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ASSOCIATION OF PROFESSIONAL ENGINEERS OF ONTARIO

TO

SUDBURY AND DISTRICT CHAPTER

AT

CAMBRIAN COLLEGE CONFERENCE CENTRE

SUDBURY, ONTARIO

8 P.M. THURSDAY, OCTOBER 7, 1982

Thank you for the invitation to be the guest speaker at the first meeting of your new Chapter year. According to one veteran of the banquet circuit, the easiest way to stay awake during an after-dinner speech is to deliver it.

Speeches, are a bit like babies--easy to conceive but hard to deliver. In fact, the best after-dinner speech of all consists of just five words; "I will pay the bill".

However, I am not going to do that. One of the presidential perks is a certain amount of free-loading at Chapter meetings. Moreover, I expect you want a little more than five words from me after wining and dining me so hospitably---for which, incidentally, many thanks indeed.

My first words to you are greetings on behalf of the Officers, Council, members and staff of APEO. It is indeed a pleasure to be with you tonight in Sudbury.

In view of the fact that your Chapter will be the host for our annual meeting here in April, in a sense I am casing the joint on this visit--taking the opportunity of getting to know you better and, in turn, of warning you what to expect when several hundred engineers are let loose here next April.

Seriously, I know it will be a memorable first, both for the Association in holding its first ever annual meeting in Northern Ontario and also for the Sudbury and District Chapter in staging it.

I congratulate you on your initiative and enterprise in undertaking to host an event of such importance in the APEO calendar. The Association is honoured indeed to be part of Sudbury's centennial celebrations. Holding the annual meeting here should have a number of beneficial results.

It should lead to a wider representation at the meeting of Northern Ontario members, giving them an opportunity to participate firsthand in APEO affairs. Secondly, it will enable members from southern Chapters, who don't normally visit these parts, to gain a better appreciation of the role the northern Chapters play in the life of the Association.

The annual meeting should be the highlight of our year. Unfortunately, in recent years, especially when it has been held in Toronto, within hailing distance of our largest Chapters, it has been poorly attended. To my mind, therefore, it makes a great deal of sense to take up your invitation to foregather in Sudbury where I feel sure northern enthusiasm and hospitality will combine to make this one of our most successful annual meetings ever.

Certainly if I accomplish nothing else of significance during my term of office I will at least have had the personal satisfaction of having presided at the first annual APEO meeting to have been held in Northern Ontario.

The wonder is that it has taken us 60 years as an Association to see the light. In this connection I am reminded of the story of a farmer visiting an art gallery with his wife.

He stood for minutes, rapturously looking at a painting of a woman dressed in a few leaves.

Finally, his wife impatiently snapped at him; "What are you waiting for? Autumn?"

Well, the waiting period is over. We are looking forward to Sudbury in the spring.

My first visit to Sudbury goes back to my years as an engineering student in the late 1940s when, for a summer job, I was part of a team doing a survey for Ontario Hydro of water levels on the Mississagi River for a tunnel project near Thessalon. Another member of the team was Archie Belaney, son of Grey Owl.

In fact, I made my first ever flight, seated on a sack of potatoes, on a plane piloted by Jack Austin from Sudbury to the site. Prior to that we were holed up--if that is the right word--in Sudbury for two weeks while our guide and cook, a memorable character named Gus Goldie--was gathering supplies, equipment, etc.

During that time I believe we were kicked out of every hotel in Sudbury, from the King Edward to the Coulson to the Nickel Range to hotels frequented by a profession somewhat older than ours.

Among the supplies ordered by Gus were two full cases of vanilla extract, which seemed a bit odd for a survey party until I discovered the use to which our cook and guide put this product in the distilling process. It was some baptism for an engineering student, scarcely out of his teens.

So much for the old days. As a piece of graffiti on a building proclaims, "Nostalgia ain't what it used to be."

They say confession is good for the soul.

While I am getting that early Sudbury experience off my chest, now is perhaps the time to do penance for another Sudbury incident which at the time made my name a four letter word in more than the alphabetical sense in this city.

I refer to the occasion in 1970 when, as a member of a group studying engineering education in Ontario, we had the temerity to recommend in Ring of Iron that existing engineering programs at Laurentian University be terminated, and no further freshmen be admitted to them.

Possibly there are some Laurentian engineering graduates here tonight who have reason to be grateful for the fact that while reports may propose, governments dispose, and this recommendation was nipped in the bud.

The school of engineering at Laurentian is now a four-year program; it did receive the strong local support it needed to expand the facilities and faculty it lacked at the time Ring of Iron was written; and it is now turning out graduates in mining and mineral processing, the main activity in the area.

Cambrian College has also been remarkably successful in the three-year diploma courses it offers in geological, metallurgical and mining technology.

