

ON BECOMING AN ARCHITECT

by Gordon S. Grice OAA, FRAIC

For most architects, the first day of university is a watershed experience. It marks the beginning of the caterpillar-to-butterfly metamorphosis of a professional education. Anything they may think they know about architecture before that day will soon be obsolete and irrelevant, to be replaced by a body of knowledge, a range of skills and a new worldview that will continue to sustain them through the rest of their lives. It's an abrupt change and it is largely irreversible.

How does a young student — a teenager — make the decision to become an architect? What kind of information has led to this commitment? Where do architects actually come from?

The impetus that directs young students into the study of architecture can come from almost anywhere. First, there is natural talent or affinity. As members of the profession, we would probably like to believe that we all possess this natural ability, but most architects, when asked, don't admit to it. Is this humility, or do we not really know what "architectural talent" is until we see it expressed? But chances are, this expression will only occur after it has been nurtured by a few years' professional education, so the force that drives us into this education must come from somewhere else.

What about the contribution of movies and television? There are the TV sit-com exemplars currently led by Larry Joe Campbell, as Andy, in ABC's "According to Jim". It seems that very little has changed since the days of Mike Brady. It's a reasonably attractive image, but devoid of professional content or accuracy. In the news, images of well known architects work overtime for popular attention, indicating that our profession, like any other, has its megastars. Architectural magazines and books might offer a valuable source of information but, as our writers found, teenagers do not seek information in books unless it's actually going to be on the exam.

A more reliable source of professional guidance might be the advice of family and friends. Sometimes, this advice can be extremely valuable — and credible, since it is accompanied by stories of first-hand experience. But this source of guidance can only exist if there is a friend or family member able to provide it. As our writers also found, in some families and neighbourhoods there is no one who can offer this advice.

Many parents still believe that the appropriate

source for career information is the high school guidance staff. They are probably correct. In high school, students are advised and channeled into courses that will allow them to pursue career streams into college, university and the world. But a lot of things have changed in recent years and public education, notably in the province of Ontario, has become a battleground of conflicting interests. Previously, counselors could be counted on to provide advice on many aspects of a student's wellbeing, including appropriate career choices. Now such advice is relegated to a classroom career studies course (not necessarily taught by a guidance counselor) while the counselors spend the majority of their time planning not the future, but the here-and-now: sorting out students' day-to-day scheduling difficulties within a curriculum that is being constantly altered. Thanks to cutbacks in funding, not only is there less opportunity for career counseling, there are also many fewer counselors. One teacher told me that the number at her school (current enrolment 1300) has been trimmed from five to three — fewer than one per 400 students. Last year, guidance counselors like all other high school faculty in Ontario, carried a teaching load in addition to their other duties; this year, that has been changed again. It seems that those in charge of helping plan students' future cannot even be certain of their own.

Yet the system continues to work. But the key, as one teacher told me, is the availability of career information. If the information is there, they will make sure that it is passed along to the students.

High schools have shown themselves to be remarkably adaptable in providing sources of career guidance. A few of these are described below:

**Post-secondary Course Admission Requirements.**

The main task of high schools is to provide students with the tools to move on to the next educational level — college, university or hard knocks. Colleges and universities provide counselors with printed material advising of their admission requirements and they may sometimes participate in "university fairs", where students may talk with university personnel. The information is purely curriculum-related (i. e., passing the student up the ladder), so there is no information about what happens after (and if) he or she graduates.

**The High School Co-op system.** This is a hands-on method of familiarizing students with possible career choices. In the Co-op system, students earn credits toward graduation by taking a (non-paying) job in a field that they might like to pursue. In Co-op,



personalities come into play and, despite the best intentions of the teacher, student and placement employer (and despite the highly structured nature of the course), this can be hit and miss. If it's a hit, the student will have gained valuable career experience. If not, he or she will know to look at other career possibilities. (See also Friesen and Ross, following.)

**Career Talks.** Parents of high school students and spouses of high school teachers may be familiar with this phenomenon. Nowadays, These may take the form of a half-hour talk to a Career Studies, or a special drop-in session as part of a school program. (See also "Talks With Students", following.)

**Counseling via Internet.** Participating schools can mount Career Explorer sections on their Web site, incorporating text, images and videos from contributing associations and organizations. Or, for fairly complete information about a career in architecture, interested students can go to [www.raic.org/career/start.html](http://www.raic.org/career/start.html)

**Educational units.** Within a given course, professional and career information can be delivered by the teacher with the help of outside consultants, assuming that there is sufficient interest and knowledge on the part of both. Along these lines, the Design Exchange has introduced a "Designers in the Classroom" programme beginning this fall. Visiting designers will work with an elementary or secondary school teacher to develop and lead a project in weekly or biweekly classroom visits over four to six weeks. Completed projects will be exhibited at DX. (See also Lynch Comisso, following.)

**Education Week.** Varying from school to school, these may consist of presentations and displays by participating associations and individuals. It's a lot of work for teachers in an already full schedule, so these tend to be irregular. Also included may be a Career Day, during which representatives of many occupations are invited to speak about their experiences to groups of interested students.

