

Can a *Liberal Education* be the Product of a *Professional Degree*?

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INTRODUCTION

Writings about the historical progression of the education of an architect have usually adopted the position that architectural education is, and should be, “liberal”, in its content, its objectives and its attitude. It has always been felt that a quality general education in architecture would provide students with a broad spectrum of information that would prepare them for a career that was focused on, but not limited to, architecture. Given the condition of architectural education in the 1990’s, the dominance of the historic liberal posture of architectural education must be seriously questioned. The education of an architect has changed greatly from the liberal pursuit described by Vitruvius.

“Let him be educated, skillful with the pencil, instructed in geometry, know much history, have followed the philosophers with attention, understand music, have some knowledge of medicine, know the opinions of jurists, and be acquainted with astronomy and the theory of heavens.”¹

An examination of the current state of architectural education in North America discloses that the curricula offered are shifting from a less general liberal arts oriented focus to one that is more restrictive and technically directed. This redirection is due to the effect of external pressures which have ultimately required the restructuring of the curriculum to comply with the content and technical requirements currently being imposed by Professional Architectural Associations and Accreditation Boards. Coupled with this, internal pressures exert demands on curricula as the result of increased time requirements to address constantly expanding technical issues. The “professionally” focused curriculum is under severe scrutiny at many schools of Architecture, and being faulted for producing students which are ill equipped to enter a shrinking traditional job market.²

This position can be accounted for by examining the notion of “professionalism” in Architectural education and by examining both the internal and external pressures which are responsible for “re-shaping” the Architectural education

in this manner. The University of Waterloo will be used as a specific case in point, being the first Canadian School of Architecture to be accredited by the Canadian Architectural Certification Board, coinciding with the depth of an economic recession which still sees 50% of Ontario Architects unemployed and half of the remainder classed as underemployed. Waterloo had long boasted a successful co-operative employment system which during the economic boom was unable to provide prospective employers in traditional architectural offices with an adequate number of students. Current co-op employment is often unable to place 40 to 50% of the students, and those who are employed, find themselves involved in related design fields more often than in traditional offices. In spite of recent accreditation, the School is undergoing an overall curriculum review and analysis to attempt to redirect the educational content to better serve students in the changed architectural climate of the 1990’s.

“PROFESSIONALISM”: THE EVOLUTION FROM LIBERAL TO DIRECTED

The changing role of the architect through history,³ from the master designer / artist to a *professional practitioner* operating in a society expecting responsible action in light of technologically advanced building practices and a preoccupation with the ramifications of legal liability, can be cited as the catalyst for shifting attitudes towards the educational requirements of an architect. These requirements have required that increasing attention be paid to the technological and professional practice aspects affecting architectural design. This acknowledgment of “professionalism” in architecture has resulted in the eventual evolution of the liberally inclusive education to a more directed and prescriptive course of study.⁴ As a professor whose focus discipline is “Technology, Building Construction and Building Science”, I have seen largely an uphill battle nationwide to finally win the position of technological concerns as an integral part of the holistic Studio experience. The realignment of Technology courses with Design Studio, if handled improperly, has led to the abandonment of more broadly artistic and theoretic-

cal content. In many instances, this has hastened the decline of the Liberal Architectural Education.

A Symposium on "The Liberal Education of Architects" in November 1990 at the University of Kansas addressed the issue at some length.⁵ The majority cited the liberal aspects of the architectural education as the most positive and desirable, yet acknowledged that the maintenance and encouragement of the liberal education was problematic within the current system. Most contributors felt that a superior version of liberal education was to be found outside Schools of Architecture, in undergraduate degrees acquired prior to entering the "professional" architectural program. Not only was the technological and practice oriented content cited as eroding the liberal intent and content, but it was even felt that the current methods for teaching the design studio netted a non liberal experience as the focus of studio projects is strongly oriented towards achievement, technological innovation and problem solving which are non liberal ideals. The modern focus of the design studio contrasts, for example, with the 19th century Beaux Arts program where the projects were set by the professor of architectural theory as a means to engage students in the study of theory, and where "(T)echnological innovations were taken up on occasion, though many inventions were ignored".⁶

