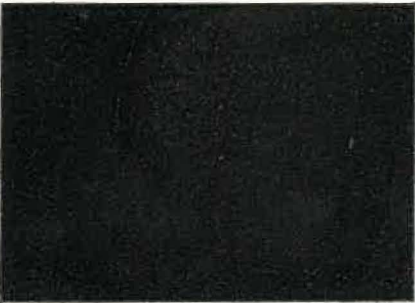




**THE
MANITOBA**

PROFESSIONAL
ENGINEER



**bulletin of the
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of the
province of manitoba**

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Opinions expressed are not necessarily those held by the A. P. E. M. or the Council of the A. P. E. M

WINNIPEG, MANITOBA, AUGUST, 1972

WHAT DID BILL 81 MEAN TO YOU?

By S. BARKWELL, P. Eng.

Now that Bill 81 has been amended and passed it will soon become the new Labour Relations Act. We can now tell you what your "staff" has been doing regarding it on your behalf.

In addition to the normal leg work we expect from our Registrar, and the policy decisions of Council, there has been a tremendous amount of advance work done by Committees to prepare briefs and presentations to the Minister of Labour and the Labour Relations Committee on behalf of Professional Engineers in Manitoba.

The Legislation and Employee Engineers Committees worked separately and collectively to keep Council advised on activities at the Legislature. A written brief requesting exclusion of Engineers from the provisions of the proposed new Act was sent to the Minister of Labour, Hon. Russell Paulley in May even before the first draft of Bill 81 had been circulated.

As we were not successful in retaining exclusion as indicated in the Bill our Committees prepared a second brief requesting—

- (a) definition of a professional employee and
- (b) exclusion from bargaining groups set up by non-professional employees.

The brief was presented July 12, 1972 by Mr. A. W. Gilliland, chairman of our Legislation Committee assisted by Registrar Terry Algeo and Councillor Dave McCall and morally supported by Jon Stefanson, Chairman of the Employee Engineers Committee and your President.

We had contacted four MLA's in person and five by letter. Hon. R. Paulley was courteous enough to contact our delegation afterwards and congratulated Mr. Gilliland on his presentation. This action encouraged us to follow up the presentation with suggested amendments which form the basis of the revised sections which we understand will appear as follows:

Section 1 — Definitions

(t) "Professional employee" means an employee who

- (i) is, in the course of his employment, engaged in the application of specialized knowledge ordinarily acquired by a course of instruction and study resulting in graduation from a university or similar institution; and
- (ii) is, or is eligible to be, a member of a professional organization that is authorized by statute to establish qualifications for membership in the organization;

Section 29 — Professional employees in bargaining units.

The board shall not include professional employees in a unit with employees who

are not professional employees unless it is satisfied that a majority of the professional employees wish to be included in the unit.

We feel this project has been one of the most important undertaken by your Association this year and the results provide significant protection to Engineers and indeed all other professional employees in Manitoba particularly in guaranteeing freedom of choice in the matter of who shall bargain (for them) on their behalf.

I have asked Mr. Gilliland, Chairman of the Legislation Committee to write an article setting forth some of his views, which will be found in the following article.

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PROFESSIONAL COLLECTIVE BARGAINING AND NATIONAL IDENTITY

By A. W. GILLILAND, P. Eng.

Are you prepared to consider collective bargaining and unions? One thing is certain, we as engineers in Canada must put aside emotional concerns and undertake a rational analysis to determine exactly where we stand both as individuals and as professionals. In this spirit the writer is convinced that our actions both local and national over the next year or so will set the pattern for the future course of engineering development in this province and in the nation as a whole.

In the closing hours of the last session of the Manitoba Legislature, Bill 81 "The Labour Relations Act" passed final reading with amendments and received Royal assent. The majority of the Act content becomes effective January 1, 1973. The new Act follows the recent example set in Ottawa and for the province of Ontario. It is interesting and stimulating reading for those wishing to remain informed.

In a nutshell, we have a definition of "professional employees"; we have a definition of a "union"; and we have a clause which requires the Manitoba Labour Board to place professionals in a different bargaining unit from non-professionals unless the professionals desire otherwise. There appear to be many questions with uncertain answers at this time, but let us explore what we do know.

By ballot A.P.E.M. members have indicated that the majority prefers the con-

cept of voluntary groups to that of formally certified bargaining units. This is consistent with A.P.E.M. Council policy of support for the concept of voluntary associations.

The new Act contains a definition of a union which allows an employee association to qualify as a bargaining agent. By appeal to the Labour Board such an association may be certified as the bargaining agent for its members. No outside union is necessary for this certification, only the formation of an association. By following this route it will be possible for engineers to maintain control of their own interests while, at the same time, being able to obtain assistance in the organization of group activities by experts outside the existing union framework. The unions would be delighted to help out, to be sure, but engineers should realize that unions have other priorities and commitments to which all members are expected to adhere.

Where a majority of engineering employees wishes to bargain collectively, the organization of engineer employee associations and their certification as bargaining agents appears to be the only way outside the established union pattern.

If the majority does not wish to bargain collectively it is technically possible to prevent the certification of any group, but this course will involve active participation of all employees in the balloting process.

From what source can leadership for engineer employee associations be anticipated? Many look to the Association for help. This cannot be, however, as a basic conflict of interest exists between public and members interests. The same reasoning rules out effective support from C.C.P.E., that body representing all provincial associations on a national level. There is no such conflict between members interests and the traditional activities of the technical societies. It is quite conceivable that an effective national leadership can be organized by the E.I.C. on a self financed constituent society basis. This will require putting together, however, as to date there is no consensus on the matter within the national engineering fraternity. If engineers require help in establishing and running membership service organizations then a national body separate from the provincial associations, and controlled by engineers, is essential. Again, all engineers must participate to make this a reality.

There are other potentially larger issues to be considered.

What of the individual (or minority group) who does not wish to be part of an engineer employee association? There is no provision for this person in the new Act. Only the "conscience" clauses can be used for protection in this case. This appears to represent an erosion of the individual responsibility of a professional engineer.

Individual responsibility is not possible if individual action is prevented.

Extending this, if we lose the concept of responsible individuals then we make impossible the continued use and application of the Engineering Profession Act. A new structure may materialize with the traditional responsibilities, of professional self discipline and assessment of qualification for the public protection, returning to the government sector. All that would remain to engineering associations might be technical activities and membership services including bargaining. Engineering employees would thereby become general employees.

Our society may be in danger of losing another facet of its traditional moderate way of life. We seem to be destined to an abrasive system of extremes based upon selfish individual demands against an all powerful government, with no middle road possible.

If we cannot define a national association to represent the engineers interests it seems to be likely that engineers will become members of the many existing unions, some international in scope.

Canadian historian Donald Creighton, has said that the two most dangerous threats to Canada are North American continentalism and Canadian parochialism.

The engineering profession in Canada has so far demonstrated an abundance of parochialism by finding it impossible to agree on one national body to represent engineers in all their affairs. It would be ironic if the federal and provincial governments should, by the various new labour relations act, remove the traditional responsibilities of the professions and expose professionals to the inroads of international and continental unionism. With professionals as members of international unions, and the basis of professional associations assumed by government, the respected and independent Canadian engineering profession would soon disappear to the detriment of all Canadians.

To wind up this commentary, an optimistic note must be heard. If we can keep

in mind the difference between seeking assistance for responsible action by engineers, and joining powerful but self seeking organizations for the purpose of personal benefit, then the above projections may never materialize. It is as well to be aware of what might happen, however, in order that future actions may be based upon a full understanding of their eventual implications.

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ALASKA TRADE MISSION

By R. R. FOSTER, P. Eng.

Manitoba Engineers were in the majority on a recent trade mission to Alaska, sponsored by the Manitoba Department of Industry and Commerce. The objective of the Mission was to develop mutually beneficial contacts between Alaskans and professional firms and manufacturers from Manitoba having expertise or products particularly applicable in cold weather climates.

The official leader of the eight man mission was D. D. Elliott, P. Eng., of the Department of Industry and Commerce. Chief co-ordinator for the mission was W. Rooke, P. Eng., of the Manitoba Export Corporation. Members of the mission representing local consulting firms were R. E. Scouten, P. Eng., R. C. Isaak, P. Eng., and R. R. Foster, P. Eng. David B. Laughton, Canadian Consul General and Trade Commissioner (Seattle) accompanied the group.

The mission's first stop was the State Capital at Juneau, where discussions were held with State officials. A meeting was also arranged with the Alaskan equivalent of the APEM, to discuss registration of Manitoba engineers in Alaska, and other points of mutual interest. The State Legislature was in session at the time of the visit, and the Canadian Consul General hosted a reception for the legislators and numerous State officials.

The next stop for the mission was Anchorage, the largest city (120,000) and business capital of Alaska. Mission members were kept busy in meetings with civic officials, Native Federation representatives, representatives of the oil industry, and Alaskan consulting firms.

In Anchorage, oil is the single major topic of discussion. In a short time, our local P. Eng.'s became fluent in the local

dialect, and could rap out terms like "TAPS". (Trans-Alaska Pipeline System) and "environmental impact statement" with ease.

In Anchorage, a reception for local businessmen was hosted by the Manitoba Government. Thursday, April 13, was proclaimed "Winnipeg-Anchorage, Alaska Friendship Day" by the Mayor of Anchorage, and the members of the mission were vested in the "Order of the Walrus". (The Order of the Walrus being such a high honour, the mission members were briefly at a loss as to how to reciprocate, however, an "Order of the Buffalo" was soon improvised).