**Outreach Programmes.** In these programmes, career people, with the help of the schools, provide career expertise outside of normal school hours. Again, success depends on the participation of knowledgeable and willing professionals. Such a venture was undertaken in July by the Toronto Society of Architects at Ryerson University. The Architecture Camp has been billed as a "one-week hands-on camp designed for grade eleven students considering a career in architecture and grade twelve students who are preparing to enter an architecture school this fall."

One teacher I interviewed spoke highly of Outreach Programmes. Career days and classroom

chats are helpful but once the presentation is over, there is no follow-up for the interest that has been generated. On the other hand, weekend and summer seminars organized by the profession in consultation with the schools, but independent of them, allows useful and relevant career information to be passed along to students without burdening the educational system. Guidance counselors from many schools are happy to direct interested students to the course. All that is required is a group of willing professionals and some eager kids.

Pre-professional education has never been an important topic to our profession, so why should it interest architects now?

The practice of architecture continues to change and the direction of this change is becoming increasingly scattered and unpredictable. We rely on our schools of architecture to select and educate the best candidates for our profession, but how do they get there in the first place? Students drawn to architecture receive career information from a variety of sources, but input from the profession is too scarce.

Even more to the point, our professional interests don't begin and end with the education of architects. Our greatest challenge lies in educating everyone about the importance of architectural ideas and this can never begin at too young an age. Those who are not architects are architectural clients or, whether they like it or not, members of an architectural audience.

Architect Drew Muffit wondered whether North Americans might benefit from adopting a more Italian approach to architectural education. In Italian schools, first year registration in architecture is quite high because the Italians view it as a kind of liberal education — something to do while they are figuring out what they really want to be — teachers, politicians, business people, public policy makers, for example. Drew says that Italians as a rule seem much more accepting of architectural ideas new and old. Don't forget that buildings in their world were constructed before North America was even "discovered".

It is becoming clearer that architectural education needs to begin earlier than at the University level and that the profession should be part of this initiative. The benefit to students who might like to be part of the next generation of architects would be enormous. But it would also be a useful tool in raising the profile of the profession and establishing a stronger connection with our communities.

*Gordon S. Grice is editor of Perspectives*

## ARCHITECTURE: MYSTERY PROFESSION

by Mary Ellen Lynch Comisso, B.S.Arch., M.Arch., OAA

What drives people to enter the field of architecture? What do we really know about the profession before we start architecture school?

Early in my own architectural journey, I began to realize that very few people know what architecture is. When family friends and new acquaintances questioned me on what I was studying in university, they often met my answer with a quizzical or apathetic reply. I began to think something was wrong — why do so many educated adults know so little about design and buildings?

At a recent Women in Architecture Forum in Toronto, I learned that all six women on the panel, all practicing

or retired and successful architects, had stumbled upon architecture as a career. This is not an isolated experience. In discussions with my peers, with Waterloo Co-op students in our office and through my teaching experiences in high school, I have found that this method of entering the profession has been fairly common over the years. This randomness seemed to be a prevalent theme in the stories that I have heard prior to and during my research for this article.

I suspect that neither institutions of higher learning nor professional associations would be eager to advertise that most of their students or practitioners happened upon architecture by accident. They would rather think that their students and members were well prepared and motivated from an early age to achieve their goal of becoming successful architects. This would certainly give the public more confidence that we architects are well suited to our work, with the aptitude and instilled values of master builders.

## CAREER ADVICE BOOKS

In the category “career advice for budding architects”, our book-review team didn’t find very much. Most career advice is written at the professional or at least post-secondary level. Four books, however, did offer some comfort.

### *Roberto the Insect Architect*

Nina Laden, San Francisco: Chronicle Books, 2000  
— *Intended for young children*

Largely a collection of juvenile insect-related puns, the book nonetheless introduces young minds to the possibility of architecture as a career. In the first half, we meet Roberto and, in epic style, are introduced to the enormous challenge which he must overcome. In the second half of the book, having met and conquered his challenge, Roberto becomes “the most famous architect in the insect world”. Whatever.

### *I Want to be an Architect*

Eugene Baker, III. Felix Palm, Chicago: Children’s Press, 1969  
— *Intended for public school-aged children*

Mr. Jones, the architect, tells two young boys, Tom and Dick, “I am an architect. . . . I work at the art of building. I draw plans. I think about space, and how it will be used. I study the ground. I must know costs and building laws.” Written almost thirty-five years ago, the contents

of the book are even more out of date than that, but the overall message is quite good. There is advice on entry qualifications and even a brief but fairly accurate description of the educational and internship process.

Regarding early architectural education, the book offers:

“‘The new high school is going to be right here,’ said Mr. Jones. . . . ‘Here is where you can start being architects. You can study art and math and science right here.’”

One wishes the high school could offer more.