EXTERNAL PRESSURES SHAPING ARCHITECTURAL EDUCATION

The changing role of the architect in society, ultimately to that of a "professional practitioner" in a position of great legal liability has recently intensified external pressures on the University as an Educational Institution responsible for graduating students whose goal is membership in the Profession of Architecture.⁷ Most general or liberal arts programs at universities maintain a high degree of freedom in the setting of their courses and content, as do liberal arts students in exercising their choice whether or not to focus on a specific area of study. This freedom can be largely credited to the operation of these faculties independently of related external professional societies. General Arts and Humanities Faculties typically do not have to answer to external professional associations, incur little if any legal liability directly connected with their careers, and find it unnecessary to apprentice or write additional exams to legitimize their degree. Architectural programs have increasingly less latitude in this regard due to their peculiar relationship to Professional Associations external to the University. The pressure exerted by Professional Associations on Schools of Architecture increasingly requires response in terms of modifications to the content and focus of curriculum.

Four main sources can be cited, then, for the external pressures which are resulting in the directed restructuring of architectural education; firstly, public perception of the professional architect in society; secondly, legal liability in the practice of architecture; thirdly, the escalating role and scope of technology; and, fourthly, the role of the Architec-

tural Associations in the Certification of Education and the process of licensing for a professional architect.

Public Perception of the Architect

"Can society afford educated, as opposed to trained architects? Or, to invert the question, can society afford trained, as opposed to educated architects? Licensing of the profession is based on the perception that society is dependent on the architect too for its health, safety and welfare. It is not surprising therefore that there is a strong body of opinion which, implicitly if not explicitly, is in favor of the training of architects."⁸

The public and the client of the 1990's increasingly perceive the architect as a responsible professional, who in their role as the primary consultant of a design and construction team, must act in an innovative but skilled and business-like manner. Whether the contemporary architect is responsible for handling vast sums of money on mega projects, or carefully designing a modest addition to a house, the client expects that not only will the architect design an aesthetically pleasing building, but that all economic and technical requirements will be met. "Designers" whose interest and expertise lies in achieving excellence in architectural design, but whose practice is fraught with business problems, cost overruns and technologically inferior construction design resulting in deteriorating buildings, are seldom tolerated or re-hired. Where architects work on government funded projects, the public expects an ever more responsible handling of their tax dollars.

With some exceptions, students of architecture (and their parents) come from the public realm, and carry with them these general perceptions regarding the profession. Most potential or incoming students show a genuine interest in becoming a practicing professional at the end of their architectural education. Since the University of Waterloo is a co-operative education program, where academic terms cycle with mandatory work terms, questions from potential students focus very directly on professional involvement during the course of study, as well as the employment potential following graduation. Since our program consists of a 3 year Pre-Professional Degree followed by a 2 year Professional Degree, with a co-op study factor, the six year minimum commitment required to complete the term of study represents a substantial commitment of time as well as money for students and their parents. This magnitude of serious commitment is typical of many professional architectural programs. As a result, the decision to become an "A"rchitect is taken quite seriously by most applicants.

Students intending to eventually practice architecture would choose from the majority of Architectural degrees offered in North America which are deemed "Professional" in status. Such degrees are considered as both a mandatory and minimum requirement prior to engaging in both national and regional licensing processes. It is the perception of most

students entering a School of Architecture offering a *Professional Degree* that this degree should be comprehensive, a complete preparation for handling both the 'design' and 'technical' roles of the architect, and satisfy the requirements of the licensing boards. Students will often select a school that has been accredited by either the NAAB or CACB expecting an all-inclusive architectural education. Although not all of the students entering programs in Architecture will ultimately become practicing professionals, most would prefer and expect that their education will serve as a preparation for that role.⁹