The final stop for the mission was Fairbanks, where further meetings were held with representatives of the Alaskan business community. A brief tour of the University of Alaska campus wound up the trip.

All of the visiting P. Eng.'s were highly impressed by the generous hospitality shown by their Alaskan counterparts. Only one of the mission members had a serious complaint; this reporter fell asleep on the 747 flight from Anchorage to Seattle, and the stewardess failed to wake him up for free champagne.

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We regret to record the death of R. James McPhail in May.

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WHAT IS THERE IN IT FOR ME?

When one buys a car licence, he sends his remittance to the Minister of Finance, he obtains the licence and the car can go on the road (properly insured and with a licensed driver at the wheel.) The car owner does not say: "What do I get for my licence fee? What are the fringe benefits? What, no chocolate ice cream? How about some owner benefits?"

What then prompts some of these same car owners, when they acquire the legally required licence to practise engineering, to contact the licensing body saying: "What else do I get for my licence fee? You don't do anything for me!" There are members in this Association like Jon Stefanson, who

with his Employee-Engineers Committee, recently prepared and circulated a 6 page letter to members, which must have taken hours and hours of work. There are members like Andy Gilliland who is Chairman of the Legislation Committee, which prepared and presented a brief to the Committee of the Manitoba Legislature concerning Bill 81 of the Labour Relations Act. They did an exemplary job; one which brought credit to this Association, one that brought desirable amendments, for which other professional Associations will surely be grateful. It was a monumental task and in the last 6 months Mr. Gilliland must have had little time for anything else but his regular employment and this Association's affairs.

All Committee members who meet in the Association office and donate their valuable time and talent are also out of pocket if they come by car, because parking charges are high in the area of our office. Our President and other members of Council and their predecessors, put in hours and hours of time and are all out of pocket, and during their terms of office they certainly have no leisure time for anything. These are true professionals.

What do we get for our \$40.00 annual fee? We are granted the privilege of belonging to a professional Association and practising our profession in this province. And we do it at a fee that is one-half to one-sixth of that paid by some other professionals. Some take the opportunity to serve the profession, its members and the public of Manitoba well, and those who do, seem to be the better for it. Certainly the Association is richer. Those who want to do nothing for the Association and the profession have that opportunity, but if they opt for this course, then they should follow it fully. Members should not interrupt a "nothing" contribution by frustrating those who are doing a great deal, and demoralizing themselves, by writing petulant letters about what the Association should be doing for them. It wasn't set up to do anything for us and if it embarked on that course, the government could, with justification, take over the administration of the Engineering Profession Act itself. We have to continue to be worthy of that trust, if we want to keep it.

Because of the number of volunteers who contribute their time and talents, the Association does offer some additional things — dances, golf, the publication, smokers, student functions, the membership roster, salary surveys, employee-engineer studies, etc. The Association also offers

the opportunity for members to do nothing but sit back and criticize if they can't think of anything more constructive to do. That is the essence of freedom which we inherited from our ancestors who fought so hard for it. Somehow the dedicated hard-working members seem not to be discouraged or inhibited by carping pettyness and self-interest; they rise above it and continue in their efforts to serve and give, and for that we are humbly grateful and very proud.



TECHNICAL ARTICLES

The Bulletin has been criticized recently in some quarters because it does not contain technical material.

We occasionally published articles of a technical nature in the past, but the decision to discontinue them was taken several years ago. The main reason for this decision was the diversity of interests of the different types of engineers within the Association. While an article dealing with geological matters would be of interest to the few geological engineers in our membership, it would not in all likelihood interest an electrical engineer. Similarly, a highly technical article on electronics would probably not interest the geological engineer.

This does not mean that we do not believe in the importance of keeping abreast of the latest developments in the various engineering fields. We do. But in a typical engineering office there is a massive volume of technical material circulating every day. Most engineers find it difficult enough to read that part of the material that applies to their particular field.

Most of this material is prepared by organizations that have large budgets for research and professionals to properly present the resulting information. A relatively small provincial engineers association using volunteer writers cannot expect to add significantly to this flow of technical data.

—R.M.S.



AWARDS FOR ENGINEERS

Candidates are requested for various awards for which Engineers are eligible. Please send your recommendations with

your supporting ideas to the Registrar, Attention: The Awards Committee, by September 1.

A summary of the terms of reference for the various awards follows:

1. Merit Award

The basis on which merit for an award may be judged shall be on one or more of the following criteria:

- 4.1 A contribution to the literature showing outstanding scholarly achievement.
- 4.2 Magnitude of works successfully completed.
- 4.3 The pioneering achievement in fields of engineering or of engineering application.
- 4.4 Outstanding public service.

2. Outstanding Service Award

Recipients shall be members of the APEM who have performed outstanding service to the Association or on the Certification Board or the Panel of Examiners of MSCETT Inc.

3. Life Membership, Honoris Causa

May be granted to a member who has rendered meritorious service to the Association, who is no longer practising on a full-time basis as a Professional Engineer, and who has preferably been continuously a member for not less than 35 years and has attained the age of 65.

4. National Engineering Award

(a CCPE award)

The medal shall be presented as the highest mark of distinction and exceptional achievement to a Canadian Engineer who has shown himself to be outstanding in his chosen field, or who, by his writings or other endeavours, has made a highly significant contribution to the advancement of standards of excellence and ethical conduct in the field of engineering in Canada.

5. Canadian Industrial Development Award

Administered by the Provincial Department of Industry and Commerce — APEM has been requested to give consideration to candidates — not necessarily Engineers.

The award will be based on the general contribution of the nominee to the regional or national industrial development of Canada, with industrial in this context to mean development of manufacturing industries:

Major factors will be:

- a) Promotional activity leading to industrialization;
- b) Vision leading to successful location of new industries;
- c) Invention of new processes which facilitate the development of Canadian resources;
- d) Organizational abilities above the ordinary which sparked industrial growth;
- e) Discovery and development of new resources leading to further industrial growth.



ITEMS OF INTEREST FROM COUNCIL MEETINGS OF MARCH, APRIL AND MAY

By D. A. CHIVERS, P. Eng.

1. Councils (A.P.E.M. & M.A.A.) have renewed the lease on the present premises. A.P.E.M. Council has authorized expenditures in the order of \$1000.00 for rearrangement of rooms to allow more working space.
2. Council is considering a change in the Act to allow the Practice and Ethics Committee to take direct disciplinary action.
3. The Manitoba Government is reviewing the Labour Relations Act and has requested briefs from the professions. Our Legislation and Employee-Engineers Committees have now presented reports to Council on Collective Bargaining. The general feeling, as indicated in the returns from the questionnaire sent to all members, and in other samplings and discussions, seems to be strongly in favour of remaining outside of the Act. This information was sent to the Labour Minister on April 5, with a brief giving our reasons for this preference. Council has also requested audience with the Minister to further discuss our views.
4. The Employee-Engineers Committee had several suggestions as to ways A.P.E.M.

could aid employee-engineers. Council asked for priorities, and pointed out that the budget is small.

5. A new By-Law was passed. Non-residents will be licensed, rather than registered. The licence will be for a specific discipline. This does not affect those presently registered, provided they maintain their registrations.

6. The Employee-Engineers Committee is endeavouring to assure that the title "Engineer" is used as little as possible for persons who are not Professional Engineers. The Provincial Government and Manitoba Hydro have changed these to our satisfaction, and M.T.S. is presently in the same process. Co-operation has been excellent.



COUNCIL

By N. P. FESCHUK, P. Eng.

Tuesday, June 6

When your reporter entered the Council Chambers most of the Councillors were enjoying the various photos that had been taken at the C.C.P.E. do in May. After welcoming your reporter and deciding simultaneously that Council had a quorum, President Barkwell got the meeting underway by 4:15 P.M. with Councillors McKall and Vice President McBain absent.

Ignoring the agenda and getting down to important things first, President Barkwell inquired of Council if anyone was attending the golf tournament since he was unable to attend. Councillor Hallson was nominated unanimously and as a result got his picture in the bulletin. (He is the one without the tie.)

Minutes of the previous meeting and accounts of April and May were passed in short order. Councillor De Pauw took time during the review of accounts to state that the Association had received many letters with regard to the social activities held during the C.C.P.E. meeting in Winnipeg.

By now your reporter was settled down comfortably in the reporter's chair loaded down with sandwiches and beverages, well catered to by Councillor De Pauw.

Licences, Engineers In Training, Transfers, and Registrations went quickly except for one individual. Councillor Lansdown noticed your reporter with pen poised, ready to tell all, and suggested to the President that the matter was delicate and

perhaps the reporter should be asked to leave. Deciding that it would be unwise for a novice Council reporter to quote the freedom of the press bit, appropriately supplied by the Editor, your reporter allowed himself to be banished from the Council Chambers. Summoned a half hour later by Past President Hood, your reporter heard Councillor Newton state that the Association had an obligation to Engineers In Training to inform them that their on the job training was not considered engineering experience if that was indeed the case. Council agreed and Registrar Algeo was instructed to inform E.I.T. if it appeared that that was the case. President Barkwell requested that the members' attention be drawn to the seriousness of signing on behalf of a person applying for registration. A number of cases reviewed by Council, although having been vouched for by members, turned out to lack the necessary experience and training required for registration. Council suggested that members should be more sincere about recommendations of credentials.

Minutes of the Board of Examiners Meeting were approved with the exclusion that engineering course offered by General Motors Institute was not accredited.