### *Le Corbusier Talks With Students*

Tr. Pierre Chase, New York: Princeton Architectural Press, 1999

— *conversations first published in 1943, slightly revised in a 1957 edition*

— *directed towards architecture students but equally meaningful to anyone interested in pursuing architecture.*

“[At this time of transition, as one civilization dies and another replaces it,] devoting yourselves to architecture is like joining a religious order. You must consecrate yourselves, have faith and give. As a just reward, architecture will bring a special happiness to those who have given her their whole being.”

The messianic tone is a little wearing at times, but in small doses, it can be inspiring as well.



So why do so few of us actually plan our architectural careers in the first place? Because the profession is hidden from mainstream life. Despite the fact that we live, work and play in built structures, we take them for granted. Very few of us have reason to think about the hows and whys of the buildings and spaces we occupy.

The demand for good design and the interest and understanding of architecture as a career would be greater if more of the elementary concepts of design were introduced and interrelated to other subjects, in grade school and continued to be developed in high school. Currently architecture, if it is mentioned at all, may be incorporated into an art history course or segment of a general art course. The history of city building and the important lessons that vernacular building types could bring to world history and social studies is lost in most classrooms. Ontario curriculum requirements include a few references to how

architectural themes could be introduced into various courses, but when the teachers are unfamiliar with the appropriate language and concepts, it becomes difficult for them to convey any lasting impressions to the students. Don Ball, a high school art teacher in a visual arts program with whom I worked recently, observed that the school's typical approach to architecture is to study the history of architectural styles, which only fosters a nostalgic appreciation of historical architecture, but doesn't spur any critical thinking about contemporary design. Similarly, choosing a famous architect and writing a report on him or her, fails to stimulate meaningful reflection on how the architect's work has affected architecture and modern society.

In preparing for my teaching sessions at Cawthra Park Secondary School in Mississauga, I researched architectural lesson models developed in other jurisdictions such as British Columbia, Boston and New York City. There was a common trend to introduce

“You take your name from a profession in which the outcome of your work will be shaped by your inventive genius, your purity, your excellence, virtues that depend on character.”

— A better read, I think, than *The Fountainhead*, and much shorter. — GSG

*Frank O. Gehry: Outside In*

Jan Greenberg & Sandra Jordan, New York: Dorling Kindersley, 2000

— *Intended for pre-teens and teens(?)*

Fish swim through it, and fantastic stories — including how the giant binoculars and the “Fred and Ginger” building came to be — are told. Characters from Mr. Gehry's childhood make appearances that are then related to his personal and artistic growth, for example, “[H]is grandmother . . . would go out and get these cuttings. There would be a piece of plywood with a hole in the middle, or a broken corner, or a long, funny piece. She'd sit on the floor with me, and we'd make cities.”

The reader is left believing that being an architect can be fun, that even the tools we use are interesting, that our work is important in the communities we touch, and that we will spend our entire lifetimes evolving.

With a personal biography that also describes, simply and clearly, what architects do, this book is highly recommended as an inspiration for the creative pre-teen who is interested in architecture, or any artistic field. — BR

## TALKS WITH STUDENTS

Last May, teachers at Cawthra Park Secondary School in Mississauga organized a Wellness Day, during which teachers and invited guests delivered talks to groups of students on topics of special interest. One such talk was delivered by architect Drew Muffit, whose wife is a teacher at the school.

The audience included visual arts and general academic students. Drew's talk covered many aspects of architectural education, practice and culture, finishing up with the assignment of a small design problem.

The students believed that the main function of an architect was to “design” — a verb, not a noun — but weren't sure what that really meant. They seemed surprised to learn that the connection between design and actual construction was also made by architects.

Students' questions included the inevitable big two: “how long and how much?” with which most architects are familiar. “How long does it take to be an architect?” and “How much do you earn?” The students also wanted to know about the current admission requirements for schools of architecture — information available on the Web, but more convincing first-hand — and what interests and qualifications were recommended for entering architecture school and then practising. One student asked whether it was necessary, as an architect to specialize — a question that architects are increasingly asking themselves.

everyday objects and familiar buildings into the lessons about scale, circulation, form and structure. However, most of what I found focused on fun creative exercises for children in primary grades. Again we see art as an activity for the young but not a serious area of study for the more mature student. The challenge of presenting the elements of design to older children on a level that would both keep their interest and provoke more in-depth thought about how design affects our culture appeared to intimidate even the architects and educators involved in such programs. Only cursory notes to high school teachers on how to expand the primary exercises into assignments suitable for their students were given at the end of each topic.

