years later, the Downtown

Eastside. In 1968, it was still 'skidrow'. Each student was given five dollars a day to aid in their urban investigations. What was surprising to them during the course of their stay was,

> "that the basic pattern of living on Skid Row differed very little from their own style of camping. The trees had given way to high buildings, the icefield had been replaced by pavement, but the ways of coping with a great deal of time and not very much to do remained the same. Like themselves, these folks were the sole occupants of an island. Their little enclosure was threatened by an ever rising tide of commercial and industrial development that encroached from all sides. unlike the students, no one had arranged for their departure that silent morning. (Brauner, 1968:454)

.2) Studies Abroad - The following year, given the relative success of the experiment, the faculty expanded the program and initiated a 'studies abroad' program that, in the fall of 1969 combined with the 'workshop' program. The first year students, joined later by students from second and third year, spent their workshop course in Venice. At the beginning of the term the first and third year students spent their entire term there. In the spring the second year students spent a term. The experience was not solely directed towards graduating students, but to all students.

The idea originated with Abraham Rogatnick, the history professor at the School of Architecture. Having previously spent time doing research in Venice, he not only knew the language but had a number of influential contacts in the city from which he could begin to develop a program that could be useful, not only to the UBC architecture students, but to the people of Venice.

A local Venetian philanthropist put $10,000 towards the development of a project called the Island of Studies in an effort to promote Venice as a seat of higher education,

possible international programs. A pilot group was found in the students from UBC. In addition to this initial source of funding, the received a $5,000 grant from UNESCO whose interest in the project was the architectural focus on approaches to rapid decay of the city's buildings.

One of the studies undertaken, by the second year students, was a housing survey. The population of Venice had been declining since 1950. Although there was no lack of employment opportunities in the city centre, the population reduced from a high of 150,000 in 1950 to 120,000 in 1968. The blame had been laid on the deteriorating quality of the housing. In conjunction with local architects and faculty, they developed a program for studying this local problem. Some 250 apartment residents were interviewed. Their apartments were appraised on 'liveability' standards.

This survey accomplished two tasks. Not only did it provide new and useful information, but it allowed the students direct contact with the local population in a way that they could not have done otherwise.

Because the laws governing preservation are so stringent in Venice, there was outward manifestation of the condition of the interior of these houses. What the students learned was

> " . . . that during the past five years perhaps a third of the apartments in the Castello district had been renovated and were in comfortable condition. Data such as these have not yet been compiled by any official agency. (Rogatnick, 1971:27)

In the students analysis, then, the declining population was due, not, as widely believed, to the deteriorating condition of the buildings, but, rather, to a natural response "to overcrowding in a city where large-scale expansion of

housing facilities is not only difficult but probably undesireable." (Rogatnick, 1971:27)

Since then both the workshops and the studies abroad programs have been directed, with increasing regularity, towards the needs of particular communities. In other studies abroad - the most frequent location being Athens - these issues of local concern have been tackled. Largely because faculty member John Gaitanakis was born in Athens and still maintains his many contacts there, the studies abroad in that city have been successful in leaving behind a legacy of some value. However, even in Japan, where these contacts were not nearly as well developed, student work was undertaken that would not have been addressed by local architecture students or professionals.

One group of students in the studies abroad in Kyoto in 1977 worked with Korean squatters. Because of the bigotry towards the Korean population in Japan, the local Japanese can ignore the situation. From the Korean viewpoint there was a natural suspicion of outsiders. When the UBC students approached them - one of their group spoke Japanese - the suspicions of the Koreans were somewhat allayed by the fact that these *gaijin* spoke Japanese and that they were completely outside the system that had continued to ignore them.

The students worked with this community of squatters on a self-help project that combined social need with architecture. It was a venture that could not have happened without these students being outsiders. Nor could it have happened without these students having some broader awareness of the issues that architecture can address or of the society within which architecture can act as a point of social leverage.

8.3.2. CIDA sponsored programs

The University of British Columbia has been involved in two recent schemes that relate education to the broader issues of human settlements. The older of these is the Canadian Universities Consortium - Asian Institute of Technology Partnership Project (CUC-AIT). The second, broader in its scope, is the Centre of Excellence.

.1) CUC-AIT - A consortium of four Canadian universities - UBC, York, Waterloo and Calgary - under the management of the Faculty of Environmental Design at the University of Calgary, is directing an exchange program of faculty and students from these and other Canadian universities to the Human Settlements Division or the Natural Resources Division of the AIT. The faculty are seconded to the AIT for both long and short term teaching or research assignments. For students, a $7500 scholarship program is offered to graduate students to conduct a portion of their masters or doctoral research in Southeast Asia. These scholarships are offered to two students making applications from each of the four universities. For the successful student applicants at least a month is spent at the AIT working with faculty there and/or taking courses that are not offered at their home university.

For students, there is a difficulty that arises from this program. When these students return to Canada, there is little in the way of courses or programs within their own universities that support what they have learned at the AIT. Nor is there any clear way to use the knowledge gained. The AIT does have some direct involvement in the local community (see 6.3, 7.3) through some of its course work. This allows students to put theory into practice. In the Canadian counterpart, this opportunity does not exist and there is scant course work that suggests that these issues of human

settlements have any particular relevance to the Canadian context, that the research undertaken and knowledge gained at the AIT bears any relationship to the student's Canadian experience or future professional life.

.2) Centre of Excellence - In the fall of 1990 CIDA approved a $6 million grant to UBC to create and manage a five year program. The goal of the program is to develop and operationalize an revised approach to human settlements planning that:

- involves a broader perspective on relationships in the human environment,
- that facilitates local action by 'enabling strategies',
- that involves access to urban land,
- strong community development
- reinforcing indigenous intellectual resources and institutional capacity,
- gives priority to the needs of urban poor
- understands the neglected role of women in urban development

This approach is intended to be operationalized by 'action research'. The intention is to ground theory in practice through "demonstration projects intentionally designed to learn from action, test new methods for planning and development and contribute to relevant knowledge." (Hulchanski, 1990:2)

Undertaking this research is a partnership led by UBC. The other partners are: Tongji University (Shanghai), Zhongshan University (Guangzhou), Tsinghua (Beijing), Chulalongkorn University (Bangkok), and the Institute of Technology in Bandung. The program involves:

- project management
- graduate education (a proposed program for the UBC School of Community and Regional Planning)
- scholarships
- visiting faculty
- short courses in Asia
- research
- international workshops
- travel
- publication of manuals, working papers

There are shortcomings to this ambitious program, though. There is a lack of involvement of practicing design professionals (planning, architecture, engineering) in this action research. If this research involves, as the proposal suggests, demonstration projects, this will mean that design professionals working in the field must be part of these functioning projects. Neither the profession nor their respective schools has expressed an interest in the relationship between the professions and how they are trained, between the professions and their potential for involvement in such projects (whether building or policy), between Canadian professional and professionals trained by the other five institutions, between these educational institutions and the communities that they expect to support with this research. Representatives from NGOs are conspicuously absent from representation in the formulation of proposals. There is no relationship between the value of these demonstration projects in China, Thailand and Indonesia to the value they might have in Canada to Canadian NGOs, professionals or professional schools.

8.4. NON-GOVERNMENTAL ORGANIZATIONS

Under NGOs there is a wide variety of organizations that are performing work with communities. In these examples these organizations are actually Community Based Organizations (CBOs). Their work ranges from local neighbourhood associations to professional institutes working within a well defined local geographic area or both nationally and internationally. It also involves people housing themselves. In most of these examples there is a relationship between the organization and some government body or between it and an educational institution.

8.4.1. Self-Help in Canada

The self-help tradition - squatting, owner-built housing and self-managed housing - has a long history in Canada, in part, one would expect, because of its initial European settlers. In early settlements, whether by Indians Inuit or pioneers, there was a common thread of the utilization of available materials and labour (see Kasegh, 1987:53-4) In squatting, there was the common thread of unstable or barely existent formalization of the land and economic base. Both tended to be frontier phenomena.

.1) Squatting - This practice is defined by the occupation of building or land without legal title. Where title is unclear or where the mechanism for registration is nonexistent, where the issue of native rights and land claims are involved, squatting can often occur.

The legal status of the squatter in terms of security of tenure is determined by the length of continuous possession (as low as ten years in Alberta, and as high as 30 years in Quebec), by taxation, and by improvements to the land.

Africville, first settled in the late 1840s, was one of the early squatter settlements in Nova Scotia. Situated outside of Halifax, the predominantly black population of Africville was faced not only with racial discrimination but with the rapid industrialization of the Halifax area[15]. Much of this industrialization was of the sort few people wanted to be around: a slaughterhouse, tar factory, fertilizer plant, oil plant and a number of city or provincial services such as the night soil deposit pit, the dump, the prison and the infectious diseases hospital. Included in this industrial complex was a considerable amount vacant railway land intended to service the industries located here. The residents of Africville usually found local work as day labourers or maids and supplemented this income with gardening, fishing and scavenging from the dump.

By 1853, with the development of the Nova Scotia Railway line through Africville, some of the occupied land was acquired by the Company resulting in the first of a series of relocations of the residents. The fact that some compensation was offered (although it took five years and a petition to the Legislative Assembly to accomplish it) suggests some tacit acceptance of the property rights of the residents. However, the long-term intention of the City Council was to use this land industrial expansion. At each stage of this expansion additional land in Africville was acquired (or expropriated). It was not until the post-Second World War days that the growth of Halifax created renewed pressure on the Africville area. A plan was developed in 1945 that called for the removal the slaughterhouse, the prison and Africville so that "the

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15. For a detailed report on the history of Africville, see Donald Clairmont and Dennis Magill, *Africville* (Toronto: McClelland and Stewart, 1974).

cleared area could become 'a most desirable residential section'." (Clairmont and Magill, 1973:210) Other plans were put forward for industrial development. The threats from the city of relocation for the population were not constant - they fluctuated with the economy - but they were consistent. Over the years, these threats

> "sapped the vitality of the community; certainly in later years it induced people to refrain from investing in the construction and upkeep of their homes. As for the City, its relocation orientation to Africville was perhaps a key factor in not responding positively to the needs and wishes of Africville residents and to the despoliation of the area. (Clairmont and Magill, 1973:234)

The attitude of the government could be described as ambivalent. While they did not want to legitimize the area by provision of services or by leasing land to residents, they did allow, particularly after the Second World War, squatting on government land. They did not enforce building bylaws or do anything else "to facilitate orderly residential development." What the city did do was to facilitate,

> "the growth of Africville as a slum and allowed the impression to develop that everyone in the settlement was a squatter." (Clairmont and Magill, 1973:239)

Finally, in the mid-sixties, the threatened relocation happened. When the negotiations began with the city, the community was, by this time dispirited and strained. There was little opportunity for collective action on the part of the community in these negotiations. In addition, the city's strategy was to get the community leaders to move so that the rest would follow. They were offered a better than average settlement to leave. Once these arrangements had been satisfactorily concluded, the balance of the relocatees fell into two broad groups - the resigned and the active

negotiators the latter being a minority. The city offered legal and real estate services but these were not widely advertised. A Relocation Social Worker was also hired for the process. The Social Worker,

> "Acted as the middle man or broker for the property settlements between the Africville residents and the City. Given the confusion in Africville over land claims and given the policy of both the relocation social worker and the City of awarding more than market value to individual property claimants (a policy developed both to induce people to relocate and to assist in their 'rehabilitation'), the relocation social worker was a key person in the property negotiations, especially (but not only) in cases where legal title was unavailable. (Clairmont and Magill, 1973:538)

The process of Relocation finally ended in the summer of 1972 when 1200 people gathered on the former Africville Community site and held a memorial service. The press and the city officials saw it as a welcome end to the slum conditions that persisted in Africville. It was seen as heralding a new and improved era of race relations Time magazine (06 APR 70) noted ,

> "The bulldozing of Africville exemplifies determined, if belated, effort by the municipal and provincial government to right an historical injustice." (Clairmont and Magill, 1973:636)

The Halifax Mail-Star editorialized that,

> "Soon Africville will be but a name. And, in the not too distant future that, too, mercifully will be forgotten. (Clairmont and Magill, 1973:637)

As part of the final days of 'urban renewal' as a planning precept, these notions seemed legitimate - not only to the white officials but to other blacks living elsewhere in Halifax for whom Africville seemed like an embarrassment.

Many in the community, though, particularly the elderly, were heartbroken by the change that had been thrust upon them. Their comments reflected some bitterness towards the city:

> "The city took it from us; it's gone. It's no good for us now. . . . The main thing that hurt me was that they took our church. They should have found a place and moved our church there. We was a community and they should have provided our church. (Clairmont and Magill, 1973:611-2)

Government policy, in general, towards squatting has rarely been formulated. No doubt, in part, this is because there is little enough of it in predominantly urban Canada that it has not been an issue worthy of policy attention. Aside from such specific situations such as Africville, the official response to squatting has been more towards the control of population movements or, more negatively, in immediate removal (see Sayegh, 1987:305). Such was intended to be the case in a more recent squatting situation in Vancouver.

After a series of demolitions of affordable housing in 1989[16] in Vancouver, in the early months of 1990, a group of 20 urban squatters took over a group of 6 vacant houses awaiting demolition. The developer had plans awaiting approval for a condominium development and had boarded up the houses until the city approved the plans. By April of that year the squatters went public with their actions in an effort to publicize the need for affordable rental housing. An editorial appeared shortly after this, expressing concern

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16. In the first seven months of 1989, 1,009 affordable rental units were demolished for 816 luxury suites. (Wilson, 1990) In Kerrisdale in May of 1990 there were more than 250 empty suites awaiting demolition and another 157 suites had already been demolished to make way for luxury condominiums. (Brabham, 1990)

that what was believed to be an action of "rangy, defiant youth occupying rotting digs in London or Amsterdam," was an issue for quiet Vancouver as well. The editorial did not express outrage at the lawlessness of the squatters, however, but spoke rather of their desperation.

> "Squatting comes about when urban life reaches a particularly high pitch of hopelessness. People no longer care about the niceties of rent and leases and damage deposits; they walk in and take shelter where they can. As the *Toronto Star* once put it, 'the homeless are one thing, the aggressively homeless another.'
> The squatters' emergence shows that unhappiness over the city's housing crisis is approaching critical mass. Seeing serviceable houses and apartment blocks razed to make way for luxury condominiums and monster houses used to make people bitter. Now it is making them aggressive." (*Vancouver Sun*, 19 APR 1990)

The response of the city to their actions, both in squatting and in protesting in Council Chambers, came most clearly from one of the aldermen:

> " . . . it's becoming clearer and clearer that it's a political group that is more concerned with politics than housing." (Brabham, 1990)

Ultimately, by August 1st, the police were called in. The squatters refused to leave because, they said, they weren't given enough notice. The deadline was then postponed to August 15th for their departure. That date came and went without action. The owner of the building finally appealed to the courts for date of September 5th to be set as the final deadline for their removal. That date came and went. The lawyer for the owner commented later in the month, as the court process went on:

> "We're not panicking; there's no point in pushing it right now. The architects have been a little slow in getting final approval of the plans (for the new building) at city hall." (Sarti, 1990a)

In the meantime, as the publicity grew, more people looking for cheap housing were arriving on the doorsteps of this squat. It was decided to invade other empty houses. One they entered was raided by the police 12 hours later, forcing everyone out. With another, the police came but "left when the squatter refused to let them in." (Sarti, 1990b) The next day, however, they were forced out by the police. The main squat now with 30 people, including some children, was still intact for the time being. The BC Supreme Court gave them until the 7th of November. The court subsequently postponed it to the 23rd of November. It was clear that neither the police nor the court wanted to be saddled with the responsibility "to make social policy" (Mann, 1990) Finally, though, on the 27th of November, the police, acting on what they called 'reliable information that a criminal element stockpiling weapons had taken over the group', brought in the Emergency Response Team (a total of 80 police officers to get them out. The Solicitor-General, in a closing comment on the affair, said:

> "Occupying someone's house without paying rent isn't the way our society works. You either rent a house, pay the rent, or you don't live there." (Ward and Bell, 1990)

Again, Marcuse's observation about housing policy and the myth of the benevolent state would seem to be well founded.

.2) Self-Help - Like squatting, self-help has a long history in Canada. Its history, though, is certainly more legitimate. In Canada, it has been defined (by CMHC) as,

> "the use of an individual's reserve manpower on a voluntary, non-renumerated basis to improve their shelter. Fundamentally, while many self-help efforts take advantage of volunteer labour from participants who have no expectation of personal shelter benefit, self-help efforts require that the end-user be directly

> involved in some way (e.g. construction, planning, management, etc.). (CMHC, 1989:1)

Self-help then, does not necessarily imply any contravention of legal requirements (such as codes, land title), but it does, like squatting, involve personal initiative in the acquisition of housing. It plays a significant role in the supply of housing in Canada. It represents,

> "about 23 per cent of the total value of new residential construction, a third of the value of new single detached dwellings, and about 41 percent of recorded repair activity." (Rowe, 1990:1)

In Atlantic Canada, about 35% of the housing starts are by the self-help sector. (CMHC, 1989:i) Being one of the poorer areas of the country, this is expected (Rowe, 1990:1). The private sector (the homeowner, friends, private organizations) is directly involved in this sector at various levels of effort. At the high end of involvement, there would be direct efforts in the acquisition of land, in the design, and in the supply of construction management and/or labour to complete the work. At the low end there would be involvement only in, for example, the selection of a design and a general contractor.

Like the approach to self-help in other countries, the Canadian government has been involved in the support of different self-help programs at various levels: new construction, renovation and management programs.

There are eight programs offered in assisting in new construction. The four largest of these are the federally run Rural and Native Housing Demonstration Program (RHN), the Northwest Territories' Homeownership Assistance Program (HAP), the Rural Home Assistance Program (RHAP) in Alberta and the Self-Help Housing Program in Nova Scotia.

The Homeownership Assistance Program grew out of an earlier program that provide a kit of supplementary building components such as doors, windows and insulation - products unavailable locally - to homeowners building their own houses. Owners then provided their own labour as equity. HAP went further by providing a full building materials package both above and below the tree line in the Northwest Territories. This kit included all materials for a choice from seven different house designs. The full value of the materials package is offered to the homeowner as a five-year forgivable loan. The program began in 1983. That year 56 homes were built under the program by 1987 more than 200 homes were built.

One of the problems that developed with the program is that it required some skill to assemble the kit and, particularly given the limited population base[17], within a few years "the majority of the clients with good building skills have been 'used up'." (CMHC, 1989:A11) The nature of the program would have to shift somewhat in order to reflect this fact. Either the program would become one that is accessible to those that could afford the services of a contractor, or it would require that the program be expanded and priority given to training rather than simply materials supply.

A newer program that tackles the issue of training as well as another common problem for self-help - the availability of construction financing - is the 'Do-It-Yourself Construction Assistance program in the Yukon Territories. The Yukon Housing Corporation (YHC) introduced the program in 1989 to provide two year construction mortgages to residents who put the sweat equity into their own house.

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17. NWT with one-third of Canada's land mass, has a population of under 60,000.

Funding is contingent on two main issues: approved house plans and lot and demonstrated construction and project management skills or enrollment in a YHC-sponsored course on construction and management. The financing is not advanced until the course is successfully completed. In addition technical advice is provided without charge by YHC staff during the course of construction.

In addition to these programs there were several others:

New Construction:

- Shell Housing (New Brunswick) - the deletion of items not necessary for the occupancy of the house thus reducing mortgage payments.
- Hearth Homes (Nova Scotia) - employment generation grants to train and pay members of the community to construct homes meeting the needs of the rural poor
- RNH Demonstration Program - material and technical assistance to core needy in small communities.
- Building Cooperatives - mortgage support for members building housing (usually single family detached) collectively.
- Self-Help Housing Program (Nova Scotia) - lending program for mutual aid housing providing the benefits of a cooperative to individuals.
- Rural Home Assistance Program (Alberta) - financial assistance (land not eligible) to families and communities to build or repair their homes where conventional financing is not available.
- Cooperative Housing Action Program (Alberta) - training and financial assistance to families willing to participate in the construction of their own home.

Renovation:

- Northern Ontario Self-Help Renovation Pilot Program - in cooperation with Frontiers Foundation.
- Residential Rehabilitation Assistance Program - loans, portions of which are forgivable, to cover the cost of necessary home repairs.

Management:

- Cooperative Housing Federation - funding provided to CHF to assist in their promotion of the development of continuing housing cooperatives and to provide organizational, technical and administrative services to new cooperatives.

For all of these government supported programs, their assistance "appears to represent only a small portion of self-help new construction activity in Canada." (CMHC, 1989:5)

8.4.2. The Urban Design Centre

Architects have been involved in a more direct way in assistance to individuals and communities attempting to develop housing and community projects. In Vancouver, that took the form of the Urban Design Centre.

The Urban Design Centre was formed out of the Inner-City Advocacy and Rehabilitation Program of the Vancouver Inner City Service Project (VISP). VISP was funded from the First United Church and began in 1967

> "as a summer student action project involving students from the faculties of social work, law, medicine, nursing, and education, with one fifth of the students from theology. The objectives of this project were to

> provide students in the service professions, with interdisciplinary learning experiences within a low income community, and at the same time, provide services the community needed and could not afford."(Tamaki, 1991:56)

In 1970 VISP, with the AIBC and the UBC School of Architecture, approached CMHC for funding to include an urban design component to the services offered by the organization. Dino Rapanos, a lecturer at the School of Architecture and a member of the Housing Committee of the Architectural Institute, was in a unique position to be able to combine the interests in the school and those of the profession with the broader social goals of VISP and, indeed, of the times[18]. Rapanos, after attending a conference in San Francisco on Community Design Centres, had gathered information and was inspired from what he had seen to use that information in forming a similar organization in Vancouver. By November the Urban Design Centre (UDC) received two years of funding ($50,000) from CMHC[19].

The operating philosophy of the UDC derived from three main principles:

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18. The freeway debate in 1967 which resulted from the threatened destruction of the Strathcona neighbourhood in Vancouver precipitated the demise of the concept of 'urban renewal' as a valid approach to city planning. It gave rise to the development of neighbourhood organizations, and the involvement of architects, planners and their respective professional schools in saving this neighbourhood. Such debates and confrontations happened throughout North American cities. See Tamaki, 1991:39-55, Donald Gutstein, *Vancouver Ltd.*, (James Lorimer, 1975) and Robert Goodman, *After the Planners* (Simon & Schuster, 1972).

19. These funds were for salaries and overhead. The paid staff included a Director and an assistant. In addition, there were student positions. Their salaries were augmented by other employment grants.

1) communication - between citizens and city planners to identify relevant problems and their appropriate solutions.
2) expertise - making professional expertise available to the disenfranchised.
3) participation - for the planner or architect to be effective active participation of the community in the process of 'community building' is necessary.

These principles are put into place in a multidisciplinary framework including both a professional team and the community. The professional team was composed of registered architects working as volunteers, students and faculty of the School of Architecture[20], and students working in summer placement programs.

In the first year much of the client base for the UDC came from its relationship to VISP, an organization that had already established a presence and some trust within the community. The clientele usually came from community organizations and research funded by CMHC or BCHMC, but it also came from individuals. Among their projects were:

- Skeena Terrace Recreation Facility for the residents of the Skeena Terrace Housing Project,
- Gastown Health Clinic for the Downtown Community Health Society

20. The involvement of students and faculty was primarily through a tutorial program offered by the school. Offered in both the spring and fall semesters, the program placed a maximum of six students per term in the field with Dino Rapanos and Ron Yuen, a recent graduate of the Architecture School. Yuen took over as the Director of UDC in the fall of 1970, when the CMHC funding was in place. He was also hired as a teaching assistant by the School of Architecture so that he could act not only as the UDC director but as teacher in the regular architecture program.

- Home Show Clinic with the AIBC offering free advice to homeowners
- Layman's Home Improvement Guide initiated by UDC and funded in part by CMHC as a self-help booklet available to the homeowner
- Daycare research for the Child Care Federation
- Paraplegic Group Home initiated by a paraplegic individual who had had difficulty in finding appropriate housing.
- Adanac Neighbourhood Planning for the Hastings Sunrise Council.
- Orchard Park planning funded by BCHMC and CMHC for the residents of Orchard Park.

The evolution of the UDC was similar to Comerio's observations about Community Design Centres (CDCs) in the U.S. (see 4.2.2.). When the funding sources dried up, CDCs had to become more entrepreneurial or they would not survive. After 1972, when VISP closed, the UDC was on its own for clients. Ron Yuen left as director and Tony Green took over from him. The UDC office had to move from its original location. In the winter of 1972-3, with these changes, there was a time of some reflection on the direction of the UDC - its goals, its client base, its staffing and so on. Some members felt that there had been too little emphasis on the issues that were affecting community's efforts to deal with their problems of housing - such as the availability of land, the planning process and so on. Others saw a greater need for new research on a number of issues from policy formulation to house form. Some saw that dealing with small scale design issues were not focussing on the real problems such as the access to shelter, or issues of participation of the community or the individual in the design process or the planning process.

The School of Architecture, by 1974, was beginning to see the UDC as a limited opportunity for students in that it had turned more to planning issues than strictly architectural issues. The client groups, along with the planning process and the other players in it, became more sophisticated. The nature of the projects changed and required more time and attention than students in a three month tutorial were able to give it. In addition, most students were beginning themselves to focus on other architectural issues - Venturi's arguments from *Complexity and Contradiction* (see 2.3.3.) were filtering through and the social implications of architecture seemed less invigorating than the formal issues of architecture. The last tutorial was offered in January of 1974. Only two students enrolled. The UDC office closed finally in October of 1976.

A legacy remained, though. The AIBC Advisory Service is still in operation as the only direct pro bono work that the professional institute carries out. While the UDC itself closed, there was a recognition on the part of communities and the City officials that there was a need for both the supply of technical services and the participation of people in their environment. Filling the vacuum left by UDC were resource groups such as Inner City Housing, Terra Housing Consultants and others who assisted non-profit organizations and co-operatives in organizing projects. There was also, at this time, the development of neighbourhood planning through Local Area Planning Offices in designated communities in the city.

The principles with which the UDC began have not disappeared. The issues of the right of the poor as well as the rich to participation in their environment is still a current issue that requires the attention of both educators and professionals. Their responsibility as professionals has not disappeared either. The client groups have changed,

the particular threats to communities are no longer so much freeways and urban renewal as megaprojects and competition for land, and the nature of the process and programs affecting these communities and their funding has changed. Despite this, the basic need for shelter and the technical skills to develop it are still required.

8.4.3. Downtown Eastside Residents' Association

One such community organization that developed out of this period and remains strong today is the Downtown Eastside Residents Association. It is active not only in housing the residents of the area, but in the health and safety issues that typically arise with the poor of any city.

.1) The DERA organization - Formed in 1973 by residents of the 'skid road' area of Vancouver, DERA was reacting, at that time, to the

> "years of neglect and the exploitation which increased [the residents'] poverty and labelled their community 'Skid Road'. Residents organized in order to improve their neighbourhood and renamed it 'the Downtown Eastside." (Gerecke, 1991:13)

The formation of DERA was seen as a direct result, not only of neglect and exploitation, but of inappropriate attention. Given the sense of powerlessness among the residents, the attention given the area by officials and planning bureaucrats was seen as unrelated to the problems they saw in the area.

> "Government responses to community problems were generally to hire more professionals to take care of the area. . . . it became a convenient area to establish programmes that were not wanted in other more affluent communities." (Green, 1988)

Bruce Ericksen, DERA's first organizer, responded to this 'professionalization'. He was concerned about educating residents on their rights and on the means to attain them. Much of this initially centred on tenancy rights in the run-down hotels occupied by most of the residents.

The organization grew from 238 members in its first year to a current 4500 members, one-third of which are Chinese. Membership is restricted to those people who live in the area. This was a deliberate attempt to avoid the 'professionalization' of the membership. If, as is the case for other organizations in the area, the directors of the association are from outside the community, there is a sense within the membership that 1) the professionals would take over - in a 'we know best' sense and 2) they would know little of the actual problems of the area. As a result the membership and the leadership began and have remained with the grassroots. The control of the organization, then is in the community itself and the charity model of the churches and welfare agencies is avoided. The resulting sense of empowerment in the community has created enormous accomplishments over the last eighteen years. Among them are:

- the creation of the Carnegie Centre the 'living room' for the Downtown Eastside.
- establishment and enforcement of a requirement for sprinklers in hotels and rooming houses
- upgrading and creation of parks
- inclusion of hotel and rooming houses in the Residential Tenancy Act
- offering free income tax services
- seniors' programs
- nutritional programs
- street safety programs (including the banning of knives from the many bars in the Downtown Eastside)

- the creation of more than 500 units of housing.

While their accomplishments in housing are recognized around the world[21], what is more important is that housing is seen in the context of the environment in which the housing is located. Housing, as visible as it is, is only one part of that environment. The health, safety and rights of its residents is of equal concern. Raising the standards, then, of existing hotel units and rooming houses is of equal importance to the construction of new units. The management process in the new housing is equally important as the physical structure. Nutritional programs and advocacy programs are also an integral part of that matrix of community support and strength.

