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Theory

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Introduction

Like other novice students and much of the public at large, I was under the impression that architects, in their artist-like studios, worked in relative isolation, making drawings of buildings... Where did this innocent vision come from? Chiefly, perhaps, from Howard Roark, hero of Ayn Rand's novel 'The Fountainhead'

Small and large warehouses [are] literally filled with young men and (some) women who [sit] at drawing boards writing memos, talking to others around them, filing, and drafting. There [are] architects who [do] nothing but make models and others who seem only to talk on the phone. Their bosses usually [have] offices that look more bureaucratic than artistic, for even those with drawing boards [keep] them covered in paperwork. Their clients [are] even more startling; often they [are] committees, actively involved in the design enterprise and apparently in charge of it. When the architects and clients [get] together, it [is] hard to follow the thread of their conversation; they [leave] meetings with no more decisions made than at the outset.

Architecture can be so pure, so elegant, when a single architect creates without outside interference, [but] the opportunities to do so are virtually nonexistent.

What is Practice?

Practice... implies a method of action, in the sense of the habitual, customary, or routine... In practice, the architect does not refer to textbooks or procedures manuals to determine how best to behave... [But] routine activities based on commonplace experience are awkward to explicate. The architect finds it difficult to explain how to persuade a client, recognize an acceptable compromise, work within the budget- these are things you 'just do'... These are exactly the elements of which outsiders have no inkling and so develop distorted images of architects and their work.

Theories vs Methods

Most architects find that their everyday life is invisible except when it is problematic... War stories are readily recounted when architects describe their practice, as are tales of great success, but it is difficult to hear about the commonplace... To complicate matters, what architects say and what they do are often 2 very different systems.

Words vs Deeds

When architects explain and justify their actions, they are presenting what is called espoused theory,... [but] they employ a 'theory-in-use' to actually guide their actions... Contradictions between espoused theories and theories-in-use are not uncommon, but such contradictions reduce professional effectiveness until the practitioner becomes aware of the dilemma... In architectural practice, the reasons why architects act and believe as they do are framed fundamentally by the architectural profession. When [they] describe [contradicting] actions, [they are] responding to changing demands confronting the profession.

Architecture's professional ethos tends to constrict the behavior of partners and employees, particularly by assigning to design the status of 'master value'... Architects are trained to assume responsibility for design; their professional identity depends on it. Yet design is a scarce resource in practice, which those in charge tend to hoard, prompting others to seek a situation where they, too, can be in charge.

Patronage

Schools of architecture have had a powerful influence on professional unity and control... because they further the profession's distance from crafts-based training. Since engineering was evolving into a profession in its own right,... the architect's primary expertise, as it was brought home from the Ecole, was design-as-art... Design as conceptual work has been a difficult commodity to sell in America's pragmatic marketplace... Compounding the problem, architects are more tightly bound to clients and to a local market for services when compared to artists. The emphasis on art also presents dilemmas about professional training... (unity and standards [versus individuality and artistic development])... The public may reject architectural products because they are not functionally distinct from nonarchitectural ones... Builders, engineers, and contractors, as well as Sears, Sunset magazine, and mobile home manufacturers can deliver plans for a building that will accommodate one's needs... Architect's products do differ functionally... when they are tailored to the specific needs of the client, yet this form of architectural service is limited to a small segment of the market... In mass housing and speculative office or retail space, architects have less clearly distinguished themselves from the rest of the pack.

One distinction between architecture and other professions... [is] the relationship between patron and practitioner... Architects, more than other professionals, remain tied to [powerful and monied] patrons... Clients... provide the function of a building... (a critical dimension of the architectural product [is placed] under the client's control)... Other professionals... have also taken over [architecture] jobs... [At
times,] the architect's task... is limited to the building's skin... [Particularly,] the increasing importance of the developer has commodified architecture through the creation of speculative commercial, residential, and industrial buildings.

There is a role that architects have always played... but have rarely cultivated: translation as a social art. That clients, planners, consultants, building departments, draftspersons, and designers must together arrive at some agreement is a key element of the architect's role, and could be better developed and marketed.

Contemporary Professionalism
The [architectural] profession suffers the consequences of its own ideals: downplaying the importance of profit creates minimum-wage workers; professional autonomy is reflected in public disinterest; emphasis on design allows other necessary skills to fall to other specialists.

Art and business exist as a dialectic in architecture that has created a dilemma for the profession since its earliest days... [And] the client stands at the center of this dilemma. Professionals, in general, promote individualism and the intrinsic value of their work, espousing anti-market principles and downplaying the profit motive... [On the whole,] the profession remains more or less independent from those it serves (this is a delicate balance, since too much autonomy can eliminate the market for services)... The primary means by which professions establish a degree of autonomy from other members of society is to claim a particular knowledge territory as distinctly their own... The expertise of any profession is based on a core of relatively well-accepted knowledge among practitioners, and a periphery of more esoteric knowledge... Since clients may not always be satisfied with a professional's service, it is to a profession's advantage to keep evaluation within its own circle... The public is to be protected from its own impossible demands; 'quacks'... will not be allowed to practice... ('quacks' are... those professionals who continually please their clients but not their colleagues). Professions generally reserve the right of peer evaluation... In architecture, these discussions are nor always secretive, but they are inaccessible (couched in the sacrosanct terms of art)... Comments from the juries for design awards usually display a lack of concern for clients, the building's technical systems, or the acommodation of human activity. Published in the professional journals, these conversations are not intended for public dissemination... Architects assume an artist's role as a means to retain autonomy and escape judgment... This is a kind of 'ideological safeguard'... that professionals can bring to bear if threatened by client dissatisfaction.