The Consulting Engineers Committee report was approved. Councillors Newton and Hicks were appointed by Council to work on a committee with C. R. Bouskill, Chairman Practice and Ethics Committee, to review procedures for laying complaints and to make recommendations to council which will expedite the disciplinary process. This arose out of a written complaint from Councillor Hicks to the A.P.E.M. Councillor Hicks contended that it was taking far too long to process formal complaints (in excess of six months) with the result that the alleged infraction was repeated a number of times before appropriate action was taken.

The report, letter and action plan of the Employee Engineers Committee report was received and referred to the Executive Committee for further study. Council directed Councillor McBain, in his absence, to review the report with special emphasis on what additional staff may be required to fulfill the recommendations of the report.

Councillors Lansdown and Grimes were directed to prepare a letter to the University with regard to the University establishing a firm policy regarding consulting practice by its engineering faculty members.

Much time was taken discussing a complaint lodged against a national company specializing in hydraulic structures. Questions were raised with regard to advertisements by the firm suggesting the offering of engineering services; the failure of one of the firm's structures in Manitoba; whether there was any negligence in the discharge of the design engineer's professional responsibility to his client and to the public in regard to the structure; and the lack of response received from the rural municipality that was involved. The Registrar was directed to meet with the Council of the rural municipality for the purpose of gathering information and explaining the A.P.E.M.'s interest in the matter.

C.C.P.E. meeting report, Status Report of the Practice and Ethics Committee, Brandon Area Committee, Bulletin Committee, and Sport Committee Reports were accepted. The Annual General Meeting Committee requested funds for a dinner speaker. A motion to that effect was defeated by Council. A second resolution directed the committee to find a speaker at no cost to the A.P.E.M., failing that to advise the President of the cost of a speaker. On the problem of selecting two out of three suggested topics for panel discussion, the Annual Meeting Committee was directed to select any two. The meeting adjourned at 8:00 P.M.

Tuesday, July 11

With everyone refreshed from the long weekend, things got off to an early start. Councillors Lansdown and De Pauw were absent, presumably on holidays basking in the sun.

By 4:10 P.M., minutes of last Council Meeting were approved. Accounts, Licences, and Engineer In Training were approved in short order. A question arose as to whether it was advisable to enroll a non-resident as an Engineer In Training. Since it was the A.P.E.M. policy not to register non-residents, it was decided to inform the applicant that he should apply as an Engineer In Training in the Province in which he resides. Transfers were approved with the exception of one individual who wanted to know if he would be accepted as a member. He was a member of a sister association and he would only apply for A.P.E.M. membership if he moved to Manitoba, but he would only move if he was accepted to the position with a potential employer who would only give him a position if he held an A.P.E.M. membership . . . , this coupled with the

A.P.E.M. position not to register non-residents led to a dilemma. A solution was somehow found to the problem.

Executive Committee meeting minutes were accepted. It was noticed by Councillor Grimes that all examinations set in the province by the A.P.E.M. drew failure marks while all those set outside the province received pass marks. Since conclusions were drawn from this, the Registrar noted that the reverse was true in other years.

Council gave blanket approval to C.C. P.E. for Canadian Accreditation Board Activity in Manitoba.

Council welcomed A. W. Gilliland who presented a report to Council from the Legislation Committee. The report dealt mainly with items that the Legislative Committee felt should be covered in any new Profession's Act that was presumably to be drafted for the fall sitting of the Legislature of the Province of Manitoba. Mr. Gilliland explained that he, with Mr. Algeo, would be presenting a brief the next day to the Legislative Committee of the Manitoba Legislature on the proposed new Labour Relations Bill.

Revisions to By-Law 40 were approved by Council. The Annual Meeting Committee recommended to Council that the terms of the Outstanding Service Award be changed to include all service to the Association. The terms of reference had stated that time spent on Council was not acceptable for consideration in selecting recipients of the Outstanding Service Award. Councillor Newton suggested it should. Councillor Hallson agreed but perhaps the change in the terms of reference should be made effective after the term of this Council expired. President Barkwell explained the terms of reference of the award were originally drawn up that way because it was felt that serving on Council had its own rewards. In the end the President called for a vote and the change was approved.

The Public Relations Committee was authorized to spend up to Five Hundred Dollars (\$500.00) on publicity in engaging a Public Relations firm. Council noted the A.P.E.O. spends \$70,000 on Publicity.

Councillors Grimes and Lansdown's draft on Council's Statement of Policy with regard to University Personnel in Private Practice of Engineering drew some comments. Councillor Hallson thought that Council could suggest that the University

adopt a uniform and equitable policy in this matter but should not suggest that professors be allowed to consult only through "established engineering organizations". After some debate the policy statement was amended and approved.

Councillor McKall suggested that Council was lax in coming out with a policy with regard to employee engineers and in particular reacting to the Employee Engineers Committee report of last fall. The new Labour Relations Act was upon us and presumably engineers were eligible for organization by unions. Many employee engineers were awaiting direction from Council. In the meanwhile, Councillor McKall felt that this lack of policy left the door open for activity by organized labour. He stated he tried to get Council to react to the Employee Engineers Committee recommendation in early December but was unsuccessful. The President pointed out that things take time and with a voluntary organization this was unfortunately so. Council could not embark on a program without first considering the priorities, staffing and space problems. Besides Council had taken a 180 degree reverse in its stand on Collective Bargaining in the last four years. It was now in favour of establishment of "voluntary groups". Councillor McKall suggested that perhaps the Council was gathering too much background information when all that was needed was a statement of direction to the members. After much discussion it was generally concluded that everything possible was being done that could be done considering the time and financial limitations of the Association.

The Hicks and Newton report on the review of the procedures for laying complaints was reviewed. Councillor Hicks said the committee appointed at the last Council meeting had studied the problem and concluded that the "due process of law" just took long and there was no way of speeding up the process without infringing on personal freedom of persons involved in complaints.

T. W. Algeo, Registrar, reported on his meeting with the rural municipality with regard to the failure of a hydraulic structure. It appeared to clear up some of the points of contention.

A report was received from the Annual General Meeting Committee which outlined the proposed agenda for the Annual Meeting.

The proposal of providing annual validation stickers for the A.P.E.M. members' certificates was discussed. It appears that a

number of people have failed to turn in their certificates on resigning from the A.P.E.M. and the certificate was being used to infer that they were still practising engineers. After much debate it was concluded that the stickers would not completely solve the problem but would help and were so approved. The Registrar was directed to write to all those who still reside in Manitoba who failed to pay their dues and/or who failed to turn in their stamp and certificate requesting a letter stating that they were no longer practising engineering. If the parties contacted failed to respond with a letter to that effect to the Association, Registrar Algeo was directed to write their employers stating the individual concerned was no longer licensed to practise engineering in Manitoba.

President Barkwell stated a case had arisen where drawings were stamped with the seal of an engineer who had moved out of the Province and was no longer registered in the province. After investigation it was concluded that the stamp was used by a junior employee of the firm, where the engineer had been employed, to stamp drawings. Council was assured that the employee did this as a matter of ignorance with regard to the use of the seal and therefore the A.P.E.M. was not going to prosecute. President Barkwell felt that Council should recommend that all members initial and date the imprint of the Seal on the drawings. Council agreed. The President requested your reporter to make Council's wishes in this matter known to the general membership. So here it is. When you use the Association's Seal (which bears your name) please initial and date the imprint of the seal. This should prevent unauthorized use of the Seal by others.

The discussion of checking and sealing shop drawings was continued from the last Council meeting. It was concluded that only the original designer could approve of shop drawings. It was Council's opinion that all shop drawings should be certified (sealed) by the original designer to ensure that detail work conformed to the designer's original design assumptions. In many cases Council was informed that shop drawings were not checked by the original designer and this had led to many problems particularly for municipal plan reviewers who were placed in a position of having to interpret whether the drawings were meeting the intent of the original design.

The meeting was adjourned at 8:15 P.M.

AT THE LEGISLATURE

See Democracy in action. Visit your Provincial Legislature. After telling others what to do I visited the Manitoba Legislature one evening. Since the evening was chosen at random, the sitting might have been typical, it was certainly not brilliant.

The matter under discussion was presumably not of great importance as Mr. Schreyer, Mr. Spivak, and Mr. Craik were not in their seats. The Attorney General was presenting his estimate and his supporters were gathered behind him in small intimate discussion groups that drowned out a lot of what was being said. The opposition rebuttal was a wordy statement about a lot of fat in the estimates. Another member had a lengthy comment (perhaps in the nature of a jest) about the absence of union labels on a brochure that the Attorney General gave each member.

It being 9 P.M. an hour was available for private members' bills. A motion was made that old age pensioners in their own homes be relieved of school taxes. While the idea is good the argument in support of the motion was trite and superficial. Indeed the next speaker who had apparently made a careful study of the question must surely have made the mover wish that he had put more thought and fewer words into his speech.

If you want to know what's going on at the legislature your best plan is to read about it in the newspaper. Having visited the legislature I conclude that all parties will have to improve if any of them is to receive my vote.

—J.W.J.L.

* * *

ANNUAL MEETING — MONDAY, NOVEMBER 27, 1972

The Annual Meeting Committee under the Chairmanship of Walter Saltzberg, has been busy formulating plans for the November 27th meeting. The schedule will be similar to that followed last year. Registration will commence at 8:30 a.m. and the important item of the award to the best dressed engineer in attendance will take place at 9:10 a.m., so please be early in your finest plumage.