Qualified technologists are part of the engineering team and APEO's policy is to provide them with the fullest opportunity to make their contribution to that team.

Ironically, economic circumstances have changed drastically, especially in the Sudbury basin, since Ring of Iron first saw print in 1970.

The authors at that time noted there was a shortage of mining engineers in the Sudbury district and local industry was being forced to search for them in other provinces and outside Canada. We also reported that graduates with bachelor degrees in mining were being offered the highest starting salaries of all branches of engineering in Ontario.

There once was some truth in the chant of mining students at the University of Toronto Faculty of Applied Science and Engineering

"We are miners seeking riches.
We are Haultain's sons of bitches."

Well, enough of reminiscences. From what I have said you will have gathered that my past acquaintanceship with Sudbury has been both colourful and controversial. I look forward to a more sedate relationship in the future.

As this is the first meeting of your new Chapter year, I want to congratulate your new officers and executive committee on their election and, indeed, all the members--566, I believe, at the last count--on the work they are doing for the Association.

The Chapter system is an integral part of APEO. Instituted in 1960, as a result of a membership referendum, its purpose, then and now, is to improve communication between the membership and the Council, the governing body.

The well-known Canadian writer, Harry Boyle, once said: "Without communication there is no society, whether it is a hive of bees, a troop of Boy Scouts, a bar association or a nation."

At the time the Chapter system was inaugurated, APEO membership numbered about 18,000. During my term of office it should approximate 50,000. Keeping in touch with a membership that large--in fact, the biggest self-governing profession in Canada, if not the world--is no easy matter, but it is essential.

Moreover, the communication has to be two-way and it has to be effective--the message has to come across.

You may recall the story of the vestrymen who were discussing the need for a new chandelier to be installed in the nave of the church at a cost of $400.

One of the vestrymen stood up and exclaimed, "We only have $750 in the treasury and such a purchase will put a serious drain on our resources."

"Moreover, "said a second member of the church board,"we have no one who knows how to play it."

"What is more," protested a third vestryman, "what we really need is better lighting in the church."

Well, I think Council and the Chapters communicate more effectively than that but we must continue to strengthen these bonds. That's not easy for an Association whose membership is as diverse as ours. Engineers work in such a variety of settings today that it is difficult for them to develop and sustain a common interest in their profession and an interdependence.

In your case, for example, mining or mining-related activities are the main source of your employment, with the two largest companies in the area, Inco and Falconbridge, being the principal employers. Others are employed in forestry and others, like your chairman, work for government. Some of you are consulting engineers and the remainder of you work in a myriad of fields, including the academic.

Perhaps the Sudbury Chapter has a higher preponderance of industrial engineers than most of the others, reflecting the industrial nature of the region, but even within industry, there is a wide utilization of your skills.

My point here is that it is becoming increasingly difficult to pinpoint exactly what constitutes engineering today. In one of my presidential pieces in Dimensions, in response to my own question, "What is engineering?" I made the rather startling reply, "Engineering is what engineers do."

What prompted that conclusion was conversations I had had with engineers who told me they no longer do engineering because they are now "in management." I disagreed with them.

Conventionally engineering is thought to be related to "technical work," so that as soon as a P.Eng. is promoted from work directly involved in technical matters, he is proclaimed to have "left engineering". I would argue that engineering embodies far broader concepts than those involving strictly technical elements.

The ethos of engineering is design; and design has been defined as rational, iterative decision making. It would be arrogant in the extreme to suggest that engineers have a monopoly on rational decision making, but nevertheless it is in fact a necessary characteristic required of all engineers.

Leadership in most organized endeavours requires rational decision making, and so it is not surprising that engineers often wind up in leadership positions.

A study which I did in 1972 in connection with the University of Toronto engineering centenary showed that while most engineering graduates start in non-supervisory, technical jobs, within ten years over two-thirds move into supervisory, management or executive positions. Within 25 years of graduating, 60 per cent were in either management or executive roles, and nearly one-third ultimately reach executive ranks.

Where does engineering stop and management start? I believe there really is no such line, but rather a continuum running from graduation to retirement. I have concluded that engineering is what engineers do.

Engineering is what engineers do. There is something breathtakingly simple about that statement, but the more you consider its implications, the more I think you will agree with it.

Quite clearly, many of our 50,000 or so members--I nearly said 50,000 odd members--no longer practise hard-core engineering. Some, in fact, never did. The study to which I referred earlier showed that only about 20 per cent of the engineering graduates surveyed remained in technical work throughout their working careers. I would argue, however, that the remainder are still practising engineering though the work they do does not fall within the strict purview of the Professional Engineers Act.