One definition of professions appears particularly astute: they are occupations 'whose indeterminacy/ technicality ratio... is generally high'... (a profession involves some objective information, but there is always more that cannot explicitly be known)... One of architecture's peculiarities is that, unlike other fields, it has failed to develop a set of hypotheses that can be advanced or refuted... High indeterminacy is partially the result of architectural problems themselves, which defy clear definition and solution.

In the negotiations between architects and thir clients,... an underlying consideration is control over knowledge and information. Parties communicate only what they want each other to take into account, manipulating the extent and accuracy of the information contributed... Just as clients keep their actual bank balance private, so architects employ mysterious justifications like the analogous structural defense... Since architectural decisions are inherently negotiable, this protects the architect's decision-making authority.

In the academic studio, the architect-teacher provides students with guidance on design problems far removed from the untidy, awkward problems that many real clients have. Later, these students may be discouraged or resentful that their real clients do not have problems and resources with greater potential. Students are rarely encouraged to work in groups on design problems explicitly intended to help them learn about the social construction of architecture, about collaboration skills, mutual satisfaction, and the like.

The Place of Practice
There are very large (over 50 persons) and large offices (generally over 20 persons) associated with large-scale projects, complex clients,... sophisticated operations, specialization, a wider range of services, higher pay, formalized management, and a hierarchical organization of responsibility and power. At the other extreme, small offices (under 10 persons) are characterized by informal management, less specialization,... lower pay, smaller-scale projects, direct contact with clients and consultants, a higher concern for design quality, and few bureaucratic traits. Mid-sized firms are offices between the 2 extremes, and may have the qualities of both large and small practices... Some say only small and large firms will survive in the future... Indeed, there is evidence that mid-sized firms are losing their share of the market... Very large firms make up only 2 percent of all firms, yet collect 30 percent of all fees... If we also include large firms,... these 7% acount for 56% of all revenues, and this share is growing... [Small offices] are seen as the backbone of the profession. Many architects much prefer to work in this kind of setting, and it is widely believed that they are the source of innovation in design.

Work and Workers
With specialization comes the 'de-qualification' of labor, which entails breaking tasks into smaller and smaller components that require less and less expertise... The jobs of most architectural workers are less meaningful and more alienating; a small but powerful group of architects at the peak of the hierarchical pyramid take for themselves what they consider the most rewarding work... Professionals are now stratified into 3 basic groups: the rank and file who perform the productive labor, the administrative elite responsible for supervising the collective performance of the rank and file, and the knowledge elite, the professionals who conduct research in universities... The managerial or administrative function coordinating specialists [has] become crucial to effective professional practice... (in architecture, the project manager or job captain is a prime example of upgraded status without increased design responsibility).

The majority of American architects are 'employees', earning wages or salaries, not from clients but from fellow practitioners... Young professionals thus have one employer rather than many clients...
Architectural employees as a whole feel little allegiance to the 'corporation'... [They] may proceed slowly and somewhat carelessly, to a domineering boss's dismay... [They also] search for and accept moonlighting jobs,... not only to make extra money, but also to be able to make their own decisions. Moonlighting keeps 'business' at the office and provides an outlet for design.

The strongest determinant of work satisfaction among professionals in bureaucratic contexts is participation in decision-making. By contrast, the strongest predictor of their alienation or dissatisfaction is 'formalization' in a heavy-handed bureaucracy where rules are strictly enforced.

[In a 1987] study of over 400 architects,... 98%... said creativity was the distinctive feature of architecture, and 80% said they wanted more opportunities to work creatively,... especially in the early parts of projects... There is also great agreement about compensation. [Most] think architects' compensation is too low, and... are personally dissatisfied with their salaries. Architects appear to be the most poorly paid professionals.

If employees can be hired at a low level,... they can be given greater responsibility, the payoff being less frustration and greater job satisfaction rather than the expected salary increase. The office benefits from a low-paid employee ably working beyond his or her job description.

The Clients
Historically, the architect's patrons came from the same culture (though generally from a higher social class), yet contemporary architects now find themselves designing in countries and for cultures quite unlike their own (even when international work is handled primarily by larger offices)…

At home,… architectural demand comes not from a tiny elite, but from a broad middle and upper-middle-class support…
Clients are more and more often corporations, governments, or institutions, rather than individuals… These client-giants send representatives to client meetings,… removing the ultimate approval process from an architect's immediate control… Architects prosper who have clients who prosper, and corporate clients who go bankrupt bring their architects down with them, while those architects who avoid corporate clients are barely surviving.