Because DERA sees the needs of the community from this broader perspective, it is more effective in dealing with any one issue. In addition, though, this broad base has helped DERA survive. The life of the organization is not dependent on winning a single issue. Stephen Leary, a community worker with DERA for 7 years, pointed out:

> "a lot of community groups form around a problem they face and either are successful dealing with it or lose interest if the battle goes on too long. (Gerecke, 1991:19)

Because they have seven staff members that have been there more than 6 years, they are able to provide the continuity as well to those battles that do go on too long.

.2) Portland Hotel - An example of their efforts in housing is in the development of the Portland Hotel in Vancouver. Unlike most of their development work in housing, this

21. Housing organizations from every continent have visited the DERA housing projects, one of which, the Four Sisters Coop, was shortlisted as one of the best in housing in the world.

building is not new, nor did it depend on substantial subsidies from government.

The building is located at the southeast corner of Hastings Street and Carrall Street in the Downtown Eastside. It is a five storey building above grade with a full basement below. The ground floor is occupied by a pub - one of 27 in the area - and the entrance to the four floors of the hotel above. The typical hotel floor has twenty rooms, each with a basin. There is a common washroom on each floor. The second floor has been altered from this typical pattern by the addition of three exit stairs to the ground floor. As a result there are four fewer rooms on the second floor, making a total of 76 rooms available.

In September of 1990 all of these rooms were empty with the exception of a few rooms at the back of the second floor that were used as 'trick' rooms by local prostitutes and the front corner room that was used by the police occasionally to observe drug dealers in Pigeon Park across the street. The owner had kept it closed for the past year because of, as he put it, 'city harassment'.

In 1986 renovations were done to the building to comply with some provisions of the fire code. Sprinklers were added along with the above mentioned exit stairs from the second floor. Also added were two exterior fire escapes, one on the west elevation and one on the south elevation. In addition, in 1989, the current owner of the building spent $150,000 on other renovations to the hotel. These renovations included paint and carpet. However, in the course of these last renovations, a new city bylaw was passed that meant that each of these SRO hotels in the area had to renew their occupancy permits every month. This bylaw was intended to keep the owners of such hotels in

close observance to the health and safety regulations from which they had notoriously deviated.

When the last round of renovations were completed, the building inspector passed it for occupancy. The owner did not begin renting it out immediately, however. A month passed and the city inspector came by to do the regular monthly check. This time it did not pass. The owner cried foul, because, he claimed, nothing had been changed or used in the intervening month so how could it now be deficient? He decided that, rather than risk having the city pull his license for the pub because of some future infraction, he would leave the hotel portion closed and keep the pub open. His profit came from the pub and, in any case, the management problems with it were far less than they were for the hotel. For more than a year, while vacancy rates dropped and more people were living in shelters or on the streets, the hotel remained closed.

DERA approached the owner in August of 1990 to offer to enter into a standard commercial lease for the hotel portion only. The owner could keep and manage the pub, DERA would manage the hotel and pay the owner a negotiated monthly sum for a five year term. DERA's purpose in this was to get some people from their waiting list for housing off the streets and out of the shelters. Although they recognized that the proposal was only a temporary measure to a long term housing problem[22], they also recognized that, as a solution, it was at least better than the present circumstances.

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22. A rapidly decreasing vacancy rate was created, in part, by development pressures for the 'expo' site and the Coal Harbour site, from the loss of more than 3000 units over the last decade (Hulchanski, 1991:17), and from 'gentrification' of the hotels for the Expo 86 event (see Olds, 1989:49-52).

In order for this scheme to work, DERA needed money from BCHMC for making minor renovations and for startup costs for the hotel. In order to make a proposal for funding from BCHMC, they needed:

- drawings of what they were proposing
- cost of renovations
- resolution of jurisdictional issues with the city

To prepare the proposal they needed the services of an architect but did not have the funding to afford to hire one. If their proposal were to be successful, there would be funding included in the total for the cost of architectural and legal services required. Until they were assured of the financing, though, there would be no money forthcoming. The needed professional services would have to be *pro bono*.

There being no Community Design Centre in Vancouver, a local architectural firm took over the responsibility of preparing those documents with the understanding that there was, at that point, no money for fees.

In September of 1990, the architect and one of the DERA staff began with a site visit to the empty building and a review of the proposed program that had been developed by the DERA staff according to the perceived needs of the future tenants of the hotel.

The program called for alterations to two areas: the lobby and the conversion of one room on each floor to a common kitchen. There were implications and costs associated with these alterations.

Lobby - In order to allow access to the elevator and to separate the lobby entrance from the pub, the existing lobby had to move from its present location to the area around the elevator. This required: revising entry to allow easier access to the lobby, demolishing some walls of existing lobby, and building fire/sound rated walls for new lobby.

Common Kitchens - On each of the four residential floors a common kitchen was to be installed for the use of the tenants on that floor. The availability of cooking facilities was an important issue to DERA, particularly after the results of their 1988 survey. They wanted to avoid having people installing hot plates in their rooms in order to reduce both the health problems and the fire safety problems that can ensue from the use of hot plates in these rooms. They also wanted the tenants to be able to cook for themselves so they could avoid the additional costs of eating in restaurants. For those on fixed incomes, as these tenants would be, any additional savings in monthly expenses is critical.

While there was existing plumbing in each of these four rooms, there were additional renovations required: installation of kitchen cabinets (approx 15 lin. ft. lower cabinets and 11 lin. ft. of upper cabinets), installation of double sink, installation of stove with ventilation, new floor covering (sheet vinyl), new washable wall covering, and renovations to electrical to suit kitchen requirements.

In addition to these two central issues, there were other points that bore some consideration.

1) With about 20 rooms on each floor, the storage of food will be a constant problem if it is stored in the common kitchen. Consequently, alternative arrangements were considered. These proposals included: the

installation of apartment size refrigerators in each room and the installation of additional storage cabinets in each room to allow for storage of dry goods.

2) Storage of belongings in these rooms is often difficult. Asian Neighborhood Design in San Francisco has addressed this problem by developing furnishings with built-in storage. This can maximize the efficiency of use of the space available.

These proposed renovations raised a number of jurisdictional issues that had to be considered. Three of the main issues were:

1) Because this is a designated heritage building, any alterations to the exterior would demand review from the Heritage Planner of the City of Vancouver.

2) There were renovations done in December of 1989. These renovations amounted to approximately $150,000. The building value, according to City Hall records was $313,000. The Vancouver Building By-law states that a structural analysis must be done on the building if the value of the renovations in any 24 month period exceeds 50% of the building value. Given that the building value was stated to be only $313,000 and nearly 1/2 of that value may have been spent in renovations only 10 months prior to this proposed interior renovation, it was expected that there may be a requirement for structural analysis. This analysis, in turn, may then result in the requirement for a structural upgrade to the building to meet seismic design standards. Without knowing the existing structural design of the building, it is impossible to know what the implications of a structural analysis might be. However, upgrading this building to meet those standards would very likely result in prohibitive costs.

3) Changes to the lobby meant that there would be a reduction in the area of the pub on the main floor. This demanded the approval of the British Columbia Liquor Control Board who have jurisdiction over all licensed establishments. This was a source of some obvious concern by the owner in that it was felt that it could affect his licence.

Over a period of three months the financial implications of these proposals and jurisdictional issues were determined and these facts and figures helped to determine the negotiated lease particularly with regard to the owner's responsibilities in the upgrading and maintenance of electrical and plumbing services. At the same time preliminary negotiations with BCHMC were held regarding their approval of the project. BCHMC was quite interested in the proposal as it was described but they were concerned about controlling costs of the project. Renovations are always faced with difficulty in fixing costs and, in this case, BCHMC did not want to be in the position of fixing major service items for a private owner. Their investment had to be considered in terms of improvements that could be amortized over the period of the lease.

During that time, it was decided by DERA and BCHMC that the project should be tendered. This meant that contract documents had to be prepared by the architect for the proposed tender. By this time five months had passed and the architect had invested a significant amount of time in resolving the jurisdictional issues and now had the prospect of spending yet more time in the preparation of documents for tender - still without direct assurance from the funding agency that the project would be approved.

As these documents were being prepared, both for permit approvals and tendering, the DERA project manager for the job changed. This individual expressed great concern that the standard contract forms for the tendering process would be too confusing and intimidating for the local small contractors that they wanted to bid on the job. If the local contractors were left out, the work would go to people from outside the community. Over the objections of the architect, who believed that it was important, for the sake of the funding agency, to conduct the project according to the BCHMC requirements - that is, with proper bid documents - the project manager went ahead and called two small contractors that he knew and had them give him a price on the work. At that point, the architect was effectively excluded from the process. By not being privy to the contract, he had no knowledge of the nature of the contract and what was or was not included in it. The project manager took over both the contract administration and the jurisdictional issues with the City.

8.4.4. StreetCity

StreetCity began with a group of 4 Toronto men who were working at All Saints emergency hostel. In 1988, when the decision was made to close the hostel in favour of building permanent housing, these four workers approached Bill Bosworth of Homes First, the director of this housing society, to assist them in replacing the much needed shelter. Bosworth, however, was not interested in the prospect of perpetuating this concept of emergency shelter. Homes First was interested in permanent solutions to the problem of homelessness. Bosworth suggested that these four workers "get a warehouse, move people in, and essentially start a squatter settlement." (Flanders, 1990:3) What followed from this idea was one of the most interesting experiments in Canadian housing.

The four found their warehouse on Front Street, about 6 blocks east of the St. Lawrence Market, in an area slated for redevelopment. The structure, a former Post Office vehicle maintenance building, was composed of two adjoining parts. The gross floor area was 24,000 square feet. The front part (about 12,000 square feet) was high enough to accommodate two storeys while the rear (about 8,000 square feet), with mechanical room, washroom and store rooms, could only allow one storey structure. Because there was already a roof and floor, much of the expense of construction could be avoided. Skylights provided some natural light to the interior of the building.

In the front of the building four two-storey 'houses' were built on either side of a central street. Each 'house' contained twelve private single rooms of 8 feet by 12 feet. The upper floor had eight rooms sharing two two-piece washrooms and the lower floor had four rooms around a shared kitchen (20 ft x 16 ft), WC (20 ft x 16 ft) and showers. The kitchens open onto semi-private 'outdoor' spaces of 20 ft by 40 ft. In addition to these spaces there are common TV lounges, billiard lounge, and during 1991, an art gallery. These common areas are like town squares. In the rear of the building the 'houses' are one storey high with similar features - twelve private rooms, kitchen, laundry, and common recreation area.

The process of building the city and the community within the structure began in December 1988 when forty men moved into the former offices on the second floor of the maintenance building. The City of Toronto operated the shelter through a management contract to Homes First Society (HFS). A Resident's Development Group (RDG) was formed, and the development process began.

With voluntary participation, these new tenants started developing the design and management of their environment. An architect, Walter Moffat, was selected by the Building Committee and employed by Homes First to work with the community. He met with the residents, some of whom had their own drawings that formed part of the preliminary information gathering.

> "The men were concerned primarily about privacy and noise. Their ideas were always balanced against the need to satisfy fire regulations and budget constraints." (Flanders, 1990:9)

Moffat, using the residents' ideas about rooms along a grid of streets coming off the main skylight, began to develop a scheme that made better use of the space while allowing for kitchens and bathrooms that were not too far away from the rooms. Getting the units on two floors helped in this. It also allowed for more open space for common areas. The criteria that the Building Committee used in the design process were:

> "the social needs and requirements of the future tenants; the existing conditions presented by the site; life safety and building code issues; and available budget. (Flanders, 1990:91)

When the construction got underway, the general contracting firm, Immaculate Constructions, through their full-time superintendent, Ian Henderson, took responsibility for hiring subcontractors and the construction crew - composed largely of StreetCity staff and residents.

There was a not unexpected concern with the idea of hiring unskilled street people to work on the project. There was the issue of likely delays driving the costs up and the very real possibility of injury on the site.

To minimize the difficulties and the required skills for the carpentry, Henderson, along with his two professional carpenters, set up jigs that could control the sizes of studs to be cut. The residents then developed a process by which they could quickly nail together the walls.

> "Walter Moffat felt that this stud training program worked well and was the 'best part of the construction period.' He recalled the men being really organized. 'He's the 'bottom plate' guy, he's the 'top plate' guy and he's the stud man . . . it was like a little factory.'" (Flanders, 1990:12)

As skills improved with confidence, the residents expanded their work activities to include insulation, floor tile, painting and so on.

Positive media attention during this process gave the residents more confidence that helped, as well, in the development of the community itself. The initial RDG meetings on the upper floor were quite short, but as time went on and the building began to take shape amidst this positive atmosphere, the meetings grew longer with increasing participation.

A 'mayor' of StreetCity was elected and together with the staff and the residents, they began to develop the rules concerning non-violence, privacy, and personal property. In addition, as the construction neared completion, rooms were selected and furniture arranged.

On March 22nd, 1990, StreetCity was officially opened. In those first months there was a period of adjustment. The mediation committee - directed by the residents with a community representative and a member of the Homes First Board sitting in an advisory capacity - was kept busy with complaints of violence, excessive drinking, and noise. The rules that had been developed in the RDG over the previous

year were now put to the test. Usually infractions of the rules could be settled at the house level, but where they were unresolved, it could then be taken to the mediation committee.

When things began to settle down after those first months, the monthly 'Town Meetings' became important forums for the discussion of community issues - not only the rules but proposals for activities. A baseball team was formed and a newsletter began publication.

In John Flanders interview with the 'mayor', Bob Lowthain, Lowthain capsulated the renewed sense of dignity that came with this process,

> "I feel very possessive about StreetCity. I built it, I don't want to see it abused or vandalized, I see every nick. This place is a beautiful place. I have a nice room, everybody has a nice room, as nice as they want to make it. I painted my room. Everybody's done their own thing to individualize their rooms. I built this balcony and built that house over there, it's not pride of possession, but it's pride of being part of it. (Flanders, 1990:21)

In October of 1991, that pride was still very much in evidence. A local group of artists had decided that they would like to hang some of their work in StreetCity. With the approval of the residents, there is now an art gallery in one corner of the city. In addition, some of these artists have offered their services in embellishing the exterior of some of the residents' rooms. Following the resident's instruction, the artists are painting friezes (one of a line of galloping horses), door decorations (one fellow wanted pink elephants on his door) and so on.

For one man the symbol of ownership was his house keys:

> "The keys symbolize the difference between the man who spent six years sleeping anywhere - under bridges, in old cars, hostels, and jails - and the one who finally has 'a place to come home to'.
> 'Having keys,' he said, clutching them in a fist, raised high. That's something.'" (Reid, 1990)

Unfortunately, the three-year lease that Homes First had with the City of Toronto is up at the end of November 1991. The building is slated to be torn down to make way for a large housing development.

8.4.5. Frontiers Foundation

The Frontiers Foundation operates as a community advancement organization in Canada and overseas. Since its founding in 1964, its Operation Beaver program has helped to build or renovate more than 1100 Canadian homes in disadvantaged areas. The program depends upon volunteer labour. These volunteers include architects and other people from the construction industry. They work cooperatively with low-income native and non-native communities to provide better housing and living conditions. Among the benefits of this cooperative venture is that the communities improve their building skills while working with the volunteers.

Although few architects have been involved as volunteers to the program, one such veteran of the program was a German architect who recently led a project in the southern Alberta community of Peigan. The Thunder Mountain Cultural and Recreation Society needed a community hall. The Foundation provided the volunteer expertise along with a small sawmill. Together the community and the volunteers constructed a piece-on-piece log building.

Because of the nature of the program, the role that the architect played in this particular project was integrated entirely within the process.

8.4.6. *Construyamos* - The RAIC in Colombia

Since 1983 the Royal Architectural Institute of Canada has been administrating a Canadian International Development Agency (CIDA) contract in Colombia. This contract is directed towards assisting an NGO called Construyamos. This organization, in turn, is faced with the challenge of providing low-cost housing in more than 80 locations throughout Colombia.

> "By the turn of the century, the urban centres will have increased their population by another 1.5 billion people, and the majority of them (1.2 billion) will be in the developing world. Cities of over 1 million, of which there are now 200, will amount to 600 by the year 2000, and 500 of them will be in the developing world." (Lewis, 1987:9)

This pattern of urbanization typifies Colombia as well. Castells defined the Latin American urbanization phenomenon as "a formation of a large concentration of population without equivalent growth in productive capacity".(Castells, quoted in Neilson, 1985:15) Without the economic means available to acquire the basic needs of survival for this concentration of population, there quickly develops a basis "not just for disease, but for civil strife, [and] revolution."(Lewis, 1987:10)

Naturally, this economic stagnation affects the ability of national or local governments to respond to the growing crisis. The resolution to this crisis may be found in the combination of efforts by a variety of players - Government, NGO's (like *Construyamos*), design professionals, and the people themselves. The role that each plays in the delivery process will depend, to a large degree, on the commitment of each to the provision of shelter.

.1) Government - In an effort to address the growing problems associated with urban migration, the government of Colombia has declared housing to be a national priority. Through this they hope to stimulate the economy while meeting a portion of the demand for housing through programs administered by the *Instituto de Credito Territorial* - a government body formed in 1939 with the mandate for low-income housing. The government considers that the most effective current method for meeting the housing demand is through self-help or *autoconstruccion*. This method is strongly supported by the Office of the President and by other government institutions. The municipal governments directly involved with the housing associations that are located under their jurisdiction are eager to help where they can. They will often do so by lending equipment, by adjusting their procedures and by providing more liberal interpretations of their bylaws so that these projects more readily fall within the requirements of lending institutions. Beyond this and some moral support from the National Government, there is little forthcoming in terms of financial aid.

The National Development Plan for 1983-86 proposed the building of some 400,000 housing units over that period. During the same period, however, there was still "no coordinator and/or centralized body related to housing (i.e. Ministry or national office, etc.)". (Neilson, 1985:12) Without this co-ordination, there was little possibility of developing an adequate housing policy or of implementing the construction of such a quantity of housing units. As a result, the self-help movement was, and still is, seen as the natural stop-gap between the demand for housing and the economic inability on the part of the government to meet that demand. Indeed, it would appear that the "government is either unwilling or unable to address the real issues behind the housing problem, because this would mean

addressing the real structural problems"(Neilson, 1985:15) that perpetuate the demand and the lack of supply.

Autoconstruccion was sucked into this vacuum between supply and demand. Failing any coherent policy, implementation strategy, or economic strength on the part of the government, the poor of Colombia had no other available response to this urgent need for housing. By 1982 there were over 500 housing co-ops filling the gap. They had built over 80,000 units. Unfortunately, without any other guidance or expertise, the quality control was very uneven. In addition, the access to conventional financing (then at 32% per annum) was severely limited, equipment and building materials were scarce and training programs in construction were not available. (Neilson & Kehoe, 1987:3)

.2) *Construyamos* - *Construyamos* is one of the umbrella service organizations of self-help groups. It was formed in 1983 with the intent to consolidate existing independent associations and to create new *autoconstruccion* associations. With broad-based support at the grass-roots level, this national body could then lobby for reforms to housing policy, or, more accurately, for a housing policy from the government. It could ensure that support services - training programs, access to credit, as well as equipment and building materials - would be made available to local community housing groups.

Within the structure of the national body, the local community groups are responsible for building their own dwellings but *Construyamos* provides these groups with a variety of services at an organizational level:

1) advice on legal status
2) financing arrangements
3) land acquisition negotiations

4) menus for dwelling design
5) lending construction tools and equipment
6) arranging services by lawyers, accountants, design professionals, etc.
7) disseminating information through regional conferences, training seminars and monthly newsletters.

Construyamos, like many other organizations of this kind, contend, with justification, that housing is only part of the problem. "The housing problem for the very poor lies not in the house, its high cost, its location and services but rather in the misery of their poverty." (Currier, quoted in Neilson, 1985:25)) This suggests that the real issue in meeting basic needs is through community development. As the *Construyamos* constitution states, *"A house is not an end in itself but a means for building the family, the community and the nation."* (in Neilson and Kehoe, 1987:4) This echoes Turner's earlier statement that:

> "the aided self-help advocate claims that the most important products are of literally incalculable value: that, in Nehru's words, 'We are building families as well as homes.' Supported by much recent research on the correlations between well-being and improved housing, the protagonists argue that merely physical improvements are of no value unless supported by social development of the kind built into the self-help programs." (Turner, 1972:132)

The priorities for the poor tend not to begin with shelter, rather with food, jobs, health and education. Shelter needs are only seen within the context of broader personal and social needs. Once the need for shelter does become a priority, though, how does a local community housing group work with *Construyamos*?

Typically, the group will contact the national body prior to their legal consolidation. They will receive assistance

from it on gaining their legal status. The group can then negotiate the title for land in the municipality. This negotiation is done within the framework of the open market. Services and infrastructure are paid by the group through loan financing. Often the access to credit is arranged within the group itself, whereby members will pool their saving and offer a lottery for one of the houses in order to cover some of these infrastructure costs.

As is typical in self-help projects, philosophically and practically, housing cost is reduced by sweat equity. For a variety of reasons though, many individuals are unable, or find it less cost-effective to participate in mutual aid work. They will contract the work out to other community members or to available skilled labour.

In order to make this process affordable, *Construyamos* has developed a number of approaches:

1) labour and group buying
2) building in stages
3) pooling of local resources
4) land banking
5) use of cheaper, traditional building materials
6) institutional credit availability
7) production of materials
8) fund raising. (Neilson, 1985)

Through these measures, the organization has been able to deliver housing for 25 - 50% less than the institutional or private market.

.3) The Role of the RAIC - The RAIC has been involved in the administrative support of Construyamos for five years now. In 1983, with funding from CIDA, the RAIC developed what was initially a three-year program of institutional co-operation. The national offices of *Construyamos* received,

through this agreement, core funding along with technical and management advice from the RAIC.

Specifically the objectives of the original program were to:

> a) provide institutional support
> b) share Canadian volunteer organizational experience
> c) exchange the Canadian experience in the housing process with counterparts in Colombia.
> d) take what can be learned from the Colombian experience in order to " develop similar programs in Latin America and other parts of the developing world." (Neilson, 1985:9)

This program was implemented by providing financial assistance, by placing a coordinating architect in Colombia for quarterly two week visits, by transferring the Canadian experience to Colombia, and by recording these local experiences for broader use.

Clearly the RAIC involvement has been heavily weighted towards the administrative rather than the narrowly defined design tasks expected of architects. Neither *Construyamos* nor the RAIC is responsible for the direct supply of housing stock. Rather, they are responsible for setting up the systems by which housing can be effectively delivered.

In the course of evaluating the success and the continuing needs for the project, Construyamos and the RAIC recognized three objectives for extending and consolidating the institution. These were in the areas of: organizing, promoting and training of self-help building communities, providing financial support for *autoconstruccion* organizations, and developing a national distribution network for building materials. In order to assist in the implementation of these objectives, the RAIC developed a program of four components:

> 1) Institutional and Organizational Support in which the RAIC assisted in the streamlining of procedures and operations,
>
> 2) Training and Study Centre, through which the critical priority of training in community leadership and in construction techniques was recognized,
>
> 3) Construction Materials Distribution Centre in which the network for distribution is developed,
>
> 4) Construyamos Co-operative Savings Fund, in which the access to credit is expedited for the poor. (see Neilson, 1985:77-80)

These components indicate quite clearly the recognition, on the part of the RAIC, that the issue of homelessness is not one of simply providing a roof over one's head, but is a far broader issue involving architects, through their institute, in the delivery process not only in technical areas, but in education, financing, and management.

.4) The Role of Design Professionals in *Construyamos*. - A limited range of possibilities exists in the provision of design services to the *autoconstruccion* groups in *Construyamos*. A revolving fund is made available to community groups in order to provide a line of credit that is intended to pay for the professional design services that the group may require. Within that framework,

> "design generally involves the participation of the community along with a private architect, or the design service may be provided by the municipal planning board." (Neilson, 1985:47)

In the case studies there were a number of variations on this role. One group 'rented' the services of an architect of the Municipal Planning Board. This was the only service that the group contracted out. Another group contracted for all design consulting services which, in turn, prepared soils tests, made a project model and working drawings, and submitted this work to the local authorities. This

arrangement most closely resembles that between the design consultant and housing co-operative groups in Canada. A third group used the design services of a member of the local community.

In general, the traditional role of the architect has been challenged in *autoconstruccion* in Colombia. This has led to the conclusion on the part of Neilson and Kehoe that "training in traditional roles of architecture will not be adequate for the future".(Neilson and Kehoe, 1987:5) Colombian architects are taking on broader roles in management and community development. Housing shortage is seen as a symptom of a larger problem, the solution to which involves an understanding of social and economic issues as well as the expected technological ones. In this way, as Neilson and Kehoe suggest, the RAIC may be bringing back more to Canadian architecture than they took with them to Colombia. They have returned with a broader vision of the role and the responsibilities of the architect in society.

8.5. THE ROLE OF ARCHITECTS

In the context of Canadian housing, the architect's role has been generally quite traditional. That has entailed a focus on the design of buildings for whomever requests the services. When the built form has been housing, in most instances this has not changed the approach to the problem, nor has it changed with the client group. The existing parameters set by policy are seen as givens.

8.5.1. Architects in Government

Architects working within the government tend not to work in the area of design, unlike many of their counterparts described in Chapter 5. Rather they are more involved in project management. This will involve them in the hiring of design consultants for a project and the review of their work. Government agencies typically do this for liability reasons so that the consulting architect faces exposure for errors and omissions, rather than the Public Works Department itself. At the same time, because of the increasing complexity of the jurisdictional environment, as well as the buildings themselves, these agencies need staff architects to interpret the work of the consultants with regard to their overall program requirements and particular regulations.

8.5.2. Architects in Practice

The work that has been described above presents a fairly traditional role for the practicing architect. The client group differs, but the work does not. It still is focussed on the traditional services that the architect provides (see Appendix A). Both StreetCity and the DERA project involved architects dealing with basic design issues and the process of permits and construction.

Where architects are able to depart from this traditional role is not in the services provided but in their method. Barry Johns, an Edmonton architect, completed a project called "Operations Friendship" in 1986. It was an integrated facility for the 'hard to house'; that is, it was a rooming house, drop in centre and social services offices for the elderly brain damaged alcoholics of the inner city. Along with the standard design issues that he faced in trying to make this institution look friendly to both the

users and the neighbourhood, he was faced with another problem. He had the program requirement from the staff, the site requirements, the design parameters set by the neighbourhood context, but he did not have any information at all from the users. What would make this institution 'friendly' for them? Given the condition of the users, it was difficult for the architect to communicate in any way with them. First he was a part of the formal sector. In other words, he was one of those people that these men could not trust. Second, they had great difficulty in communicating their ideas about space, about needs. They were used to living with whatever they could get, which typically wasn't much.

In order to establish trust, Johns decided he had to go some distance. He took two weeks away from his office and lived with some of these men, drank too much, slept in cars - whatever they did, he followed. Slowly, he said, they began to accept his presence (Johns, 1987). While that bond was building he was also able to see some avenues of communication that he could use to understand the needs that these clients had. One of these was through the use of collage. He had the men cut out photographs from magazines and newspapers that represented things and situations that they liked. One of these men, who spent much of his time sleeping in cars, did a collage that was composed largely of different cars - most of them large and luxurious. These collages formed part of John's programmatic requirements.

Notwithstanding such exceptional efforts to understand client needs, most practitioners work with what they are given, whether this is housing policy, zoning bylaws, or client programs. There is often little time to question, develop or strengthen the relationship between the architect and the community s/he serves.

8.5.3. Architectural Institutions

The national institution, the RAIC, has been active for a number of years in initiatives supporting housing in the Third World. The ongoing *Construyamos* program has since been augmented by a joint effort with the Beijing Institute of Architectural Design. This project is focussed on inner city housing in Beijing.

This institutional effort to deal with these issues of development and housing in the Third World is exceptional, if not unique for an architectural institution. However, one of the problems with the *Construyamos* program is that it is difficult to transfer what was learned in that project to Canadian architects. Consequently, there is a widely held view in the profession that the program is simply 'good works' on the part of the RAIC and that it has nothing to do with the way they run their practices or with the housing issues that affect Canadians.

The Beijing program provides a better opportunity for this kind of exchange to occur. Because it involves workshops and professional exchange, the RAIC architectural team and the Beijing team, at least, will have the opportunity to explore those similarities. It may be more difficult to disseminate those conclusions to the rest of the membership.