Given that Mississauga City Centre has a wealth of prominent and familiar architecture, I chose this venue as a contemporary counterpoint to explore design concepts that traverse architectural styles and historical periods, with a group of grade ten visual arts students. I began with a slide show of well-known buildings and places throughout the world, grouping them together on the basis of important design elements rather than historical periods, i.e. proportion, context, form, spatial organization and details. Some may say this dive into rather complex ideas is too advanced for grade ten. It could be, but for many it was not. It is a new way of applying knowledge — one that they will soon encounter in university regardless of their readiness. The teachers found that this introduction gave them the tools they needed — vocabulary and living examples — to continue to compare and understand other buildings that they encounter with their students. The students gained a new appreciation of the thinking and planning that went into these “strange” buildings right in their back yard. The next term, we went downtown in Toronto to apply the same principles of design to “famous” and historical architecture. Another useful tenet of many architecture lesson plans is to approach projects in teams. Small groups, or even the whole class, usually make for better solutions and broader thinking than individual efforts — a notion that is usually overlooked in today’s star culture. We tried to emphasize that successful architecture is accomplished through open communication and the collaboration of many people, architects and non-architects alike, rather than the exclusive vision of the mythic genius. Of course better architecture will prevail when all people have a broader knowledge and appreciation of what is involved in the design process. But it will take time, generations perhaps, for the value of design in society to permeate everyone’s consciousness.

The teachers I have worked with, and several

students too, have emphasized how meaningful it is to have current practitioners and graduates in the classroom. Not all architects are suited to teaching, but just sharing personal experiences and communicating with people about design can be an invaluable positive influence for students and for the profession as a whole. All those potential architecture students who have never met an architect, now have a way to give a bit of reality to their imaginations. And all those students who go into other fields will have an ounce more appreciation of architecture than they otherwise would have, and may become informed clients of architects.

We have to remove the mystique surrounding architecture. Making architecture a part of every day life by incorporating it into primary and secondary school subjects is one way of planting the seeds of appreciation. If our children grow up with the knowledge that design matters, there will be higher demand for good design, more respect for architects, more livable cities, and thus more need for good architects — who could argue with that!

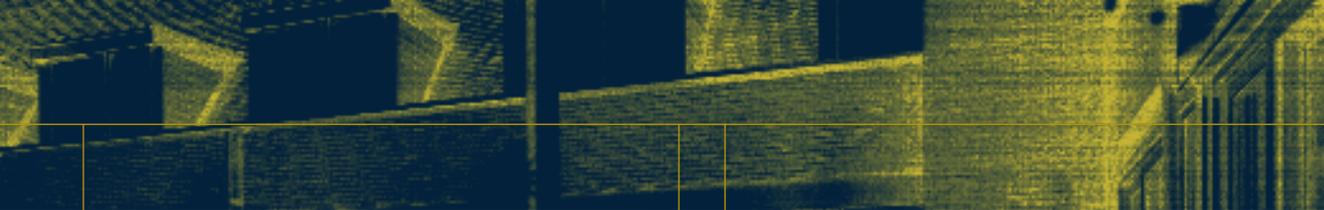
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## APPROACHING A CAREER: “A” IS FOR “ARCHITECTURE”

*by Ian Ellingham. Ph.D., OAA, MRAIC*

Shortly after I arrived at architecture school, Professor Glen Milne challenged my class about why we were there at all. He suggested that, being a logical person, he had considered a list of possible careers, alphabetically: accounting (boring), actuarial science (even worse), agriculture (somehow not quite his thing), architecture, . . . Now there was something that seemed inoffensive, perhaps even interesting. To me then, and perhaps still, this seemed to stand for all of us. Did we really understand the implications of the decision we had made? How indeed do teenagers choose careers? In particular, why do they select architecture?

The logical approach is to find high school students and ask them. I found out that guidance departments are always looking for people to talk about their



careers, and often cannot find a willing architect. Hence, a bit of a trade-off: first the students talk to me and then I tell them about architecture as a career. A short survey helped focus things a bit: a total of seventy-five surveys were completed.

What emerged? Most of my main subjects, grade ten and eleven students, were vague and elusive about career matters. A few were clear about their choices: somehow there was that long-standing passion — the sense of always knowing that medicine, for example, was one's destiny. However, none of the couple of hundred students with whom I discussed this seemed to have a driving passion for architecture, or at least none admitted to it. Instead, quite a few students seemed to have a vague interest in the built environment.

Architecture has a very strong cultural component. Clearly, in an environment without plumbing few people will aspire to be plumbers. The same appears to apply to architecture: if the environment contains little that is recognizably "Architecture" (note the capital A), it does not seem to cross anyone's mind to become an architect. This became apparent in a discussion with one of the heads of guidance interviewed: his relatively small high school in an affluent part of Toronto routinely sends two or three people a year off to schools of architecture. In contrast, in ten years at his previous school, in a small but prosperous southwest Ontario town, this same guidance head could not recall that anyone even contemplated architecture as a possible career. At another school, the guidance head indicated that he had noticed that family background played a major role, but had never considered exactly how.

Architecture demands an extraordinary set of capabilities. Most high school students see themselves as either "arts" or "science" oriented, and indeed, most university programmes tend to be grouped that way. Architecture in contrast, demands both. Certainly the admission requirements, which include math and physics, and a portfolio, mean that an applicant must be capable and comfortable in both areas. Hence, when one asks students who have expressed an interest in architecture what other careers they are considering, it could be engineering, management, physics, film-making, graphic design, or sculpting. One student saw the military as an alternative to architecture, perhaps seeing it as more profitable and less dangerous!