In the context [of megaclients], the client with whom the architect works… is not the client who will use the building… Architects' isolation from their 'real clients' [is what has] precipitated a trend toward more formal, abstract, and less humane design.

Mega-clients hire particular firms for the following reasons (in rank order): ability to complete on budget + ability to make a building function, ability to complete work on time, and ability to work with owner staff. Aesthetic quality ranked 10th, along with fee amount… Only a large architectural office can meet the requirements of mega-clients. And once an office gears up for 'big dollar work', it is difficult to take on any other kind. Small projects (such as single-family dwellings) do not make efficient use of resources…

In the last century,… "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." [Bernard Michael Boyle; 'Architectural Practice in America 1986-1965']

Design Problems in Practice
The activity of design is commonly thought to be what the designer does, alone, at the drawing board… However, every individual with a voice in the design process is a kind of designer… The architect-designer, among those individuals, has the added responsibilities of coordinating all contributions and giving them some spatial expression… While not all actors may sketch their concepts into architectural form, their input will frame design solutions. It is from the context of all their interactions that a building emerges… 'Design' refers to more than design activity in the office; it also means moving a project through the approval process, managing its construction, obtaining the commission in the first place, and so on…

Six principal characteristics of design problems:

·Design in the balance: Architecture tries to unite ideologically-contradictory forces…

·Countless voices: The influence brought to bear on any project is distributed across numerous participants…

·Professional uncertainty: The responsibilities, procedures, authority, allegiances, and expertise in a project are ambiguous.

·Perpetual discovery: The information needed to make decisions is never complete, and each constraint can be challenged…

·Surprise endings: Possibilities are limitless and participants cannot predict the outcome.

·A matter of consequence: Design participants are highly motivated since the stakes are significant and the consequences serious.

Defining Design Problems in Schools

The one element that all academic approaches and programs have in common is the design studio. The studio is the heart of architectural education, [consisting of] ? to ½ of the required educational program… Each studio varies with the teacher, the school, and the level of the student, but the fundamental structure of the studio is relatively consistent: the instructor poses a problem… and then works individually with students as they develop their solutions.

There is a fundamental explanation why studio problems are distinct from practice's problems: they each have a unique and definitive context… In schools, problems are composed for didactic reasons (complex problems are simplified, variables are isolated for study, and a series of educational experiences is coordinated). The studio provides direct experience with design as an isolated activity, but not with design-in-practice… School problems are self-selected by architect-educators… Because school problems are partially the result of an idealized vision, they help to create the ethos of practitioners… Design is emphasized as an art and a craft… Design is emphasized as mysterious knowledge, the learning of it taking place in a somewhat protective setting (academia)… The school disembodies the primary professional activity of design from its context… By deemphasizing context, much knowledge and training that would be useful in architectural pratice is unattainable… Students are expected to gain context-loaded experience during their internships… But since apprenticeships in architecture… are relatively disorganized,… many practitioners are not trained in the social arts of working with clients and consultants, I negotiating a contract, in real estate finance, or in working with regulatory agencies.

The Professional Organization

Founded in 1857, the American Institute of Architects (AIA) remains the primary professional society for architects… In spite of the fact that not all, or even a majority, of practicing architects are members, the professional organization sets standards that permeate the entire building industry…

Design in the Balance

In practice, design 'hangs in the balance'… At the office, design time and design freedom are challenged in at least 2 ways. The first resistance stems from the common priorities of clients… (and other participants, such as consultant engineers, design-review agencies, and users)… Second, the architectural office's own business practices may work against design quality… Good business practices… can discourage good design…

While architecture is identified as one of the arts, it is also a profession and a business… The business aspects of architecture involve establishing a realistic fee structure, staying on schedule, estimating the amount of work remaining prior to completion, coordinating consultants and in-house staff, maintaining contacts with prospective clients, acquiring new work, managing the number of projects that are in the office at any point in time, getting agreements in writing, writing legally-competent specifications, staying as close as possible to the construction budget, staffing the office in an optimal manner, gaining publicity for work completed, and developing effective office procedures… Within a firm, those at management levels have the greatest responsibility for the business (and… the least contact with 'drawing-board design'). Many offices hire someone expressly in charge of business development… The design staff tends to view these people as being outside the architectural culture… (attempting to protect against economic priorities overtaking design priorities)…

The general attitude among architects is the 'charette ethos', in which good architecture requires commitment beyond the allotted time… It is a widely held notion that the best work comes from offices [where employees are] willing to put I overtime (sometimes unpaid) for the sake of the outcome; and that good architecture is rarely possible within the fee… People involved with a project will care about the building enough to uphold high design standards regardless of the fee… This can be seen as a reaction to and rejection of the client's control. By working without pay or longer than is reasonable to create a building, beyond the client's subsidy, the architect asserts some independence and at the same time justifies decisions that might go against the client's wishes. In a sense, the architect comes to 'own' some part of the project…

The separation of architecture as an art from the business of architecture has a long tradition. In the fist century BC, Vitruvius praised the 'gentleman architect', in contradiction to the suspect 'architect of wealth'…