CHAPTER 9
ENABLING ARCHITECTURE

> After nearly a hundred years of professional existence, architects have almost completely surrendered both the tools and the ideological aspirations that might allow them to address the economic, political, and social concerns posed by modern life. Clearly, given both the inherent contradictions of the profession and the historical legacies of its struggle to maintain professional autonomy and status, altering this situation will be difficult. (Crawford, 1991:43)

Le Corbusier suggested that we have a choice between architecture and revolution. Revolution, he believed, could be avoided. Charles Jencks, in his 1973 book, *Modern Movements in Architecture*, suggested that we need both; that,

> ". . . if we are to have a credible architecture, it must be supported by a popular revolution that ends in a credible public realm, the council system." (Jencks, 1973:380)

While his interests in the connections between the political and the architectural realms changed since, the connection between the two, and the need for clarification of that connection have, if anything, intensified. The conclusion that Jencks reached was not dissimilar to the conclusion subsequently reached by UNCHS about enabling strategies. In turn, that conclusion was put forward some years before with some vigour and conviction by John Turner who had learned it in the Peruvian *barriados*. It is not a new or novel idea. The participation of people and their control over the decisions affecting their environment is critical to the ability of the environment to thrive. If architects are to

be effective stewards of that environment, they must not only recognize these connections but strengthen them by becoming, as Turner put it, enabling practitioners (Turner, 1987)

The enabling practitioner uses architecture as a tool towards the democratization of the built environment. Architecture, as well as the democratization process, has a role in the development of a sustainable future and it has a responsibility, as a profession, to use its resources to address the basic need of shelter in society and to honour the human rights derived from that basic need.

As we have seen in Part 2, architects are acting in a variety of ways to meet these professional obligations. In most cases, their actions are on an individual basis and often they are conducted outside the domain of traditional architectural practice. Some architects have been faced with a choice of either abandoning the profession or redefining it to include the kind of work they are doing. Many of them chose to abandon the profession. If the profession continues to exclude these broader possibilities, it will become increasingly irrelevant to a world bifurcated between a rich minority and the poor majority. Its relevance depends on the ability of the professional institute, the educational institutions and the practicing professional to overcome some of the artificial dichotomies that have arisen in the development of the profession, such as: theory and practice, education and training, art and craft. Without some resolution of these dichotomies, the profession will become increasingly irrelevant.

In the Canadian context, it is possible for the profession to better serve the future by allowing itself to expand the use of its resources. To do that we will have to change the nature of the institutions governing architecture and their

educational foundations. We will have to change the way individuals practice architecture as well. As Part II indicated, there are many options available to encourage change.

9.1. INSTITUTIONAL CHANGE

There are a number of institutions that represent practicing architects and architecture to the public. At the international level, the International Union of Architects (UIA) represents architects at such world bodies as UNESCO, UNEP and UNCHS. Also at the international level is the Commonwealth Association of Architects (CCA) which represents commonwealth architectural bodies. In Canada, architects are represented by two bodies: The Royal Architectural Institute of Canada (RAIC), a voluntary body with individual membership, and the Committee of Canadian Architectural Councils (CCAC), whose membership is composed of representatives from each provincial Institute. These bodies represent Canadian architectural interests at the national and the international level. At the local level, architects are governed and licensed by their respective provincial institutes.

These institutions that govern architects and that represent the profession to the public, have a responsibility not only to their members but to the public. The practicing architect is, as well as being a professional, in business. As such s/he is faced with decisions that the institution of architecture is not. The institute does not represent the 'business' of architecture to the public - it represents the 'profession' of architecture. This gives it the responsibility to insure, not only the protection of the public, but to see that the public is served. One of the

seven objects of the Royal Architectural Institute of Canada is:

> "to attain improvements in the environment *in the public interest* and to generally provide *service to the public* as a national organization in the furtherance of these objects. (Fennell, 1991:10) [my italics]

The professional institutes representing architects, then, in honouring this responsibility must do more than serve its membership. In the Architectural Institute of British Columbia (AIBC), for example, there are currently 24 committees. Most of them concern internal issues of the Institute. Only a few of them, such as Housing, Energy and Environment, and the Advisory Service Committees concern public or social issues - even indirectly. Only two involve direct contact with the public: the Communications Committee, through its 'Speakers' Bureau (see Appendix N), and the Advisory Service Committee (see Appendix O) which provides free advice to homeowners.

These institutions have the ability to speak to issues in a way and with a weight that individual practitioners cannot. However, to an astonishing degree they have all been silent when faced with issues of ongoing public concern such as housing, urban amenities, environmental issues and so on[1]. In Canada, the institutional interest in housing issues has been expressed amply by the fact that, among the RAIC and all of the provincial institutes, there are only two Housing Committees - one in Vancouver (the AIBC Housing Committee) and one in Toronto (the OAA Housing Committee). Of the these two, the OAA Committee is concerned solely with the relationship between OAA members and their work with the Ontario Ministry of Housing. They are, in other words,

1. Although the RAIC has published documents concerning urban amenity and housing issues (in the Third World), this has been focussed towards the profession more than the public.

concerned with business issues between architects and the government. They are not concerned with issues of public concern about housing. At the national level, the RAIC, with the exception of its 1987 'Regina Resolution' concerning housing and affordability, has been, like many others, silent about the issue since the International Year of Shelter for the Homeless.

There are a number of things that these institutions, at all level, could do to make it known that architects - as a professional body - have concerns about these issues. They could:

a) form provincial and national housing committees for the purposes of:

   i) disseminating information:
      - to the public about the position of architects on issues of affordability, density, liveability, etc.,
      - to other architects within provincial and between provincial boundaries about local, provincial, national and international concerns in housing,
      - to government bodies to express our concern over significant issues of policy
   ii) developing position papers on issues relevant to housing,
   iii) initiating demonstration programs that indicate the implications of design on issues of affordability, density, liveability, sustainability

b) initiate changes to existing act and bylaws that:

i) indicate clearly the commitment of the Architectural Institutes to serving public needs
ii) indicate clearly their commitment to the environment
iii) present a code of ethics in addition to the current code of 'conduct' (see Appendix D).
iv) allow architects to form co-operatives[2] (as opposed to corporations)
v) allow architects to do *pro bono* work

c) establish a funded *pro bono* program - advertising funds, for example, could be directed towards community needs rather than self-serving adverts in home magazines.

9.2. EDUCATIONAL CHANGE

Architectural education is caught between a number of responsibilities: those to the profession, those to the students, and those to the community at large.

In their obligation to the profession, the ten architecture schools in Canada are governed, if only indirectly, by the Canadian Architectural Certification Board (CACB). This body assesses the academic qualifications of each applicant for registration in the provincial institutions which regulate who can practice architecture. In setting the

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2. Cooperatives are specifically excluded by Article 63 of the Act and Article 15(3)(c) of the Bylaws which prohibit an architect from forming a partnership with anyone outside of the profession except as a corporation where the majority shares must be held by members of the Institute.

minimum uniform standards for applicants, architecture schools must provide graduating students with the appropriate curriculum that will meet that standard. Because of this responsibility, educational institutions and the profession must agree, at least to some degree, on what constitutes a minimum standard for graduating students. However, the conflict between theory and practice, along with the constraints that bind each institution - the school to the rigors of the university system and the profession to the rigors of business - create ongoing fundamental problems in the way that each defines the professional sphere. In that conflict, both have neglected what perhaps should be considered to be their *raison d'etre*: service to society.

Their obligations to students, as noted, include the requirement to provide them with at least the minimum requirements to allow them to qualify to enter the professional stream towards registration. This could be termed the training aspect of the education process. In addition, there is the broader obligation to educate the student in issues that set the parameters for the professional. Recalling Vitruvius (see 2.1.), these include such things as ethics, culture, history, law, and so on. Ultimately this involves the movement towards wisdom. Whitehead made this distinction clear:

> "Now wisdom is the way in which knowledge is held. It concerns the handling of knowledge, its selection for the determination of relevant issues, its employment to add value to our immediate experience. This mastery of knowledge, which is wisdom, is the intimate freedom obtainable. (Whitehead, 1967:30)

This task does not come easily within the confines of a curriculum and so much depends upon the motivation of the student. The curriculum, though, can offer the opportunity.

In its obligation to the community, like most schools, those in Canada have only a marginal association with the public at large, and, in particular, those communities in need. This is often a result, as Gutman noted, of the continuing emphasis on formalism.

> "Schools instead have been concentrating on the formal aspects of architecture, on history and theory, apparently in the belief that it is diminished skill in form-making which is largely responsible for the difficulties architects face in their practice. (Gutman, 19876:24)

The preoccupation with formalism in the schools has left the communities around them quite divorced from their activities. The students, then, are shortchanged as well because they cannot get the kind of experience that will ultimately prove useful to them in whatever kind of professional practice they choose to enter.

In order to meet these obligations there are a number of things the schools of architecture can do, even at the undergraduate level (certainly as indicated by King Mongkut University). These include:

a) establishing courses in development issues that will give students exposure to the alternative uses for the skills they are learning
b) establishing courses in ethics. This is a required course for graduation from engineering schools, but is not often even offered in architecture schools.
c) creating a more direct connection to both the community and the profession by becoming more involved - within the curriculum framework - in community issues and needs. In order to do this - like the Urban Design Centre of the early 70s (see 8.4.2.) - the profession and the school must work more closely together than they do at present.

9.3. CHANGE IN PRACTICE

For the architect working in the trenches of daily business needs, considering anything beyond the immediate needs of the client, the contractor, the bank, the landlord, the staff, suppliers, payroll, etc. is usually asking more of the individual practitioner than s/he is able to bear. In order to allow the opportunity to arise, though, there are things the architect in practice can do. This will depend, to a large degree, on the nature of the practice. Architects practice in a variety of circumstances. Although most architects work as sole practitioners, many work in government and in educational institutions, and many, of course, are employed by architectural firms. Most practicing architects will not often have the occasion to work outside the traditional form of practice. In Canada, the informal sector in housing is almost nonexistent in urban areas. The need for the 'habitat worker' as described does not seem to be a necessary or even likely development in Canadian cities. In rural and more remote areas of the country, though, where the availability of resources is low, the informal sector is increasingly seen as a viable option. The Frontier Foundation and its Operation Beaver is one such example of a successful shift away from the formal approach to housing supply. This shift has more to do, though, with the trend towards decentralization and political self-determination than it does with a lack of effective management and resources as is the prevailing situation in the Third World.

Within either context, urban or rural, the question that must be addressed concerns the relationship between the community and the professionals that intend to serve it. The

traditional approach of the professional is not equipped to deal with the more broadly based needs of community groups, of the homeless, or the disenfranchised. However, other possibilities do exist for the redefining of the roles that professionals might play in urban community development.

9.3.1 Requirements for Practice

The examples that have been outlined give an indication of the range of roles that professionals and paraprofessionals have played in the field. In the *Construyamos* projects architects were involved with this community resource group in a broad range of administrative functions. The RAIC helped them streamline procedures and operations, they developed a training and study centre for the education of community leaders (habitat workers), and they helped *Construyamos* create their Construction Materials Distribution Centre and Co-op Savings Fund. The RAIC has also assisted them in attracting interested consultants in the field of design. Christopher Alexander has been retained by the RAIC as part of the *Construyamos* project in order to provide design services similar to those with which he has been experimenting in such case studies as described in the *Production of Houses*. In this way, the RAIC has been involved, not only in the technical areas of construction but also in the broader areas of the delivery process such as education, financing, and project management.

In the case of the Community Design Centres architects are working again in a much broader range of activities than is typical with a more traditional practice. They tend to be directly involved with local community resource groups - groups that are focussed on self-reliant economic and community development strategies. CDC's, in order to function appropriately in that environment, must expand their services to accommodate the broader focus of the

groups they serve. These services include traditional contract work, funded research, training programs, construction and furniture design, technical assistance and political advocacy.

Although housing may be seen by CDC's as the primary goal, it is more appropriate to focus on the client type rather than the building type in order to circumvent the restrictions on problems created by predetermined building solutions. The results of this focus are solutions that combine the principles of empowerment with enabling products.

The Technical Aid groups in England involve the community resources groups even more directly than do the CDC's. Their composition is similar in that they are inter-disciplinary, but they go beyond CDC's organizationally. As a co-operative, they require that the users of their services be members of the co-op. In this way, the projects on which the staff work will only be those approved by the community representatives. The work that they do, then, will be more responsive to the needs of the community. An additional benefit is that the experience gained by members in going through this development process can be passed on to newer members.

The success of CDC's and Technical Aid Agencies will depend on their ability to bring about visible physical improvements; to develop economic alternatives for the ownership and management of a community's resources; to be political advocates, particularly for issues affecting neighbourhood stability; and to develop social services and education programs.

The barefoot architect or the paraprofessional responds to different needs in the community. While the other examples

depend upon the availability of architects and planners, this approach to the delivery of services exists as a result of the unavailability of professional services in the field. Their unavailability may be due to the remoteness of the community to be served, to the exclusionary nature of the informal sector or simply to the small numbers of trained professionals in a given area, but the lack of services by professionals must be covered by the presence of the paraprofessional in the community. In the work cited, architects and planners in this field are called upon to facilitate the training of these paraprofessionals.

9.3.2. An Alternative Practice

Given these examples, how could an alternative Canadian practice be organized? What kind of work would it do? Who would it serve? How would it generate income?

One possible alternative is the organization of a group of professionals offering services in architecture, design, research, product development and educational programs development. There are two important aspects of these services:

a) They are particularly directed to projects that arise from the basic human need for a *home* and a *community*.

b) They should complement rather than overlap with services already provided by other community organizations.

This first requirement is what could be called 'the Human Settlements Approach". This approach to practice views the natural and the built environment as one system. This is consistent with the concept of sustainability which raises

Figure 9.1
The Human Settlements Approach

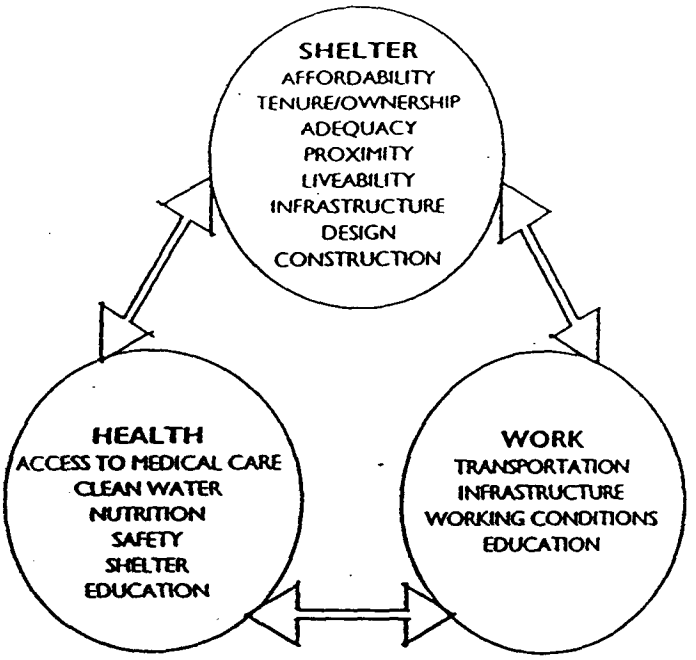
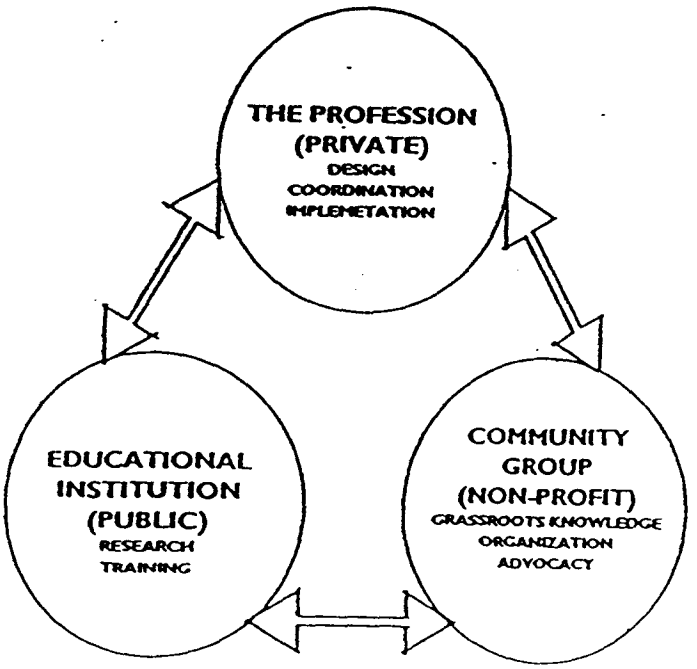


Figure 9.2
The Team Approach



the additional issues of access to resources, distributive justice, generational equity, growth, change, and the control or management of change (see WCED, 1987). It views housing within the context of a broader agenda for human health and well-being. In this there is a direct relationship between shelter, health and work. As Figure 9.1 indicates, each of these broad areas of concern involve other important aspects of human settlements, such as infrastructure, housing finance, nutrition and so on. Housing in isolation from these other issues and from the community itself, is not meaningful. In order to achieve an appropriate response to housing needs within the community context, the architect must work in a team that represents those broader interests.

The 'Team Approach' to practice indicates that the profession has partners in two other sectors in order to successfully meet the broader requirements of the Human Settlements Approach. These are educational institutions and the communities themselves. Both are critical to the evolution of any housing program. The former can provide the research data and theoretical basis for action. The latter can provide the grassroots understanding of need. The professional, then, can facilitate action. Each group, while independent in many of its aims, overlaps with the other in some concerns. Figure 9.2 indicates this relationship. Within the context of generic sectoral delineation, the private sector is represented here by the profession, the public sector by the educational institution and the popular sector by the community organization.

9.3.3. Obstacles to the Team Approach

In a Canadian context there are some difficulties with this approach. The Architectural Institute of B.C., as most provincial bodies, controls who can and cannot practice

architecture. If an architectural firm is registered as a corporation, the by-laws of the AIBC state that the majority of shareholders must be architects. The majority of shareholders in COMTECHSA, for example, (see 4.2.2.) are not architects but members of the community at large.

In addition to this obstructive by-law, there are other problems. COMTECHSA receives funding from the state in order to provide services to voluntary groups. If a similar group in Canada were to receive state funding and, in turn, take client groups away from other architectural firms there would be a justifiable hue and cry from the profession. CDCs in the United States have faced a similar problem with the AIA, but have managed to allay some of the fears of the profession.

The notion of user control of the service through the development of a service co-operative is ideally suited to the basic belief in community control of decisions affecting their environment. However, the local problems with the Architectural Institute and likely with insurers of Professional Liability as well as the structural problems of funding tend to preclude this organizational model.

A worker co-operative, although it does not involve the community at large as actual shareholders of the co-op, does align itself ideologically with the democratization of decision-making both within the co-op and within the community. It is structured horizontally rather than vertically, and, as such, tends towards consensus in policy decisions. This structural attribute in itself implies at least the informal, if not the formal involvement of the community in the policy decisions of the worker co-op. Part of the constitutional mandate of such a co-op could include the involvement by voluntary organizations.

In order to circumvent the AIBC by-laws concerning shareholders, the co-op could be composed of individuals and architectural firms operated by individuals. The firm itself, is held out to contract 'architectural work' as defined by the Institute and the firm's professional liability insurance remains with the firm rather than the group. However, the firm will take direction from its proprietor who is a member of the co-op. In this way, the architect can practice in the context of a multi-disciplinary team. S/he can also practice within the context of community groups that sit informally (as non-voting bodies) on the management board of the co-op.

9.3.4. The Shape of Practice

.1) Type of Projects - Based on the scope outlined in the work of paraprofessionals (see 4.2.1.) in developing countries as well as the work in Technical Aid as seen in England and in the U.S. (see 4.2.2.), there are five broad areas in which services could be directed: Urban Issues, Rural Development, International Issues, Educational/Cultural Program Development, and Product Development.

A. URBAN ISSUES

A.1. Neighbourhood-based planning - workshop sessions on planning issues of the community

A.2. Advocacy, self-help and participatory programming and design: Projects involving user participation in design; Resource for developers whose projects will require community participation; Neighbourhood urban design crises situations.

A.3. Design for special needs groups: elderly, handicapped, children

A.4. Family housing - single parent families, families in high density environments
A.5. Design for safety and security

B. RURAL DEVELOPMENT

B.1. Community-based projects - for example, community halls in which the impetus and the money comes from the community but it lacks design input. The technical aid agency works as part of this team to develop better design for community projects.
B.2. Community development - participating in the mobilization of the human resources required to implement a project.
B.3. Self-help - developing enabling strategies
B.4. Technical assistance - related to construction techniques, planning and design fundamentals.
B.5. Appropriate technology - the use of local materials and available energy sources; the use of environmentally responsive and responsible technology.

C. INTERNATIONAL ISSUES

C.1. Research in community development - work that is being done now in developing nations with regard to the organization and implementation of enabling strategies can be transferred to other situations including those in Canada.
C.2. Technology transfer
C.3. Professional exchange - The co-op could act as a vehicle for the opportunity for foreign professionals to gain Canadian experience.
C.4. Design and contract administration

D. EDUCATIONAL/CULTURAL PROGRAM DEVELOPMENT

D.1. Exhibitions - e.g., the use of architectural drawings as educational devices.

D.2. Training programs - Self-help construction; For groups involved with self-help urban design; Adjunct to guidance educational programs; Urban atelier for professional studies.

D.3. Research and publications - Background research for proposal writing; Development of alternatives to developers schemes; Surveys and evaluations for proof of need.

5. PRODUCT DEVELOPMENT

E.1. Furnishings - similar to Asian Neighbourhood Design, there are a number of groups, from the residents of SRO hotels to the handicapped and the elderly whose immediate needs are not for newly designed housing but for some improvement to their existing environment.

E.2. Commercial exhibitions - The promotion of such products and the promotion of other designers and manufacturers in the same field is the purpose of exhibiting commercial products that are directed to the needs of low-income tenants.

.2) Client Group - The clients of the team would be the voluntary agencies and community groups such as the Salvation Army, the United Church, DERA, housing co-operatives, tenants, native groups, the disenfranchised poor, and rural community organizations.

.3) Funding - Using the example of AND in San Francisco, the team could develop a for-profit arm of the work that

could then subsidize the work that must be voluntary. In addition, it is possible to form a foundation towards which these profits could be directed. In this way work which will be subsidized can be decided upon by a board composed of members of the community at large. Possible funding sources include: Government Grants, Community organizations and Societies, Professional organizations, Traditional Fees, Donations, Retail sales. These funding sources could be directed towards either the service agency or the foundation, depending on their purpose.

9.3.5. Other Options

Although the development of a worker coop directed towards the needs of the poor is a workable approach for some, there are other ways that architects can meet their professional obligations to the provision of basic needs.

.1) Volunteering - Although architects already volunteer their services to many causes, from municipal design panels to speaking at high school 'career days', there is a more directed effort that could be undertaken, not only by individuals but by firms. Firms can make it a part of their hiring policy that its employees give a portion of their time (so many hours per month) to volunteer work. This is not put under a promotional budget - the object is not a search for more paying work. Rather, these hours are calculated to be part of 'community service'. The focus of this service is basic human needs. One such clearing house for this kind of work is the Architects, Planners and Designers for Social Responsibility.

.2) Third World Issues - There are a number of architects in Canada whose practices have combined the traditional development projects with Third World development. One of these, John van Nostrand, in Toronto, has been working for a

number of years on a sites and services planning project in Botswana and Lesotho. The planning and architectural expertise that he had developed through his professional practice in Canada was put to good use in these long-term development projects.

The reverse is also quite possible. Recently, van Nostrand was working with a group of developers in a suburb of Toronto. In the course of his presentations to this development group, he showed them his work in Africa. Their first reaction, according to van Nostrand, was bewilderment. What did sites and services projects in Africa have to do with subdivision development in Brampton? It was pointed out to them, though, that many of the principles of these developments in Africa, particularly concerning incremental development, infrastructure funding and affordability, were applicable as general principles. The development group then began to see applications to their project that they had not before.

.3) Full-Time Commitment - It is possible to take one to two years away from the development of a practice to volunteer one's time to organizations (NGOs) that are devoted to the provision of basic needs where that need is the greatest. Some of these organizations have been mentioned earlier - CUSO, WUSC, MSF, InterPares - and there are many others. MSF (see 3.4.1.2) recruits members of the medical profession, usually out of internship, to apply their skills to emergency situations. Medical personnel are capable of getting very close to the edges of basic human needs. A MASH unit at the frontline of war is one obvious example of this proximity. There is no such need for architects in these circumstances. There is nothing to build or repair in such emergencies. But there are situations, somewhat removed from those emergencies, where the skills of the architect do become useful. While all of

the above-noted NGOs are dealing, at various levels, with these issues, MSF works closest to the edge of need. At some point, in the spectrum of their work, there is a need for the technical expertise of architects. It is possible, then, for those professionals prepared to take up that challenge, to devote their skills, over an extended period of time, to the most basic level of human needs.

9.4 CONCLUSION

There is a demonstrated need for closer ties between the work being done in the developing world and that being done in local communities in the West. The need for a broader perspective in the education of the architect in the West seems abundantly clear. This perspective can best be achieved through the co-ordination of information coming out of community projects in both the developing and the developed world. There are many similarities between Construyamos, DERA in Vancouver, the KIP programme in Indonesia, COMTECHSA in Liverpool, and the Great Earth Rural Development Foundation in China. Each of them suggests a broader role for the architect in society. That role must include a more direct relationship between the CBOs and NGOs for the professional to be effective in meeting his/her responsibilities to meeting basic needs.

It remains a critical issue for students and professionals alike to become aware of the opportunities *and* social responsibilities that spring from their extensive education and technical expertise. These responsibilities can be directed towards broader issues of design if, through their education, they are presented alternatives to traditional practice. The redefinition of the role of the architect must start with the development of alternatives that respond to the shelter needs of the poor.

With the fragmentation between the profession and education, between both of these and the communities they serve, there is a distinct need for redefinition. Without it the profession loses its relationship to the community in its bifurcated interests in business and formalism. Without it education loses its relationship to the basic needs of the community in theoretical pursuits. Both institutions become irrelevant. The malaise and doubt within the profession, and by extension, within the schools of architecture is, under these circumstances, well founded.

Both institutions are faced with internal conflicts. These conflicts or dichotomies have existed throughout the history of the profession and many attempts have been made to resolve them. The effort that Gropius made - both with the Bauhaus and later with the Architects Collaborative - were arguably the most consistent and directed. However, they remain unresolved. They are, perhaps, even more pronounced.

The process towards recovery of relevance is the same process that resolves the artificial dichotomies that exist in education and the profession - the conflicts of art/craft, education/training, business/profession, theory/practice. It is the movement to the community. Architects can then meet the responsibility to basic human need and can realize theory in the world. This third path, between the two extremes, also fosters the development of sustainable environment - both natural and political. In meeting this responsibility, architects help foster human dignity. This, in the end, is the value of the profession.