Legal Liability

Legal liability has placed enormous pressure on the function of the architect, a pressure which has been acknowledged through curricular changes and additions in Schools of Architecture. The legal framework of the 1990's is far more severe than that experienced by the master builders and liberally educated architects of the past. The architect is legally and ethically responsible for a far vaster array of technical requirements which have required a redirection of focus in practice. The problem of legal liability reflects not only in the nature of topics which Schools recognize must be incorporated into the curriculum, but as well, in the expectations of students. Their assumption is that the education provided should be a complete preparation in light of the future requirements of the Profession. Any deficiencies in the technical content could be highly problematic in this instance, given this assumption.

The notion of legal liability has not only affected the curriculum, its detailed content and offerings which include courses on Professional Practice,¹⁰ Acts, Codes, Specifications and Management, but the way in which Architecture is administrated and taught.¹¹ Precedent setting legal cases where students have sued over inadequate education and improper grading practices have resulted in a more formal educational atmosphere. Single professor subjective grading is considered to be politically dangerous.¹² Preference is given to teaching situations which are carefully monitored and documented, and where grading is done by teams on a consensus basis as a preventative measure against student appeals and potential lawsuits. Teaching becomes more directed and carefully controlled in these conditions, and less liberal in the breadth of its approach and content.

The Increased Role of Technology

The need to become educated about the ever increasing new technologies of architecture, such as increased performance criteria, numerous new materials and products, industrialized building techniques, constantly changing laws and codes, and, fast paced construction, have necessitated positive response from educational facilities. Many Professional Programs in Architecture have acknowledged these requirements through the addition of new or expanded technical courses to provide a venue for addressing these issues. New

computer related technologies to assist in the design and construction of buildings have resulted in the creation of complete networks of courses, often including the creation of several mandatory junior level courses, to familiarize students with hardware and software systems, followed by growing numbers of both required and elective senior level courses which respond to the availability of new and improved CAD, 3-D modeling and virtual reality software.¹³ Institutions now offer Professional Architectural Degrees which may have a Computer Minor attached. Co-op employment has seen an increased marketability for students who are proficient in computer skills.

Given the limited number of course hours, the increase in technical course requirements has had to "steal time" from elective and liberal components of the curriculum. This has posed a difficulty in maintaining a balanced offering of courses, and an even more serious problem at Schools offering compressed Professional degrees where time issues are considerably more critical. The academic focus of the technical and professional courses is often in conflict with the ideals of liberal education, and students find difficulty in comprehensively addressing the conceptual aims of the curriculum where its internal streams of study are seemingly at odds.

Accreditation

The Professional Architectural Associations during the 1980's and 1990's have increased their interest in the programmatic requirements of the Schools. This intervention in the education process was the result of the profession's need to respond to public perceptions and opinions about architecture. Architectural Associations have been able to influence and control the content and direction of architectural education through the Certification Process and the role it plays in the granting of licensing and professional registration. The power wielded by the Certification Board can be very heavy. Close scrutiny of the institution, its facilities, teaching staff, space, teaching ratios, principles and curricular content can result in highly specific recommendations which must be met if accreditation is the objective.

In Canada, the Certification process has changed quite recently. Until 1992, no process existed which was acceptable to both the Schools of Architecture and the Professional Associations of Canada to establish the Certification of Schools. Schools of Architecture were not accredited, and as a result, curriculum, its content, quality and direction varied greatly in its response to technical topics and issues pertaining to the practice of architecture. Students were (and are still in many institutions who are currently not accredited) required to submit transcripts to the Royal Architectural Institute of Canada (RAIC) for review upon graduation, for a fee (which is currently \$400 per student). If the RAIC assessed the education as *complete*, the graduate could apply to the Architectural Association for Graduate membership and commence the registration process, initiate their log book and take the Registration Exams. If the RAIC cited

shortcomings, the graduate was required to return to school to complete the requirements.