The AIA handbook used to state the percentage of the total fee for basic services that each phase deserves… [We see] that the

largest share of a project budget goes to production (working drawings and specifications writing- 60%). Only a small portion goes to conceptualization and the early stages of design (35%), where so many architects want to work…

In schools,… design quality is challenged only by the designer's ability… While teaching design is difficult enough by itself, this has not prevented schools from integrating it with other essential design issues such as structure and technology. The pragmatic business component of architecture should be equally difficult to ignore…

Countless Voices
The architects' ideal has traditionally been to control the entire design and business process… originally, patrons were expected to subsidize the architect's art… without having much input… However, mediaval records indicate that responsibility for a building's final form has long been distributed among a number of individuals… Every art relies on a network of collaborators operating under certain conventions. Yet there is a general belief… that the quality of a work of art decreases in proportion to the number of people involved in its creation. This is one reason why the small office remains the ideal of architecture practice… And any office… is likely to attribute a particular building to a single designer from the firm…

Today, architecture has been pushed into the public domain, giving voice and decision-making authority to communities, public agencies, regulatory bodies, constituents, planning boards, city councils, neighborhood associations, and the like… The architect's office must act as a control point. But the profession does very little to prepare would-be architects for the crowds of participants who will want a say in their projects…

Sometimes the least significant participants in a project may have a highly significant influence on the building's design [a professional renderer may depict an idea incorrectly, leading to client confusion; a contractor may push for personal changes, with support from the client; a bank loan officer decides what needs to be incorporated into a project, before financing is provided)…

Between architects and clients, dominance is unclear. Architects are most likely to dominate negotiations by observational criteria, whereas clients may ultimately dominate, since they can stop specific negotiations and take their business elsewhere… Any client wants her or his input to be significant; at the same time, the architect is expected to know best and to be able to foresee consequences…

Sometimes, the more participatory the process, the more time-consuming and less profitable… [It is important for] offices to try to find consultants with whom they can establish a long-term relationship… Treating contributions as constraints… can mean a reduction in the architect's freedom…

Both the professional organization and the schools continue to emphasize the importance of the individual architect. The AIA takes a highly optimistic, if not unrealistic, view of collaborative situations… The AIA's basic strategy for confronting the outside voices of participants is to establish both confidence in and control for the profession… Consultants… are presented almost as tools for the architect… The client is expected to provide a site, create a program,… review and approve documents as they are produced, and pay bills… In a subtle way, the AIA suggests the importance of the client while protecting the primacy of the architect… At one point in its handbook, the AIA suggests that the architect's basic services include 'providing design' to the client…. (a notion as odd as a psychotherapist providing mental health to a client)…

In academia, the instructor replaces the client as the most consistent and significant influence on the student'designer… Thus an architect is trained to respond to challenges from another professional, and not those of a layperson…

Project participants, according to the AIA (1975 Handbook):
Civil engineer
Structural engineer
Electrical engineer
Landscape architect
Interior designer
Construction manager
Survey/ soils engineer
Foundation engineer
Value-analysis engineer
Construction-cost estimator
Zoning/ building department
Special-building-type specialist
Lighting specialist
Food-service-facility specialist
Elevator/escalator specialist
Materials-handling specialist
Irrigation specialist
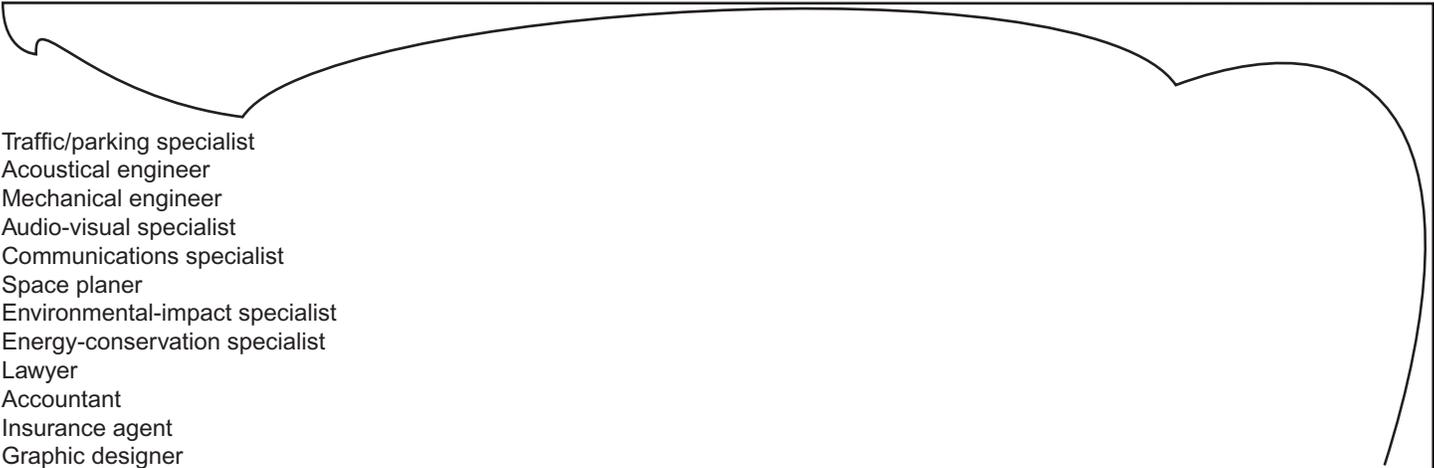
Traffic/parking specialist
Acoustical engineer
Mechanical engineer
Audio-visual specialist
Communications specialist
Space planer
Environmental-impact specialist
Energy-conservation specialist
Lawyer
Accountant
Insurance agent
Graphic designer
Photographer
Model-maker
Renderer
Computer technician