CHAPTER 1 - INTRODUCTION

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APPENDIX A: SCOPE OF ARCHITECTURAL SERVICES

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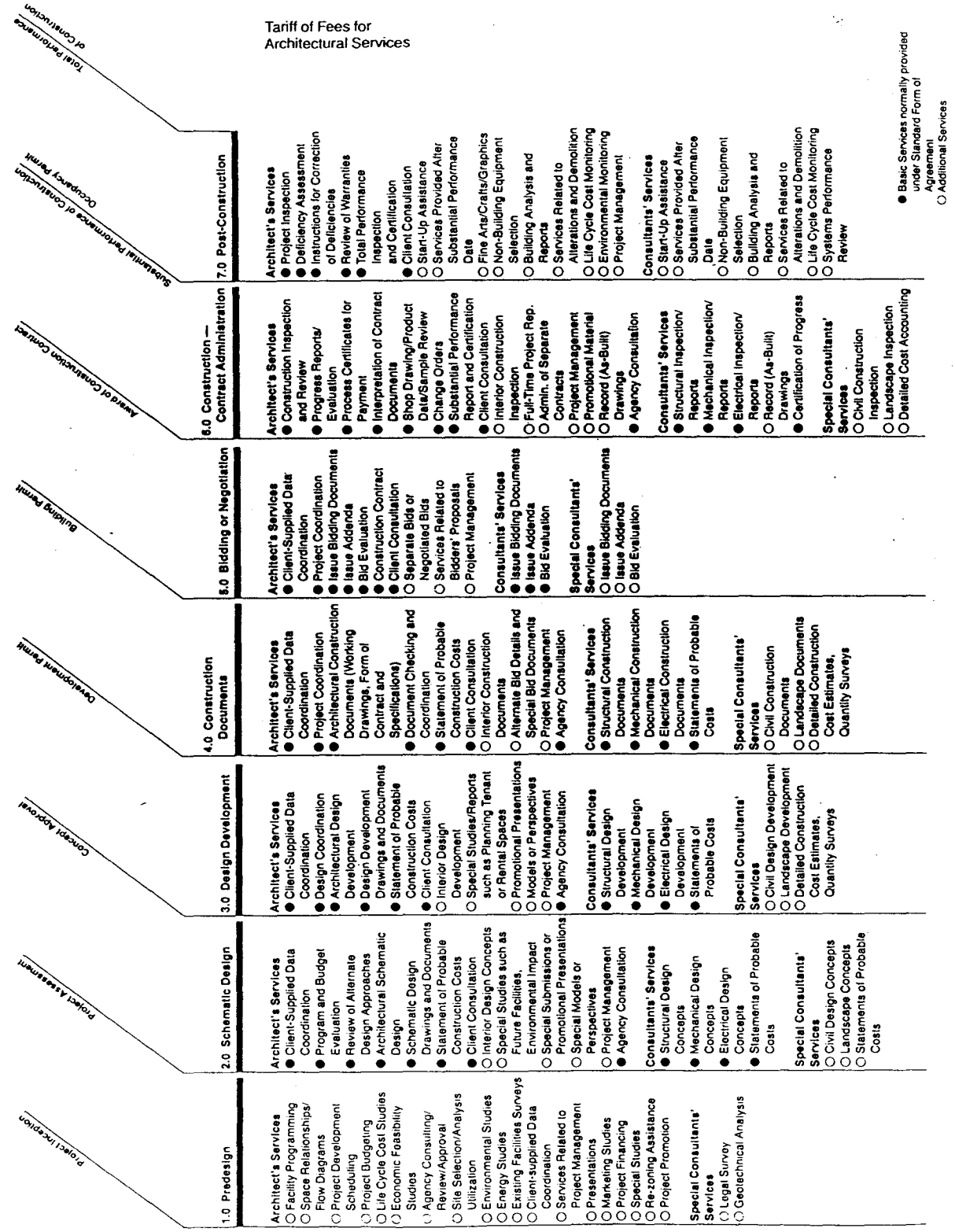
Architectural Scope of Services (AIBC, 1991)



Hippocratic Oath (Duncan, et al, 1977)

I swear by Apollo the physician, by Aesculapius, Hygeia and Panacea, and I take to witness all the gods, all the goddesses, to keep according to my ability and my judgement the following Oath:

To consider dear to me as my parents him who taught me this art; to live in common with him and if necessary to share my goods with him; to look upon his children as my won brothers, to teach them his art if they so desire without fee or written promise; to impart to my sons and the sons of the master who taught me and the disciples who have enrolled themselves and have agreed to the rules of the profession, but to these alone, the precepts and the instruction. I will prescribe regimen for the good of my patients according to my ability and my judgement and never do hare to anyone. To please no one will I prescribe a deadly drug, nor give advice which may cause his death. Nor will I give a woman a pessary to procure abortion. But i will preserve the purity of my life and my art. I will not cut for stone, even for patients in whom the disease is manifest; I will leave this operation to be performed by practitioners (specialists in this art). In every house where I come I will enter only for the good of my patients, keeping myself far from all intentional ill-doing and all seduction, and especially from the pleasures of love with women or with men, be they free or slaves. All that may come to my knowledge in the exercise of my profession or outside of my profession or in daily commerce with men, which ought not to be spread abroad, I will keep secret and will never reveal. If I keep this oath faithfully, may I enjoy my life and practise my art, respected by all men and in all times; but if I swerve from it or violate it, may the reverse by my lot."

Codes of Ethics - Engineers & Geoscientists
(As amended August, 1990)

ENGINEERS AND GEOSCIENTISTS ACT
BYLAWS OF THE ASSOCIATION

(Amended November, 1989)

Change of Bylaws

13 (a) The introduction of new Bylaws and the amendment or repeal of existing Bylaws shall be effected in the manner prescribed in Sections 7 and 8 of the Act.

13 (b) Any request by a member or members of the Association for the introduction of a new bylaw, or the amendment or repeal of an existing bylaw, shall be given in writing to the Registrar and shall be considered by the Council within sixty days of the receipt of such request. If necessary a letter ballot shall be taken as provided in Section 9 of the Act, and if the proposed new bylaw, amendment or repeal of existing bylaw is approved by a two-thirds majority of the votes cast, such action shall be considered as a mandate to the Council.

Code of Ethics

14 Preamble – The following is prescribed as the Code of Ethics of the Association, and the Engineer is bound by its provisions just as he is bound by the provisions of the Engineers Act, 1979 and by the Bylaws of the Association.

The professional engineer shall act at all times with fairness, loyalty and courtesy to his associates, employers, employees and clients, and with fidelity to the public needs. He shall approach his work with devotion to high ideals, personal honour and integrity.

The purpose of the Code is two-fold:

(1) To give general statements of the principles of honourable conduct which, over the years, members of the profession of engineering have come to accept as required of each member in order that he may fulfill his duty to the public, to the profession, and to his fellow members.

(2) To give some specifics in the sub-sections, both of required standards and prohibited actions, in order that they may act as a guide, to the intent of the general statements. These specifics, it is emphasized, are only some examples of the broad principles upon which members of this profession must appraise and govern their own conduct.

The following Code of Ethics is promulgated as a general guide and not as a denial of the existence of other duties equally imperative, but not specifically included.

Section 1

The Engineer will be guided in all his professional relations by the highest standards of integrity.

(a) He will be realistic and honest in the preparation of all estimates, reports, statements and testimony.

(b) He will not distort or alter facts in an attempt to justify his decisions or avoid his responsibilities.

(c) He will advise his client or employer when he believes a project will not be successful or in the best interests of his client or his employer or the public.

(d) He will not engage in any work outside his salaried work to an extent prejudicial to his salaried position.

(e) In the interpretation of contract documents, he will maintain an attitude of scrupulous impartiality as between parties and will, as far as he can, ensure that each party to the contract will discharge the duties and enjoy the rights set down in the contract agreement.

(f) He will not use his professional position to secure special concessions or benefits which are detrimental to the public, his clients or his employer.

Section 2

The engineer will have proper regard for the safety, health and welfare of the public in the performance of his professional duties. He will regard his duty to the public safety and health as paramount.

(a) He will guard against conditions that are dangerous or threatening to life, limb or property on work for which he is responsible, or if he is not responsible will properly call such conditions to the attention of those who are responsible.

(b) He will present clearly the consequences to be expected if his engineering judgment is overruled.

(c) He will seek opportunities to work for the advancement of the safety, health and welfare of his community.

(d) He will guard against conditions which are dangerous or threatening to the environment and he will seek to ensure that all standards required by law for environmental control are met.

Section 3

The Engineer may promote and advertise his work or abilities provided that:

(a) The advertising preserves the public interest by reporting accurate and factual information which neither exaggerates nor misleads.

(b) The advertising does not impair the dignity of the profession.

(c) Statements do not convey criticism of other engineers directly or indirectly.

Section 4

The Engineer will endeavor to extend public knowledge and appreciation of engineering and its achievements and will endeavor to protect the engineering profession from misrepresentation and misunderstanding.

(a) He will not issue statements, criticisms, or arguments on engineering matters connected with public policy which are inspired or paid for by private interests, unless he indicates on whose behalf he is making the statement.

Section 5

The Engineer may express an opinion on an engineering subject only when founded on adequate knowledge and honest conviction.

(a) In reference to an engineering project in a group discussion or public forum, he will strive for the use of pertinent facts, but if it becomes apparent to the engineer that such facts are being distorted or ignored, he should publicly disassociate himself from the group or forum.

Section 6

The Engineer will undertake engineering assignments for which he will be responsible only when qualified by training or experience; and he will engage, or advise engaging, experts and specialists whenever the client's or employer's interests are best served by such service.

(a) He will not sign or seal plans, specifications, reports or parts thereof unless actually prepared by him or prepared under his supervision.

Section 7

The Engineer will not disclose confidential information concerning the business affairs or technical processes of any present or former client or employer without his consent.

Section 8

The Engineer will endeavor to avoid a conflict of interest with his employer or client, but when such conflict is unavoidable, the Engineer will fully disclose the circumstances to his employer or client.

(a) He will inform his client or employer of any business

ENGINEERS AND GEOSCIENTISTS ACT
BYLAWS OF THE ASSOCIATION

(Amended November, 1989)

connections, interests, or circumstances which may be deemed as influencing his judgment or the quality of his services to his client or employer.

(b) He, while a member of any public body, will not act as a vendor of goods or services to that body.

Section 9

The Engineer will uphold the principle of appropriate and adequate compensation for those engaged in engineering work.

(a) He will not normally undertake or agree to perform any engineering service on a free basis, except for civic, charitable, religious, or nonprofit organizations when the professional services are advisory in nature.

(b) He will not compete improperly by reducing his usual charges to underbid a fellow engineer after having been informed of that engineer's charge.

Section 10

The Engineer will not accept compensation, financial or otherwise, from more than one interested party for the same service, or for services pertaining to the same work, unless there is full disclosure to and consent of all interested parties.

(a) He will not accept financial or other considerations, including free engineering designs, from material or equipment suppliers as a reward for specifying their product.

(b) He will not accept commissions or allowances, directly or indirectly, from contractors or other parties dealing with his clients or employer in connection with work for which he is responsible.

Section 11

The Engineer will not compete unfairly with another engineer by attempting to obtain employment or advancement or professional engagements by taking advantage of a salaried position, or by criticizing other engineers or by other improper or questionable methods.

(a) He will not attempt to supplant another engineer in a particular employment after becoming aware that definite steps have been taken toward the other's employment.

(b) He will not offer to pay, or agree to pay either directly or indirectly, any commission, political contribution, gift, or other consideration in order to secure work.

(c) He will not solicit or accept an engineering engagement on a contingent fee basis if payment depends on a finding of economic feasibility or other preconceived conclusion.

Section 12

The Engineer will not attempt to injure maliciously or falsely, directly or indirectly, the professional reputation, prospects or practice of another person.

(a) He will not accept any engagement to review the work of a fellow engineer except with the knowledge of and after communication with such fellow engineer, where such communication is possible.

(b) He will refrain from expressing publicly an opinion on an engineering subject unless he is informed as to the facts relating thereto.

(c) Unless he is convinced that his responsibility to the community requires him to do so, he will not express professional opinions which reflect on the ability or integrity of another person or organization.

(d) He will exercise due restraint in his comments on another engineer's work.

(e) If he considers that an engineer is guilty of unethical, illegal or unfair practice, he will present the information to the Registrar of the Association.

(f) An engineer is entitled to make engineering comparisons of the products offered by various suppliers.

Section 13

The Engineer will not associate with or allow the use of his name by an enterprise of questionable character, or by one which is known to engage in unethical practice.

(a) He will not use association with a non-engineer, a corporation, or partnership as a "cloak" for unethical acts, but must accept personal responsibility for his professional acts.

Section 14

The Engineer will give credit for engineering work to those to whom credit is due, and will recognize the proprietary interests of others.

(a) Whenever possible, he will name the person or persons who may be individually responsible for designs, inventions, writings, or other accomplishments.

(b) When an engineer uses designs supplied to him by a client or by a consultant, the designs remain the property of the client or consultant and should not be duplicated by the engineer for others without express permission.

(c) Before undertaking work for others in connection with which he may make improvements, plans, designs, inventions, or other records which may justify copyrights or patents, the engineer should enter into a positive agreement regarding the ownership of such copyrights and patents.

Section 15

The Engineer will co-operate in extending the effectiveness of the profession by interchanging information and experience with other engineers and students, and will endeavor to provide opportunity for the professional development and advancement of engineers in his employ or under his supervision.

(a) He will encourage his engineering employees in their efforts to improve their education.

(b) He will encourage engineering employees to attend and present papers at professional and technical society meetings.

(c) He will urge his qualified engineering employees to become registered.

(d) He will assign a professional engineer duties of a nature to utilize his full training and experience, insofar as possible.

(e) He will endeavor to provide a prospective engineering employee with complete information on working conditions and his proposed status of employment, and after employment will keep him informed of any changes in them.

Section 16

The Engineer will observe the rules of professional conduct which apply in the country in which he may practise. If there be no such rules, then he will observe those set out by this code.

AIBC - Bylaws (Excerpt - Para. 30 - 34) (AIBC, 1990)

Architectural
Institute of
British Columbia

970 Richards Street
Vancouver BC
Canada V6B 3C1
604/683-8588
FAX/683-8568

BYLAWS

July 1990

PROFESSIONAL ETHICS

Conduct

30. (1)All Architects are expected to conduct their affairs in a competent and professional manner, and refrain from acts which would reflect unfavourably on the profession as a whole.

(2)No Architect may injure falsely or maliciously, directly or indirectly, the professional reputation, prospects or business of a fellow Architect.

Conflict of Interest

31. (1)No Architect may engage directly or indirectly in any of the building or decorating trades.

(2)This restriction shall not be interpreted to prevent any member of these trades, as a Client, from retaining an Architect on the usual Client-Architect basis.

(3)No Architect may have ownership or pecuniary interest in any building material, device or invention proposed to be used in work for which he is Architect without informing his Client of that fact before use.

(4)An Architect shall not give or permit any public endorsement of any building material or service by means of a statement to which his name is attached or with which his portrait is displayed.

July 1990

Conflict of Interest (cont'd)

(5)No Architect may accept any payment or substantial service from a Contractor or any interested party other than his client.

Advertising

32. An Architect may promote or advertise his abilities as follows:

(1)He may display his name and illustrations of his work at his place of business.

(2)He may erect a sign bearing his name and address on work he has under construction.

(3)He may, with the Owner's consent, affix his name permanently to work for which he has been the Architect.

(4)An Architect may promote or advertise his abilities provided that:

(a)the advertising preserves the public interest by reporting accurate and factual information which neither exaggerates nor misleads;

(b)the advertising does not impair the dignity of the profession;

(c)statements do not contain criticisms of other architects directly or indirectly;

(d)fees are neither quoted nor implied;

(e)the advertisement shall not promote or advertise any party or parties other than the subject firm or architects;

(f)all such advertising shall indicate that the architect is a member of the Architectural Institute of British Columbia.

(5)When an Architect has been retained on the usual basis to design a definite project he may display such designs by publishing them in newspapers or magazines or otherwise presenting them to the public, provided the name of the project and the name of the architect are prominently displayed on each drawing.

July 1990

Advertising (cont'd)

(6)An Architect shall not display drawings of an indefinite or imaginary project for which there is no client, unless it is a recognized Architectural Exhibit or otherwise as authorized by Council.

(7)An Architect may present lectures of an educational nature either with or without remuneration.

(8)No Architect may promote or advertise his work or abilities beyond the limits set out in sub-paragraphs (1) and (7) above.

Competition

33. (1)An Architect may approach a prospective Client either on his own initiative or at the request of such prospective Client. In either case the Architect shall not attempt to influence the prospective Client's position by any submission of designs or technical data pertaining to the project in question, or by the provision of any form of service, until he has been formally retained and is in full receipt of the Client's instructions.

(2)No Architect may attempt, directly or indirectly, to supplant a fellow architect after definite steps have been taken toward his employment.

(3)More than one Architect may not submit to a Client designs, technical data or any form of service on the same problem except through the medium of a formal competition, or as may be specifically approved in writing by the Council, or subject to (5) below.

The Council may approve of such special arrangements if it is satisfied that all such Architects retained will be equitably dealt with, equally and adequately recompensed.

(4)No Architect may undertake a commission until the services of any Architect previously retained for the work have been terminated.

July 1990

Competition (cont'd)

(5)No Architect may enter a formal competition as competitor, advisor or juror, unless such a competition be approved in writing by the Council. Unless the Council rules otherwise, such approval may be assumed to be automatically given to any formal competition which meets and is conducted under the most recent edition of the "Canadian Rules for the Conduct of Architectural Competitions".

(6)No Architect may, except as a duly authorized competitor, attempt to obtain work for which an approved competition is in progress.

(7)No Architect may attempt to influence, directly or indirectly, the awards in any approved competition.

(8)No Architect may accept a commission to do work for which an approved competition has been instituted, if he has acted in an advisory capacity, either in drawing the conditions or making the awards.

Architectural Competitions

34. Formal architectural competitions shall be conducted according to the Canadian Rules for the Conduct of Architectural Competitions, and amendments thereto, or as Council may otherwise direct.

Experience Record Book - Examining Board, AIBC (AIBC, 1990)

QUARTERLY EXPERIENCE RECORD SHEET	EMPLOYER ADDRESS	PERIOD OF EMPLOYMENT FROM TO
Describe Project Type and Size On Which Major Experience Is Gained.	TIME RECORD Report Major Area Of Responsibility For Each Day Of Each Week	Insert Appropriate Month and Week Ending Total Days
PROJECT No. 1	**PROJECT ANALYSIS** Proj. No.	
	Feasibility Studies	
	Financial Analysis	
	Location & Site Analysis	
	Master Planning	
	Operational Programming	
	Other	
	SCHEMATIC DESIGN Proj. No.	
	Initial Studies	
PROJECT No. 2	Presentation Material	
	Other	
	DESIGN DEVELOPMENT Proj. No.	
	Design	
	Presentation Material	
	Other	
	CONSTRUCTION DOCUMENTS WORKING DRAWINGS Proj. No.	
PROJECT No. 3	Preplanning Production	
	Plans, Sections, Elevations	
	Details, Schedules	
	Other	
	CONSTRUCTION DOCUMENTS SPECIFICATIONS Proj. No.	
	Outline Specifications	
	Specifications	
	Other	
PROJECT No. 4	**ADMINISTRATION OF CONSTRUCTION CONTRACT (GENERAL REVIEW)** Proj. No.	
	Office Functions	
	Field Functions	
	Post Construction Services	
	COST PLANNING CONTROL Proj. No.	
	Predesign Budget Review	
	Schematic Design Cost Plan	
PROJECT No. 5	Design Development Cost Checks	
	Contract Document Cost Checks	
	Pre-Tender Estimates	
	Other	
	CO-ORDINATION OF CONSULTANTS Proj. No.	
	Struct./Mech/Elect. - Schematic Design	
	Struct./Mech/Elect. - Design Development	
	Struct./Mech/Elect. - Contract Documents	
PROJECT No. 6	Other	
	TENDER/CONTRACT AWARD Proj. No.	
	Tendering	
	Tender Opening/Analysis/Award	
	Other	
	OFFICE ADMINISTRATION Proj. No.	
	Promotion/Marketing	
	Financial Management	
	Management Information Systems	
	Other	
	VACATION TIME	

PROJECT No. 7

PROJECT No. 8

PROJECT No. 9

TASK PARTICIPATION

RESPONSIBILITY RECORD: Report Major Responsibility Discharged At End of Each Week As Observer Or Employer's Representative	Insert Appropriate Month and Week Ending												Total Tasks
Meetings with Client													
Meetings with Authorities Having Jurisdiction													
Meetings with Consultants													
Site Meetings													
Office Administration Meetings													
Meetings with Ratepayers/etc.													
Other Meetings													
Assembly of Tender Documents													
Addenda Preparation													
Construction Tender Enquiries													
Site Meeting Reports													
Client Meeting Reports													
Field Review Reports													
Field Orders & Contemplated Change Orders													
Appraisal of Contractor's Quotation													
Appraisal of Progress Application													
Certificate of Payment													
Substantial Performance Inspection													
Final Performance Inspection													
Substantial Performance Certificate													
Final Performance Certificate													
Review of Shop Drawings													
Review of Construction Schedules													
Review of As-Builts/Guarantees													
Time Studies/Scheduling													
Client Invoices													
Client Agreements													
Consultant Agreements													
Other													
												TOTAL	

CANDIDATE'S REMARKS

CANDIDATE'S QUARTERLY DECLARATION:

NAME: (Please print)

I declare that the preceding is a correct record of my experience from to

Date Signature

SUPERVISING/CERTIFYING ARCHITECT'S REMARKS:

Signature

DECLARATION OF SUPERVISING ARCHITECT:

As an Architect in the Province of
I hereby declare that the above record for the period from to
is an accurate record of the experience gained by the candidate.

Date Signature

DECLARATION OF CERTIFYING ARCHITECT:

As an Architect in the Province of
I hereby declare that the above record is to the best of my knowledge a true record of the experience gained by the candidate.

Date Signature

Curriculum - UBC School of Architecture (UBC, 1991)

BACHELOR'S DEGREE PROGRAM (B.Arch.)

Instruction in the School is offered through several types of courses:

a) The INTRODUCTORY WORKSHOP, given to all new students entering the program, for a period of about two weeks prior to Labour Day; involves the study of selected environments in the form of an extended field trip.

b) LECTURE COURSES AND SEMINARS

c) DESIGN TUTORIAL COURSES based on individual instruction using the project method. The student develops designs and communicates ideas through drawing for projects which may by hypothetical, or proposals for actual projects and sites. Students are expected to present and defend their proposals in the course of critical dialogue with faculty, visiting professionals, and their peers during reviews.

Program of Study: To qualify for the degree of Bachelor of Architecture an incoming student must complete satisfactorily a minimum of 110 credits of course work selected on the basis of the following program of study:

Three Required Workshop Courses

Course		Credits	
ARCH	406	2	Introductory Workshop
ARCH	411	0	Computer Workshop
ARCH	412	2	Techniques Workshop
Total		**4**	

Thirteen Required Lecture Courses

Course		Credits	
ARCH	413	3	Introduction to Issues and Ideas in Architecture
ARCH	404	3	Architectural History[1]
ARCH	405	3	Architectural History[1]
one of:			
ARCH	424	3	History of Urban Form
or	448		History of Theories of Architecture
or	446		Current Issues in Architecture
ARCH	409	3	Introduction to the Behavioural Basis of Design[1]
ARCH	426	3	Architectural Technology 1[1]
ARCH	416	3	Architectural Structures 1[1]
ARCH	452	3	Environmental Control Systems 1[1]
ARCH	427	3	Architectural Technology 2
ARCH	436	3	Architectural Structures 2
ARCH	454	3	Environmental Control Systems 2
ARCH	423	3	Process and Practice of Architecture 1[1]
ARCH	422	1	Project Costing
Total		**37**	

[1] These courses are a prerequisite to more advanced level courses and should therefore be completed in the first and second year of the program. ARCH 412, 413, and 426 are taken concurrently with ARCH 400 design tutorial.

Seven Design Courses:

Course		Credits	
ARCH	400	9	Arch Design 1A
ARCH	401	9	Arch Design 1B
ARCH	420	9	Arch Design 2A
ARCH	421	9	Arch Design 2B
ARCH	440	9	Arch Design 3A
ARCH	498	3	Graduation Project: Part 1
ARCH	499	9	Graduation Project: Part 2
Total		**57**	

Four Elective Courses normally selected from the following list:

Course		Credits	
ARCH	424	3	History of Urban Form
ARCH	425	3	History of Urban Planning: Workshop
ARCH	442	3	Housing and Community
ARCH	445	3	Current Theories of Arch
ARCH	446	3	Contemporary Issues in Arch
ARCH	447	3	Urban Design Workshop
ARCH	448	3	History of Theories of Arch
ARCH	471	3	Meaning in Arch
ARCH	472	3	Meaning and Behaviour in the Landscape
ARCH	407	3	Research Methods in Arch Evaluation
ARCH	408	3	Social Aspects of Arch Space
ARCH	474	3	Introduction to Facilities Planning
ARCH	410	3	Arch Graphics
ARCH	417	3	Computer Applications 1
ARCH	419	3	Computer Applications 2
ARCH	485	3	Special Topics in Arch Technology
ARCH	430	3	Arch Acoustics
ARCH	431	3	Light, Colour, and Space
ARCH	455	3	Energy and Building Design
ARCH	456	3	Structures: Special Topics
ARCH	450	3	Design Management
ARCH	451	3	Process and Practice of Arch 2
ARCH	458	3	Arch Seminar
ARCH	459	3	Directed Studies
Total		**12**	

PROGRAM TOTAL 110

Note: A student who enrols in the Study Abroad Program in a year may substitute ARCH 461 Study of Architecture Abroad for nine credits of electives, and ARCH 460 Design Abroad for one of the nine-credit tutorial courses in ARCH 420, 421 or 440, so as to make up a full term's work abroad.

A student who has valid credit for a course similar to a required lecture course in this program may take an extra elective course in lieu of that required course, but still must complete a total of 110 credits in this program.

With the approval of a designated faculty adviser, a student may substitute a course or courses offered by another Department for not more than two electives, providing the course(s) can be shown to be relevant to the program.

Course descriptions are to be found in the alphabetical listings of the Departmental offerings in this Calendar. See the School Handbook for more complete details, including term, time, and location of courses.

Curriculum - Barefoot Architecture (UNESCO, 1983)

FRAMEWORK FOR A TRAINING PROGRAMME

The following programme is evolved to cater to the needs of a person who acquires certain additional skills while already working to support himself and his family. Thus,a flexible and modular approach is felt necessary whereby an individual can undergo training either in small parts or a combination of parts depending upon his or her personal inclination. Also,it is felt necessary that the training should keep opportunities open for those who wish to pursue higher studies at a later stage.

As specific goals the programme addresses itself to the training of

1) community workers with sufficient technical orientation who can mobilize community effort through leadership and example and has sufficient grasp of technical problems to call for appropriate help from local and out side sources and

2) a technical person with very little or no community orientation who is familiar with at least one of the building trades and has sufficient grasp of community problems to orient his work in harmony with the community.

The programme is structured around three primary combinations of courses covering three basic areas: i) technology, ii) management, and iii) community development. Various further combinations are possible, a few of which are suggested here. These can vary depending upon the needs and directions of an individual or a country. But it is felt that the first conbination should be mandatory to all.

The suggested course offerings are, of course, indicative and should not be regarded as comprehensive and offerings must be varied according to different needs and thus the detailed contents of the courses and the methodology in regard to relative weightages, field training etc are left to individual institutions to work out.

COMBINATION I:

Duration - one year

Objectives

1. To equip the student to undertake, or supervise simple day-to-day kind of construction.

2. To equip him in the use of basic tools of various trades involved in the simple construction.

3. To equip him to manage a team of skilled or semi-skilled workers.

4. To equip him to be sympathetic to the problems of the community and identify with both the tradition and aspirations of the people.

Workshop on barefoot architects

Course Areas

Technology

T 1. Introduction to drawing materials and drawing techniques.

T 2. Survey of existing buildings,including preparation of measured drawings.

T 3. Introduction to building materials and their availability.

T 4. Building components.

T 5. Introduction to construction technology traditional to the region.

Management:

M 1. Introduction to cost of construction related to material, labour, and transport.

M 2. Basic accounting and payroll management.

Community Development:

CD 1. Basic communication skills.

CD 2. Introduction to minimum community services and their importance in community development.

COMBINATION II:

Duration one year

Objectives

1. To equip the student to act as a co-ordinator between the community and outside agency.

2. To equip him to initiate technical project related to shelter or services and manage its implementation.

3. To equip him in the basic techniques of survey of physical condition and its communication to community.

4. To relate his role with the welfare of the weaker sections of the society.

The "barefoot architects"

Course Areas

Technology:

T 6. Building materials and techniques (Indigenous).

T 7. Introduction to on-going research in indigenous technology.

T 8. Introduction to new and improved materials and technology.

T 9. Exercise in designing simple one and two storey structures.

T 10. Exercise in site planning and land use planning.

T 11. Survey and levelling.

T 12. Building services and their installation and maintenance.

Management:

M 3. Estimating of Building and services.

M 4. Materials management

M 5. Building and planning By-laws as related to small project.

M 6. Introduction to various Government and non-government agencies and their interrelationship as related to integrated development.

Community Development:

CD 3. Introduction to the structure of society.

CD 4. Introduction to issues in settlement improvement.

CD 5. Human relations and communication skills.

Workshop on barefoot architects

COMBINATION III:

Duration one year

Objectives

1. To develop an understanding of the dynamics of planned purposive change and that of community work with a view to equipping the worker with the capability to initiate the process of change in identifiable communities, groups, and individuals.

2. To equip the student in helping the weaker sections of society to adjust and readjust to the new situation.

3. To equip student with the knowledge of complex problems of development in a developing society perticularly his/her own.

4. To equip the student to deal with emergency situation as related to settlements.

5. To initiate in the students an appreciation of scientific thinking.

Course Areas

T 13. Intermediate mathematics. (pre-requisite:Elementary Mathematics.)

T 14. General Science (Intermediate Physics and Chemistry)

T 15. Basic civil engineering.

T 16. Environmental planning and Ecology.

T 17. Detection of construction faults and maintenance.

T 18. Design and erection of emergency shelter.

Management:

M 7. Manpower and resource mobilization.

M 8. Financial management of projects.

M 9. Legal and administrative management.

M 10. Management of Development agencies.

The "barefoot architects"

Community Development:

CD 6. Social and community development -- surveys and techniques.

CD 7. Motivation,public participation,and education.

CD 8. Project evaluation.

CD 9. Social problems and social change.

CD 10. Problems of weaker sections of the society.

CD 11. Problems of developing societies.

Suggested further combinations.

COMBINATION IV. - Duration two years.
Combination I plus T-6 through T-18.

COMBINATION V. - Duration two years.
Combination I plus M-3 through M-10.

COMBINATION VI. - Duration two years.
Combination I plus CD-3 through CD-11.

COMBINATION VII. - Duration three years.
Combination I plus T-6 through T-18
plus M-3 through M-10

COMBINATION VIII. - Duration three years.
Combination I plus CD-3 through CD-11
plus M-3 through M-10.