In hands-up questioning, it was apparent that in every class there were four to six individuals to whom architecture seemed like a possible career. Even though the four schools visited were likely to produce a higher than average interest in architecture, and were selected

for this reason, this level of interest seemed high. The seventy-five surveys showed that thirty-five respondents were not interested or had not considered architecture as a career; twenty-six were "somewhat interested", and fourteen were seriously interested. While many students might have interests and some ability in both creative arts and math and sciences, with 800 applications coming to the Waterloo School of Architecture in a typical year, and sixty-five spaces, the successful applications must be able to demonstrate excellence at both.

So why do teenagers want to be architects? A number of suggestions were offered on the survey. Each student was allowed to select up to three. "I like designing things" received the highest number of responses (thirty-four), with "It sounds like interesting work" in second place (twenty-eight). Illustrating the duality of capabilities required, "I have done well in art class" (fourteen) and "I have done well in mathematics" (thirteen) were near ties. Only one student suggested that it was to make a contribution to society, and among the less idealistic possibilities were "To make lots of money" (nine), "I have an architect in the family" (three), and "I am not really interested, but I do need to get a trade" (two), were also selected. In the nature of surveys one never gets all of the questions right the first time. One individual at the last event suggested that he wanted to be an architect because of the status. Is this possibly a reason for more than just this one person?

Why don't students want to be architects? Again, a number of possibilities were surveyed and discussed. The respondents tended to choose only one or two, as opposed to those interested in architecture who tended to check three. The largest response was to "I am not very good at art" (fifteen), closely followed by "boring" (twelve), and "I don't think I have the marks" (eleven). Nine people thought that they didn't know enough about architecture to be interested, and four wrote in that the career just somehow didn't appeal to them.

What do they think architects do? In conversation it was clear that everyone knows that architects design buildings, however most of the students, even those interested in architecture as a possible career, are not aware of the range of activities that involve architects, notably the amounts of time many practitioners spend dealing with land and construction. This is in spite of their recognition that management capabilities are important to an architect; perhaps they see management as applying only to the design process.

The questions with respect to the educational process were very poorly answered. One would have expected those who were quite interested in architecture to offer more accurate answers, but this was not the case. Certainly, the responses to "How many universities in Ontario offer programmes in architecture?" were effectively random. Responses about the time until an architect became fully qualified, suggested that most respondents were unaware that architecture, in common with other professions, has an intern period after university.

The survey asked whether the respondent had ever read a book about architecture, and to identify it. Forty-three per cent of the interested group had, while 19.2 per cent of the "somewhat interested" group and only 8.5 per cent of those who had no interest in architecture as a career had. Few could name any books, although they seemed to be art or history of architecture books of the type recently reviewed in *Perspectives*. The role of reading in career choice was not clear. Do teens read architecture books and magazines because they are interested in architecture, or does reading inspire them to take an interest in the built environment?

Prompted by one teacher to name a book, out of curiosity, I asked if anyone had read *The Fountainhead*, this being the book that is mentioned in so many *Perspectives* committee meetings. No one had, but the teacher carefully wrote the name and author on the blackboard, and asked for a précis of the book. Concerned that I was about to contribute to the rise of a generation of Howard Roarks, I told them it was a most interesting study of alternative possible realities, and, like science fiction, not to be confused with the real thing.

After almost every session, I was approached by a student with more or less the same story. These were students with a serious interest in architecture, but who have been taking math and science courses, and have not taken art since elementary school. Confronted with one or two years before having to produce a portfolio, they are starting to panic, and are seeking direction on how to produce something that might be acceptable. Such students seem to be obtaining help from the schools' art teachers, even though they are not taking art, but this may represent a widespread problem for students who have a strong math and science orientation.

A number of insights emerged. Evidence of a driving passion for architecture was not apparent among the subject students. Perhaps, recognizing that the intense pressure on spaces means that they may

not gain admission to an architecture programme, young people suppress such passions at this stage. Architecture is of interest, perhaps because it is the obvious career in the built environment — everyone knows about architects.

Guidance departments seem to be doing a much better job at providing information and inspiring students than they did thirty years ago. Nevertheless, it is clear that students at this stage, when they are selecting courses for the last two years of high school, still lack a good understanding of career opportunities. Perhaps it is inevitable that they are primarily focused on just surviving high school. Do you remember how distant a career seemed when you were in grade ten? Are they ready for this decision? In this light, the move of the professions to graduate level programmes makes sense.

*A note of appreciation must be offered to the schools, students and teachers participating in this exercise. The schools included: Agincourt Collegiate, Don Mills Collegiate, Lawrence Park Collegiate, and St. John's Kilmarnock School.*

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## COLLEGIATE CO-OP STUDENTS IN THE OFFICE: A GOOD WAY TO BEGIN

*by Barbara Ross, B.E.S., B.Arch., OAA, SAA, MRAIC*

In our mid-town Toronto practice of forty people, we believe that, as practitioners, we ought to concern ourselves with the interests of the next generation. Kind and ethical mentorship is an important element in a healthy profession, and it could be argued that our profession — more than the others — has a particularly strong tradition of hands-on learning under the supervision of somebody who has already survived the bruises of the "doing".