There will be two panel discussions in the morning, one on the subject of the Technician and Technologist, and the Engineer, and the other on the subject of Lay People on Professional Councils.

The luncheon break this year will be extended to allow for more time at the bar and more fellowship. Members attending may then doze through the annual meeting business in the afternoon to recuperate in time for another fellowship hour and bar.

To enliven the proceedings, gag awards will be made as was done last year so keep an eye on your friends and report any unusual activities or achievements to Chairman Walter Saltzberg or Executive Secretary Lorean Dunklee.



"Don't look so innocent, George, I see that wandering hand." (C.C.P.E. social)



THOSE PROFESSIONS

From The Edmonton Journal

Other provinces will inevitably follow Quebec's lead and increase public scrutiny of the affairs of professional groups.

The proliferation of professions and quasi-professions is too great. So are variations of entrance requirements, standards of professional conduct, internal procedures, especially disciplinary actions, membership requirements and so on.

And it is not always evident that these

groups are acting in the interest of the public as they profess — and as they are required under law as creatures of provincial legislatures. Time and again members of the public are given the impression that they are more concerned with their own interests than with those of the public.

Quebec's Bill 250 — a proposal to regulate the professions — is still being debated. But it is generally agreed in that province that many of the professions' almost unlimited powers will be curbed. In other provinces legislative committees or task forces are taking a critical look at the

professions, their practices and the acts under which they were set up. Alberta is no exception. A review was set in motion by the former Social Credit government and it is being continued by the present administration. A report of its work is due next spring.

Many of the system's shortcomings — which gave rise to the public inquiries — are evident in Alberta. The quasi-governmental powers of professional groups vary greatly. Dentists, doctors and lawyers, for example, can't practise unless they are members of and are recognized by their professional associations.

In other cases theory and practice are not necessarily in harmony. Engineers, for instance, are supposed to be professional engineers and members of their professional group before practising. Yet some of them aren't.

And then there are those, like agrologists, who can work in their field at will with or without professional association. Failure to be a member merely precludes them from using the designation "professional

agrologist" following their names.

The number of professional groups here is growing, topsy-like. There are 25 at present and more groups are likely to request professional status. Recently the Alberta Teachers' Association requested the right to determine whether a member is competent.

There is also the question of whether some occupational groups should be entitled to the designation "professional." Are interior designers professional people? In Alberta they are. And what about music teachers, industrial accountants, persons practising naturopathy?

These questions must all be explored. But above all every professional group enjoying quasi-governmental powers should in future be held accountable to the public or its agencies to a much greater degree. The professions' traditional secrecy and exclusiveness is no longer tenable. There are many ways of holding them responsible. One of the best would be the appointment of credible members of the public to their governing councils.



Prof. Ray Chant, Mrs. Chant, Mrs. Hoogstraten and Dean Jack Hoogstraten at the C.C.P.E. reception.

"IF ONLY WE COULD PLEASE OUR OWN MEMBERS"

Our map, "Oh Canada" in the last issue was a reproduction of the place mat used at the banquet for the Canadian Council delegates at their annual meeting held in Winnipeg this year. Of course it was intended to be humorous and was very well received both by the delegates and our own members.

It was, however, taken seriously, which is a pretty hard thing to do, but easy as J. L. Charles, P. Eng. has pointed out in a letter to the editor, when combined with the March issue of the National Geographic Society showing a map of Canada on which is shown the "Southern limit of permafrost" with a notation "north of this line the ground remains below 32°F except for a thin surface layer that briefly thaws each summer. Half of the Canadian landmass, most of it Arctic tundra, lies in this permafrost region," implying that half of Canada is a frozen wilderness.

Mr. Charles, in a very informative letter, continues: "I wrote to the National Geographic drawing attention to its gross error re permafrost, advising that the line shown on its map is the extreme southern limit of where isolated small patches of permafrost may occur. For example during construction of the C. N. branch to Chisel Lake, a small area, about 30'x30', was encountered. Such areas become larger and more frequent northerly. 'Continuous permafrost' on the Hudson Bay Railway does not occur until the crossing of the Nelson River at Kettle Rapids, far north of Warren Landing as shown on National Geographic map. The chief cartographer acknowledged my letter and data as being correct and apologized, in a way, for his misleading notation. However, this does not remedy the unfortunate situation that many readers may assume an adverse view of conditions in northern Canada, whereas very little permafrost was found during rail construction to Hay River and Pine Point Mines, south shore of Great Slave Lake. There is good timber growth and gardens grown at Hay River and beyond down the Mackenzie valley. Beautiful wild roses and garden flowers bloom at Norman Wells and at Mayo in the Yukon, a vast area far from being a frozen wilderness.

"The Geological Survey of Canada, in co-operation with the National Research Council, produced map 1246A, NRC 9769, Perma Frost in Canada, showing the south-

ern boundary of 'continuous permafrost by a line from the north end of James Bay, northwesterly, about 50 miles south of Churchill, to the north end of Great Bear Lake (where it crosses the Arctic circle) to Fort McPherson 75 miles south of Inuvik, whereas the National Geographic mistakenly showed the extreme southern limit of 'discontinuous permafrost' and confounded this by noting 'North of this line the ground remains below 32°F.'

"My first encounter with this ground condition was in 1915 in an area with peat surface immediately south of Kettle Rapids, between Gillam and the Nelson, and have been keenly interested in this subject to date. I suggest it behooves all true Canadians, particularly professional engineers, to emphasize favourable features, of which we are fortunately blessed with many, such as fertile Red River Valley, fresh air, and precious water, rather than exaggerating ice conditions of Hudson Bay and 'cold and colder' in the N.W.T."

In dealing with the Oh Canada map, Mr. Charles commented: "In particular please consider 'Hudson Bay, 10 months of solid ice and 2 months of solid icebergs,' I have met persons in Montreal who would grasp this exaggeration to defame shipping routes to and from our Port of Churchill. This is especially serious in view of the efforts being made by westerners, particularly those of Saskatchewan, to further develop this port and reduce transportation costs of exports and of imports too. Also the notations 'cold' by lat. 60° and 'colder' just north of Great Slave Lake are not conducive to promote settlement and tourism which are so needed to develop Canada's northlands."

But cold is a relative thing and one man's "warm" feet may be his mate's "icebergs." We all know we live in a variable and beautiful country and we generally dress for the weather. We could hardly encourage permanent settlement with Canada being a warm country (93° above day of writing.)

Before encouraging massive settlement in the north, which will proceed rapidly from a physical sense, we need to recognize that the northern environment is a very demanding one on all biological and material systems. Environmentally it is very fragile, being a "large freezer" for most of the year and therefore unable to cope with serious disturbances, particularly the dumping of polluting wastes.

If it is to be developed under good management principles, it will have to be made attractive as a place to work and to live for a type of conscientious and highly skilled people able to take good care of it.

So far, most of the housing arrangements in the north are modified southern systems, designed without adequate realization of the radical conditions to be met. Supply and removal services from such housing leave much to be desired in design and performance. For instance, for much of the year energy has to be spent in melting ice to make water and for purification. Such water has to be supplied through insulated, warmed, utilidor ducting, costing about \$250.00 per running foot, while the water using services have not been designed to conserve water or to minimize it in the subsequent sewage wastes.

Effective means of disposing of solid wastes in the north are lacking, unless burned. When dumped in the environment, they remain unsightly local pollution problems. Liquid wastes are generally

carried in utilidor ducting to primitive sewage lagoon systems which cannot operate most of the year due to extremely low temperatures. Such waste spilled into the environment, is only partly oxidized and should be sterilized before discharge, but rarely is, thus leading to serious water pollution and health risk problems.

Further applied research and development are required wherein the problems of water supply and waste disposal are resolved for small communities. Greater economy in fuel usage and heat conservation, in water usage and conservation, designs for partial and full water recirculation are essential, plus care in waste disposal and the prevention of environmental pollution. These problems are urgently in need of solution in order that northern settlement can become a more healthful and enjoyable experience. —E.A.S.

Editor's Note: Oh Canada, our controversial map of Canada, suitable for framing, clean enough to eat on, is still available in limited quantities from the Association office.



This happy group was caught after two drinks of the Templeton Joy Juice at the cocktail party at the C.C.P.E. social.

NORTH OF THE 58TH REVISITED

By R. J. RENNIE, P. Eng.

I recently had the opportunity to visit Churchill, Manitoba and Baker Lake, Northwest Territories after an absence of some 10 years from Churchill. I was interested to see if life in the north had changed significantly in that period of time, particularly in light of the renewed interest in the north stimulated by oil and gas discoveries and various independent crusades for development.

I found that our inland port of Churchill had changed very little physically over the years. However, some changes were underway at the time of my visit. A low cost prefabricated housing project was under construction using Indian labour. Sewer and water services were being installed which should put an end to the water delivery by truck and the old honey bucket routine. There was even some talk of a recreation centre to be built in the immediate future.

Fort Churchill which is about 5 miles from the Port still consists of row upon row of white military structures now occupied by the Federal Department of Public Works and the Government of the Northwest Territories. The Canadian Armed Forces left this legacy in 1964. The Aurora Club Bar, which is the focal point of the community, is still very busy. It nostalgically contained plates on the wall which named the past Commandants and Vice Commandants of the old Camp, some of whom were the best damn drinkers in the Forces.

Basically, after talking to personnel at the Fort, I got the impression that the population of the area is expected to decrease in the future and there is in fact some uneasiness about job security. This observation is certainly in contrast to the construction activity taking place in the Port, and therefore it would seem that the future of the entire area is somewhat cloudy and perhaps confused for the time being. It will probably stay that way until a clear policy concerning the future of Churchill as a port is established.