COMBINATION IX. - Duration three years.
Combination I plus Combination II
plus Combination III.

WORLD BANK - KIP Design Criteria (World Bank, 1976)

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SCHEDULE 5

Design Standards -
Part A and Part B of Project

The following design standards shall be applied in the execution of Part A and Part B of the Project, subject to such minor modifications or departures as shall be reasonably required to meet the needs and priorities of residents or otherwise justified for reason of economy and efficiency.

(a) Roads and Footpaths

1. Vehicular Roads -

All dwellings at most 100 m from a one-way road and at most 300 m from a two-way road with at least a width of 4 meters paved surface, bordered by 1-meter drainage channels.

2. Paved Footpaths -

Paved footpaths with 1.50 meters paved surface and 0.75-meter drainage channels, for every dwelling not located on a road.

(b) Water Supply

About 20 liters per person per day from public water taps connected either to the municipal system by means

of a distribution system with a potential capacity of 60 liters per person per day or deep tube wells; public water taps shall be provided in sufficient numbers adequately to serve the residents, taking into account existing private facilities. For Jakarta, the number of taps will, as a minimum, be:

for the North District	1 per 5 ha.
for the South District	1 per 20 ha.
for the East District	1 per 20 ha.
for the West District	1 per 8 ha.
for the Central District	1 per 3 ha.

(c) Sanitation

1. Sanitary Facilities -

For each dwelling one toilet with pit privies where feasible; where space or groundwater conditions do not permit pit privies, small communal toilet facilities with septic tanks will be constructed.

2. Garbage Carts -

Carts with a capacity of 2 m^3 shall be provided to serve 8 hectares each on a regular schedule of house collections, and deposits at garbage boxes.

3. Garbage Boxes -

Garbage boxes with a 6 m^3 capacity shall be provided to serve about 65 dwellings.

4. Garbage Trucks and Trailers -

Garbage trucks shall be provided to serve about 150,000 people each in Jakarta; tractors with 4 garbage trailers each shall be provided to serve about 40,000 people each in Surabaya.

(d) Schools

Elementary schools shall be constructed to serve in combination and on a double-shift basis at least 75% of the children eligible to attend grades 1-6 and living in the kampungs included in Part A and Part B of the Project.

(e) Health Clinics

Health clinics (puskesmas) will be constructed in Jakarta and Surabaya in such number and in such location as to provide adequate health clinic services to each Kampung included in Part A or Part B on the basis of one clinic for approximately 30,000 residents.

30 health offices (pos Kesehatan) will be built in Jakarta and 5 health offices in Surabaya.

BUILDING INFORMATION CENTRE (BIC) - Pamphlets

TIKUS

PITB / BIC BALI

PROYEK PENYULUHAN DAN PERINTISAN
PERBAIKAN PERUMAHAN RAKYAT BALI
KOMP. CIPTA KARYA WERDHAPURA P.O. BOX 170
TELEPON 8176 SANUR DENPASAR

publ. 04 / 87-88

PENDAHULUAN :

T I K U S merupakan hama yang dapat mengakibatkan goncangnya kelestarian antara manusia dan lingkungannya. Tikus dapat mengakibatkan timbulnya beberapa hal yang merugikan, antara lain :

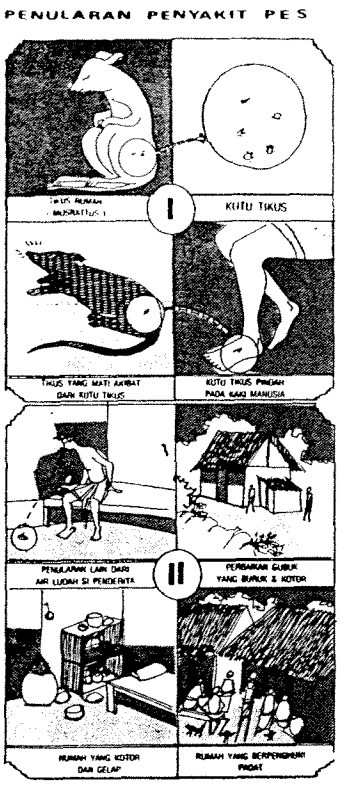
1. Timbulnya bibit penyakit pes.
2. Kerusakan pada bangunan karena tikus membuat sarangnya pada konstruksi bangunan. Disamping itu pula merusak tanaman disawah dan diladang.

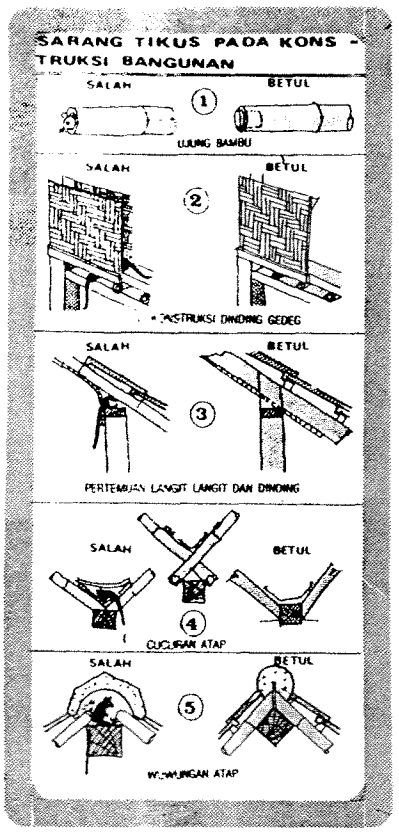
1. PENYAKIT PES :

- Dibakibkan dan dijangkitkan melalui kutu - kutu tikus.
- Berkembang sangat pesat pada rumah - rumah yang gelap, padat dan kotor.
- Tidak dapat berkembang pada ruangan dengan udara yang tinggi suhunya.
- Meskipun demikian berkat jasa Prof. Otten yang menemukan serum penyakit pes, sehingga dapat mencegah epidemis tersebut.

2. PADA BANGUNAN :

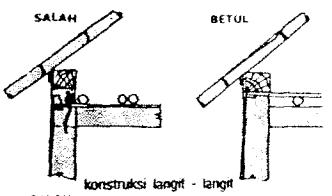
- Tikus yang bersarang pada rumah merusak bahan bangunan.
- Pada pembuatan rencana bangunan dan semua konstruksi bangunan harus anti tikus.
- Tikus dapat membuat sarang - sarang pada konstruksi atap, dinding, dan dalam lubang bambu.
- Bila mempergunakan bambu, konstruksi harus anti tikus.
- Penerangan dalam rumah harus baik.
- Sebaiknya konstruksi bangunan tidak mempergunakan bahan yang berlobang ...



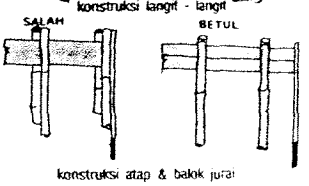


SARANG TIKUS PADA KONSTRUKSI BANGUNAN

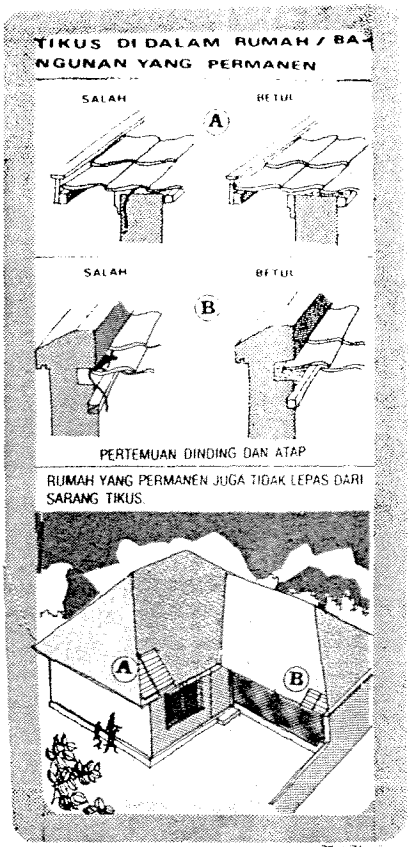
1. Bambu yang pada ujungnya terbuka dapat ditutup dengan kayu atau besi.
2. Dinding dari gedeg yang berlapis dua dengan ada antara pada kedua buah dinding merupakan tempat tikus bersarang, hilangkan antara pada kedua buah dinding.
3. Tempat pertemuan antara langit-langit dan dinding harus tertutup rapat dan langit-langit yang dibuat harus dicat atau dilabur setebal mungkin.
4. Ruang antara cucuran atap dan balok jurai harus anti tikus.
5. Ruang dibawah wuwungan harus anti tikus. Atap daun alang-alang tidak boleh dipakai pada daerah yang berpenyakit pes dan atap harus dengan genteng atau seng.

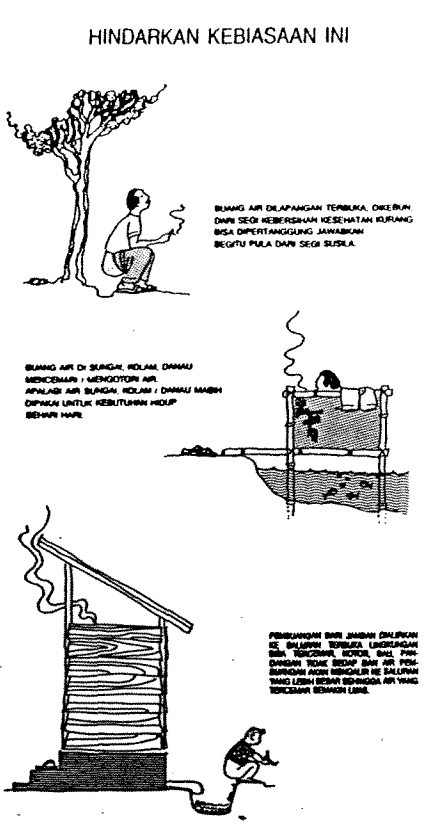


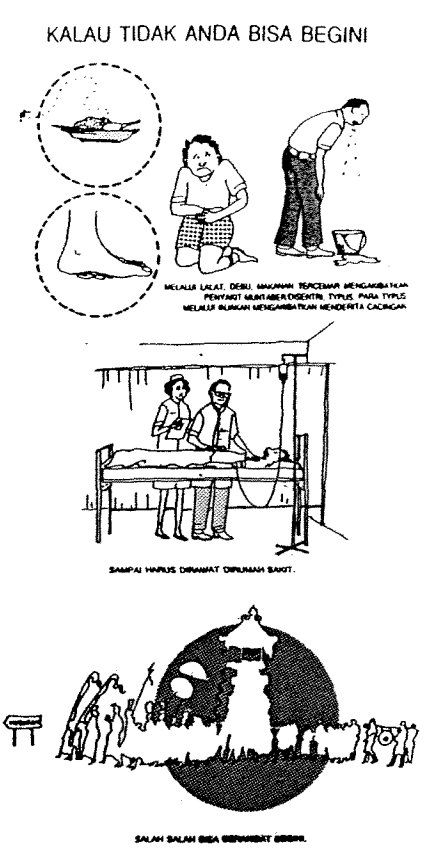
konstruksi langit - langit



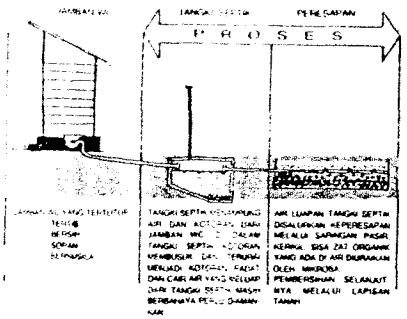
konstruksi atap & balok jurai







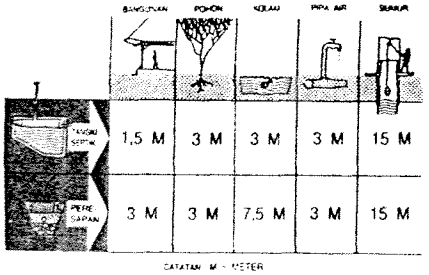
MENGAMANKAN PEMBUANGAN AIR KOTOR



GUNAKAN KONSTRUKSI "LEHER ANGSA" PADA JAMBAN

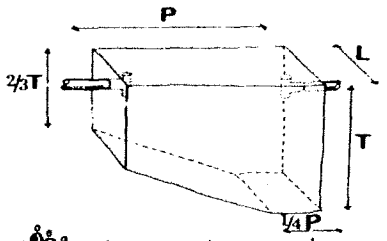
AIR PADA KONSTRUKSI LEHER ANGSA BERGUNA UNTUK
- MENCEGAH MASUKNYA SERANGGA (KECOA, LALAT DLL.)
- MENCEGAH KELUARNYA BAU BUSUK

JARAK AMAN TANGKI SEPTIK DAN PERESAPAN



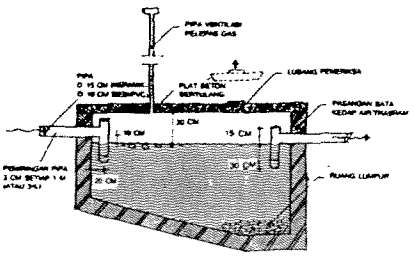
CATATAN : M = METER

CONTOH TANGKI SEPTIK



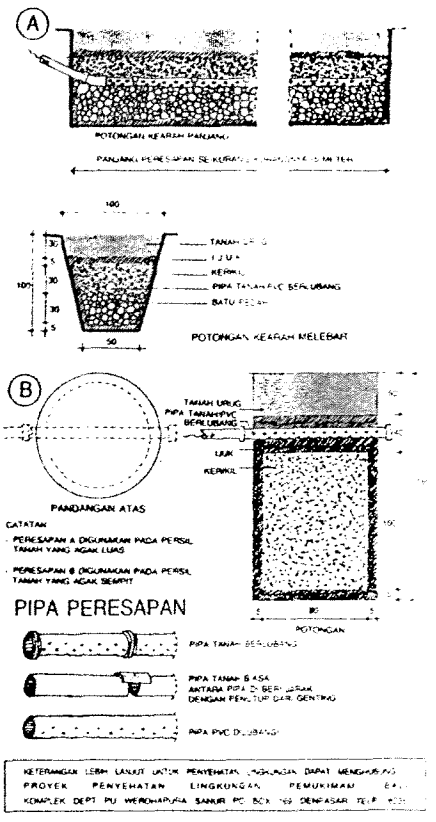
	P	L	T
5 ORANG	2.10 M	1.00 M	1.45 M
10 ORANG	2.90 M	1.25 M	1.60 M
15 ORANG	3.10 M	1.50 M	1.60 M
20 ORANG	3.60 M	1.70 M	1.70 M
25 ORANG	4.00 M	1.90 M	1.70 M
50 ORANG	5.30 M	2.50 M	1.90 M

CATATAN : P = PANJANG, L = LEBAR, T = TINGGI, M = METER.



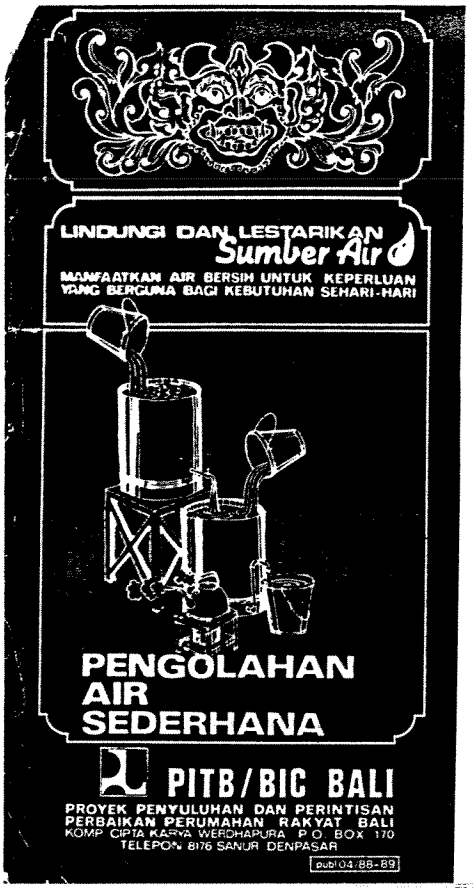
POTONGAN KEARAH PANJANG

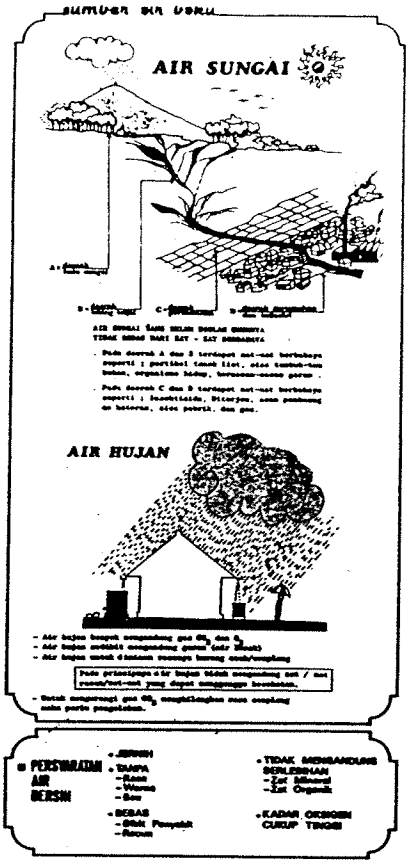
CONTOH PERESAPAN

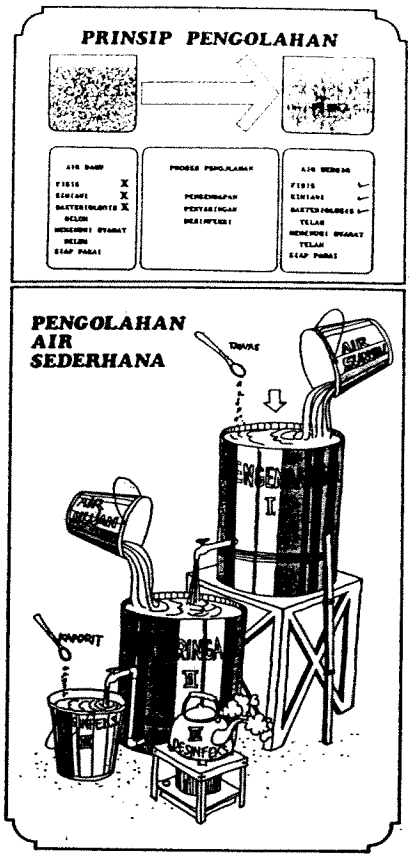


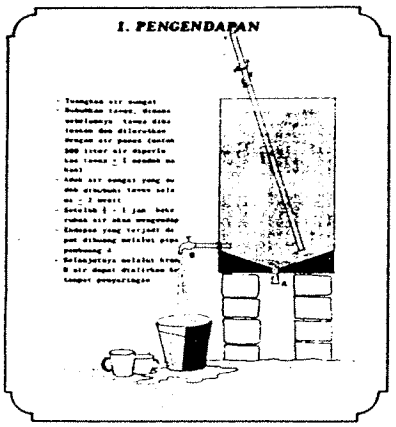
CATATAN :
- PERESAPAN A DIGUNAKAN PADA PERSIL TANAH YANG AGAK LUAS
- PERESAPAN B DIGUNAKAN PADA PERSIL TANAH YANG AGAK SEMPIT

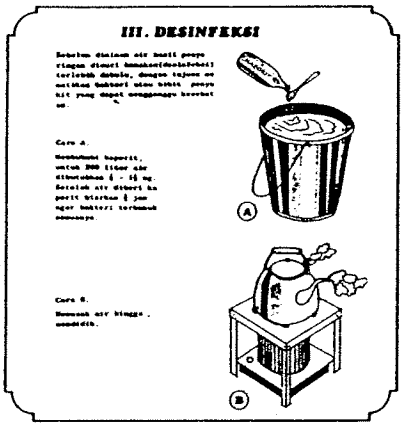
KETERANGAN LEBIH LANJUT UNTUK PENYEHATAN LINGKUNGAN DAPAT MENGHUBUNGI PROYEK PENYEHATAN LINGKUNGAN PEMUKIMAN DI KOMPLEK DEPT PU WERDHAPURA SANUR PO BOX 170 DENPASAR TELP 8176


LINDUNGI DAN LESTARIKAN
Sumber Air
MANFAATKAN AIR BERSIH UNTUK KEPERLUAN YANG BERGUNA BAGI KEBUTUHAN SEHARI-HARI
PENGOLAHAN AIR SEDERHANA
PITB/BIC BALI
PROYEK PENYULUHAN DAN PERINTISAN PERBAIKAN PERUMAHAN RAKYAT BALI
KOMP CIPTA KARYA WERDHAPURA P.O. BOX 170
TELEPON 8176 SANUR DENPASAR
publ 04-88-89

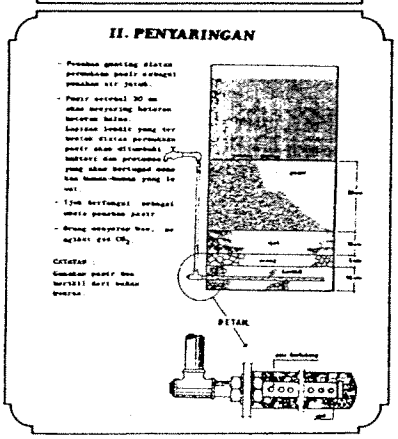

AIR SUNGAI
AIR HUJAN
PERSYARATAN AIR BERSIH
JERNIH
TANPA
BEBAS
TIDAK MEMBAHAYAKAN KESEHATAN
KADAR OKSIGEN CUKUP TINGGI

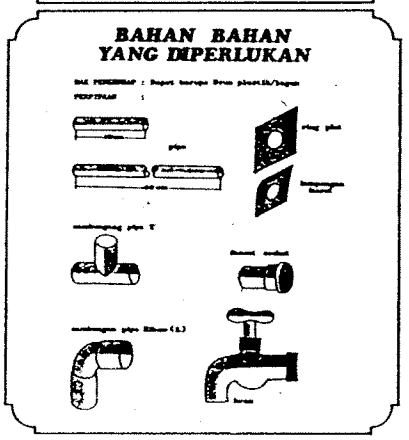

PRINSIP PENGOLAHAN
PENGOLAHAN AIR SEDERHANA
AIR MINUM
DESINFEKSI

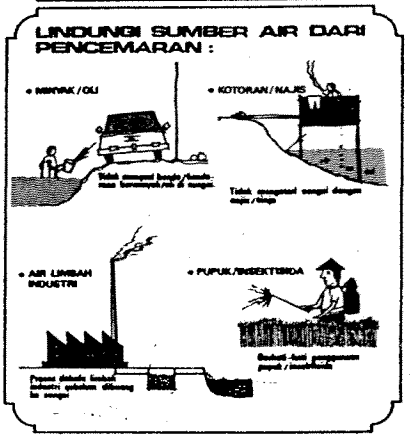

I. PENGENDAPAN


III. DESINFEKSI

LINDUNGI/LESTARIKAN SUMBER AIR


II. PENYARINGAN
PASIR


BAHAN BAHAN YANG DIPERLUKAN


LINDUNGI SUMBER AIR DARI PENCEMARAN :
MINYAK/OLI
KOTORAN/NAJIS
AIR LIMBAH INDUSTRI
PUPUK/INSEKTISIDA

PRAKATA

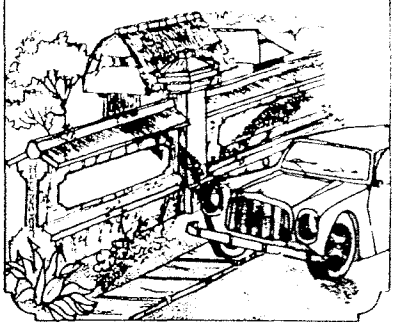
- Jalan setapak dimaksudkan sebagai sarana penghubung untuk pejalan kaki, yang ditata demi keindahan lingkungan.
- Didalam pelaksanaannya dilengkapi dengan saluran air untuk menghindari genangan air diwaktu musim hujan.

KEUNTUNGAN JALAN SETAPAK

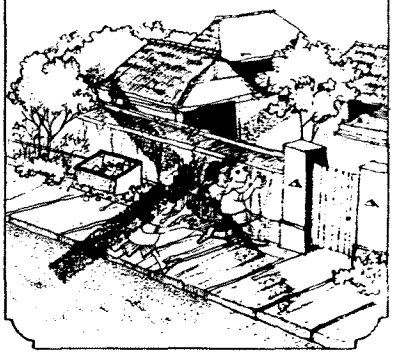
- Tidak becek pada waktu musim hujan sehingga :
  - Tidak menggangu kesehatan.
  - Tidak menjadi sarang nyamuk.
- Tidak berdebu pada waktu musim kemarau.

JALAN SETAPAK BUKAN UNTUK :

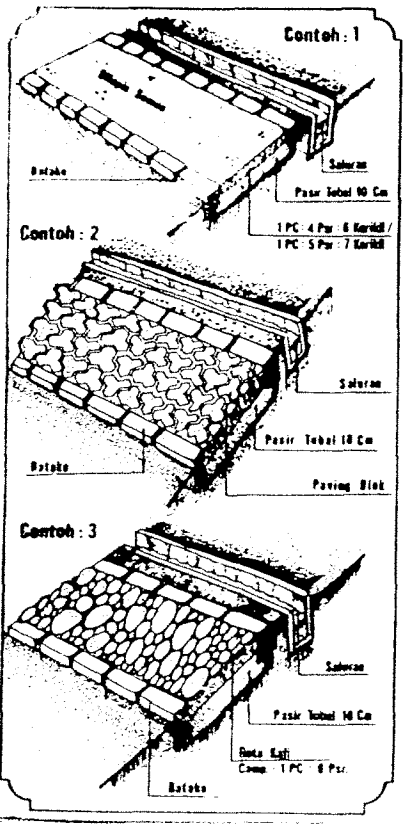
TEMPAT PARKIR !!!



TEMPAT BERMAIN !!!

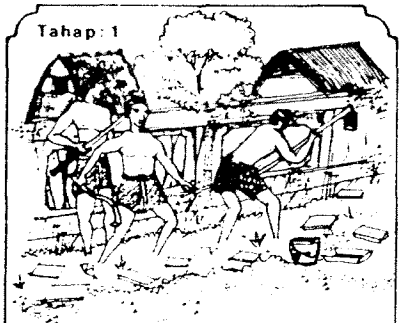


MACAM JALAN SETAPAK



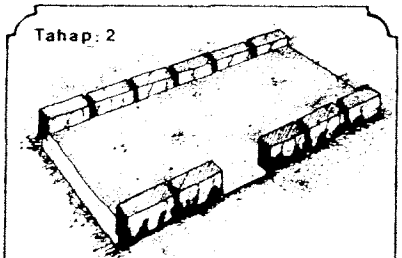
CARA PEMBUATAN JALAN SETAPAK

Tahap : 1



- Tumbuhan dan kotoran dibersihkan.
- Tanah digali secukupnya (sesuai dengan kebutuhan).
- Kemudian tanah dipadatkan.

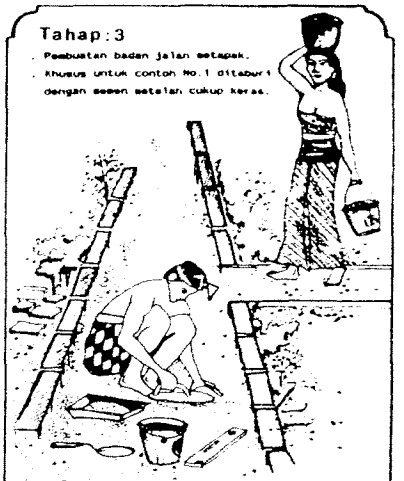
Tahap : 2



- Untuk lapisan dasar dipakai pasir yang bersih dan berbutir keras se tebal 10 cm.
- Bataco dipasang sebagai pengunci jalan setapak.

Tahap : 3

- Pembuatan badan jalan setapak.
- Khusus untuk contoh No.1 ditabur dengan semen setelah cukup keras.



KELEBIHAN DAN KEKURANGAN UNTUK MASING-MASING CONTOH :

Contoh 1 (Semen) :
- .Kelebihan: - Bahan mudah didapat.
  - Pengerjaannya mudah.
  - Biaya murah.
- .Kekurangan:- Cepat retak dan haus

Contoh 2 (Paving block):
- Kelebihan: - Permukaan rapi.
  - Bila rusak/pecah mudah diganti.
  - Pengerjaan mudah dan cepat.
- .Kekurangan:- Biaya relatif mahal.

Contoh 3 (Batu Kali) :
- .Kelebihan: - Penampilan alami.
  - Bahan mudah diperoleh
  - Pengerjaan mudah.
- .Kekurangan:- Permukaan tidak rata.