Who are architects? What are they like? What do they do? Why should we care if high school students know the answers to these questions? Why not just get on with the complex business of sustaining a practice — small or large — in a world which seems more and more crowded with stranger and stranger ideas about how to get things done?

Each of our office's recent experiences with high



school Co-op students, has been positive. We'd invite them, if for no other reason, because we enjoy the enthusiasm of young faces around the office: they provide a balance to the haggard looks of our experienced and more weather-beaten members.

In addition to this, they are arriving somewhat prepared. By grade ten, students have taken structured testing with respect to individual interests, aptitudes, and values. Some have taken an "architectural design" course. Some are studying "cyber arts" and some (thankfully) still study the "old-fashioned" arts, using clay, paint or plaster. We are amazed that as many as half of the grade eleven peers of our students had a clear idea, before they agreed to come, not only that they would like to try a job "in a creative field", but that they know which specific field is calling them — graphic design, industrial design, or, perhaps, even architecture.

But a client of ours (who, by the way, is not known for tolerating "slackness" in the services of any of the architects he hires) reacts this way: "If kids in high school knew how hard you guys work, they would never consider it." Our challenge must be, then, to suggest where to find the gain for all the potential pain and to point the next generation down the road to what we consider valuable, in the hope that they will choose architecture over anything else.

I think we would not survive the day-to-day without the willingness of the eager and strong to help with some of the drudgery. There may not be many opportunities for the Co-op student to exercise his artistic passions (or her exceptional speed with mathematical calculations) while clerking, copying, filing and packing. And the students may, some days, find us a bit goofy (in what other "money making business", after all, are *découpage* and Plasticene modeling considered serious exercises?)

However, as inspiration to join us in the profession, we offer at least some short-term stimulation. For excitement, there will be exposure to the tearing of hair that takes place during the meeting of deadlines. The student will see chaos descending into previously harmonious project teams, may take part in very clumsy and drawn-out performances (which result in very good looking presentations), and they will probably witness the development of the interpersonal skills of all concerned.

The Individualized Training Plan of one our recent Co-op students sets out the following objective: "Upon completion of the work experience, the student will be able to participate in discussions in which personal opinions and values are being expressed without monopolizing, interrupting or being irrelevant." While

this may be a lifelong challenge for some of us, and not just in architecture, we appreciate the student who begins training early.

In the co-op workterm — without planning how, at all — we demonstrate how our shared passions for art and culture, and our skills with mathematics are deployed to make buildings. Debate will go on, whether we deploy well or poorly, but there should be no debate that our work profoundly affects — well or poorly — other people's lives. This is the privilege we inherit and the obligation we assume when we start imposing the kind of environments other people will have in which to live and breathe. A candidate for university studies in architecture should have some appreciation of this, just as they would, if contemplating the liabilities and obligations of a life in medicine or law.

By having students in the office, we also offer an introduction to what can turn out to be an interesting life for an architect who is curious about the worlds that other people inhabit. And the students' curiosities sometimes remind us how lucky we are. To some, the construction site feels immediately like home. Others are fascinated by the "behind the scenes" exposure to the workings of other professions — hospitals, courthouses, TV studios, sports stadia — and they learn that architects are allowed to see into these worlds, and even sometimes to consider how to re-configure them.

Many of our students have reflected on fond memories from their early years — of the pouring of concrete, the sound of welding, or the smell of sawdust, emanating from the home workshop — someone they admired and whose company they enjoyed is in the picture. They may love the feel of a power tool, a camera, or a paintbrush in hand, and they must have an intense curiosity about how things are made.

If they get even a vague idea that the practice of architecture might allow them to take their private passions, and offer something of themselves into the world, we will have done well. They will begin to get a sense whether participating in a team to make a complex thing, if managing internal stresses and difficult personalities, and if "living in the studio" fits their temperament. If it does, they probably will represent themselves with greater confidence during university admissions interviews, and should get some ideas about preparing their portfolio.

At the end of the term, our students are required to conduct a seminar for their whole class. We encourage them to do this in the office. This allows the whole group to visit "the field site" (that's us) for a morning. It is our hope that this kind of support is

available for every student who has been willing to walk with us for a few months — and some even return for summer employment.

The collegiate co-op term may also be the first of many steps in discovering whether the context of a practice, or perhaps another venue will suit an individual better. After all, some of today's collegiate co-op interns may become architects, but not work in architects' offices. They may follow one of the many diverse paths that open through the study of architecture — doing research, developing new products, producing images, analyzing building failures, writing and critiquing, experiencing politics, or teaching.

It is a big thing, in grade twelve, to begin to sense how, with your particular and individual interests, you might fit into the world of work. We think it's important to spend time with other people who may share your partly formed way of looking at the world, and who may show you where to look for more inspiration.

In general, Co-op architecture students enter university with elevated expectations of their own ability to "make things", and an enhanced respect for the contributions of their collaborators. We think that is a very good way to begin.