Transair had inherited the old RCAF hanger at Fort Churchill and herein I met our DC-3 pilot for Baker Lake. I am sure I saw him flying this route 10 years ago. Could it be that it takes this long to recognize one muskeg puddle from another for navigation purposes?

The weather for the flight up to Baker Lake was clear and a perfect view of a

totally barren and icy landscape was provided. It never ceases to amaze me that small settlements such as Eskimo Point, Rankin Inlet and Baker Lake can appear on the horizon, each a cluster of small squares huddled in complete isolation from the rest of the world. On the plane, I met a former Eskimo employee of mine, he was just returning to Eskimo Point from Yellowknife where he is establishing himself in business. He thought it humorous that he had to travel via Edmonton, Calgary, Winnipeg, Churchill to get home when Yellowknife was only 600 miles of tough sledding from Baker Lake.

In the 1950's the Federal Government collected many starving Eskimos and brought them to Baker Lake for food and shelter. A visit to this settlement provides an opportunity to view these people and their descendants at close quarters. In a physical sense, the Eskimo has entered the 20th Century as they are housed in individual homes containing modern appliances such as washers and dryers. Water is delivered to each house and must be boiled, and the honey bucket routine is still in effect. Street lights come on automatically by sensor just like home. Some families have skidoos which do not appear to be well looked after as the landscape is dotted with abandoned yellow skidoo carcasses. A fishing trip during the summer requires the use of a skidoo, a 12-foot sled, and a freight canoe — you figure out how you move all three across open water and ice.

Some Eskimos are employed by the local Government agencies or the Hudson's Bay Company. Others participate in a co-operative venture which produces Eskimo art or sewn articles such as parkas. The art prices are usually beyond the means of the average working man but large lots are bought up by tourists looking for a novelty. The remaining Eskimo families are probably on welfare and will stay there unless the local Industrial officer can come up with some ideas.

Yes, even tourists invade Baker Lake and are received by the Tourist Information Centre and housed in cabins which form part of a tourist lodge. The lodge owner will fly you to some excellent fishing — for a price. A different type of holiday can certainly be had by visiting Baker Lake and I certainly recommend it.

A walk out "on the land" as the Eskimo calls it, is a must for the tourist in the summer (?). The brown tundra stretches for miles over small rolling hills. There are

no trees, no landmarks, no interruptions by man, only pure silence with a slight breeze. Now and then the peace is disturbed by the rustle of a ground hog or a Ptarmigan. The Eskimo frequently takes his family "on the land" to get away from it all. Now I see why.

I have a feeling that the silence of the tundra is to be short lived. There is much talk of northern ports (Chesterfield Inlet), oil and gas exploration in Hudson Bay, mineral exploration (Rankin Inlet has an abandoned nickel mine) and pipeline construction. For Manitobans, one might say that the ghosts in the attic (Northwest Territories) are starting to walk. Perhaps the province should start taking a far sighted look into the future of the Northwest Territories if they have not already done so and be ready to exploit any development that comes through the roof. Within the last 10 years, it would seem that the greatest change North of the 58th is the upgrading of living standards and social services. Certainly this appears to be where the money is being spent at Churchill. Coupled with this is the rather hazy outlook for the future. The time is now ripe for giving serious consideration toward the development of an economically self-supporting northern community.

To this end I would suggest the following action on the part of the Provincial Government:

- a) Partake of any discussions or conferences between the Government of the Northwest Territories and the Federal Government with regard to any proposed development or resource exploration in the Northwest Territories.
- b) Promote the use of Churchill as a port and the province as a possible pipeline route from the north.
- c) Carry out a Northern Transportation Study with respect to rail and road development extending North of Churchill.
- d) Promote northern Tourism.
- e) Initiate research to study the factors affecting northern development such as ecology, pollution, living accommodation, and resource development.

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The CBC finally came to realize what we knew all along — that the Jalna series was a bust.

LETTERS

Manna From B. C.

The Editor:

Dear Sir: **Re; Hands Across the West**

After reading your heart-rending plea in the B. C. Professional Engineer, the undersigned felt truly penitent and hereby will endeavour to make some amends for the iniquitous inequalities perpetrated by this province on our neighbors to the east. Although I speak as an individual, I am sure there are many here who share my views.

In the matter of discrimination, you have to remember that many B.C. products are sold for less in Manitoba than they are in B.C. Is this because you don't value our products as we do, or are we being scalped? It is true your income tax rate is higher and to remedy this I propose to send you our minister of finance. I am sure you will find him a real funny money man. With 10% unemployed we cannot send you any welfare but we will gladly proffer our minister of welfare. He may not be miserly but have you ever tried to squeeze blood out of a rock?

I have never heard that B.C. is overrun with Prairie people but anyone making such a remark is not worthy of an audience. It is true that British Columbians do not migrate to Manitoba in January and February but our Premier feels that the "good life" in B.C. can only be enjoyed after he has stripped the shirt off your back. Without a shirt it is cold at 30 above, not to mention 30 below.

It is true that many people from the Prairies retire in B.C. But they don't last long! Although the high cost of dying here may offend, the high cost of living really kills them. I can't afford to retire here. It is my intention to move elsewhere in this country when that day comes.

I agree that you are a deserving bunch. Have I not already offered Messrs. Bennett and Gaglardi? With this team I am sure Manitoba would soon boast of the highest wages, highest unemployment rate and highest cost of living. Then you could say as we do now, "Never have I earned so much and had so little."

It is true that our Association has higher revenues but as efforts are being made to unionize engineers, any surplus will be needed for a strike fund. Sorry, can't help you here.

The matter of B.C. shipping money to eastern Canada is probably an oversight. As you know, on the Prairies you can look farther and see less. From the mountain heights Manitoba was perhaps overlooked, but with the Richardson tower now on your sky line I am sure this injustice will cease.

I hope this missive will salve your feelings and help dispel any misunderstandings. If you feel we have all the plums then by all means come out and share them. You may find that some of your so-called misfortunes are really a blessing in disguise.

D. T. HOLLOWAY, P. Eng.
Vancouver, B.C.

P.S. Your journals are as witty and lively as ever. Thanks.

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IRRELEVANT DRIVEL

Dear Sir:

I am writing in support of the opinions expressed by R. A. Sillitto in the June A.P.E.M. Bulletin. I, too find the Bulletin largely irrelevant drivels.

The Bulletin should be confined to material concerning the A.P.E.M. or engineering in general. It should not be used as a personal soapbox platform for the opinions of a small group of A.P.E.M. members whose concern over supposed moral decay of the world in general overshadows their logic. I strongly resent any part of the (excessive) dues I have paid being used for this purpose.

I have been a member of the A.P.E.M. for about a year. As a geophysicist I joined solely because I needed professional registration to write occasional reports. Personally, I feel that the A.P.E.M. is an inappropriate organization to ensure the ethical practice of geophysics and geology and the dues are out of all proportion to the benefits gained from membership.

My impression of the A.P.E.M. is one of a closed-shop union, control of which has fallen into the hands of a small group of reactionary individuals who are more interested in boosting their egos than in ensuring that this province gets the best possible engineering practice. Perhaps this is untrue and unfair — but it is the impression I have gained from reading the

Bulletin.

Yours truly,

R. J. IRVINE, P. Eng.

Editor's Note: We are not surprised that anyone would object to paying for a publication that he considered to be irrelevant drivels. What surprises us is that anyone who feels that way would bother to read it.

Mr. Irvine has resigned his membership and departed our shores to return to Australia. However, we are pleased to note from his comments that we have some logic to overshadow.

✦ ✦ ✦

TECHNICAL DRIVEL vs. IRRELEVANT DRIVEL

There has been criticism lately of our Bulletin's content, to the effect that we should be technically oriented, rather than a newsy series of articles on, quite often, un-engineering topics.

I believe there are good reasons to stick with our present policy. They are:

- 1) We do not have the staff or resources for worthwhile technical articles.
- 2) Any A.P.E.M. member who wishes to publish a technical article can find many more widely distributed magazines that will accept the article if it is worth publishing.
- 3) There are enough (too many?) technically oriented magazines on the market now. From the limited polling we have done, it appears that our Bulletin is read more than many technical articles are. It is nice to be able to relax and read something light, even humorous, once in a while, that is written by engineers. We find that our Bulletin is quite well read and even envied occasionally by other groups.
- 4) The Bulletin gives engineers a chance to voice their opinions on topics both inside and outside our profession. This should be encouraged — we are generally a far to quiet group. Why not say what we think about government policies, etc., and perhaps get a little controversy going?
- 5) Lastly, we have been fortunate en-

ough to attract one or two people who can see the humour in a situation. I am sure these articles are the ones

read most thoroughly. We can use some gentle (and occasionally, biting) satire these days. —D.A.C.



Left to right: Bob Stokes, Frank Farish, Bill Finnbogason and Sandy Penman settling world affairs at the C.C.P.E. cocktail party. (Women's Libs ought not to be so liberal as to let this charming group of men isolate themselves from the ladies.)

SUPPORT AND DEVELOPMENT OF RESEARCH PERSONNEL

By E. A. SPEERS, P. Eng.

In presenting this statement we are not commenting on the effectiveness of the research and development training relative to the needs of our Manitoba society, mainly because of the shortage of opportunity to exercise the skills and training obtained in this field. We have assumed the training in scientific method here to be eminently satisfactory as a majority secure employment outside of Manitoba.