THE ARCHITECT'S ACT (Province of British Columbia, 1987)

ARCHITECTS ACT

CHAPTER 19

[Consolidated November 14, 1986]

Interpretation

1. In this Act

"architect" means a person who is engaged in the planning or supervision of the erection or alteration of a building for a person other than himself, but does not include a draughtsman, student, clerk of works, superintendent or other employee of a registered architect, or a superintendent of buildings paid by the owner and acting under the direction and control of a registered architect;

"building" means a structure consisting of foundations, walls or roof, with or without other parts.

RS1960-16-2.

Corporation

2. (1) The Architectural Institute of British Columbia is continued as a corporation and referred to in this Act as the institute.

(2) The institute

(a) has perpetual succession;

(b) shall have a common seal;

(c) may sue and be sued;

(d) may acquire and dispose of property; and

(e) may borrow money and mortgage or otherwise encumber the property of the institute to secure money borrowed for the purposes of the institute.

RS1960-16-3; 1979-2-4.

Members

3. The members of the institute shall be

(a) those persons who were, on March 15, 1955, registered members of the institute and resident in the Province;

(b) those persons who are subsequently registered as members.

RS1960-16-4.

Head office

4. The head office of the institute shall be in the City of Vancouver.

RS1960-16-5.

Council and powers

5. There shall be a council of the institute (the "council") which, subject to this Act and the bylaws of the institute, shall govern the affairs of the institute and may by resolution make rules necessary for that purpose.

RS1960-16-6.

Members of council

6. (1) The council shall consist of 12 members.

(2) The Lieutenant Governor in Council shall appoint 2 members to hold office during pleasure, one of whom need not be a member of the institute.

(3) Where at the time the Lieutenant Governor in Council makes appointments under subsection (2) there is no member of the council who is a member of the faculty of the School of Architecture of The University of British Columbia, one of those appointed shall be a member of the faculty.

(4) Ten members shall be elected by and from the members of the institute.

1981-20-2, proclaimed effective July 30, 1981.

Eligibility

7. Any member of the institute in good standing is eligibile for nomination and election as a member of the council. A retiring member of the council is eligible for re-election.

RS1960-16-9,10.

Election

8. (1) An election for members of council to fill vacancies then occurring shall be held on the day fixed for the annual meeting of the institute. Each person elected shall, subject to this Act, hold office until the election held on the day fixed for the annual meeting in the second calendar year following election.

(2) If no election is held on the day fixed, the members of council remain in office until their successors are elected. The council may fix a day for an election. The term of office of persons elected at that election expires on the same day as if the election had been held on the day originally fixed.

RS1960-16-11.

Voting

9. Only members of the institute in good standing may vote.

RS1960-16-13.

Successful candidates

10. (1) A candidate who receives the highest number of votes shall be deemed elected.

(2) In the event of an equality of votes, the person last holding the office of president, if not one of the candidates, may resolve the tie, otherwise the council may fix a day for a tie breaker election.

(3) Immediately after an election the registrar shall certify the persons elected as members of the council.

(4) The certificate is, subject to section 11, conclusive evidence that the persons named have been elected members of the council.

RS1960-16-12.

Election disputes

11. (1) A member of the institute may question a certificate of election of a person within 30 days of the date of the certificate by petition to the Supreme Court setting forth the grounds on which he questions the certificate.

(2) The petition shall be served on the registrar and on the person certified to be elected.

(3) A petition shall be heard in a summary way. The court may give directions on procedure and other persons to be served with the petition.

(4) The court may decide that a person was elected or may order a new election and give directions. A decision of the court is not subject to appeal and the institute and all other persons shall be governed by it.

(5) After an election under this section, the registrar shall certify the person elected a member of the council at that election. The certificate has the same effect as a certificate following the annual election.

(6) The term of office of a person elected under this section expires on the same day as if he had been elected at the questioned election.

RS1960-16-14.

Council vacancy

12. A member of the council ceases to hold office if he

(a) resigns by notice in writing delivered to the registrar;

(b) ceases to be a member in good standing of the institute;

(c) is absent from 3 consecutive meetings of the council, unless excused by the council;

(d) ceases to reside in the Province;

(e) becomes a mentally disordered person.

RS1960-16-15.

Filling vacancy

13. (1) In the event of a vacancy among the elected members of council, the remaining members of council shall, within one month, appoint a member of the institute in good standing to be a member of the council.

(2) and (3) [Repealed 1981-20-3, proclaimed effective July 30, 1981.]

(4) The term of office of a person elected or appointed under this section is for the unexpired portion of the term of the member previously occupying the place on the council to which he is elected or appointed.

RS1960-16-16; 1981-20-3, proclaimed effective July 30, 1981.

Council meetings

14. Subject to this Act, the council may make rules regulating council meetings. Failure of a council member to receive a notice does not, if he attends the meeting, invalidate the meeting.

RS1960-16-17,19.

Quorum

15. A majority of council members is a quorum.

RS1960-16-21.

Votes at council

16. All acts of the council shall be decided by a majority of members present. Each member present has one vote. The chairman does not have a second or casting vote. On an equality of votes, the question is lost.

RS1960-16-21,22.

Resolution of council members

17. A resolution signed by all members of council has the same effect as a resolution passed at a regularly convened meeting of council.

RS1960-16-18.

Fees and expenses

18. Council members may be paid the fees for attendance and reasonable travelling and other expenses fixed by bylaw of the institute.

RS1960-16-20

Officers

19. (1) At its first meeting after an election the council

(a) shall elect from its members a president, one or more vice presidents and a treasurer,

(b) shall appoint a member of the institute as registrar, and

(c) may appoint other officers.

(1.1) An appointed person holds office during pleasure of the council.

(2) The elected members shall, if they continue as members of council and subject to the pleasure of the institute, hold office until the conclusion of the next annual meeting.

(3) The council may fix the salaries or fees, if any, to be paid to an appointed person, to employees of the council or institute and to examiners appointed under this Act.

RS1960-16-23; 1981-20-4, proclaimed effective July 30, 1981.

Committees

20. The council may appoint committees or boards and delegate to them powers as it sees fit. The president is a member of all committees. The council may remove a member of a committee.

RS1960-16-24,25.

Institute meetings

21. (1) The institute shall hold an annual meeting in each year at a time and place the council designates.

(2) The council may call a meeting of the institute at any time and shall call a meeting on the written request of 15 members.

(3) The council shall give written notice of a meeting to each member of the institute in good standing, not less than 15 days prior to the meeting, by prepaid post addressed to the residence of the member as shown on the register.

(4) The president or, in his absence, the vice president shall preside at all business meetings of the institute. In their absence a chairman shall be elected by the meeting.

(5) A quorum at a meeting of the institute is 10 members in good standing, or a greater number fixed by bylaw of the institute.

(6) Each member in good standing present at a meeting of the institute has one vote.

RS1960-16-26(1,3 to 8); 1979-2-5.

Reports

22. (1) The president shall report on the affairs of the institute at each annual meeting and file the auditors' report for the last fiscal year.

(2) Auditors shall be appointed at each annual meeting and shall hold office until their successors are appointed.

RS1960-16-26(2,9).

Bylaws

23. The institute may, subject to this Act, make bylaws considered necessary for the regulation of the institute, its members, licensees, associates and students. The bylaws may, among other things, provide for

(a) institute meetings;
(b) the nomination and election of the council;
(c) admission to the practice of the profession of architecture, and as a student;
(d) the course of study for students, their examination and the period, if any, for passing examinations as a condition of continuing as a student;
(e) the fixing of fees or fines payable to the institute and in the case of fees payable on registration or licence, designating, if the institute considers it advisable, different classes of applicants and prescribing different fees for those classes;
(f) a tariff of fees for an architect's services;
(g) the conduct, discipline and standards of honour of the institute's members, licensees, associates and students, and the maintenance of the dignity and honour of the profession;
(h) a code of ethics and professional conduct for members, licensees, associates and students, and prohibiting acts or conduct by them deemed by the institute unprofessional or detrimental to the welfare of the profession; and
(i) the maintenance of professional liability insurance coverage by members, firms and licensees.

RS1960-16-27(1); 1986-16-1, effective July 18, 1986 (B.C. Reg. 170/86).

Filing bylaws, etc.

24. (1) The registrar shall file with the Provincial Secretary a certified copy of every bylaw within 7 days of its making. The bylaw or amendment comes into force 30 days after the filing.

(2) The Lieutenant Governor in Council may within the 30 days disallow the bylaw or amendment.

RS1960-16-27(2,3)

Register

25. The registrar shall keep the Register of The Architectural Institute of British Columbia (the "register") in which, on application or on direction of the council, he shall enter, for each person entitled to be registered as a member of the institute, that person's name, residence and any other particulars directed by the council.

RS1960-16-28(1).

Registration

26. A person whose name is entered in the register is, unless the registration is erased or the person is suspended from practice, registered under this Act as a member of the institute.

RS1960-16-29.

Resignation

27. (1) A member in good standing may, in writing, voluntarily resign from the institute. His name shall be removed from the register and he ceases to be a member of the institute.

(2) The council, on conditions it determines, may restore to the register the name of a person who resigned under this section.

RS1960-16-30.

Removal

28. (1) The council may remove from the register a name or other entry which has, in its opinion, been entered by fraud or misrepresentation or has been incorrectly made.

(2) The registrar shall promptly notify, in writing, the person whose name or entry has been removed under this section. The person may at any time apply to have his name or the entry restored to the register. The council may in its discretion refuse to restore the name or entry.

RS1960-16-31.

Membership: qualification for registration

29. (1) A person who is at least 19 years of age, who produces evidence satisfactory to the council of identification, good moral character, his qualifications and, if he has practised as an architect, of good professional conduct, and any further information required by the council, and who passes examinations required by the institute or the council is entitled, on payment of the fee for registration, to be registered under this Act, if he is

(a) a member of an organization governing the practice of architecture in a province where the architectural training required for admission is approved by the council, is entitled to practise architecture in that province, and has, within 5 years prior to his application for membership in the institute, been for 2 years engaged in the practice of architecture in that province, or actively employed in the office of a practising member of the institute or a practising architect approved by the council;

(b) [Repealed 1986-16-2, effective July 18, 1986 (B.C. Reg. 170/86).]

(c) a graduate of a school of architecture in a course approved by the council and who, subsequent to graduation and within 5 years prior of his application for membership, has for a cumulative total of 3 years been actively engaged in the practice of architecture or employed in the office of a member of the institute or a practising architect approved by the council; or

(d) a person who has, for 5 years, served as a student under articles with a practising member of the institute, or actively served as a student outside of the Province with a practising architect approved by the council; who has passed the examinations required by the council, and who has, subsequently and within 5 years prior to his application for membership in the institute, been employed for a cumulative total of 3 years in the office of a member of the institute or a practising architect approved by the council.

(2) The council may reduce the 3 year period referred to in subsection (1) (c) and (d) to not less than 2 years where the applicant has other related experience that the council accepts as part of the 3 years.

RS1960-16-32; 1985-68-8, effective December 13, 1985 (B.C. Reg. 392/85); 1986-16-2, effective July 18, 1986 (B.C. Reg. 170/86).

Alternative qualifications

30. The council may admit to registration in the institute a person nominated in writing for membership by 5 members of the institute and who has passed an examination required by council, if he has

(a) for 15 years, been employed in the office of a member or members of the institute;
(b) for 15 years, been employed in the office of a person outside the Province who, in the opinion of the council, is a qualified and capable architect; or
(c) for 8 years, practised as a qualified architect outside the Province.

RS1960-16-33; 1985-68-9, effective December 13, 1985 (B.C. Reg. 392/85).

Temporary licence

31. (1) On payment of the specified fee the council may grant to an architect a temporary licence to practise as an architect in the Province in collaboration with an architect registered under this Act.

(2) The temporary licence may be for the period of time determined by the council, may be restricted to a specified architectural work within the Province and may be cancelled by the council for a breach of the licence.

(3) A person who, on March 15, 1955, was registered as a member of the institute but not a resident of the Province shall be deemed, from that date, to hold a temporary licence to continue for the period of time determined by the council.

RS1960-16-35; 1983-10-21, effective October 26, 1983 (B.C. Reg. 393/83).

Honorary membership

32. (1) The institute may confer honorary membership on a person nominated by the council, including a person who, in the council's opinion, has been outstanding in the practice of architecture or in service to the institute.

(2) Honorary membership confers all the rights of ordinary membership, but no fees are payable and an honorary member may not, by reason only of his membership under this section, practise architecture unless he has actively practised the profession.

RS1960-16-36.

Associates

33. The council may admit any person as an associate of the institute, may divide associates into different classes and fix the qualifications for each class.

RS1960-16-37.

Associate's rights

34. An associate is not entitled to vote, hold office in the institute or receive notices and may only practise the profession of architecture as an employee working for and under the supervision of a member of the institute.

RS1960-16-38.

Admission of students

35. The council shall admit as a student an applicant who is, in the opinion of the council, of good moral character, and deposits with the secretary the particulars and evidence of qualifications required by the council, pays the specified fee, and has either

(a) graduated from a university approved by the council;
(b) passed the senior matriculation examination of the Province;
(c) passed an examination which, in the opinion of the council, is equivalent to senior matriculation; or

(d) passed the preliminary examination specified by the council.

RS1960-16-64(a,b,c); 1983-10-21, effective October 26, 1983 (B.C. Reg. 393/83).

Student to enter articles

36. (1) A student shall, within 30 days after his admission, enter into articles with a member in good standing of the institute and file with the registrar a duplicate original of the agreement with an affidavit of execution.

(2) A student who fails to comply with subsection (1) ceases to be a student, but the council may extend the period of 30 days if it considers it advisable under the circumstances.

(3) This section does not apply to a student who has, within 30 days after his admission or within any further time allowed by council, entered the service as a student of an architect approved by the council and practising out of the Province.

RS1960-16-65.

Five years of service

37. A student shall serve a term of 5 years under articles or as a student with an approved architect practising out of the Province, and shall comply with the bylaws on examinations.

RS1960-16-66,71.

Transfer of articles

38. If the principal to whom a student is articled ceases to be a member of the institute, the student is released from the articles and shall, within 60 days or any longer period allowed by the council, enter into articles with another member and file a duplicate original of the agreement with the registrar. Otherwise he ceases to be a student at the expiration of the period.

RS1960-16-67.

Assignment of articles

39. An assignment of an agreement shall be filed with the registrar within 30 days after the assignment.

RS1960-16-68.

Certificate of registration

40. A certificate of the registrar under the seal of the institute that a person named was or was not registered as a member of the institute, or was or was not suspended from practice on the date stated, is conclusive evidence in all courts and before all others of the facts stated. A certificate purporting to be signed by the registrar is evidence that the person is the registrar. A certificate purporting to be sealed with the seal of the institute is evidence that it is so sealed.

RS1960-16-39.

Inspection of register

41. The register shall be open to inspection by any person whenever the office of the institute is open. A person may, for 50¢, obtain a certificate under the preceding section.

RS1960-16-40.

42. [Repealed 1985-68-10, effective December 13, 1985 (B.C. Reg. 392/85).]

Conviction of indictable offence

43. A person who has been convicted of an indictable offence is not entitled to be registered. The council may remove from the register the name of a member who has been convicted of an indictable offence. The council may permit a person so convicted to become or remain a member or may restore his name to the register. Registration shall not be refused and a name shall not be removed on conviction for a political offence or for an offence which should not, in the opinion of the council, either from the nature of the offence or from the circumstances of the case, disqualify a person from practising under this Act.

RS1960-16-42.

Inquiry

44. The council may, and shall if requested in writing by 5 members in good standing, order an inquiry by an inquiry committee into a complaint against a member or licensee of the institute, or into the conduct, capability or fitness to practise of a member or licensee. The council shall appoint the inquiry committee consisting of not fewer than 3 council members.

RS1960-16-43.

Judge as member

45. (1) The inquiry committee may appoint as a member of the committee a judge of a County Court.

(2) The council or inquiry committee may employ, at the expense of the institute, the legal or other assistance it may think necessary. The complainant and the person whose conduct is the subject of inquiry may be represented by counsel and submit evidence.

RS1960-16-48.

Hearing

46. (1) At least 2 weeks before the first meeting of the inquiry to be held for taking evidence or otherwise ascertaining the facts a notice of the hearing shall be delivered to the complainant and the person whose conduct is the subject of inquiry. The notice shall include a copy of the complaint or a statement of the subject matter of the inquiry and shall state the time and place of hearing.

(2) The testimony of witnesses shall be taken under oath. There shall be full right to cross examine witnesses and to call other witnesses.

(3) If the complainant or the person whose conduct is being examined does not attend, the committee, on proof by affidavit or otherwise of personal delivery of the notice of hearing, may proceed with the inquiry without that person being present and make its report without further notice to him.

(4) The inquiry committee may direct that all or part of the evidence be taken down in shorthand or other method of recording, and transcribed. The chairman may administer the oath to the stenographer or person employed.

RS1960-16-49.

Subpoena and witness fees

47. The council, inquiry committee or a party may, without leave or order, obtain from the Supreme Court a subpoena for the attendance and examination of any witness, and for the production of documents, production of which could be compelled in an action, before the inquiry committee, at the time and place stated in the subpoena. The person whose attendance is required is entitled to the conduct money and payment of expenses and for loss of time paid on attendance at a trial in the Supreme Court. Failure to attend or produce a document shall be deemed contempt of court.

RS1960-16-50.

Reprimand, etc.

48. (1) An inquiry committee shall find the facts and report to the council in writing.

(2) If the council, on a report from an inquiry committee, considers that a member or licensee has been unprofessional in his conduct, has failed to observe a bylaw of the institute, has been negligent or has misconducted himself in the execution of the duties of his office or is incapable or unfit to practise, the council may reprimand, censure or suspend from practice for a stated period the member or licensee, remove a member's name from the register or cancel a licensee's licence.

(3) The council may, on the terms and for the period it thinks fit, suspend its decision.

RS1960-16-44.

Suspension

49. The registration of a member suspended from practice shall be deemed to be removed and he is not a member of the institute during the suspension.

RS1960-16-45.

Reinstatement

50. Where the council removes from the register the name of a person or other entry, the name or entry may only be restored to the register by the direction of the council or by order of the Supreme Court or the Court of Appeal. The council direction may dispense with a fee or require the payment of a fee fixed by council.

RS1960-16-46,47.

Protection of council and committee

51. No liability is incurred by the council, an inquiry committee or a member of either body for anything done or purporting to be done in good faith under this Act.

RS1960-16-51.

Appeal

52. (1) A person making a complaint before an inquiry commission, or a person suspended from practice, or whose name has been removed from the register, or whose licence has been cancelled, may appeal from the decision or direction of the council to the Supreme Court within 30 days after the decision or direction.

(2) On the hearing of an appeal, the court may confirm, reverse or amend the decision or direction, may order a further inquiry by the inquiry committee or may make any other order, on costs or otherwise, the court believes right, including restoration of a registration, termination of a suspension or reinstatement of a licence.

(3) An appeal lies from the decision of the court to the Court of Appeal within 30 days after the decision and the Court of Appeal has all the powers that may by this Act be exercised by the court appealed from.

(4) An appeal taken from a decision or direction of the council is deemed to include an appeal from the findings and report of the inquiry committee.

RS1960-16-52; 1982-7-33, proclaimed effective September 7, 1982.

Notice of appeal and procedure

53. (1) The rules of court apply to an appeal. Notice of the appeal shall be filed in a registry of the court within the time limited by section 52 (1) and the appellant shall serve a copy of the notice of appeal on the registrar of the institute within the same time.

(2) The registrar of the institute shall, on request, furnish to a person desiring to appeal, a certified copy of all proceedings, reports and documents on which the inquiry committee or council acted in making the finding, report, decision or direction complained of, and of the finding, report, decision or direction. Where the evidence on the inquiry was taken by a stenographer or other person, the registrar is not required to furnish a transcript, but the person desiring to appeal shall obtain the transcript from the stenographer or other person.

(3) The person appealing shall deposit in the court registry the certified copy and the transcript, if any. The appeal shall be heard and determined on the material filed.

(4) The person appealing shall give to the registrar of the institute 7 clear days' notice in writing of the time and place for hearing the appeal together with a copy of the material filed in the court.

RS1960-16-53.

Appeal on merits

54. An appeal or further appeal shall be heard and determined by the court on the merits, notwithstanding any want of form: The court may give directions it considers necessary to enable the proper hearing and adjudication of the appeal.

RS1960-16-54.

Inquiry into conduct of associates and students

55. (1) The council may inquire into the conduct of an associate or student and, if it considers his conduct detrimental to the interests of the institute or contrary to its bylaws, may cancel his commission as an associate or student.

(2) The provisions of this Act for an inquiry into a charge or complaint against a member of the institute apply, so far as applicable, to an inquiry under this section.

RS1960-16-55.

Unregistered person not to practise

56. A person who is not registered as a member of the institute under this Act or the holder of a current temporary licence issued under this Act shall not practise or offer to practise the profession of architecture.

RS1960-16-56(1).

Practice of architecture

57. A person is deemed to practise the profession of architecture within the meaning of this Act who

(a) is engaged in the planning or supervision of the erection or alteration of buildings for persons other than himself;

(b) by advertisement, sign or statement of any kind, written or oral, alleges or implies that he is an architect or that he is, or holds himself out as being, qualified, able or willing to do any act set out in this section. RS1960-16-56(2).

Exceptions

58. Section 56 does not prevent

(a) a person who is a professional engineer registered under the *Engineers Act* from practising professional engineering or from doing any act set out in paragraph (b);

(b) a chemical, civil, electrical, forest, geological, mechanical, metallurgical, mining or structural engineer from designing or supervising the erection, alteration or repair of a structure usually designed or supervised for these purposes by an engineer;

(c) a person from doing any act set out in paragraph (b) for the erection of a warehouse to store produce by an agricultural association;

(d) a person from making plans or specifications for or supervising the erection or alteration of the whole or a part of a building that is a one or 2 family dwelling on his own property, where the building or part is to be used and occupied by the person and his household;

(e) a corporation acting through members of its regular staff or other qualified persons from making plans or specifications for or supervising the erection or alteration of the whole or part of a building to be occupied and used exclusively by the corporation, its subsidiaries or lessees, as part of an industrial plant operated by it;

(f) a person employed by a registered architect as a draughtsman, student, clerk of work, superintendent or in any other capacity from acting under the supervision of the registered architect;

(g) a superintendent of buildings paid by the owner from acting under the direction and control of a member of the institute;

(h) a person from advising on, planning, designing or supervising the erection, alteration or repair of a building other than

(i) an apartment or residential building containing 5 or more dwelling units;

(ii) a hotel or similar occupancy containing 11 or more guest rooms for transient or permanent occupancy;

(iii) a commercial or industrial building, or combination of same with other occupancies, in excess of 470 m^2 gross area, being the aggregate area of all floors;

(iv) a one storey building, other than a school building, to be used for public assembly, where the gross area exceeds 275 m^2 or the unsupported span exceeds 9 m;

(v) a building of more than one storey, other than a school building, to be used for public assembly, where the gross area exceeds 235 m^2;

(vi) a building, other than a veterinary hospital, to be used as a hospital, sanatorium or as a home for the aged and with a capacity of over 12 beds;

(vii) any other building in excess of 470 m^2 gross area, being the aggregate area of all floors;

(viii) any alteration to an existing building placing it within any of subparagraphs (i) to (vii);

(i) a person employed in the actual service of Her Majesty's Forces, or in the service of the government of Canada or the Province, from acting as an architect in the course of his employment or service;

(j) a person who is employed as an architect by a public service corporation or a public utility or government ministry whose business is normally carried on in 2 or more provinces and who, by reason of his employment, is required to practise as an architect in a province other than that of his residence, from practising as an architect in the course of his employment;

(k) a landscape architect or naval architect from describing himself as such.

RS1960-16-56(3); 1966-45-2; 1974-87-2; 1977-53-1; 1977-75-1; 1981-20-5, proclaimed effective July 30, 1981.

Offence

59. A person shall not erect, alter or repair a building, or cause a building to be erected, altered or repaired under plans and specifications prepared or approved by a person in contravention of section 56.

RS1960-16-57.

Saving

60. This Act does not require the registration under this Act of a person registered as a professional engineer under any Act of the Province relating to the practice of engineering where the professional practice of the person is confined to professional engineering.

RS1960-16-58.

Further prohibitions

61. (1) Subject to this Act, a person not registered as a member of the institute shall not use or hold himself out under the title "architect" or any similar title or description, or use, advertise or hold himself out under any name, title, addition or description implying, or calculated or likely to lead the public to infer, that he is registered under this Act.

(2) A person not licensed under this Act shall not take, use, advertise or hold himself out under any name, title, addition or description implying, or calculated or likely to lead the public to infer, that he is licensed under this Act.

RS1960-16-59.

False representation

62. No person shall obtain or attempt to obtain

(a) registration,

(b) a licence, or

(c) admission as an associate or student

under this Act for himself or for another person by intentionally making or causing to be made any false representation, either verbally or in writing.

1986-16-3, effective July 18, 1986 (B.C. Reg. 170/86).

Partnership with non-architect

63. (1) No member of the institute or licensee shall practise architecture in partnership with a person not entitled to practise architecture, or make an agreement or arrangement or do an act that will enable the person to practise architecture contrary to this Act.

(2) A person registered or licensed under this Act may enter into a partnership with a professional engineer registered under the laws of the Province for the practice of his profession.

(3) A person is not entitled to recover in a court a fee or remuneration for services rendered or work done contrary to this Act.

RS1960-16-61; 1986-16-4, effective July 18, 1986 (B.C. Reg. 170/86).

Exemplary damages

63.1 (1) An act prohibited in section 56, 61, 62 or 63 (1) is a tort actionable by the institute without proof of damage.

(2) A person who contravenes any prohibition contained in section 56, 61, 62 or 63 (1) is liable to pay exemplary damages not exceeding $10 000 to the institute whether or not he has been convicted of an offence related to the contravention.

(3) In an action under subsection (1), it is sufficient proof of the contravention if it is proved that the defendant has committed a single act of the kind prohibited.

1986-16-5, effective July 18, 1986 (B.C. Reg. 170/86).

Proof

64. (1) In a prosecution, it is sufficient proof of an offence under this Act if it is proved that the defendant has committed a single act of unlawful practice or has committed on one occasion any act prohibited by this Act.

(2) In a proceeding or prosecution under this Act, where it is shown that a name, title, designation or descriptive term has been used indicating that a person has held himself out, or has been held out by another person, as being an architect or registered under this Act or willing to perform architectural services, it is not necessary to prove that the name, title, designation or descriptive term was used by the defendant or with his knowledge, but the onus is on him to establish that the name, title, designation or descriptive term was not used by him or with his knowledge.

RS1960-16-62.

Injunction

65. In the event of a violation or threatened violation by a person of a provision in sections 56, 59, 61 and 80, the institute is entitled to apply by action for an injunction to restrain the person from continuing or committing the violation. Pending adjudication of the action on application to the court showing the violation or threatened violation and on the court being satisfied that there is reason to believe that the person committed or is likely to commit the violation, the institute is entitled to an interim injunction.

RS1960-16-63; 1976-33-14; 1986-16-6, effective July 18, 1986 (B.C. Reg. 170/86).

Examining board

66. The council shall, after the annual election, appoint a board to be known as the examining board, to consist of the member of the council appointed by the Lieutenant Governor in Council or a member of the institute nominated by that member, one other member of council and 4 or more other members of the institute actively engaged in the practice of architecture. The members of the examining board hold office until their successors are appointed.

RS1960-16-69; 1986-16-7, effective July 18, 1986 (B.C. Reg. 170/86).

Duties of examining board

67. Subject to approval by the council and the provisions of this Act, the examining board shall

(a) set examinations to be passed by a person under this Act;

(b) hold, supervise and mark the examinations;

(c) report the result for each candidate to the council;

(d) consider and report to council on the qualifications of an applicant for admission as a member of the institute, an associate or a student;

(e) perform other duties referred to it by the council.

RS1960-16-70.

Decision of council final

68. The decision of the council on whether a person has or has not passed an examination is final.

RS1960-16-72.

Fees

69. (1) A person, on registration or admission as a member of the institute, licensee, associate or student, or on applying for examination, shall pay the fee determined by the bylaws.

(2) Every member of the institute, firm of architects, licensee, associate or student shall pay the annual fee determined by the bylaws. Annual fees are payable on or before February 1 in the year for which they are imposed.

(3) Fees are payable to the registrar or his nominee.

(4) The annual fee is a debt due to the institute and is recoverable in a court of competent jurisdiction.

RS1960-16-73(1,2,3,4,5); 1979-2-6.

Default

70. (1) A member, licensee, associate or student who fails to pay his annual fee on or before February 1 ceases to be in good standing.

(2) A member or licensee who does not pay the annual fee within 30 days after the mailing of a registered letter from the registrar demanding payment, addressed to him at his address appearing in the register, shall be suspended from practice and the registrar shall remove his name from the register or cancel his licence.

(3) A member or licensee suspended under subsection (2) who pays all annual fees payable if he had not been suspended, and any fine imposed by the bylaws shall, subject to further examination, be reinstated. The registrar shall re-enter his name in the register or reissue his licence.