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## MORE THAN COMPUTER SKILLS

*by Debbie Friesen*

How does a young person who thinks he wants to be an architect find out what the work of an architect is really like? In the case of Steve, a grade eleven student at Dr. G.W. Williams Secondary School in Aurora, a high school Co-op placement in an architect's office exceeded his expectations for learning about what's involved in the profession to which he aspires.

But before looking at Steve's Co-op experience, it is useful to ask what adolescents on the cusp of their future careers know about architecture and architects in order to even get to the point of considering it or rejecting it as a career. A rigorously scientific survey of three grade nine students revealed a pretty good general notion about what architects do — design buildings — but less knowledge about the specifics of

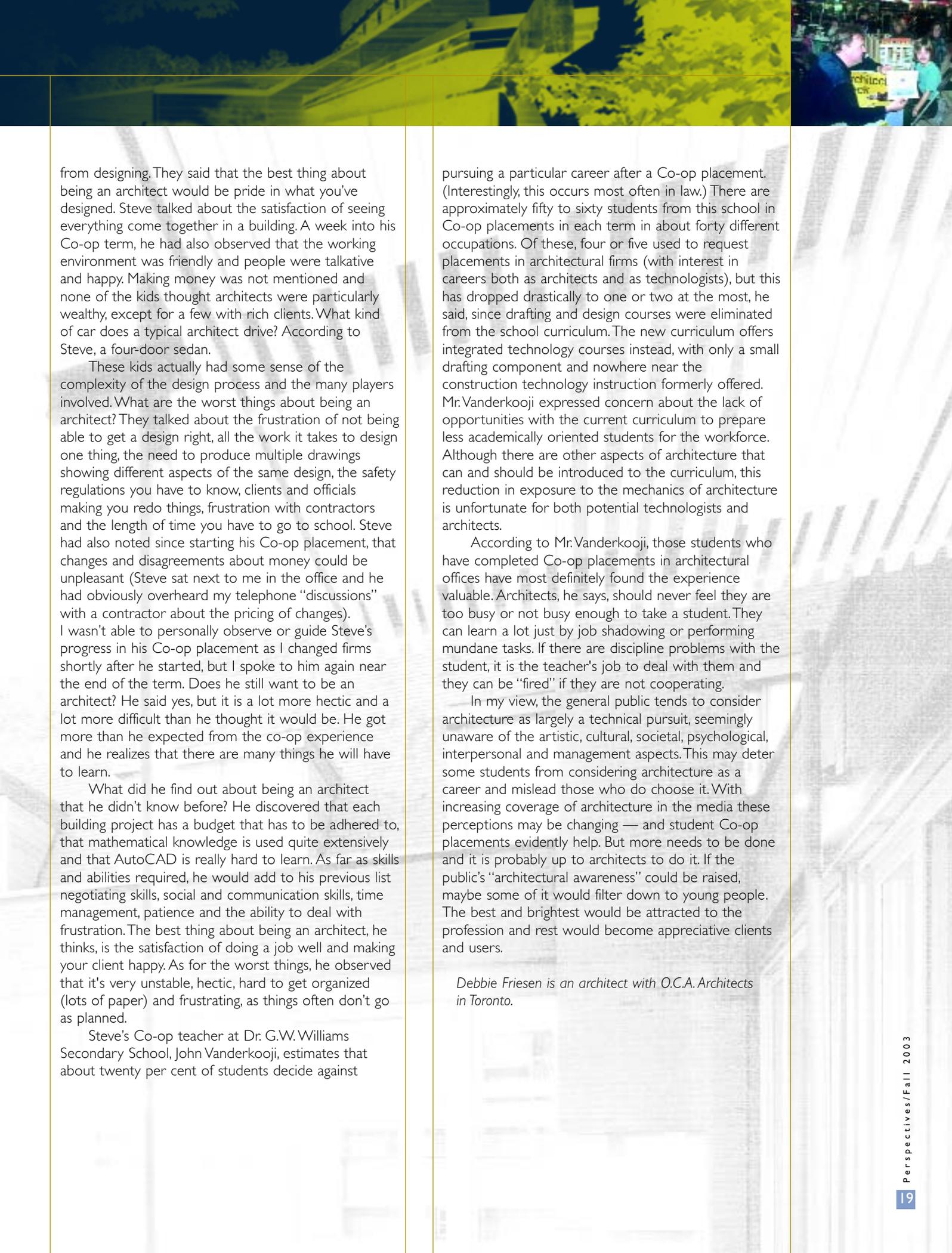
working in the profession. The architect's son (mine) naturally had somewhat more knowledge than his friends, but not as much as I might have expected. The notion of architecture as a cultural entity did not seem to be on their radar, even though the study of Egyptian culture, including architecture, was part of my son's grade nine art curriculum. (Note to self: put more effort into to your children's cultural education.) Their awareness of architecture within and outside their own community was limited to the CN Tower and "a church in Montreal" (Notre Dame?) Sadly, they couldn't name a single well-known architect.