The objectives of post-secondary education have outlined the expectations the citizen should have in taking advantage of

the opportunities presented: to obtain knowledge and skills; to be more economically productive; to enjoy a higher standard of living and a better quality of life; and to provide an environment for both pure and applied research and the accumulation of knowledge which will lead to improvements in the quality of life for Manitobans and humanity in general.

These aims are admirable and some degree of success is obtained in improving the individual's ability to enjoy and enrich everyday life. Our educational system is designed to train people to earn a living, and not necessarily a living in Manitoba.

What about the opportunities available in Manitoba to exercise these skills? Does our society need the skills available? How

may our society benefit from the exercise of knowledge? Does our society present an environment for the growth and exercise of the talents learned?

The competitive societies to ours are based on scientific advancement. The greater the application of knowledge the more prosperous the society and the greater is the quality of life.

The knowledge of science is broadening at a tremendous rate relative to previous ages. The new fields of space travel, supersonic speeds, lasers and fluidic systems were relatively unknown fifteen years ago.

With the volume of technical information now increasing at a great rate — doubling in under seven years — for instance in 1965 there were 36,000 articles on amino acids alone — there should be more than ample opportunity to employ our trained people in taking advantage of these essentially pure research or University-type developments. In fact the Economic Council of Canada has warned that scientific research and development will contribute nothing to the economy unless the discoveries are taken out of the laboratory and put, in effect, on the supermarket shelf.

But we find that, on an average, 70 out of 120 graduating in Engineering, for instance, leave the province for employment (not including those who leave for reasons of higher education).

At a figure of \$30,000, say, to raise and educate our youth — the loss of seventy engineering graduates alone represents the loss of two million dollars of capital investment.

The expensive part for the economy lies not in the initial loss but in the loss of growth industries generated on giving the energies of our educated youth an environment in which to grow. Can our economy grow vigorously when over fifty percent of the "new blood" is drained off year after year, while we retain the unemployed and welfare sectors of our society?

We are in a position to create a growth environment in Manitoba which will be more meaningful for us all. We need to reinforce feasibility study capabilities within our own community. We need not be dependent on others to build our chemical and production plants. Using our own people, the grants and tax concessions, as well as ownership and profits, stay within

Canada. An economic environment is needed where the profits regenerate working capital and are not taxed off or shipped outside the country.

Until the economic factors are such as to support native industrial development projects, there can be little possibility of stemming the flow of emigrating technical people. Let's have more feasibility reports done at home by our own technical people. Give greater support to industrial research and development as it represents the most economical way of securing the answers on which to build to the pilot plant stage and beyond. The know-how is here to build any plant or complex legitimately required in Manitoba.

This is a call for increased capability and productivity through opportunity — technical capability, Manitoba based. Developing our people has many secondary advantages besides higher educational levels.

The results of bringing in outside help to set up plant and solve technical problems in the past has resulted in the average 76% of foreign ownership of our basic industries and growing economy. Foreign ownership finds it more profitable to do the research work at the home base and license the know-how out to the Canadian subsidiary, thus enhancing their profit picture at home and taking funds tax free from Canada as an expense of operation.

What has this to do with post-secondary education?

It means we are training our people and not securing the benefits within our economy although we desperately need them.

It means that our technical people have relatively no local place to go to develop solutions to our industrial problems.

When these problems are solved abroad the development of that phase of our economy remains subject to others. Because the "expense of operation" can siphon off the profits, the required taxes needed for development of the economy in fair share, and for education in particular, are not available, and the tax burden is much greater on the rest of society as a result.

What is needed is an Institute of Applied Research and Development outside the University domain, but associated, and outside of Government and the Civil Service, but associated.

The objective is to fill the void in the systematic application of scientific method to industrial problems and to aid in the development of secondary industries in Manitoba, thus giving our trained people an environment and an opportunity to encourage growth following post-secondary education.

For proper planning to consider the being, or the financing, of one without the other is ludicrous.

We also need a fund at the University to finance, at the President's discretion, such research work as appears promising, but which has not been possible to fund through the usual channels. This would be based in a manner similar to the very successful Wisconsin Alumni Research Foundation.

The outcome of this approach could well feed into the applied development, mentioned above, at a later date. The aims of these proposed programs could result in long term benefits to our society in effectively utilizing those with post-secondary education.



E.I.C. WINNIPEG BRANCH ANNUAL MEETING

D. W. Livingstone, E. I. C. Winnipeg Branch Chairman, in the Chairman's Annual Report to the Branch presented April 27 at the Viscount Gort Motor Hotel, reviewed the Branch highlights of the year including the E.I.C. Student Night and the Continuing Education Program. Mr. Livingstone expressed concern for some of the branch activities such as some of the Continuing Education Courses and the Conference on the Social Responsibility of the Engineer which were cancelled because of lack of participation.

Reports were received from the various Branch Committees and Sections with the financial statement (as in all annual meetings) drawing most of the questions. The business meeting, taking approximately one hour, terminated with the announcement of the new Branch and Section Executives.

The Winnipeg Branch Executives for 1972-73 are as follows:

- T. A. Crosier, Chairman.
- C. Vogel, Vice-Chairman.
- E. R. Hanson, Councillor.

The following were elected as Section Executives:

Civil Section: T. Gaul, Chairman; R. H. Kury, Vice-Chairman; V. J. Galay, Councillor.

Electrical Section: E. P. Debusschere, Chairman; D. G. McIntyre, Vice-Chairman; U. Raabe, Section to Branch Councillor.

Geotechnical Section: R. J. Rennie, Chairman; A. D. Gould, Vice-Chairman; A. K. Loh, Councillor.

Retiring Regional (Manitoba) Vice-President of The Canadian Society for Mechanical Engineering, J. T. Atchison announced that a duly elected group of Regional Officers, drawn from the sixty members of the region, were to replace the ad hoc group that had helped establish CSME, a constituent society of the E.I.C. in Manitoba. The new executive are as follows:

Regional Vice-President: E. Parfeniuk.

Deputy Regional Vice-President: M. P. Challenger.

Regional Secretary: K. Singh.

Regional Treasurer: W. McGilvery.

Regional Vice-President Technologists: M. P. Challenger.

Regional Vice-President Students: G. E. Sims.

Directors at Large: E. F. Bell, P. A. Bertram, S. C. Suggett.

Following the dinner, the meeting was treated to a slide presentation by Carson Templeton. Ness Mudry, in introducing Mr. Templeton, spoke on Mr. Templeton's contribution to the Board of Governors, University of Manitoba; Board of Directors of the Children's Hospital; and his leadership in forming the E.I.C. (National) Environmental Committee.

Mr. Templeton's slide presentation dealt with the Environmental Protection Board's studies. The Board, of which Mr. Templeton is chairman, is an independent group commissioned and financed by Gas Arctic Systems. The Board is free to operate autonomously and release its findings to the public and to governmental bodies without censorship or editing by the sponsors. The talk dealt with various environmental aspects which will have to be considered in the design of the proposed 1500 mile long Mackenzie Valley Pipeline from Prudhoe Bay to Southern Alberta. The pipeline is estimated to cost \$1.5 billion.

Mr. Templeton stated that it would be impossible to carry works into the Arctic without disturbing the environment, however, it is imperative that changes be kept to an acceptable level. Questioned whether it would not be best to leave the Arctic undeveloped, Mr. Templeton replied that if we did we would have to accept the fact that our standard of living would not improve, or more probably, that it would decrease. He felt that this would not be acceptable to the majority of Canadians. —N.P.F.

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While much is heard about the Silent Majority, very little is heard from them. One of the reasons they are not very vocal in this Association is that they are so busy working on Council and Committees for the welfare of the Association.

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In three years the Trudeaus will no longer have to worry about the whims of the voting public. He will be eligible for the Opportunities for Aged handouts and she will still be in the Opportunities for Youth bracket.

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STUDENT COUNSELLING PROGRAM

By M. HIRT, P. Eng.

Each spring, a great number of Engineering graduates discovers that they are totally unaware of the Association or the role of the Professional Engineer. It's probably also true that the Professional Engineer is unaware of the current undergraduate curriculum and facilities at the University. The Membership Committee is doing something to close this "communications gap" — namely, providing a counselling scheme intended to benefit both the Professional Engineer and the undergraduate student.

This year's counselling program is intended to operate similar to last year's. By the end of the summer, the general membership will be sent a descriptive form with a request to sign their name and address, check-off their discipline and field of work, and return it to the Association. Early in the fall, the students will be invited to participate in the counselling scheme. The counsellors will then be match-

ed to three or four students by discipline and introduced at an informal meeting in October or November. This meeting will provide an opportunity for the students to discuss the Association and the Engineering profession with their counsellors and to hear from other Professional Engineers about what they feel Engineering is, what an Engineer does and the value of the Association. Hopefully, the counsellor will arrange a further meeting with his students at his place of business or at a technical meeting.

A follow-up dinner meeting will be held in February or March, together with the Engineering graduates, in order to evaluate the program and to answer questions concerning the Profession or the Association.

Last year's program was very successful and proved to be valuable to Engineer and student alike. But it depends on the Engineer's co-operation and willingness to donate some time. We were all students at one time or another with questions about Engineering. Now here's a chance to help. Watch for our mailing in the next few weeks and take advantage of the opportunity to participate in our Student Counselling Program.

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E.I.C. TO MEET IN SASKATOON

The Engineering Institute of Canada's Annual Congress will be held this year in Saskatoon's Bessborough Hotel. Theme of the early October sessions will be "Engineering in the Interest of Canada". C.S.M.E. and C.S.C.E. meetings will be held concurrently.