RS1960-16-73(6,7).

Further examination

71. The council may require a person whose name has been removed from the register for failure to pay annual fees to pass an examination before reinstatement.

RS1960-16-73(8).

Wrongful conduct

72. The registrar may, subject to appeal to the council, refuse to re-enter the name of a person who he believes has been guilty of conduct for which his registration, had it continued, could have been erased or who could have been suspended from practice.

RS1960-16-73(8).

Default by student, etc.

73. The council may direct that an associate or student who has failed to pay his annual fee on or before February 1 shall cease to be an associate or student.

RS1960-16-73(9).

Seal

74. (1) An architect registered under this Act shall have a seal, the impression of which shall contain the name of the architect and the words "Registered Architect, British Columbia", with which he shall stamp all working drawings and specifications prepared by him or under his supervision, direction or control.

(2) If an architect ceases to be a member of the institute, he shall promptly deliver his seal to the institute. If he again becomes a member of the institute, his seal shall be returned to him.

RS1960-16-74; 1986-16-8, effective July 18, 1986 (B.C. Reg. 170/86).

Use of seal

75. A member of the institute or a licensee shall not affix his seal to a plan, working drawing, detail drawing, specification or other document unless it was prepared by him or under his supervision, direction or control.

1986-16-9, effective July 18, 1986 (B.C. Reg. 170/86).

Report to Province

76. The registrar, when required by the Lieutenant Governor in Council, shall send to the Provincial Secretary a return certified under the seal of the institute setting out the required information and particulars relating to the institute.

RS1960-16-76.

Execution of deeds

77. All deeds of the institute shall be signed by the president and the registrar, or another person designated by the council, and sealed with the common seal of the institute.

RS1960-16-77.

Notices

78. (1) A notice or document sent by prepaid post shall be deemed to have been received by the person to whom it is addressed at the time when the envelope containing it would be delivered in the ordinary course of the mail and in proving the

sending, it is sufficient to prove that the envelope containing the notices or documents was prepaid and properly addressed and mailed.

(2) Notices and documents sent to the council or other authority shall be deemed to be properly addressed if addressed to the council or authority, or to an officer of the council or authority, at the principal place of business of the council or authority. Notices and documents sent to a person registered under this Act shall be deemed to be properly addressed if addressed to him according to his address in the register.

RS1960-16-78.

Funds of institute

79. (1) The funds of the institute shall be paid to the treasurer and shall be applied in accordance with the rules and directions made by the council.

(2) The treasurer may invest the funds of the institute in any securities authorized by law for investment by trustees and authorized by the council.

RS1960-16-79.

Employment of person not registered

80. A person shall not employ, retain or enter into a contract with a person not registered or licensed under this Act to do architectural work where the doing of that work by a person not registered or licensed under this Act is prohibited.

RS1960-16-80.

Offence Act

81. Section 5 of the *Offence Act* does not apply to this Act or to a bylaw made under this Act.

1986-16-10, effective July 18, 1986 (B.C. Reg. 170/86).

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CCDC 2 - Architects Responsibilities to Construction Contract (CCDC, 1982)

GC 3 CONSULTANT

3.1 The Consultant will provide administration of this Contract as described in the Contract Documents.

3.2 The Consultant will be the Owner's representative during construction and until completion of any correction of defects under the provisions of GC 24 — WARRANTY, paragraph 24.2, or until the issuance of the certificate of Total Performance of the Work, whichever is later. The Owner's instructions to the Contractor shall be forwarded through the Consultant. The Consultant will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written agreement in accordance with paragraph 3.13.

3.3 The Consultant will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs required for the Work in accordance with the applicable construction safety legislation, other regulations or general construction practice. The Consultant will not be responsible for or have control or charge over the acts or omissions of the Contractor, his Subcontractors or their agents, employees or other persons performing any of the Work.

3.4 The Consultant will visit the site at intervals appropriate to the progress of construction to familiarize himself with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. However, the Consultant will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

3.5 Based on the Consultant's observations and his evaluation of the Contractor's applications for payment, the Consultant will determine the amounts owing to the Contractor under the Contract and will issue certificates for payment in such amounts, as provided in Article A-4 — PAYMENT and GC 14 —CERTIFICATES AND PAYMENTS.

3.6 The Consultant will be, in the first instance, the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by both parties to the Contract. Interpretations and decisions of the Consultant shall be consistent with the intent of the Contract Documents and in making his decisions he will not show partiality to either party.

3.7 Claims, disputes and other matters in question relating to the performance of the Work or the interpretation of the Contract Documents shall be referred initially to the Consultant in writing for decision which he will give in writing within a reasonable time.

3.8 The Consultant will have authority to reject work which in his opinion does not conform to the requirements of the Contract Documents. Whenever he considers it necessary or advisable he will have authority to require special inspection or testing of work whether or not such work be then fabricated, installed or completed. However, neither the Consultant's authority to act nor any decision made by him either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the Consultant to the Contractor, his Subcontractors, or their agents, employees or other persons performing any of the Work.

3.9 The Consultant will review and take appropriate action upon the Contractor's submittals such as shop drawings, product data, and samples in accordance with the requirements of the Contract Documents.

3.10 The Consultant will prepare change orders in accordance with the requirements of GC 11 — CHANGES IN THE WORK.

3.11 The Consultant will conduct inspections to determine the dates of Substantial Performance of the Work and Total Performance of the Work in accordance with the requirements of GC 14 — CERTIFICATES AND PAYMENTS. He will receive and review written warranties and related documents required by the Contract and provided by the Contractor and will forward such warranties and documents to the Owner for his acceptance.

3.12 If the Owner and the Consultant agree the Consultant will provide at the site one or more project representatives to assist the Consultant in carrying out his responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the Contractor.

3.13 The duties, responsibilities and limitations of authority of the Consultant as set forth in the Contract Documents will not be modified or extended without the written consent of the Owner, the Contractor and the Consultant.

3.14 In the event of the termination of the employment of the Consultant, the Owner shall immediately appoint a Consultant to whom the Contractor makes no reasonable objection and whose status under the Contract shall be that of the former Consultant.

3.15 Nothing contained in the Contract Documents shall create any contractual relationship between the Consultant and the Contractor, his Subcontractors, his suppliers, or their agents, employees or other persons performing any of the Work.

CCAC 6 - Architect's Responsibilities (CCAC, 1990)

Responsibilities 2

The Architect's basic services consist of the five phases described in paragraphs 2.1.2 through 2.1.26 and include normal structural, mechanical and electrical engineering services, of which all engineering services shall be provided by professional engineers. The Architect's basic services include the co-ordination required to integrate all parts of the service.	2.1.1	**Article 2.1 Architect's Basic Services**
The Architect shall study the program of requirements furnished by the Client and shall study the characteristics of the site.	2.1.2	Schematic Design Phase
The Architect shall review and comment on the Client's Construction Budget in relation to the Client's program of requirements	2.1.3	
The Architect shall review with the Client alternative approaches to the design of the project and the types of construction contracts.	2.1.4	
Based on the mutually agreed upon program of requirements and Construction Budget, the Architect shall review applicable statutes, regulations, codes and by-laws and where necessary review the same with the authorities having jurisdiction and then prepare for the Client's review and approval schematic design documents to illustrate the scale and character of the project and how the parts of the project functionally relate to each other.	2.1.5	
The Architect shall prepare and submit to the Client an estimate of Construction Cost based on current area, volume or other unit costs.	2.1.6	
Based on the approved schematic design documents and approved estimate of Construction Cost, the Architect shall prepare, for approval by the Client, design development documents consisting of drawings and other documents appropriate to the size of the project to fix and describe the size and character of the entire project as to the architectural, structural, mechanical, and electrical systems, materials and such other elements as may be appropriate.	2.1.7	Design Development Phase
The Architect shall prepare and submit to the Client for approval a revised estimate of the Construction Cost.	2.1.8	
The Architect shall continue to review applicable statutes, regulations, codes and by-laws in relation to the design of the project.	2.1.9	
Based on the approved design development documents and approved estimate of Construction Cost, the Architect shall prepare, for approval by the Client, construction documents consisting of drawings and specifications setting forth in detail the requirements for the construction of the project.	2.1.10	Construction Documents Phase
The Architect shall advise the Client of any adjustments to previous estimates of Construction Cost indicated by changes in requirements or general market conditions.	2.1.11	
The Architect shall advise the Client on the Bidding Documents. The Architect shall obtain instructions from the Client for the preparation of the necessary bidding information, bidding forms, conditions of the Contract and the form of Contract between the Client and the Contractor.	2.1.12	
The Architect shall review statutes, regulations, codes and by-laws applicable to the design and where necessary review the same with the authorities having jurisdiction in order that the required consents, approvals, licences and permits necessary for the project can be applied for and obtained	2.1.13	

Bidding or Negotiation Phase

2.1.14 The Architect, following the Client's approval of the construction documents and of the latest estimate of the Construction Cost, shall assist and advise the Client in obtaining bids or negotiated proposals and in awarding and preparing contracts for construction.

Construction Phase — Contract Administration

2.1.15 During the construction phase — contract administration, the Architect shall be a representative of the Client, shall advise and consult with him and shall have authority to act on his behalf to the extent provided in this Agreement, and shall at all times have access to the Work wherever it is in preparation or progress. All instructions to the Contractor shall be forwarded through the Architect.

2.1.16 The Architect shall carry out the general review of the Work at intervals appropriate to the stage of construction which the Architect considers necessary to determine if the Work is in general conformity with the Contract Documents. However, the Architect shall not be required to make exhaustive or continuous on-site reviews. The Architect shall keep the Client informed of the progress and quality of the Work and shall report to the Client any defects or deficiencies in the Work observed during the course of the site reviews. It is understood that the reviews being conducted by the Architect are for the following purposes:

1. To examine, evaluate and report to the Client upon representative samples of the Work; any comments on the balance of the Work made during the course of the site reviews are assumptions based upon extrapolation.
2. To determine if the Work is in general conformity with the Contract Documents for the project.

2.1.17 The Architect shall not:

1. be responsible for the acts or omissions of the Contractor, Sub-Contractors or any other persons performing any of the Work, or for the failure of any of them to carry out the Work in accordance with the Contract Documents.
2. have control, charge or supervision of, nor responsibility for construction means, methods, techniques, sequences, or procedures or for safety precautions and programs in connection with the Work.

2.1.18 The Architect shall determine the amounts owing to the Contractor based on observations at the site and on evaluations of the Contractor's application for payment, and shall issue certificates for payment in such amounts, proportionate to the amount of the Contract, for Work performed and products delivered to the Place of the Work as provided in the Contract Documents. The issuance of a certificate for payment shall constitute a representation by the Architect to the Client, based on the Architect's observations at the site as provided in paragraph 2.1.16 and on the data comprising the Contractor's application for payment, that the Work has progressed to the point indicated; that to the best of the Architect's knowledge, information and belief, the Work observed during the course of general review is in general conformity with the Contract Documents; and that the Contractor is entitled to payment in the amount certified.

Such certification is subject to:

(a) general review and evaluation of the Work as it progresses for general conformity as provided in paragraph 2.1.16.
(b) the results of any subsequent tests required by or performed under the Contract Documents.
(c) minor deviations from the Contract Documents correctable prior to completion, and

(d) any specific qualifications stated in the certificate for payment. The issuance of the certificate for payment shall not be a representation that the Architect has made any examination to ascertain how and for what purpose the Contractor has used the monies paid on account of the contract price, or that the Contractor has discharged the obligations imposed on him by Law under the Workers' Compensation Act, or other applicable statute, non-compliance with which may render the Client personally liable for the Contractor's default.

2.1.19 The Architect shall be the interpreter of the requirements of the Contract Documents and shall make findings as to the performance thereunder by both the Client and Contractor. The Architect shall render interpretations as may be required with reasonable promptness on written request of either the Client or the Contractor, and shall render written findings within a reasonable time, on all claims, disputes and other matters in question between the Client and the Contractor relating to the execution or progress of the Work or the interpretation of the Contract Documents.

2.1.20 Interpretations and findings of the Architect shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in written or graphic form. The Architect shall not show partiality to either the Client or the Contractor and shall not be liable for the result of any interpretation or finding rendered in good faith in such capacity.

2.1.21 The Architect shall have the authority to reject work which does not conform to the Contract Documents. Whenever, in the Architect's opinion, it is necessary or advisable for the implementation of the intent of the Contract Documents, the Architect shall have authority to require special inspection or testing of the Work by others, whether or not such work has been fabricated, installed or completed.

2.1.22 The Architect shall review or take other appropriate action with reasonable promptness upon the Contractor's submittals such as shop drawings, product data, and samples, for conformance with the general design concept of the Work as indicated in the Contract Documents. The Architect's review of a specific item shall not indicate acceptance of an assembly of which the item is a component.

2.1.23 The Architect shall prepare change orders for the Client's approval and signature in accordance with the Contract Documents and shall have authority to order minor adjustments in the Work not involving an adjustment in the contract price or an extension of the contract time which are consistent with the intent of the Contract Documents.

2.1.24 The Architect shall determine the date of Substantial Performance and shall receive from the Contractor and forward to the Client for the Client's review the written warranties and related documents. The Architect shall determine the date when the Contract shall be deemed to be completed.

2.1.25 The extent of the duties, responsibilities and limitations of authority of the Architect as the Client's representative during construction shall not be modified or extended without written consent of the Client and the Architect.

2.1.26 Prior to the end of the period of one year following the date of Substantial Performance, the Architect shall review any defects or deficiencies which have been reported or observed during that period, and the Architect shall notify the Contractor in writing of those items requiring attention by the Contractor to complete the Work in accordance with the Contract.

Article 2.2 Construction Cost and Estimates of Construction Cost

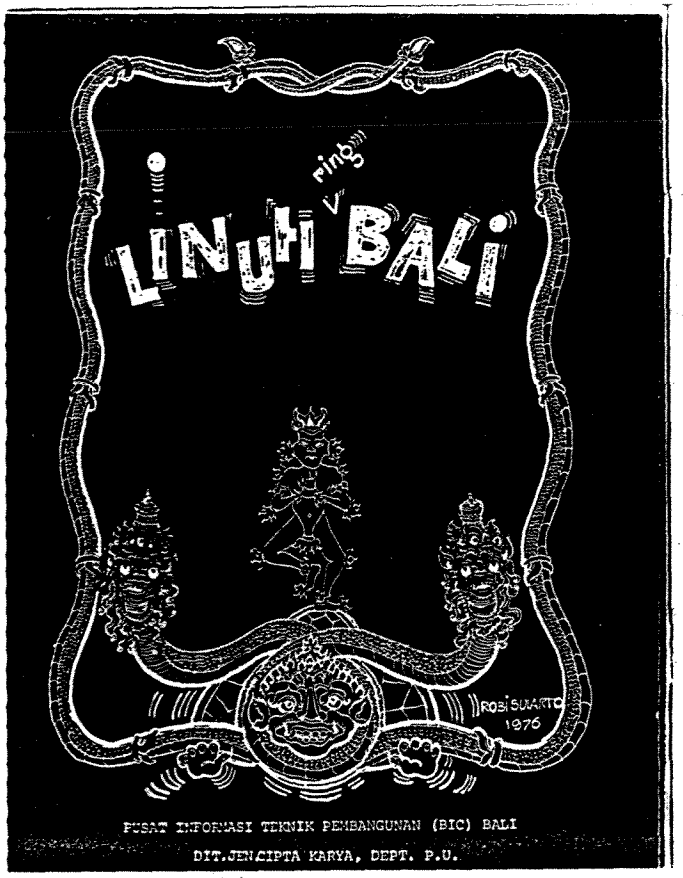
2.2.1 The Architect shall evaluate the Client's Construction Budget and shall prepare estimates of the Construction Cost as previously set out in this Agreement. Neither the Architect nor the Client has control over the cost of labour, materials or equipment, over the Contractor's methods of determining bid prices, or over competitive bidding, market, or negotiating conditions and therefore the Architect cannot warrant or represent that bids or negotiated prices will not vary from the estimate of Construction Cost. Variance from the Construction Budget or Project Budget established under this Agreement shall not constitute grounds for the Client withholding fees due to the Architect.

2.2.2 If the bidding or negotiation phase has not commenced within three months after the Architect submits the construction documents to the Client, the Construction Budget shall be adjusted to reflect any change in the general level of prices in the construction industry between the date of submission of the construction documents to the Client and the date on which proposals are sought.

2.2.3 If the lowest bona fide bid or lowest negotiated proposal exceeds the latest approved estimate of Construction Cost as set out in paragraph 2.1.11 by more than 15%, the Client shall:
(a) give written approval of an increase in the Construction Budget, or
(b) co-operate in revising the scope or quality of the Work as necessary to reduce the Construction Cost, or
(c) authorize rebidding or renegotiating of the contract, or
(d) terminate if the project is abandoned, in accordance with paragraph 3.5.3.

2.2.4 If the lowest bona fide bid or lowest negotiated proposal exceeds the latest approved estimate of Construction Cost prepared as set out in paragraph 2.1.11 by more than 15%, unless there has been an increase in the Construction Budget or the project has been abandoned or terminated in accordance with paragraph 3.5.3, the Architect shall modify at no additional fee, the drawings and specifications, or provide other services as necessary to reduce the Construction Cost to within 15% of the latest approved estimate unless the excess is due to extraordinary market conditions. The providing of such services shall be the limit of the Architects responsibility, and having done so, the Architect shall be entitled to compensation for all other services performed, in accordance with the Agreement, whether or not the construction phase is commenced.

"Linuh Bali - Robi Sularto (Sularto, 1976)



OOM SWAGTIASTU,

BUKU INI DIMAKSUD UNTUK DAPAT MEMBERI PENYULUHAN SEDERHANA BAGI MASYARAKAT DI BALI, TERUTAMA DI DAERAH BENCANA ALAM GEMPA BUMI.

SEMOGA BERGUNA.

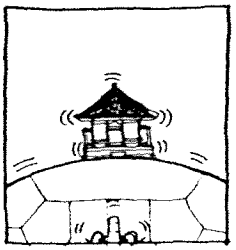
OOM SHANTI, SHANTI, SHANTI.

Robi Sularto

BIC BALI
PUSAT INFORMASI TEKNIK PEMBANGUNAN
DIREKTORAT JENDRAL CIPTA KARYA. PU

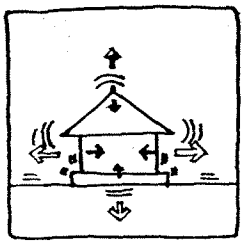
1. BEDAWANG NALA.

DALAM HIKAYAT TRADISIONIL BUMI DIANDAIKAN SEBAGAI "BEDAWANG NALA" OLEH NENEK MOYANG KITA. SETIAP SAAT IA AKAN BERGERAK/BERGETAR, APABILA KEDUA NAGA YG MENGIKATNYA KURANG ERAT MENJALIN TAMBATANNYA.

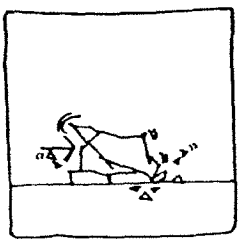


ADALAH KEWAJIBAN KITA UNTUK SELALU SADAR BAHWA "BUMI" KITA INI MEMANG TERLETAK DALAM DAERAH GEMPA YANG SETIAP SAAT BISA BERGONCANG. GEMPA ADALAH PERISTIWA YG AKAN SELALU BERULANG, KITA TAK KUASA MENCEGAHNYA TETAPI KITA TAK PERLU CELAKA DIBUATNYA.

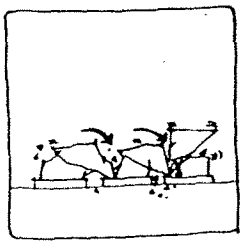
2. MENYADARI AKIBAT-AKIBAT GEMPA.



GEMPA ITU DAPAT MENGGOYANGKAN BANGUNAN KESEGALA ARAH, DALAM BERBAGAI KEKUATAN. KARENA ITU SETIAP BANGUNAN, TIDAK SAJA KUAT BERDIRI UNTUK MEMIKUL BEBAN SENDIRI DALAM ARAH TEGAK, TETAPI HARUS KUAT PULA MENAHAN "DORONGAN-DORONGAN" MENDATAR, MIRING,

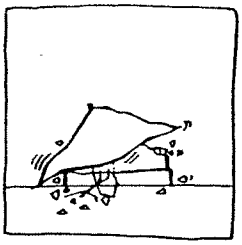


BILA TIDAK TAHAN DORONGAN ATAU GONCANGAN MENDATAR, TENTU ROBOH

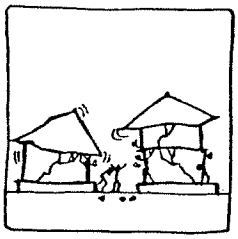


BILA BANGUNAN TERLALU PADAT,

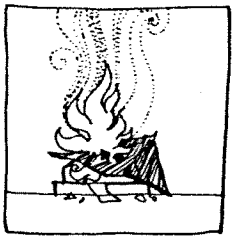
ROBOHNYA SEBUAH BANGUNAN YANG TIDAK TAHAN GEMPA, DAPAT MEROBOHKAN BANGUNAN BANGUNAN YANG LAIN.



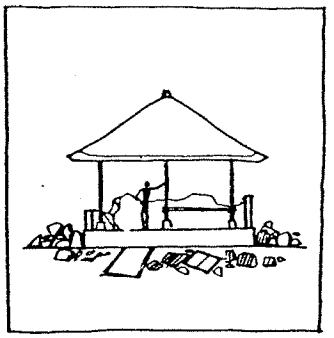
ROBOHNYA BANGUNAN YANG TERLALU CEPAT, TIDAK MEMBERI PELUANG WAKTU UNTUK MENYELAMATKAN PENGHUNI.



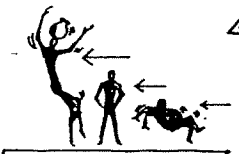
BILA BANGUNAN TERLALU PADAT, MESKIPUN ADA PELUANG WAKTU UNTUK KELUAR RUMAH, BELUMLAH BERARTI AMAN, SEBELUM BERADA DITEMPAT YANG CUKUP TERBUKA.



KEBAKARAN DAPAT MENYUSUL APABILA API DAPUR, LAMPU MINYAK, ALIRAN LISTRIK, TIDAK SEGERA DIKUASAI PADA BANGUNAN BANGUNAN YANG RUNTUH.

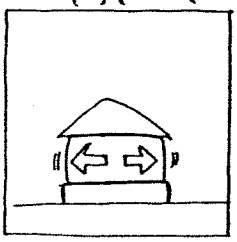


IBARAT TEMBOK ITU BAJU ----
MAKA GEMPA YANG KUAT BOLEH-BOLEH SAJA MEROBEKKAN BAJU,
TETAPI BANGUNAN HENDAKNYA —
TETAP BERDIRI MELINDUNGI PENGHUNI.



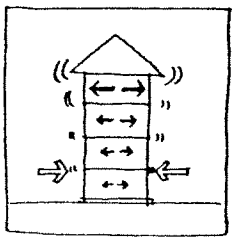
4. MENGENAL SIFAT² BANGUNAN

TERHADAP GEMPA BUMI



BANGUNAN DENGAN MASA YANG BERAT, AKAN MENANGGUNG GAYA GONCANGAN YANG BESAR PULA.

BANGUNAN YANG RINGAN, AKAN MENANGGUNG GAYA GONCANGAN YANG LEBIH RINGAN PULA, AKIBAT GONCANGAN GEMPA.

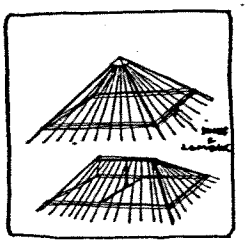


BANGUNAN YANG TINGGI, AKAN LEBIH BERGOYANG, JUGA ADA GAYA GAYA YANG MENTAKIK "PINGGANG" DAN "LEHER".

PIKIRLAH BAIK BAIK SEBELUM MEMBANGUN BERTINGKAT, HITUNG DENGAN TELITI, DAN DILAKSANAKAN DENGAN HATI HATI.

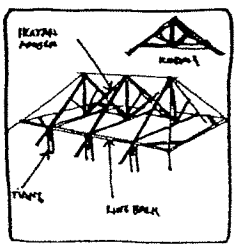
④ ATAP (KEPALA)

KOKOH KAKU, SEPADAN DENGAN PENUTUP DUDUK TERIKAT DENGAN BAIK PADA BADAN YANG DAPAT MENYALURKAN GAYA BERAT KE PONDASI



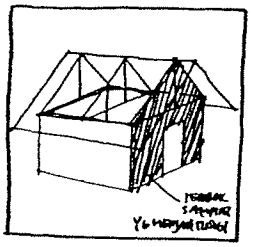
ATAP TRADISIONIL ITU MEMBAGI GAYA GAYA MERATA KESELURUH PENJURU, DAN DITAMPUNG MERATA DENGAN KOKOHNYA, OLEH SINEB DAN LAMBANG.

ATAP TERSEBUT KAKU SERTA KOKOH.

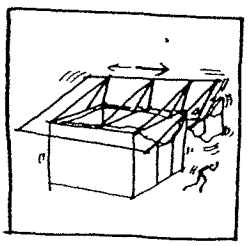


ATAP MODEL KUDA KUDA AKAN KUAT PULA, BILA ANDA TIDAK LUPA AKAN HAL HAL, SEBAGAI BERIKUT:

- TIAP KUDA KUDA DUDUK DIATAS TIANG, ATAU PADA RINGBALK YANG KUAT.
- IKATAN ANGIN ANTARA KUDA KUDA
- SIKU PENGUAT PADA SETIAP POJOK, BILA ANDA MENGGUNAKAN BALOK KELILING KAKU.

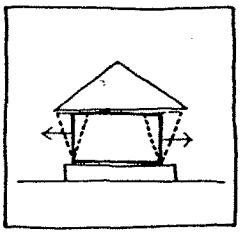


KUDA KUDA ATAP PELANA DENGAN TEMBOK SAMPING YANG MENJADI TINGGI, APABILA TIDAK KOKOH DAN KAKU, LUPA IKATAN ANGIN, PELAKSANAAN TIDAK TELITI, AKIBATNYA BILA ADA GEMPA.

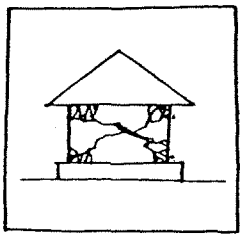


SUNGGUH BERBAHAYA!

ⓑ BADAN BANGUNAN



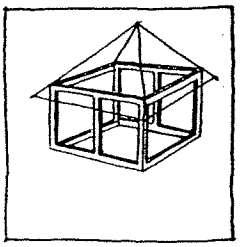
BILA DINDING ITU TIDAK CUKUP KAKU, IA AKAN MELIUK/MELEOT (BERUBAH BENTUK) DAN MENJADI RAPUH, BILA TERDORONG OLEH - GONCANGAN MENDATAR.



TEMBOK MENJADI BENCAH BENCAH, MENDEKATI BATAS KETAHANAN UNTUK BERDIRI MEMIKUL ATAP.

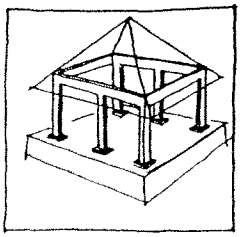
BILA ADA GONCANGAN LAGI, IA AKAN SANGAT MUDAH RUNTUH.

6. MEMBANGUN DNG KERANGKA BETON BERTULANG.



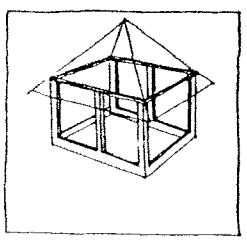
BILA KITA BUAT DENGAN KERANGKA PENUH (SLOOF, TIANG, RING BALK) DALAM IKATAN YANG KOKOH,

MAKA AMANLAH BANGUNAN INI DARI GONCANGAN² GEMPA BUMI.



KERANGKA BANGUNAN DNG HANYA TIANG DAN RING BALK

- TIANG² DUDUK DIATAS SENDI
- HANYA BAIK APABILA TANAH BANGUNAN SANGAT KUAT.

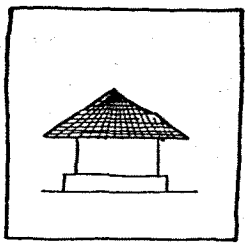


KERANGKA BANGUNAN DNG HANYA TIANG DAN SLOOF,

- UJUNG² TIANG DIBINGKAI DENGAN KONSTRUKSI KAYU.
- HANYA BAIK UNTUK DAERAH BERTANAH LUNAK

BILA INGIN MEMBANGUN BANGUNAN DNG BETON BERTULANG YG BESAR DAN MERUPAKAN BANGUNAN UMUM (TOKO DSB) MINTALAH PERSETUJUAN PU.