Additional project participants, as seen in real life:
Client
In-house architectural staff
Architects from other firms
Tenants/ users
Community groups
Project architect (employed by client)
Fire-safety specialist
Geologist
Biologist
Historian
Programmer
Proposal writer
Business developer
Contractor
Construction foreman
Client representatives
Voting public
Planning commission
City council
Board of supervisors
Design review board
Bank-loan officer
Financial backers
Client's friends
Previous clients
Product representatives
Construction workers
Typist/ receptionist

Professional Uncertainty
The fundamental source of professional uncertainty is the constant change that every problem and organization undergoes over time,… in 4 primary areas:

·Expertise: In order to coordinate the input of many collaborators, an architect is expected to be knowledgeable in all the fields brought to bear upon a design project… Although the architect's education is primarily focused on design, in practice the architect is variably a designer, businessperson, market analyst, psychologist, contractor, politician, and arbitrator…

·Authority: It is not always clear who has the authority to delegate responsibilities… in architectural practice… The client, as initiator and owner of the project, is the ultimate authority… However, since clients are generally the least experienced participants in a design process, they are the most uncertain about their role when their opinion is expected…

·Allegiances: [In an architecture project,] each participant's role undergoes alterations that reinforce the ambiguity of authority. There is a strong tendency to form temporary allegiances in order to safeguard one's interests… Transferring allegiances is in fact part of the standard agreement between client and architect. Prior to the selection of a contractor, the architect is the owner's agent; after that point, however, the architect is expected to become a neutral arbitrator…

·Procedures: The procedures for a project's evolution are often also unclear… (the sequence of events adopted, the

means of developing ideas, the ways of going about reaching agreements)… Offices tend to use past experience as a basis for planning ahead. But project managers guide projects idiosyncratically… The standard procedures manual… has little day-to-day application… Ways of holding meetings are also uncertain. Methods of discussing issues, reaching agreement, and conserving time are all unstructured… All this is generally not recognized… Although the AIA acknowledges the complexity of the process, the Handbook maintains its manageability… The AIA divides an architect's work into phases, and then those phases into a series of activities. These appear in a 'Project Checklist', published to help architects clarify the activities of 'basic services' and to keep records…

In schools, the extreme uncertainty and contingency of architectural practice is intentionally avoided… Studio problems narrow the full range of issues, seldom dealing with issues such as changes in the middle of the project, budget cuts, new information learned during the process, conflicts among parties, ambiguous roles, working with consultants, and so on… It is not surprising that young professionals are frustrated by the circumstances surrounding architectural commissions and by the high degree of uncertainty they find in practice.

Perpetual Discovery
Time management is one of the most common ailments of architectural practice… There are several reasons why… projects take longer than either clients or architects anticipate. First, in the architect's office, seemingly straightforward activities can be extremely time-consuming (selecting fixtures, building a model, coordinating working drawings). Second, there are unforeseen delays caused by participants outside the architect's office… In addition, no issue is non-negotiable, nor is information ever complete… Finally, there is an overarching phenomenon of 'perpetual discovery'… (the architect is continuously tempted to go back and redesign what has already been decided)… Even when construction is complete, the design project is not finished. The building is continuously inhabited, personalized, weathered, landscaped, ventilated, viewed, and visited. The building solution is the answer to one set of problems, yet will inevitably bring other problems into view… All this creates an image of a nested or circular process, while the AIA's literature… promotes the idea of a linear process…

Of all the characteristics of practice, perpetual discovery is the best represented in schools… It is commonly understood… that the time allotted to academic design problems will never be sufficient…

Surprise Endings
An architect and client do not really know the object of their negotiations… Several aspects of design problems make it difficult to predict design outcomes. First, there is no one point in time, in the life of a building, when participants can evaluate it definitively… Second, people and institutions tend to seek architects when they experience a shift in their own expectations… Third,… the principal planning media (drawings, models, and conversation) are simulations of the outcome (it is actually words and images that are negotiated under the belief that they determine the final form of the building)… The AIA documents appear to sidestep this entire issue of 'surprise endings'. The typical agreement between architect and client does not center on a finished building; instead, it is the contractor who is responsible for the physical result… Architects learn in the course of professional socialization that it is the process of doing the work that matters, rather than the product…

A Matter of Consequence
Buildings are a matter of consequence. They have a significant impact on the lives of the people who plan them and those who use them… The work of architecture is a matter of consequence to at least the following parties: architect, client, funding agent, consultants, neighbors, and inhabitants… Not all negative consequences can be avoided; not all participants have an equal voice… [To minimize consequences,] clients generally prefer to hire architects who have experience with their particular building type… Since it is not easy to start over, clients want to be sure that the architect will satisfy their requirements, that they can afford the building being designed, and, in many cases, that the building will give a good return on their investment… "Not only is the Architect committed to the interests of the client; he is as much concerned with the best interests of the community, the people, and the land." [AIA Handbook; 1972]