This situation was found to be unacceptable by the Associations and the Schools of Architecture. Students were angered at having their education rejected or deemed incomplete after such a great expenditure of time and money at Schools claiming to offer a "professional degree". This led to the creation of the Canadian Architectural Certification Board which was founded in 1976, and in the establishment of the Conditions and Procedures for Certification, and ultimately in the commencement of the accreditation process in 1993.¹⁴ The intention was to replace RAIC review on a student by student basis with a review and subsequent Certification or Accreditation of the entire School and, subsequently, its graduating students. The commencement of the review process in Canada in 1993 has begun to put incredible pressure on the Schools to modify their curriculum in order to meet the very specific requirements of the CACB.¹⁵ It is the perception of the Schools that the focus of the Conditions and Procedures Document is more specifically interested in the technical and professional practice requirements of education than the liberal arts component. The liberal requirements are stated to only constitute a minimum of 20% of the total hours required for the completion of the program, and their content and quality are more subjective and less directed than the corresponding technical component.¹⁶

"3.3.3 Education and Registration:

The profession of architecture is licensed to protect the health, safety, and welfare of the public. The CACB accredited professional degree programs must demonstrate that graduates have competence in architectural design; are knowledgeable about technical systems and requirements; are able to incorporate considerations of health and safety into design; understand the historical, the human, and the environmental contexts of architecture; and comprehend the roles and responsibilities of the architect in society."¹⁷

The specific requirements of the Conditions and Procedures Document which describe the criteria constituting the descriptive body of knowledge necessary for the practice of architecture outlines four major areas of study; Fundamental Knowledge (social, environmental, aesthetic and technical), Design, Communication and Practice (project, process, economics, business practice and management, and, laws and regulations). The criteria are stated in terms of the level of accomplishment that students should achieve prior to graduation; these being, Awareness of the topic, Understanding of the topic, and, Ability to apply skills and knowledge to specific problems. Interpretation of the intentions of the document and its ramifications with respect to the intensity of exposure to the subject matter required, in terms of course time, leads to an appreciation of the inflated amount of time that is required to be devoted to the teaching of technology and practice, both as independent courses and as topics

which require integration into the teaching of Design Studios. This is not to say that in light of the current situation in architectural practice that this is not wise or warranted, only that it necessarily reflects in the inevitable decrease in attention that can be paid to liberal studies, citing the value of 20% recommended by the CACB.

Most institutions will no longer be able to provide an independently functioning liberal education that satisfies all of the requirements of the profession and its various agencies and licensing boards. Schools whose status, after the review of all Schools is complete, is not accredited may lose prestige and position, and will run the risk of a poorer selection of students, and potentially the loss of faculty and research funding.

THE PROFESSIONALLY DIRECTED EDUCATION: POTENTIALS AND PROBLEMS

The change from a liberal to a directed architectural education has resulted in a higher degree of "professionalism" in light of the technological and practice oriented content of the program. External pressures and ultimately, the specific interventions of the Architectural Certification Boards, have conservatively tailored the "professional" degree to meet the needs of the registration and licensing process, and to serve as a high quality preparation for the practice of architecture. Although the curriculum is not completely devoid of liberal content, the primary focus has largely shifted to more specific issues of problem solving, design and technology.

During the height of the building boom of the 1980's, when the Architectural Certification Boards began to seriously address the issues associated with directed education, technology, practice and the design curriculum, the majority of graduates with Professional Architectural Degrees went on to become licensed practicing professionals. To this end the directed education was both effective and appropriate. Graduates were adequately prepared to tackle increasingly more difficult and complex registration exams and all aspects of traditional architectural practice.