Speakers to the sessions will include the Rt. Hon. J. G. Diefenbaker, the Hon. Paul Hellyer, David Cass-Beggs, Dean L. S. Mordell, President A. D. Booth, and others.

Social diversions at the congress will include square dancing, a horse-shoe pitching tournament, and what's billed as the National Beer Drinking Contest.

A field trip to the Gardiner Dam is also scheduled.

Dates of the session are October 3 to 6. Details available from E.I.C. headquarters in Montreal.

May we suggest those attending buy or take their shotguns along just in case you're attacked by vicious prairie chickens en-route.

ON METRICATION

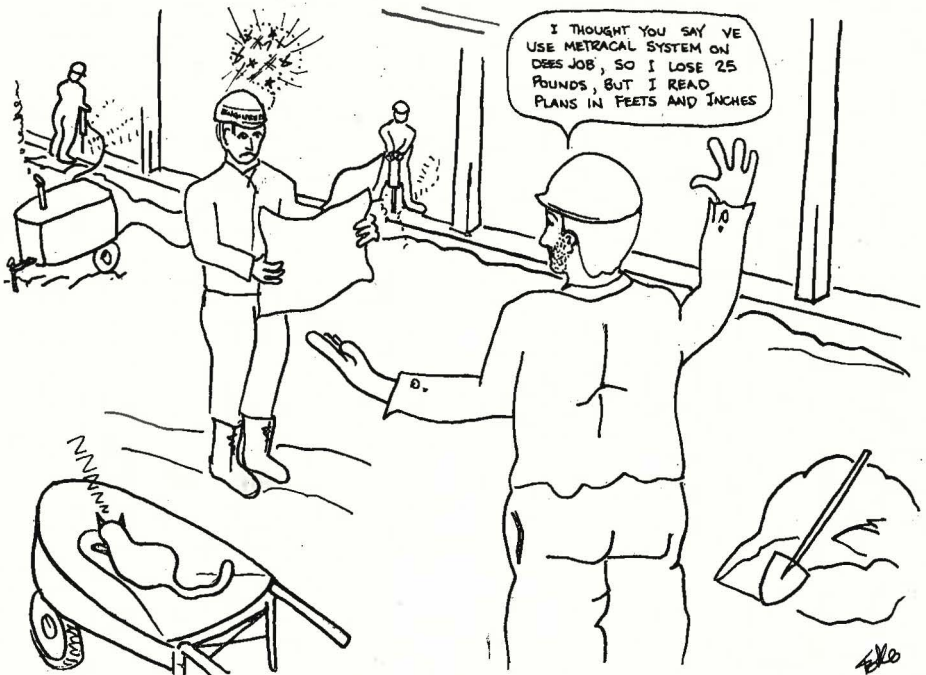
by N. P. FESCHUK, P. Eng.

By introducing the White Paper On Metric Conversion, in January, 1970, the Federal Government began the process of eventual adoption of the metric system in Canada. Although a time table for the conversion has not as yet been set, the Metric Preparatory Commission has been working for the last year or so in planning and formulating recommendations in this direction. Because of the introduction of the metric system many presently accepted standards, will not convert directly from the presently used English System to a convenient metric unit. For example, the standard road width of 24 feet becomes 735 centimeters. Obviously the road width will be more convenient to work with if it were 700 centimeters or 750 centimeters. Thus metrification opens up another avenue, the rationalization of standards, since in the process of metrification it will become necessary to "change" standard sizes. This provides a unique opportunity for standards setting organizations, industry, government and manufacturers to re-write standards eliminating much of the

jungle of standards and sizes created during the century. One only has to look at the multi-sized paper, multi-types of screws and bolts, and nails, many originally designed to meet the needs of a particular customer and then adopted as a standard, to realize that considerable savings will result in inventory and manufacturing if standards are rationalized.

Many manufacturing organizations and technical organizations have taken upon themselves to begin the process of metrification. One has only to look at milk cartons, dry goods, and paints to see that the manufacturers have indicated the metric equivalent to the pint, the quart, the gallon and the pound on their product. Eventually this will lead to these products being sold in metric sized containers. Technical Societies have begun accepting articles using metric measurements. A number have adopted the policy of printing the English Units followed by the metric equivalent with the purpose of eventually adopting the metric system as the customary units for publication.

Since measurements are the engineer's stock in trade, the engineering community have a tremendous stake in any decision



to switch from the "inch-pound" or English system to the universal family of measurements units based on the decimals known as the Systeme International des Unites or S. I. metric system. Much of the work that the engineer is involved in, out of necessity, demands that he work with the decimal. In measurement we have bastardized the English system so that we talk about 565.75 feet, not 565 feet 9 inches. The advantage of using a system based on a system of units of ten is very clear to us.

In the world, the U.S.A. is the only major country which hasn't changed to the metric standards. Other non-metric countries are Bambia, Guyana, Jamaica, Liberia, Malawi, Nigeria and Sierra Leone. Canada has committed itself to the metric system. Many countries, including Great Britain the originator of the "inch-pound system", are nearing the end of their conversion period from their customary unit system to the metric system. World trade is metric.

Unfortunately many of the engineers feel very uncomfortable when expressing their opinion on metrication. The initial reaction appears to be hostility towards the change. This is a natural reaction particularly when we consider the amount of effort that will have to be exerted by the engineering community in the conversion of standards and the loss of familiar, if not practical, customary English Units.

Metric means across-the-board re-education on all aspects of weights and measures. New designs standards for familiar engineering values call for the substitution of newtons for horsepower, kilograms for pounds, grams for ounces, with new metric size standards for bar and wire stock, sheet metal, screws, bolts, plywood, and all other material.

Engineers, as to be expected, will have a great deal to do with the successful metrication and the rationalization of standards in Canada. Out of necessity we will have to "think Metric" long before the general public.

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STUDY COURSES

Information on Home Study Courses for Professional Engineers may be obtained from the Co-ordinator, Home Study Courses, The Engineering Institute of Canada, 2050 Mansfield St., Montreal 110, P.Q.

BAKING ENGINEERING YET SHADES OF THINGS TO COME

A recent release from the Manitoba Government's Information Services Branch announces "Toupin Names McPhail Executive Assistant."

The release goes on to say that Mr. McPhail "has been appointed executive assistant to Health and Social Development Minister Rene E. Toupin. Mr. McPhail was born in East Kildonan where he completed high school. He also completed the labor certificate course sponsored by the University of Manitoba as well as courses in baking engineering and in quality control. He worked in the baking industry for a number of years in a supervisory capacity and became active in union work through the Bakery and Confectioners Workers Union, Local 389."

We checked at the University of Manitoba and neither the Faculty of Home Economics nor the Faculty of Engineering gives a course in Baking Engineering. We called the Manitoba Government's Information Services Branch to get some details about this baking engineering course. The first person we spoke to knew nothing about it. The second said she was on holidays when the release was prepared, would make inquiries and call us back with the information. We heard no more.

We have turned this matter over to our solicitor for attention. However, aside from the legalities involved in the use of the word "engineering" in this manner, it opens up a whole new can of worms. We are having enough difficulty these days in keeping women in their places and can just envisage the next voters list as something along the lines of the following: R. M. Stokes, Irrelevant Drivel Editor; Kathleen Stokes, Aquatic Engineer. N. P. Feschuk, Committee Secretary; Vicki Feschuk, Pedagogical Engineer. Carson Templeton, Retired (compulsorily) Board of Governors Member; Laurie Templeton, Nursing Engineer. George De Pauw, Tennis Player; Florence De Pauw, Culinary Engineer. Les Wardrop, Farmer; Olive Wardrop, Horticultural Engineer. W. R. Newton, Philosopher; Mae Newton, Production Engineer. —S.J.A.

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The Democratic convention was an example of what happens when the silent majority stays silent and vocal minorities get more vocal.

ON THE LINKS

Ninety-eight bids were submitted for the Landon Cup and contract was awarded to low bidder Ken MacCharles with an alleged 74. Runner up was Gord Marshall with a bid of 82. Larry Greer was low net but it's who you know, not what you score.

The specifications called for 6417 yards of golf with only 70 shots for 18 holes. Allowing for an average of four putts per hole, simple arithmetic indicates that the specifications were quite unreasonable.

The Sports Committee of Bud Christie, Bischoff, Jeske, and Dunklee are a good bunch of guys. (The Sports Committee are the ones with ties at the Head Table so they won't be mistaken for Councillors.) There were 98 players and about 50 were at the dinner. The press were not treated

to the usual courtesies of a private hospitality suite but we all had an extended cocktail hour.

Myron Musick, Chairman of the Board of Examiners came in with an appropriately high mark. Frank Arnason was hit on the head. Frank Fowler was superb with knife and fork. Paul Lowe in his first whole day as a member did not get a prize, back in Ontario he always used to win a prize.

Educational Feature: Ed Tymofichuk recommends an upside down No. 6 for getting out of sand traps.

Next Sporting Event: Breezy Bend, on September 14.

—J. LEWIS, Sports Editor



Golfers from Pinawa at the Spring tournament.
Professional Engineers Meek, Graham, Remington and Ayres.



The CBC announced that the Trudeaus had spent 24 hours at the summer "cottage" of the Hon. James Richardson. The dictionary defines cottage as "a small dwelling house esp. in the country." We'll bet that "cottage" would make our editor's house look like a tool shed.