From Layperson to Expert
What does it mean to become an architect?… At the very outset, we must ask how one decides to begin the journey of becoming an architect. There are always those few individuals who seem to have known from an early age… A more common motivation… might be termed 'society's prudence' (counselors, parents, and teachers steer toward architecture those young men and women who exhibit the telltale signs commonly associated with a budding architect)… Most novices enter the field through an architectural education, once set forth on this path, they undergo 'professional socialization'…

The educational route involves the intense indoctrination characteristic of an initiation rite: a high degree of commitment, a certain amount of isolation from non-group members, cohesion within the group, sacrifices, and rituals marking passage at various stages… Important elements include the studio, the crit, and the charette… Here we see kernels of architects' later values, such as the principle of peer review and a developing segregation from the general public…

·The studio: Academic requirements fall into several basic categories: art, architectural history, theory, structures, professional practice, social sciences, and environmental controls… Regardless,… the most important part of academic education and the core of the curriculum is the studio… Studio problems are important because they must hold the

students' undivided attention for a term, and because students include these design solutions in their portfolios… The typical studio instructor is a practicing architect who provides a living example of what it means to be a designer… (the relationship between instructor and student in studio can be the richest source of learning, and thus the most envied student is generally the one with whom the professor spends a great deal of time)…

·The crit: The primary form of interaction between studio teachers and students. Critiques are discussions about design solutions that teachers 'give' and students 'get'… The se encompass desk crits, group crits, and pin-ups… At a final review, the critique becomes a formal ritual in which several respected jurors are invited to evaluate students' projects… (most guest critics are not only architects but 'architect-teachers'; rarely are clients, users, engineers, planners, or neighbors invited)… The 3 primary purposes of juries are to criticize individual students' designs, provide general instruction, and initiate scholarly exchange… From the students' perspective, the crit is probably the most grueling and potentially humiliating experience of their education. A student publicly presents his/her project by describing the drawings and models on view, then remains before the group to accept criticism… Many times, critics, rather than address the work displayed, discuss the broader issues and theories that the projects raise…

·Charette: Students put a tremendous amount of time into their studios… The test is to see how many consecutive nights one can work without sleep. It is not uncommon to be 'on charette' for a week, culminating in 2 or even 3 all-nighters. This is a competitive arena, for not only is everyone racing against the clock, but students compete with each other.

The school's physical setting also plays an important part… Working at home is discouraged… Working in studio, students benefit from other students' criticism and from spontaneous visits by the instructor… The process of becoming an architect is far more easily guided when the novitiates are conveniently gathered together under one roof…

In all of this, talent is believed to be a natural gift bestowed upon the best designers. Talent aside, good students… produce more drawings, sketches, models, and studies of alternatives than anyone else, setting the pace for the entire studio… In addition, there are usually one or two creative rebels who do not follow the above patterns, yet are widely regarded as being among the best students… (they "break the rules for the right reasons")… In school, students learn that only skills and knowledge can be acquired; certain qualities are essential to the architect (talent, passion, and good aesthetic judgment)…

After graduation, a second development phase ensues… (entry-level architects, intern architects, production people, apprentices, technical staff, junior architects, interns, and draftspersons)… The transition from school to office work is rarely graceful, as even the most advanced student tends to lack experience. There are, within the entry-level phase, several significant activities:

·Landing a job: First jobs consist of running prints and errands, or come through personal; connections, or from a willingness to work for little or no pay… (there is a vast supply of candidates for low-ranking jobs, and all entry-level designers absolutely need to gain direct office experience)… Job security is nonexistent; draftspersons are hired and laid off by the project… Partners are committed to their firms' survival; employees are viewed as potential liabilities… Even though the overall supply of entry-level architects is great, the supply of 'good' entry-level architects is slim… To demonstrate their qualifications, young architects… submit a resume and a portfolio… Most important are working-drawings skills…

·Details: The everyday life of most entry-level architects resembles that of a laborer more than that of a professional… The opportunities for design, as practiced in school, exist only on a very small scale… Interns are given tasks for which errors are not costly and which require minimum supervision… If experience is the primary condition for gaining employment, error-free speed is a key condition for keeping it…

·Humility: The entry-level architect is caught in a schism between ideals and practice, expecting to become an architect-designer, yet humbled by his/her status as a laborer…

There is no predetermined duration for entry-level status in architecture… (one might remain a draftsperson for as little as a year, or as long as a lifetime)… A variety of signs may indicate that an architect is moving forward… The metamorphosis is slow and sometimes uneven (from gathering experience to displaying competence and gathering responsibility/ autonomy)… The middle years can be characterized most simply as the period of greatest ambiguity for the architect… At his point, architects are able to make particular choices… Some architects become project managers, others become lighting specialists or historic preservationists. It is also common for architects at the late middle stage to change offices or start their own… In any firm, advancement depends upon experience, talent, dedication, and personal connections… In the middle years, the 2 most intense rites of passage are:

the licensing exam: The registration exam, given across the country several days each year, includes approximately 10 tests, 2 of which are design problems that entail drafting for hours on end in a room filled with other applicants… The exam is… about competence… Even though registration is legally required for designation as an architect, it is only tenuously related to what practitioners consider criteria for membership in the profession… The great significance of the exam lies in the independence it confers (the registered architect can act alone)…