The current economic situation may beg a different response from the architectural program. Although the "professional" degree still serves as an excellent preparation for those competing in the reduced architectural market, "professional" architectural degrees are becoming so specifically preparatory for employment as a traditional practicing architect, that both students and graduates are finding themselves ill prepared to create or find alternative work in the context of the prevailing recession.¹⁸ The Co-operative Education component of the program at the University of Waterloo was able to provide students a remarkable selection of jobs in private architectural practices during the late 1980's, often disappointing employers due to a shortage of students. Currently, the employment rate for students in the co-op program runs around 50 to 60%¹⁹ in a combined venue of traditional architectural offices, government agencies, alternative design fields and

entrepreneurial self employment.

Students and the co-op department are hard at work trying to find or create alternative employment for students which serves to support a *broader definition of architecture*. Such alternative work may largely be found in design related fields which are more “liberal” and less “professional practice” oriented in their interpretation.²⁰ Older models of architectural curricula tended to prepare architects for more diverse areas of study (and employment) via liberal education and thinking. Feelings are increasing that the return to, or additional provision of, an alternative, more liberal architectural education is required to respond to the dwindling field of traditional architectural employment.

CONCLUSION

It would seem that the current state of Architectural Education describes an education that due to external pressures which shape the requirements for educating a professional, has indeed taken a less liberal and more conservative direction. It remains to be seen whether or not this direction in architectural education, is ultimately successful in preparing graduates for the current state of architecture and the need to address an increasing number of more liberal alternatives in the broadening definition of the “practice of architecture”. In light of the immediate situation in education and the profession, it would appear that directed professional education may not be satisfactory.

In spite of the current more conservative direction that architectural education has taken, I feel that it is difficult, but still possible to maintain an adequate degree of liberality in the setting of the curriculum. Such a curriculum will require a sensitive, detailed rethinking of the broadened definition of Architects and their place in the Profession. It is still more idealistic to create a diversity of choice within the education of the Architect than to create two distinct streams of study, Liberal versus Professional, which mandates a career choice from the outset. Given the current air of change and upheaval in Architecture, it remains to be seen whether or not a Liberal Education can be the result of a Professional Degree.