One might have expected to find these kids with romantic ideas about the glamour of architecture and little thought given to the mundane practical aspects, however the opposite seemed to be true. All three cited computer skills as one of the most important requirements for an architect, but the ability to draw quickly and mathematical skills, (particularly measuring) were also seen as important. These ideas may come from elementary school assignments involving measuring and drawing plans for a space — a good way, perhaps, to introduce architecture into the curriculum, but arguably not enough. Are they too young to be introduced to ideas about the contribution architecture can make to culture and community?

As someone closer to having to make a career choice, Steve had learned a little more than the grade nine students about what an architect does. At the start of his Co-op term, he described an architect's activities as designing buildings, making floor plans, visiting job sites, attending site meetings and making sample boards. But he did not seem to have any more awareness of the cultural significance of architecture and he too could only name the CN Tower as a well-known work of architecture.

Steve's ideas at the start of his Co-op term about the skills and aptitudes required to be an architect were similar to the younger students: math skills, artistic ability, construction knowledge and computer skills. He wanted to be an architect because he loved art and was passionate about math, and because of the encouragement of a grade six teacher who had praised his work on architectural projects in her class.

My son thinks he might like to be an architect or maybe an engineer, because he would like to be able to express his ideas by building things. (He also likes that there is not a lot of physical labour involved). One friend has already decided he wants to be a "computer guy". The other friend isn't sure, but he likes the idea of designing things, so architecture might be a possibility. All of the kids did have a notion of personal satisfaction



from designing. They said that the best thing about being an architect would be pride in what you've designed. Steve talked about the satisfaction of seeing everything come together in a building. A week into his Co-op term, he had also observed that the working environment was friendly and people were talkative and happy. Making money was not mentioned and none of the kids thought architects were particularly wealthy, except for a few with rich clients. What kind of car does a typical architect drive? According to Steve, a four-door sedan.

These kids actually had some sense of the complexity of the design process and the many players involved. What are the worst things about being an architect? They talked about the frustration of not being able to get a design right, all the work it takes to design one thing, the need to produce multiple drawings showing different aspects of the same design, the safety regulations you have to know, clients and officials making you redo things, frustration with contractors and the length of time you have to go to school. Steve had also noted since starting his Co-op placement, that changes and disagreements about money could be unpleasant (Steve sat next to me in the office and he had obviously overheard my telephone "discussions" with a contractor about the pricing of changes). I wasn't able to personally observe or guide Steve's progress in his Co-op placement as I changed firms shortly after he started, but I spoke to him again near the end of the term. Does he still want to be an architect? He said yes, but it is a lot more hectic and a lot more difficult than he thought it would be. He got more than he expected from the co-op experience and he realizes that there are many things he will have to learn.

What did he find out about being an architect that he didn't know before? He discovered that each building project has a budget that has to be adhered to, that mathematical knowledge is used quite extensively and that AutoCAD is really hard to learn. As far as skills and abilities required, he would add to his previous list negotiating skills, social and communication skills, time management, patience and the ability to deal with frustration. The best thing about being an architect, he thinks, is the satisfaction of doing a job well and making your client happy. As for the worst things, he observed that it's very unstable, hectic, hard to get organized (lots of paper) and frustrating, as things often don't go as planned.

Steve's Co-op teacher at Dr. G.W. Williams Secondary School, John Vanderkooji, estimates that about twenty per cent of students decide against

pursuing a particular career after a Co-op placement. (Interestingly, this occurs most often in law.) There are approximately fifty to sixty students from this school in Co-op placements in each term in about forty different occupations. Of these, four or five used to request placements in architectural firms (with interest in careers both as architects and as technologists), but this has dropped drastically to one or two at the most, he said, since drafting and design courses were eliminated from the school curriculum. The new curriculum offers integrated technology courses instead, with only a small drafting component and nowhere near the construction technology instruction formerly offered. Mr. Vanderkooji expressed concern about the lack of opportunities with the current curriculum to prepare less academically oriented students for the workforce. Although there are other aspects of architecture that can and should be introduced to the curriculum, this reduction in exposure to the mechanics of architecture is unfortunate for both potential technologists and architects.

According to Mr. Vanderkooji, those students who have completed Co-op placements in architectural offices have most definitely found the experience valuable. Architects, he says, should never feel they are too busy or not busy enough to take a student. They can learn a lot just by job shadowing or performing mundane tasks. If there are discipline problems with the student, it is the teacher's job to deal with them and they can be "fired" if they are not cooperating.

In my view, the general public tends to consider architecture as largely a technical pursuit, seemingly unaware of the artistic, cultural, societal, psychological, interpersonal and management aspects. This may deter some students from considering architecture as a career and mislead those who do choose it. With increasing coverage of architecture in the media these perceptions may be changing — and student Co-op placements evidently help. But more needs to be done and it is probably up to architects to do it. If the public's "architectural awareness" could be raised, maybe some of it would filter down to young people. The best and brightest would be attracted to the profession and rest would become appreciative clients and users.

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