Starting an office: This usually entails an extremely difficult financial period, and the rate of failure is high… The entire test ultimately rests on getting enough work… In starting a practice, one takes on the role of either 'starving artist' or 'young entrepreneur'. The former lives on the small salary received for part-time teaching at the local university while working in a converted garage on competitions and small residential remodels. The young entrepreneur sends out a mailing to all contacts announcing the firm's opening, rents a commercial space for an office, hires an answering service,

and goes for government jobs…

To become a full-fledged architect , the practitioner must have the experience and responsibility that derived from entry-level and middle-year jobs… The rate of progress from the middle years into full-fledged status depends upon the structure of opportunities within the office, as well as the abilities of the individual… The full-fledged practitioner is one who can lose income when a project costs more than the fee, who will benefit when the work is done efficiently, and who may need to take out a loan to make payroll… In this last stage, the balance of activities shifts away from actually doing the work to getting the work and keeping it. Ironically, although the established practitioner has less responsibility for doing the work than in earlier stages, he/she is generally the one to receive credit for a building… Practitioners who have chosen to become managers or specialists exist only on the margins of full-fledged status… The full-fledged architect's career evolves into a search for a market, significant commissions, public recognition, and a widening sphere of influence:

·A stable market for services can take forms ranging from private clients with a solid network of referrals, to corporate clients with continuous building programs… This ensures economic stability and greater profitability…

·The quality of commissions is important to becoming an established architect… There are many means of getting better projects: entering competitions, hiring talented designers, restructuring office policy…

·Architects who are better known and respected by the general population will have the advantage in gaining commissions… Counter to professional beliefs, the respect of fellow professionals often does translate into greater professional and financial success…

·A final step is for full-fledged architects to seek a widening sphere of influence for their works and ideas… The presumed means for achieving notoriety is through the material record, but architecture is wholly bound to the social network that produces and consumes its services…

The Architect's Milieu

Architectural firms locate the individual practitioner's actions in a coherent system of meaning… Regular patterns of interaction recur within very different firms…

Large firms capture a disproportionate amount of fees available in the market. Work in firms also allows for varied commissions and enough positions to allow for specialization. And firms allow architects to establish meaningful worlds for themselves and their actions… These 'meaningful worlds' are provided by myths of origin and other cultural values:

·Office heritage: Each office has one or more founders, and if the firm has been relatively successful under their leadership, the founders have become role models. If the founders have either charisma or widespread professional recognition, or both, their influence increases… The values held in any firm are shaped by various forces, the most significant of which are the principal's own values. Founders and principals, in turn, are influenced by their own schooling and mentors… Office culture can be passed along directly, through words, actions, and legacies. It can also be passed down through the portfolio of buildings designed by the office (explained by senior office members)…

·Dialect: Firms have particular form-related expressions (the formal presentation of design) and verbal expressions. The vocabulary extends across the board… Even simple statements can cause miscommunication with the uninitiated…

·Values: Members of an office must share common values… In most architectural offices values are ambiguous because they cannot be enumerated or made explicit. Values are learned through experience and by example… Office values tend to be ambiguous and transient…

·Prevailing practices and rituals: These concern how the architect acts with values in mind… In larger offices, books of policy and procedures are sometimes developed… The office develops acceptable and inappropriate patterns of behavior for most recurrent situations (negotiating fees, moving projects through stages, hiring and firing, etc.)… Rituals reinforce these ideas:… consistent ways of working with clients and consultants, how architectural ideas are generated, how projects are completed, group cohesion… The idea of 'power' is also important… Power can be achieved through a variety of means: persuasive ability, the strength of one's design ideas, decision-making authority, or support from powerful individuals… Power is also held by those with focus-knowledge (Cad, lighting, or even office culture itself)…

·Roles: Roles… are plans for behavior governing the ways in which individuals will participate in the office… In architecture, the broadest level of roles include architect, client, contractor, and consultant… Within an architectural office, many individuals assume roles only temporarily,… especially at lower levels, where the majority of individuals are still 'on their way'… Only 4 roles can be considered essential: getting and keeping work, getting it done, doing it well, and maintaining the organization (management and marketing, technical expertise, quality control, and leadership)… Regularly observable characters include charismatic leaders, entrepreneurs, creative eccentrics, wheeler-dealers, slaves, go-getters, technical wizards, it's-a-job types, rebels, and craftspersons.