In that sense, our profession, while becoming increasingly diversified in terms of the work we do, is not divisible. There is a common bond in that we all do engineering and our career paths show many common elements. We are interdependent.

APEO tries to nurture that interdependence and the Chapter system is an important factor in that process. Council needs Chapter input and feedback from all parts of the province. That is why our basic election framwork is a regional one, consisting of five regions, which in turn are broken down into 42 Chapters in order to provide local membership participation.

The Chapter system is supported by two full-time staff members and part-time work by several departments within APEO. The direct costs of the Chapters and Regions in 1981 were estimated at $188,000 and overhead at $108,000 for a total of $296,000, or about $6.16 per member.

Distance tends to lend disenchantment to the view. There is a tendency to think that the further remote or smaller a Chapter is, the weaker its voice is. That is not so. Your Chapter, for example, managed to sell Council on the idea of holding the annual meeting here during Sudbury's Centennial Year.

The Northern Region, in my experience, has always had vigorous representation and its Councillors have been effective spokesmen. In recent years also Council has adopted the practice of inviting Chapter chairmen to sit in at meetings to get an insight at what happens there. And, as a result of the initiative of one Chapter, Regional Congresses are now held coincidental with the annual meeting. That makes our annual meeting more representative.

I know you want me to say something about upcoming changes in our act, and I will do my best to bring you up to date.

In September Council held a two-day workshop at Jackson's Point to look at a discussion draft of the act, supplied to us earlier by the Attorney General's ministry. We weren't looking for a Council consensus, nor were we trying to rewrite the act. We were seeking Council's views on a number of discussion points which will be the basis of further talks with the Attorney General's people.

I should stress that much preliminary work has been going on in the last year and there have been innumerable discussions between APEO and the ministry. We had the opportunity at a Council workshop earlier this year to look at a draft bill of the architects act and to make our input.

We are now at what you might call the refining stage. We expect to have a first draft of our act, hopefully before the end of the year. Chapter chairmen will receive a copy of the draft with a staff commentary as soon as possible after it is received at APEO headquarters.

At that stage, the draft bill will be a semi-public document in that it will be distributed to other interested parties as well and their views sought. Our interest, of course, is paramount and, therefore, it is essential Council gets back as much feedback--and rapidly--as it can from the Chapters, Regions and individual membership.

I don't want to go into detail on the discussion draft we debated at Jackson's Point because I don't think that would be a very profitable exercise tonight since its successor, the draft bill, will, we hope, take into account the points we raised at the workshop.

In general, we do not anticipate major changes in our self-governing functions. As you will recall, the report of the Professional Organizations Committee found no fault with the way we have been exercising these responsibilties in the past. However, since our bill will parallel legislation enacted in recent years in the health field, there will be some further strengthening of public accountability, notably through a complaints procedure.

There will be some changes in the definition of the practice of engineering to recognize the reality of what today constitutes engineering practice. The agreement which we ourselves voluntarily reached with the architects and which is being monitored by a Joint Practice Board will be embodied in the act. There will be recognition of the position of the qualified technologist on the engineering team through the work he performs with the over riding responsibility resting with the licensed engineer.

There is no Council consensus on whether the Officers should be elected directly by the membership or from the Council ranks. When members were asked to express a point of view on this issue some time ago, opinion was also divided. There is also mixed feeling on Council about having the discretion to make bylaw changes without membership referendum. In the case of routine housekeeping changes, it seems logical for Council to act on its own, but there is strong support for retaining the members' prerogative to vote on major issues, such as fee changes.

These are subjects on which your input will be sought when you are asked to comment on the draft bill. I hope you will take this responsibility seriously. Council can't operate in a vacuum. It needs broad membership support and interest. Our Association is strong because its strength is evenly distributed and not borne by just a few.

I don't know what stage we will have reached in the legislative process of revising our act when we meet in Sudbury

in April. I do hope, however, we will meet in a more clement economic climate and that your centenary year will see a return to better times.

For my presidential message in the current issue of Dimensions I have written a piece on The Power of Positive Thinking. It is not easy to think positively in a community whose major industry is idle because of soft markets and where thousands of people are out of work.

I believe there is light at the end of the tunnel and that it is not the headlight of an oncoming train. Engineers are trained to think positively--a necessary prerequisite to problem solving.

In these difficult times the Sudbury Chapter has shown courage as well as initiative in electing to host the annual meeting next year. In accepting your invitation, Council is expressing its confidence in your Chapter to do the Association proud and also in the community to recover its momentum.

The time has come to draw these remarks to a close. Many speakers know how to rise to an occasion, but few know when to sit down. A train of thought must have a terminus, and I have reached mine.

Again, thank you for your invitation and best wishes for a most successful year. I look forward to seeing you all again in April.

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