The Manitoba Legislature wound up its proceedings at 5.20 one July morning, gasping its last over the separate schools bill. After its defeat, Mr. Desjardins said the subject had been killed in Manitoba for years to come. He obviously hasn't met the Newton-De Pauw debating society.

ON AND OFF THE LINKS



Spring Tournament happy golfers Kruk, Christie, McLenaghan, Monastyrski



Sports Committee at head table, left to right (with ties) Bob Jeske, Bud Christie, and Al Bischoff.



Councillor Hallson a low eighty handicapper) presents Landon cup to Ken MacCharles for his score of 74 (weighted).

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Overheard at the Golf Tournament: As one guy was doing elaborate warm-up exercises, he commented, "The best part of my game is my shower." His friends pounc-

ed on him, accusing him of deliberately grandstanding in front of this reporter. Hope he's satisfied!

The highs for the day were 59 (degrees that is) posted by the weatherman, and 160 (strokes) recorded by R. R. Tillotson.

Chairman Bud Christie who got out with the birds (and the ladies) shortly after dawn engineered a highly successful tournament. The turnout was 98 golfers and others, proving that engineers would rather golf in the cold than work.

Messrs. Tymofichuk and Frankenberger golfed the first nine holes of their careers in 1966 and the second nine at our tournament. They spent two hours practising their putting before taking off. Bill Boyaniwsky arrived with three caddies. Ed Lipinski said his foursome needed two cards to record all their shots.

The plumage was not so gay. There were 18 tied for worst dressed golfer, but finding the best dressed was a challenge until David Sharpe came along and saved the day.

Ken MacCharles was the big winner of the day and will have his name inscribed on the Landon Cup.

George Pratt figured out a way to keep from getting a cold in the head. His wife was away so he borrowed her wig for the outing.

Gerry Langman and Art Round, who came only for the dinner, presented us with the strange phenomenon of two people who had worked all day looking more refreshed and less tired than the 98 who had spent the day in the fresh air.

We wish to thank Aerofoam Chemicals, Reid Crowther, Power and Mine Supply



Frank Fowler demonstrates his renowned skill with number 2 iron and putter.

and Canadian Johns-Manville for contributing prizes to our tournament.

Merv Robinson came in from Carman to win the Reid Crowther prestige varnish remover, Ken MacCharles won the Aerofoam Chemicals foamless chemical, Ed Thrush won the Canadian Johns-Manville farewell to Bill Lynn toast, and Harold Wilson won the Power and Mine Supply lubricator.

Winners of more solid gifts included Gordon Marshall and Larry Greer. There was a time when all the members of the Sports Committee won prizes or golf balls. However, this sort of corruption has ended under Chairman Bud Christie. He was the only Committee member to win anything.

Frank Arnason was hit on the head by a stray golf ball. We were unable to get a diagnosis as to whether his headache the next day was caused by the hit or by the pain killer his friends forced on him.

—S.J.A. (Assistant Sports Editor.)

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FATE WORSE THAN DEATH

The phrase "Fate worse than death" used to be used in hushed tones and I never knew what it was until given the choice of painting or wallpapering. It means wallpapering.

Wall paper is specially prepared stretchy paper printed with conical rolls. The walls on which the paper is stuck are architect designed with complete absence of vertical or horizontal lines. There are no right angles.

Once involved I made myself so unpleasant that I will not be asked again. If you are invited to wall paper be pleasant, be firm, say "No".

In the above the words ceiling paper may be substituted for wall paper in which case the answer is "No! No!"

Social Service Department
(name withheld to protect the innocent)

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FLIN FLON NEWS

By M. N. COLLISON, P. Eng.

Hudson Bay Mining and Smelting Company recently announced several retirements and promotions. Retiring were G. H. Kent, P. Eng. which was covered in the last issue of the bulletin, and D. J. Robertson, P. Eng. Dave has been General

Manager since 1969. He joined Hudson Bay in 1934 and has held positions of Assistant Mill Superintendent and Assistant Superintendent and Superintendent of Research and Assay. He is planning on spending his summers at his cabin at Beaver Lake with wife, Mary, and whatever members of his family may be in town. Winters will find him home in Flin Flon unless he decides to be like the birds and "go south".

Taking over from Dave Robertson as General Manager, is J. R. G. Sadler, P. Eng. Bob has been around here since 1950, after graduating from McGill in 1949, and has held various positions of responsibility in the Mine Department prior to his appointment as Assistant General Manager in 1969, and appointment to General Manager on June 1, 1972. A year ago it was reported that he was busy with an extension to his cabin at Bakers Narrows. This project has been completed, but like all cabin owners, the alterations are never complete, so he is still hard at other improvements.

W. J. Stickney, P. Eng. and wife, Irene, will be spending the next few months in the Toronto area. Bill is there for an extended business trip and will make use of his spare (?) time visiting his daughter and her family.

L. W. Ogryzlo, P. Eng. and wife, Grace, were in the area recently, having spent several weeks at their Bakers Narrows cabin. Hello Larry and good-byl

R. L. Price, P. Eng., returned recently from a three-week business visit to South Africa. Ron reports extremely interesting visits to Johannesburg, Kreuger Park, diamond and gold mines, Victoria Falls, Rhodesia, and Lusaka, Zambia.

M. N. Collison, P. Eng. and wife, Ethel, had a most enjoyable trip overseas in April. We spent a week in London, England, with our daughter who is teaching there, and then took a 16 day bus tour of the Continent, starting at Amsterdam (including Red Light District), south to Venice and Rome, and back to Paris. To top it off, one month after getting home, I turned around and went back to England, along with 13 other Canadians, for a two week tour of Materials Handling installations and equipment manufacturers.

S. F. Liss, P. Eng., has returned to work after two weeks vacation which included a one week trip with his family to Sanguedo, Alberta, to celebrate his parents 50th wedding anniversary. This celebration took

the form of a family reunion with some 125 guests attending, and only three members of the family not being able to be present. Stan says it is the first time he has seen many of these relatives and recommends family reunions.

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TECHNICAL SEMINAR IN BANFF

A three-day seminar dealing with load bearing masonry wall systems will be held in Banff, Alberta in late September.

Although intended primarily for structural engineers to review basic methods of structural analysis and recent revisions in The National Building Code, the seminar will also be of interest to architects, contractors, and others involved in the design and construction of clay masonry bearing wall systems.

The seminar is scheduled for September 27, 28, and 29, at the Banff Centre in Banff. Fee is \$100 plus accomodation.

Details and registration forms are available from:

Course No. 33 - 72

The Division of Continuing Education
The University of Calgary
Calgary, Alberta. TZN-1N4.

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THE EASY WAY TO WEALTH

During the depression when I was young and impressionable an uncle, who was a banker, gave me some sage advice. "If you want to become rich," he said, "you must market something that the public doesn't really need at all - you merely convince them that they need it." "The manufacturers of Coca Cola will be rich," he predicted, "while the wheat farmer struggles along." I have often thought of his advice, but never applied it.

However, the current generation is brighter than mine and they see that government seems to be applying this theory and they are quick to jump on the bandwagon. If you want a government hand-out, then come up with some scheme that nobody needs and the government is sure to give you top prices for it. The "expose" on the CBC recently of how a few youths are getting thousands of dollars for projects under the Opportunities for Youth schemes has left us green with envy. Imagine getting \$15,000.00 to "develop" a piece of property, that is hardly big enough for a garage, into a "park area" where people can "communicate." And is this midget park located in an area that is

miles away from any other parkland? Not at all. It is just a few hundred yards away from the Legislative Building grounds and Memorial Park where there is more communicating going on all summer long than some of us care to notice.

Several thousand more dollars have been allocated to another small enterprising band of youths who are going to spend the summer among a group whose birth rate is exceedingly high and the purpose is to teach them to "relate." They have already exhibited evidence of knowing quite well how to relate.

The whole scene has overtones of real tragedy. As we sit and ponder over what we lost by becoming associated with engineering instead of soda pop, we can regularly send cheques to Ottawa so they can dole our money out to today's youths. The Opportunities for Youth scheme was well named. The beneficiaries of these legalized con games make even the soft drink barons look like pikers. At least they had to work for their fortunes. —S.J.A.

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Premier Bennett has said that a referendum should be held in Quebec and if they vote for separation they should have it. As he points out the United States exists with Alaska off in one direction and Hawaii off in another so the Maritimes could be part of Canada with Quebec in between. We can see it all now — Cornerbook, Newfoundland, advertising itself as the Honolulu of Canada.

PRIZES AND AWARDS

Last year several door prizes were awarded at the Annual meeting, the final one being an actual door presented to Councillor Bill Newton.

The Committee in charge of arrangements for this year's meeting is again planning to present door prizes. Will anyone wishing to donate prizes for this feature please contact the Association office.

The Annual Meeting Committee is still accepting nominations for any type of award — best dressed, worst dressed, best chicken breeder, you name it we have a category for it.

ANNUAL GENERAL MEETING

MONDAY, NOVEMBER 27th, 1972

NORTH STAR INN

REGISTRATION: 8:30 A.M.

During the morning session there will be two panel discussions on matters of current and vital concern to members.

There will be a guest speaker at the luncheon, followed by an afternoon session which will include the routine annual meeting business.

The meeting will close with a cocktail period and light buffet.

Tickets: \$5.00, includes lunch, 2 drinks, snacks, morning and afternoon coffee and a chance to win one of the door prizes.

Will members wishing to donate door prizes please contact the Association office. The list of donors will be published in the Annual Meeting Edition of the Bulletin.