7. MASIH KOKOHKAH BANGUNAN ANDA AKIBAT GEMPA?

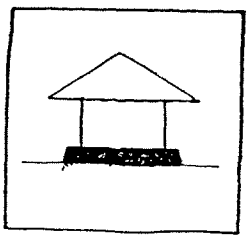


BILA BANGUNAN ANDA "TIDAK" ROBOH,

①

PERIKSALAH KAP/ATAPNYA

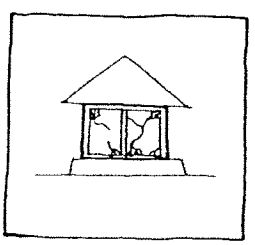
- APAKAH KERANGKA KAJU DIDALAMNYA MASIH KOKOH, KAKU DAN TIDAK CEDERA?
- APAKAH TIDAK TERJADI PERUBAHAN BENTUK?
- APAKAH HUBUNGAN³, SAMBUNGAN², PASAK⁴ MASIH BAIK?



②

PERIKSALAH PONDASI/LANTAI²

- ADAKAH RETAKAN/PATAHAN?
- ADAKAH LANTAI YG TURUN ATAU NAIK?



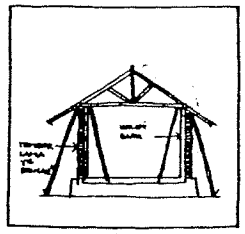
③

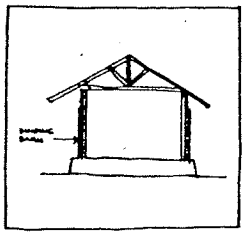
PERIKSALAH BADAN BANGUNAN

- ADAKAH KERANGKANYA CUKUP LENGKAP DAN MASIH KOKOH? (SLOOF, TIANG, RINGBALK)
- ATAUKAH KUDA² ATAP ANDA TERNYATA HANYA DUDUK DIATAS TEMBOK SAJA?
- ATAUKAH HANYA TEMBOK³ DIANTARA KERANGKA TIANG ITU SAJA YG RETAK?
- ADAKAH RETAKAN³ ITU TERNYATA AKIBAT SPESI PEREKAT BATA MENGELUPAS SEHINGGA TEMBOK ANDA

BILA HASIL PEMERIKSAAN
① & ② & ③ = BAIK, RUMAH ANDA MASIH KOKOH.

BILA HASIL PEMERIKSAAN
① & ② = BAIK, TETAPI ③ = TERNYATA KUDA² ATAP HANYA DUDUK DIATAS TEMBOK YG BENCAH², ANDA MASIH DAPAT MENCOBA MEMPERKUAT BANGUNAN ITU DENGAN KOLOM² BARU DIBAGIAN DALAM DARI DINDING, DENGAN RING BALK DAN / SLOOF SETELAH ITU, DINDING² YG BENCAH DPT ANDA GANTI SATU DEMI SATU.
(BILAMA PERLU KAN TSB, TOPANG-LAH ATAP BANGUNAN KUAT².)

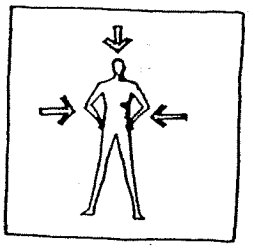




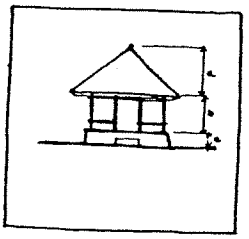
BILA HASIL PEMERIKSAAN
① = BURUK, MAKA SEBAIKNYA BANGUNAN ANDA DAPAT SEGERA DIBONGKAR DAN DIPERBAIKI DARI BANAH DENGAN MEMPERHATIKAN PETUNJUK².

BILA ANDA RAGU-RAGU, MINTALAH PETUNJUK PADA PETUGAS² DENGAN TANDA TANDA MEREKA BAHAGIA DPT MENOLONG ANDA

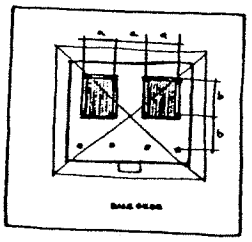
8. BANGUNAN TRADISIONIL BALI TAHAN GEMPA



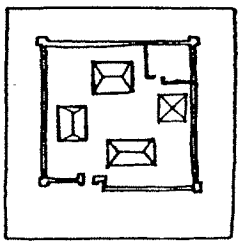
IBARAT MANUSIA YANG TEGAP, LINCAH, BANGUNAN TRADISIONIL BALI ITU :



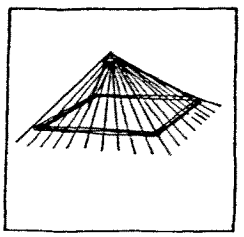
- JELAS TERBAGI DALAM KEPALA, BADAN, KAKI DALAM PERBANDINGAN BERAT YANG SERASI
  - a. KEPALA RINGAN, RENDAH KOKOH KAKU
  - b. BADAN KOKOH LENTUR
  - c. KAKI RINGAN BERAT KOKOH KAKU



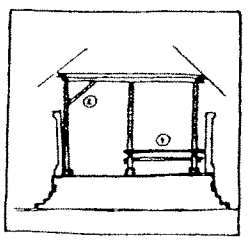
- DENAH TIAP BANGUNAN SEDERHANA DAN RAPI., SEMUA BAGIAN DIATUR RAPI MENURUT "TUGAS" MASING MASING, TERPIKIRKAN SECARA TERPERINCI.



- DIBANGUN SATU PERSATU DENGAN KESUNGGUHAN CERMAT DAN TELITI SESUAI SIFAT PRIBADI DAN KEMAMPUAN YANG NYATA.



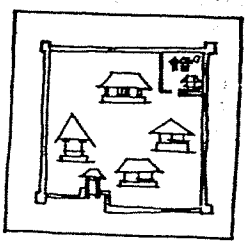
- ATAP YANG RINGAN, KAKU, RAPI, MEMBAGI RATA GAYA GAYA, DUDUK DALAM BINGKAI SINEB DAN LAMBANG, MENYALURKAN GAYA KETIANG - TIANG.



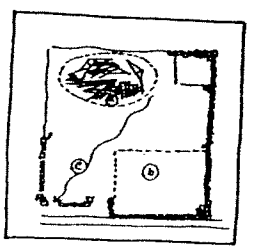
- TIANG - TIANG KAYU YANG TERPILIH MENDUKUNG ATAP, DUDUK DIATAS SENDI SENDI (YANG BERSIFAT SENDI). ANTARA TIANG DAN TIANG TERIKAT OLEH BALE BALE(①) ATAU BER-CANGGAH WANG (②), MENYEBABKAN MAMPU BER-"GOYANG PINGGUL" BILA TERGONCANG GEMPA. DINDING BATA HANYA IBARAT BAJU SAJA.
- PONDASI YANG KOKOH, BERAT DAN MANTAP, MENGGESER TITIK BERAT BANGUNAN KE-BAWAH, SEHINGGA SELURUH BANGUNAN LEBIH MANTAP.

9. MEMBENAHI RUMAH YANG PUNAH

(UNTUK DAERAH TRADISIONIL SEPERTI KALAPAKSA, PA-NGESTULAN, DLL.)



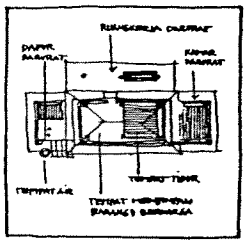
SETIAP DAERAH MEMPUNYAI ATURAN² SENDIRI DALAM MEMBANGUN TATA LETAK DAN BANGUNAN²NYA
DALAM MEMBENAHI KEMBALI, JANGANLAH MELUPAKAN HAL² PENTING TSB.



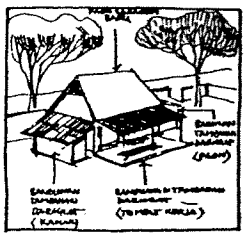
BENAHILAH HALAMAN RUMAH DLM TATA ATURAN YG SESUAI; UMPAMANYA:

- BATA² BEKAS DISUSUN SEBAGAI PANJANG BEKAS TEMBOK PENYENGKER RUMAH
- KAYU² BEKAS DIBENAHI DI BAGIAN KAJA (a)
- BAGIAN KELOD, TEMPAT PAWON, DIBERSIHKAN, DI RATAKAN. DEMIKIAN PULA DAERAH MRAJAN
- USAHAKAN AIR DI HALAMAN DAPAT MENGALIR (c)

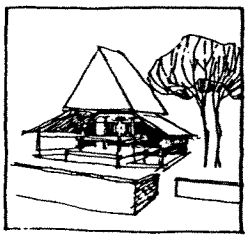
- SELOKAN DIDEPAN RUMAH DIBERSIHKAN, SEHINGGA KEBERSIHAN SELURUH LINGKUNGAN TERCAPAI !



DALAM TATA TRADISI, PAON MERUPAKAN PANGKALAN UTAMA KEGIATAN RUMAH TANGGA, KARENANYA, SETELAH HALAMAN PAON DIBERSIHKAN, BANGUNLAH TERLEBIH DAHULU 'PAON SANANEM' SEBAGAI PANGKALAN KEGIATAN DARURAT RUMAH TANGGA DAN TITIK PANGKAL MEMBANGUN KEMBALI SELURUH RUMAH SECARA BERTAHAP.



BALE PAON SAKANEM DAPAT DIPERLEBAR KEDEPAN SEBAGAI EMPER (SERAMBI) TEMPAT KERJA, DIPERLEBAR SEBELAH/SAMPING KANAN UNTUK TAMBAHAN KAMAR TIDUR, DIPERLEBAR KESAMPING KIRI UNTUK DAPUR DARURAT, SEMENTARA BANGUNAN POKOK BALE PAON SAKANEM DIPAKAI SEBAGAI RUANG TIDUR UTAMA DAN TEMPAT MENYIMPAN BARANG BERHARGA.

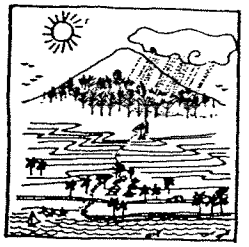


→ UNTUK BANGUNAN PERLEBARAN INI YG BERSIFAT DARURAT, TIADALAH MENYALAHI TRADISI BILA KITA PERGUNAKAN BAHAN2 BANGUNAN BEKAS!

DEMIKIAN PULA BILA KLUMPU, JINENG MASIH UTUH, DAPATLAH DIPERLEBAR KESAMPING SEBAGAI BANGUNAN DARURAT.

BAHAN2 BANGUNAN BEKAS, DAPAT DIPERGUNAKAN KEMBALI. BERHEMATLAH!

10. PELIHARALAH ALAM LINGKUNGAN

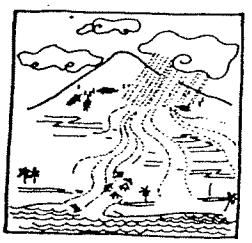


BALI DIKENAL SEBAGAI PULAU DEWATA, ALAMNYA INDAH LUAR BIASA, DAN LESTARI KARENA DIPELIHARA DENGAN PENUH RASA HORMAT.

NENEK MOYANG KITA BEGITU CINTA KEPADA ALAM, KARENA MENGERTI BAHWA ALAM ITU ADALAH SUMBER KEHIDUPAN.

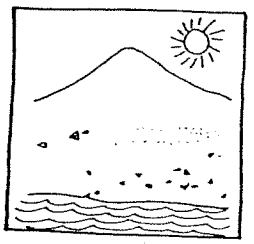
ALAM ADALAH "BUANA AGUNG" DAN MANUSIA SEBAGAI "BUANA ALIT" YG WAJIB MENYELARASKAN DIRI KEPADA BUANA AGUNG

MENCEDERAI ALAM, ARTINYA MENCEDERAI DIRI SENDIRI



MENEBANGI POHON SEMENA2 ADALAH MENCEDERAI BUANA AGUNG DAN BUANA ALIT!

HUJAN YG TURUN DIGUNUNG TIADA LAGI DAPAT DITAMPUNG DAN DISIMPAN OLEH POHON2 DIMANA HUTAN INI BERABAD2 MENYALURKAN KEMBALI AIR YG TIADA HENTI SEPANJANG TAHUN. KINI TUMPAH BEGITU SAJA SEBAGAI AIR BAH!



BILA HUJAN TURUN DIMUSIMNYA, BANJIR MELANDA APA SAJA. DAN DIMUSIM KEMARAU, TIADA AIR MENGALIR.

ALAM JADI SEMAKIN TANDUS. SEMAKIN KERSANG.

BUKAN MUSTAHIL, SEABAD LAGI GURUN PASIRLAH YG KITA WARISKAN KEPADA ANAK CUCU.

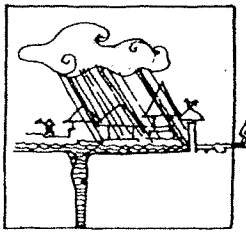
CINTAILAH ALAM SEPERTI MENCINTAI DIRI KITA SEMUA.

LINGKUNGAN YG KERSANG

DEBU2 BERTERBANGAN, MENYESAKKAN NAPAS, MENCEDERAI MATA, MENYEBAR BERBAGAI BIBIT PENYAKIT.

SUMBER2 AIR MENJADI KERING, SAMPAH2 BERTUMPUK, BERTERBANGAN KEMANA2 MENGOTORI SELURUH LINGKUNGAN, MENGKOTORI PIKIRAN DAN JIWA KITA.

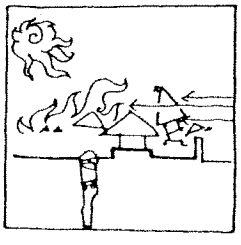
LINGKUNGAN SEMACAM INI BUKANLAH KODRAT, TETAPI JUSTRU KARENA KITA LENGAH, DAN MEMBIARKANNYA, TIADA MERAWAT ALAM



DIMUSIM HUJAN, AIR MENGGENANG TERLAMPAU BANYAK, AIR KOTOR, BENIH2 PENYAKIT BERKECIMPUNG DIMANA2.

JALAN PUN AUS DAN RUSA ANGKUTAN JADI LAMBAT,

BARANG2 PANGAN JADI MAHAL

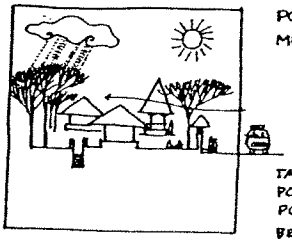


DIMUSIM KEMARAU YG KERING, API KEBAKARAN MENGHANTUI DIMANA2, SIAP MEMUSNAHKAN RUMAH DAN HARTA YG TELAH DIBINA PULUHAN TAHUN.

PADA MUSIM BADAI, TIADA POHON DAN SEMAK SEBAGAI TIRAI PELINDUNG DESA.

HIJAUKANLAH LINGKUNGAN DESA!

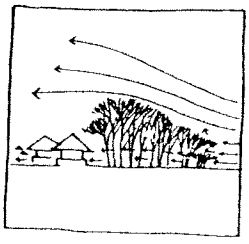
KEBERSIHAN BUKANLAH BERARTI MENEBANGI POHON2. TETAPI MEMBERSIHKAN LANTAI HALAMAN. HALAMAN DIATUR SEDIKIT MIRING, SEHINGGA AIR TIDAK MENGGENANG. NISCAYA AKAN TERCIPTALAH LINGKUNGAN YG BERSIH, INDAH, RAPI, SEJUK DAN BERMANFAAT.



POHON2 YG HIJAU DAN RINDANG MEMBERI BANYAK MANFAAT,

UDARA JADI SEJUK,
AIR SUMUR TIDAK KERING,
TIADA DEBU
BUAHNYAPUN MENGUNTUNGKAN ANDA SEKELUARGA.

TANAMLAH POHON MANGGA TAHUN INI, POHON JERUK TAHUN DEPAN, POHON JAMBU TAHUN BERIKUTNYA, BERARTI ANDA AKAN MEWARISKAN KEBUN BUAH2AN KEPADA ANAK CUCU ANDA.



POHON2 YG BANYAK DAN BERKELOMPOK AKAN MELINDUNGI PULA LINGKUNGAN ANDA DARI ANGIN TOPAN.

BILA HANYA ADA SATU DUA POHON, TENTULAH DAPAT TUMBANG, TETAPI BILA ADA SEKELOMPOK POHON, TIDAKLAH MUDAH DITUMBANGKAN.

AIBC - Speaker's Bureau (AIBC, 1991)

The people from the Architectural Institute of British Columbia want to come and talk to you about architecture. We want to talk to you about architecture and your family, about architecture and your neighbourhood, and about architecture and social issues...affordable housing for example. We can also tell you about architecture and business, about earthquakes and architecture and about new directions in architecture for native Indian communities.

Why not ask us to come and talk with you soon?

The Architectural Institute of British Columbia,
103 – 131 Water Street,
Vancouver, B.C.
Canada V6B 4M3
Tel: 604/683-8588
Fax 604/683-8568

Allen Aubert, MAIBC
Allen is an architect with strong ties to the community. A principal of the Surrey firm of Allen Aubert Associates International Inc, he is past director of the Nanaimo Chamber of Commerce, served as a member of Nanaimo's Advisory Design Panel and is currently active on the Surrey Heritage Advisory Committee. Allen's experience in the U.K. and Canada has provided him with first hand knowledge of the difficulties and dilemmas that people face when asked to comment on a proposal in their neighbourhood.

Architecture as a Voice in the Community.
Who represents communities in transition? Allen believes that architects are uniquely qualified for this role and may be the professional best suited to speak for the community in matters concerning proposals for new developments. His presentation outlines the role an architect can play as your community's advocate.

Patricia Bourque, MAIBC
Patricia Bourque is the principal of her own firm specializing in housing design. Her experience as a parent who works from the home has given her particular insight into questions surrounding zoning policies and housing issues.

Living and Working at Home.
Trend-watchers call it "cocooning" – many families call it a necessity – however you look at it growing numbers of people are working from offices in their home. Patricia believes that single-family zoning is developing in opposition to this trend and becoming increasingly restrictive. Her presentation suggests a philosophy of zoning based on "nurturing" principles and aimed at achieving a healthy community.

Graeme Bristol, MAIBC
Graeme has expanded his traditional architectural practice to include research, planning and analysis in housing and community development. He is an active participant in the debate on housing issues and serves on the Housing Committees of both the AIBC and the Royal Architectural Institute of Canada. He is known across North America as an articulate spokesman for housing issues.

Issues in Affordable Housing. Architects are inextricably linked to issues surrounding human shelter...its availability or, for many, its unattainability. Shelter, as a basic human need, has a profound effect on the shape of the built environment. Our response to current housing needs and those of future generations is an ethical issue to architects such as Graeme. His views on this important concern are topical and thought-provoking.

Dennis A. Christianson, MAIBC
Dennis has experience with a range of developments in the field of educational and institutional facilities. He is registered to practice in B.C. and Alberta, and is a member of the Boston Society of Architects, the Town Planning Institute of Canada, the Urban Design Institute of New York, and the Council of Educational Facilities Planners. He has been a guest critic at Cornell University, New York and a speaker at the University of Alberta, Edmonton.

Educational Facilities for the Future. There is a growing trend for people to pursue education throughout their life – from their first day of kindergarten to their enrolment in a retirement planning seminar. Dennis explains how educational facilities should be built to meet the needs of a new generation of life-long learners. He discusses how school design can reflect this philosophy and adjust to our changing needs.

Jory Faibish, MAIBC
Jory has over 14 years of experience in residential, commercial, institutional and industrial architecture. His renovation experience ranges from small-scale residential projects to warehouse conversions, industrial and institutional renovations. Jory is the founder of the Vancouver Entrepreneur Resource Association, registrar for the Architectural Institute of British Columbia and a principal of Jory C. Faibish, Architect.

The Process of Renovation. Jory looks at the "who what when where why" of renovation – from start to finish. Assessing the structural characteristics of your house and evaluating your needs and wants are both part of the process covered by Jory's presentation. He will let you know what you're getting yourself into – and how you can achieve a successful renovation project. Learn how to make your dream come true – keep your marriage intact – and avoid "The Money Pit"!

Milton Gardner, MAIBC
Milton's special interest in seismic design originated in 1971, when he was executive architect for two large California hospitals. Today, he is one of the few architects registered to practise all along the Pacific Coast of North America; he is licensed in California, Oregon, Washington and B.C. Milton has worked in the field of planning and architecture for more than thirty years. In 1975 he immigrated to Vancouver and established his own practice in 1980. His experience includes work throughout the U.S., Jamaica, Southeast Asia, the Middle East and Western Canada.

Earthquakes – How Safe Is Your Building? Milton's Pacific Rim experience makes him especially qualified to address the issue of earthquake proof buildings – and debunk many of the myths associated with the topic.

Harvey Hatch, MAIBC
The firm of Harvey R. Hatch Architect Ltd. was established in 1982 and has developed from a single proprietorship into two firms serving Vancouver and the Lower Mainland. Harvey's practise specializes in feasibility studies, single and multi-family residential design, commercial and industrial design, institutional designs and program development, and mixed-use projects.

Making Decisions When You Renovate. Harvey starts his presentation by discussing your very first choice – renovate or move? His talk can help you make the dozens of decisions that arise during the renovation project. Harvey will explain the process for developing a program and plan and the relationship of the renovation to the existing structure. Harvey also recommends techniques for implementing quality control and sound contractual relationships.

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Fax: 604/683-8568

Robert Lemon, MAIBC
Robert is the principal of Robert G. Lemon Architecture & Preservation, and heritage planner for the City of Vancouver. A specialist on heritage issues, he was a member of the Vancouver Heritage Advisory Committee and has offered heritage planning advice to communities across B.C. with the Community Pride Program.

Heritage in Your Community. Our architectural heritage is an integral part of our history and part of the fabric of our cities and towns. Once destroyed, older buildings can never be replaced. Communities everywhere are striving to preserve their heritage for future generations. Robert's talk explains what heritage is all about, describes what can be done to restore and preserve heritage buildings and discusses some of the issues surrounding the topic of heritage.

Gerald Longson, MAIBC
As a senior project architect with David Nairne & Associates, Gerald has played a key role in the design of buildings for native Indian communities. He has been involved in the design of band administrative offices, community halls, schools, commercial facilities, cultural centres and housing throughout British Columbia and the Yukon.

Designing for Natives. The design of buildings for native Indians must reflect their traditions. An understanding of historic native lifestyles, culture, art, and architecture, assists architects to design buildings that both reflect the past and fulfil present day requirements. Gerald uses examples of historic buildings, art and ceremonial objects, as well as recent architectural designs, to demonstrate exciting new directions in architecture for native communities.

Clare McDuff-Oliver, MAIBC
Clare formed her architectural practice, specializing in heritage restoration and renovation, in 1985. McDuff-Oliver Architect has received two heritage design awards from the City of Vancouver. Clare aims to produce designs for renovation and new construction that are sensitive to the surrounding neighbourhood.

Joint Property Ownership and Development – Making it Work for You. Clare's experience as a development coordinator for groups wishing to jointly purchase and develop property has given her singular insight into the joys and pitfalls of the process. For many people this is the only avenue towards the purchase of a home – learn how to make this option work for you.

Ben Ostrander, MAIBC
Ben's firm, R.B.O. Architecture, was incorporated in 1987 to provide architecture that is sensitive to people's functional needs, with a primary focus on barrier-free design. He is the chair of the AIBC's Accessibility Task Force and has addressed many groups, including the Interior Design Institute, B.C. Building Inspectors, B.C. Coalition of the Disabled and the UBC School of Architecture, on the topic of accessibility.

Barrier-Free Design – Access for Everyone. People with disabilities, including many seniors, want a lifestyle that is active and independent. Accessible environments are essential to full participation. Both new buildings and renovations are discussed in Ben's presentation as he explores design solutions for persons with disabilities and the functional design needs of seniors.

Richard Vallee, MAIBC
As the principal of the Courtyard Group Architects, Richard has developed his insights and design approach over the course of numerous multi and single-family residential projects, both new and renovated, as well as a number of commercial and institutional projects. Richard has been active in the housing field as a member of the AIBC Housing Committee and as a key organizer of the "Home Pursuit" housing feature at the 1989/90 Fall Home Shows.

Housing in Times of Change. What is influencing the evolution of housing design and how is the rate of change progressing? Richard looks at the current situation and it's effects on the design of housing in the future.

Additional Topics:
- Architecture and Social Responsibility
- Architecture as a Career
- Architecture and Business
- Community Development in Southeast Asia
- Design and the Community
- Effective Team Management in the Building Process
- How to Find, Select and Engage an Architect
- Preservation Philosophy
- Transforming Your House: Designing Renovations and Additions
- Urban Growth
- Urban Housing in China
- What Architects Do

The topics listed above are only a few of the many that are available. If there is a topic that you are interested in, but is not listed, please call us – we will be happy to recommend a qualified speaker.
There is no charge for this public service.

To arrange a speaker for your group contact:

The Speakers' Bureau,
The Architectural Institute
of British Columbia,
103 – 131 Water Street,
Vancouver, B.C.
Canada V6B 4M3
Tel: 604/683-8588
Fax: 604/683-8568

The Architectural Institute of British Columbia is a self-governing body dedicated to promoting and increasing the knowledge, skill and proficiency of its members in all things relating to the practice of architecture, the allied arts, science and professions; and enforcing the Architects Act. Only registered members of the Architectural Institute of B.C. may practise architecture and use the title 'Architect' and the initials MAIBC.

AIBC - Advisory Service (AIBC, 1989)

What is the AIBC Advisory Service?

- Helps people understand the process of design and construction
- Helps create the best environment for people
- Helps people get the best value for their investment

The Architectural Institute of B.C. began the Free Advisory Service in 1970 in order to help homeowners with their project, or problems in renovation, addition and rebuilding.

It is the first professional organization to offer such a public service. To date, it has helped more than 5,000 homeowners.

One of the aims of this service is to show the public that architects are interested in the small and medium residential and community environments.

Another public service performed by architects in your community is their participation on municipal design panels and planning commissions. In this role, architects perform an advisory service to the community, to ensure that proposed building projects meet with the community's standards.

A public service by architects in your community

Members of the Architectural Institute of B.C.

Advisory service committee:
Kendall Jessiman, Co-Chairman
Richard Kadulski, Co-Chairman
Peter Baker
Arni Boaz
Raymond Bradbury
Donald Fairbrother
William Gies
Steven Hodder
Jarmie Kauppila
Richard Kolodziej
Mark Mayall
Charlotte Murray
Charles Nichols
Paul Ohannesian
Nirbhai Virdi
David Weiser
Walter Wiltshire
Gen Yada

Architects' Advisory Service

Free Architectural Advice for the Homeowner

aibc

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of British Columbia
103 - 131 Water St.
Vancouver, B.C.
Canada V6B 4M3
(604) 683-8588
FAX 683-8568

aibc

Ask an architect

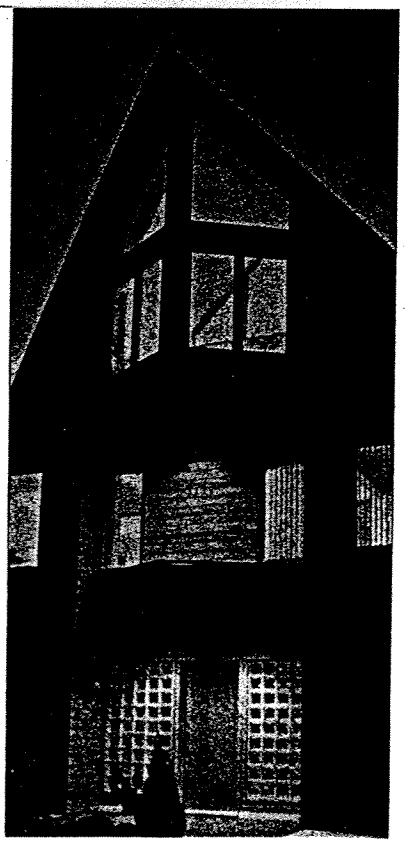
Saturday mornings, 9:30 am to 12:30 pm
970 Richards Street, Vancouver, B.C.

- Embarking on the project
- Renovating the house
- Adding to the house
- Building a new house
- Ideas for conserving energy
- Building on a difficult site
- Understanding building codes and municipal bylaws
- How to hire and work with an architect
- How to hire and work with a building contractor

How to get free architectural advice

Phone the Architectural Institute of B.C. for an appointment (683-8588) and get the undivided attention of a registered architect for 45 minutes to discuss your ideas, requirements and questions.

The architect will meet you at the Architectural Institute, 970 Richards Street, Vancouver, on Saturday morning. Bring photographs, sketches and any other information. You will not be solicited for business.



What an architect does

Architecture is a blend of art and science. The architect designs buildings with people in mind - the people who live and work in the buildings - the neighbours who see them every day - the community that wants a pleasant environment. The architect protects the interests of the client by consulting, preparing designs and plans, overseeing the total project.

How to find the right architect

The AIBC has the following complementary publications:

- How to Find, Select and Engage an Architect
- Tariff of Fees
- Directory of Firms
- Architects Value by Design
- List of Architects Specializing in Residential Work