REFERENCES

- ¹ Vitruvius, *The Ten Books on Architecture*, Morris Hicky Morgan, trans. (New York: Dover Publications Inc., 1960): Chapter I, Section 3.
- ² Kapusta, Beth, “Architecture’s Alter Egos,” *The Canadian Architect*, (September 1993): 39.
“Few jobs exist for qualified graduates, and the joke “What do you say to an employed architect? Big Mac, fries and a Coke,” may not be that far off the mark. Many graduates find themselves as models of a Generation X-type architect: disillusioned, ambivalent, over-educated, and underemployed. According to a 1993 survey, junior employees fell in number to less than 3% of all production staff, down from 20% in the so-called boom years. Most firms ... had reduced staff size by 23% from last year...”
- ³ *Sinness Journal*, Houston Business. “Focus: Engineering/Architecture/Construction,” (March 23, 1992)
- “The architect’s role, as perceived by clients and the public, has continued to fluctuate. The 1980’s archetype of the star performer who makes bold statements and creates facades has begun to subside in favor of the truer picture of a hardworking, qualified professional.”
- ⁴ Lee, Peter, “Some Thoughts on the Education of the Future Practitioner,” *JAE*. (Jubilee 1987): 42.
“While most architecture programs do not preclude general studies, they typically parallel rather than precede professional subjects and are consequently studied on a time available basis. It is a common phenomenon that course work is accorded student attention proportional to its perceived career purpose.”
- ⁵ “The Liberal Education of Architects,” *A Symposium Sponsored by the Graham Foundation for Advanced Studies in the Fine Arts*, (November 1990), The University of Kansas.
- ⁶ Middleton, Robin. ed., Annie Jacques, *The Programs of the Architectural Section of the Ecole des Beaux-Arts, 1819-1914*, : 59.
- ⁷ Groat, Linda, “Defining Liberal Education in the Context of Architectural Education,” *The Liberal Education of Architects*, The University of Kansas, (November 1990): 68.
“Too often ... professional education is driven by the concept of “professional competence” which is equated with the ability to perform specified tasks. As a consequence, many professional programs are founded on the belief that their mission is primarily to train students for such tasks.”
- ⁸ Meunier, John, “Paradigms for Practice: A Task for Architecture Schools,” *JAE*, (Jubilee 1987): 47.
- ⁹ Wolf, Harry, “Observations on Education,” *JAE*, (Jubilee 1987): 92.
“The fact that education has become a business is one of the problems. Institutions everywhere find themselves in competition for the tuition dollar. With fixed capital costs and smaller and smaller student population, universities “market” themselves.”
- ¹⁰ Gutman, Robert, “Education and the World of Practice,” *JAE*, (Jubilee 1987): 24.
“One of the central issues in architectural education now is the relationship between the subjects taught in the schools and the skills required for professional practice.”
- ¹¹ Wolf, Harry, “Observations on Education,” *JAE*, (Jubilee 1987): 92.
“...and an insistence upon keeping that consumer happy. It is a strange situation to find that the notion of being demanding strikes terror in the heart of administrators, and the failing of students is all but unheard of.”
- ¹² Currently at the School of Architecture at the University of Waterloo all Design Studios are taught by a minimum of two, preference for three or four faculty who grade all student work as a team. This is in light of a recently adopted Student Appeals Policy which allows for the request of a remarking/rereading if the student disagrees with the grade given. Previous policies required extenuating circumstances on the part of students to legitimize an appeal.
- ¹³ Gross, Mark, “Roles for Computing in Schools of Architecture and Planning,” *JAE*, (September 1994): 56.
- ¹⁴ The CACB acknowledges its debt to the NAAB for permission to draw upon the NAAB 1991 Conditions and Procedures document.
- ¹⁵ The list of criteria for Canadian Accreditation was modeled on NCARB as to legitimize Canadian Professional status in light of the future benefits under the North American Free Trade Agreement.
- ¹⁶ Canadian Architectural Certification Board, *Conditions and Procedures*, Revised Draft, (April 1992): 9.
- ¹⁷ Canadian Architectural Certification Board, *Conditions and Procedures*, Revised Draft, (April 1992): 11.

¹⁸ Fisher, Thomas, "Can This Profession Be Saved?," *Progressive Architecture*, (February 1994): 47.

"Schools of architecture have always stood a little apart from the everyday demands of the profession and of the marketplace, and it is right that that should be so. But how far can that divergence go before the link between the school and the profession becomes dangerously tenuous, and the implicit guarantee that the school prepares the student for the world of work verges on dishonesty?" Historian Andrew Saint from a paper delivered at the Harvard Graduate School of Design, October 23, 1993.

¹⁹ Kapusta, Beth, "Architecture's Alter Egos," *The Canadian Architect*, (September 1993): 40.

"A recent survey by the University of Waterloo's Co-op placement services indicates that since peaking in 1988 with over 80% of architecture students placed in architecture firms, the numbers have dropped to around 40% leaving almost 40% employed outside of architecture altogether."

These figures change on a seasonal basis. The Co-op system runs year round. The highest success rates often coincide with the Fall and Winter placement terms, the Summer suffering more from a glut due to the coincident summer recess of all other Architectural institutions in the Province.

²⁰ Kapusta, Beth, "Architecture's Alter Egos," *The Canadian Architect*, (September 1993): 41.

"Many graduates find career paths that are downright lateral, more in the tradition of the list of once-aspiring architects who went on to do other things for which they were more notorious — Jimmy Stewart, Alfred Butts, (the recently deceased author of Scrabble) — or of the legendary architecture students who went on to become rock stars — David Byrne, Roger Waters, John Denver. ...Closer to home, people are curating exhibitions, opening their own restaurants, creating sculpture and art, starting magazines ..." (It is interesting to note that Beth is a Waterloo Graduate Architect who herself is employed full time as the Assistant Editor of *The Canadian Architect*...")