·Architect and client: In the creation of any architectural work, there are no actors more important than architect and client… The contemporary architectural client plays an active role with the practitioner, giving constraints, advice, and approval throughout the process… The best buildings have clients who are very active but also willing to step back at crucial points in the design process… Architects and clients design their interactions as carefully as they design their buildings (the meetings and negotiations are themselves design problems). The specific conversation in any given meeting, while superficially disordered and impromptu, is more like jazz improvisation… The qualities of a working relationship are built over time and take the following forms:

Courtship: When architects and clients meet, their first efforts center on trying to assess and understand

one another… In this initial phase, architect and client try to determine if their relationship has potential… Factual inquiries are made as architect and client ask for and present information… The relationship actually begins earlier, with preconceptions… The social stereotypes about architects and clients are most active in courtship…

Building rapport: Rapport must be maintained and strengthened throughout the period that participants work together… Business associations are enhanced through more personal, informal interaction… Because clients must expose rather intimate information about their lives during the design process, trust is essential… Rapport can be built by inventing a common adversary or by pushing accomplishments back and forth as rewards…

Unveiling boundaries: Besides camaraderie, architects and clients establish preferences or limits for the design process… These limits are established in process rather than 'a priori'… Three commonly observed means of establishing values are non-negotiable declarations, barbed remarks, and a show of strength. In the first case, either architect or client presents a bottom line, which is to remain undisputed… Barbed remarks are relatively acceptable surface statements with underlying messages about limits (ie "That's been done on every tract house from here to Los Angeles")… Finally, a show of strength is occasionally invoked to maintain one's desired relationship with other participants (this is a last resort, since it undermines rapport and puts the project at risk)…

Avoiding disputes: One of the best-obeyed unwritten laws of everyday architectural practice is: "Avoid confrontation whenever possible"… Direct conflict is a serious matter, for it can destroy long-term rapport, color subsequent interactions, or force a decision at an inopportune time…

Constructing progress: progress toward project completion can be insured through various types of procedural strategies… It's important to discover the powers that be, I order to determine whose approvals are needed to proceed with confidence. In addition, because fleeting words are easily forgotten, approvals are sealed by asking the other to commit it to paper, either in words and drawings…

·Design interactions: The level of interaction between architect and client and contractors depends on the current design stage:

Architect and client: highest interaction at schematic stage, with interaction reducing at every stage thereafter.

Architect and consultants: Peaked interaction in the middle of schematics, design development, construction documents (with the highest interaction in this 3rd stage).

Architect and contractor: Practically no interaction through construction documents, followed by intense and constant interaction through bidding/negotiating and construction.

Architect and in-house architects: Peaking towards the end of schematics, design development and construction documents.

Talk

Conversations follow a structure of timing, tempo, rhythm. Sequence, response, and theme. In general, architects and clients do not plan their conversations, but neither is it a matter of chance… Conversations are guided according to the actors' goals in a relatively orderly fashion that is nevertheless difficult to perceive… Any utterance can have multiple meanings and most have more than one possible interpretation… An important aspect of conversational analysis concerns sequencing (repetition of an issue, raising it first or last, indicated significance)… Early meetings are dominated by the client, who initially has the most information to impart… Later, the encounters are dominated by the architect… Conversations about drawings or models develop from the middle of schematics through the end of design development… In the initial encounters with the architect, clients often contribute visual images to guide the project… Some bring magazine photographs that portray the feeling, ambiance, materials, or style they prefer (the more photos and drawings the better; then it's harder for clients to pick and choose). Architects contribute the lion's share of the graphic dialogue, starting with images of their past work… In early meetings, it is important to employ loose sketches (the transition from words to images).

The overall development of a conversation can be diagrammed as follows:
First, someone lays out a starting point, after which discussion ensues about topics related to the general theme, proceeding with no immediately apparent logic. Topics are raised, dropped, ignored, reviewed, but few subjects are treated with any continuity; no issues are resolved. The speakers test whether they understand one another.

It is not typical for any issue to be raised, debated, and decided in sequential order. More commonly, an issue is raised, discussed, a related issue is raised, then a third, and none is decided, as participants try to make mutual sense of the situation. Any one architectural issue is linked to many others…

When and where do design decisions occur? In the conversations… many of the discussion points have direct spatial implications… Agreements tend to be marked tacitly (tacit agreements are far more common in architectural dialogue than explicit decisions)…

In conversations, certain issues are emergent. They will not be determined in a single meeting but will emerge over time… Second, there are straightforward issues that could be settled quickly but are not, for various reasons… Third, an issue is raised and an agreement is reached, not about the solution, but about how to approach the problem…

Raising examples helps bring all participants together in understanding… These can be literal examples, analogies, and metaphors… Examples help the client paint an approximate picture of his ideas… Another primary means to establish mutual sense of the situation is to play out a possible life in the building… Such an example is effective because it not only incorporates physical place, but also actors and events…

Firm Growth and Change
Typically, an office starts small, grows at least a little over the years, and changes its profile over time… But there are many exceptions to this pattern. There is the office that grows but does not change much (young contemporaries could simply start out on their own and grow old together, or a firm could have a single charismatic founder who never takes on any partners, or the founders might be unable to break out of small-scale work, maybe because they are busy with other activities, such as university teaching positions)… Most architects have worked in a number of offices, and many principals begin several firms as a result of economic crises, relocation, new partnerships, the creation of branch offices, and so on…