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“Consolidation of The Engineering Profession in Canada”

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Abstract

The text of this paper was the basis of a presentation by the author to the 2003 Biennial Conference of the Canadian Science and Technology Historical Association (CSTHA). The text that follows is a slightly expanded version of this presentation.

The learned and licencing arms of the engineering profession in Canada have been, and remain, quite separate, although two attempts to 'consolidate' or 'confederate' them were made seventy and fifty years ago. The background to, and the results of, these attempts are the principal elements in the paper. The principal 'actors' were the Engineering Institute of Canada and the provincial associations of professional engineers, which were represented in the second attempt by the Canadian Council of Professional Engineers. Both attempts failed, and are unlikely to be revived now or at any time in the future. Some additional information on the development of the profession as a whole has also been given as background.

About this Series

Principally, the Cedargrove Series is intended to preserve some of the research, writings and oral presentations that the author of this present paper has completed over the past half century or so but has not yet published. It is, therefore, a modern day variant of the privately published books and pamphlets written by forebears, such as his paternal grandfather and grandmother, and his grandfather's brother John.

About the Author

He was born in Penicuik, Scotland, in 1928 but, since 1945, has not lived there. For some years, his wanderings were limited to the British Isles in pursuit of a university education and various kinds of working, military and social experience. Then in 1957 he flew west across the Atlantic to settle in Ontario, Canada, and - while visiting other parts of the world from time to time - has had his home and family base there ever since. The majority of his working life was spent in the service of various agencies of the Government of Canada, from which he retired in 1986 to become a consultant, writer and editor. He has also served in leadership positions in the engineering profession in Canada and, more recently, has written extensively on the history of engineering.

Introduction

Currently, there are four national institutions within the engineering profession in this country, each with its own special functions. The oldest is the Engineering Institute of Canada (EIC) and its Member Societies, formed originally in 1887 as the Canadian Society of Civil Engineers (CSCE), whose functions were - and still are - 'learned.' The second oldest is the Association of Consulting Engineers of Canada (ACEC), formed originally in 1925 as a national organization to seek federal government business for its members. Subsequently, similar provincial associations were established to develop the provincial and municipal sectors. They became affiliated with ACEC. The third is the Canadian Council of Professional Engineers (CCPE), which was established in 1936 as the Dominion Council, with eight associations within the then nine provinces as members. It now has 12 provincial and territorial association members. CCPE represents the associations at the federal level and helps coordinate their interests and activities. Its current concerns are with academic standards, registration, licensing, and manpower questions. The youngest is the Canadian Academy of Engineering (CAE), founded in 1987 principally as an organization for the recognition of distinguished contributions by individual engineers to their profession and to engineering. It also provides engineering-related advice to governments and others, much as the Royal Society of Canada does for science, and undertakes a variety of engineering-related studies. All four institutions share the job of making the engineering profession better known to the people of Canada and of upholding its position in the country.

What I would like to discuss are the two attempts that were made in the 1930s and the late 1950s-early 1960s to consolidate/confederate the learned and the registration/licensing organizations - in other words the functions of EIC and CCPE. The principal sources of my material are issues of the *Engineering Journal*, published by the Institute, as well as two special reports.

The question of combining learned with registration/licensing functions was part of the discussion at the time the original Canadian Society of Civil Engineers was being established in 1887. The decision made at that time was to have the Society follow the 'learned' path. But the debate continued for many more years, albeit in a lower key. World War I saw its revival as a primary concern of Canadian engineers and, after the Engineering Institute was formed in 1918, action was taken. However, it was clear to the Institute that it could not provide a 'home' for the registration/licensing authority since it had a Dominion Charter and the provinces had jurisdiction over professions and trades. So it established a committee to examine the development of a Model Law or Model Act that engineers in the provinces could use to formulate provincial legislation. This was done quickly. The letter ballot vote by the members of the Institute was positive, and the way was cleared for the establishment of provincial associations, as we now know them. Over the next two years, seven associations were established, the missing ones being those in Saskatchewan - which was formed in the late 1920s - and Prince Edward Island, where the number of practising engineers was then too small for a viable association. The Model Act, however, made no provision for the new associations to relate to, or interact with, the Engineering Institute.

The First Attempt

However, relatively quickly, the advantages to individual engineers of belonging to a provincial association - as opposed to a more general learned one, or to both - were becoming evident. The Institute became concerned. So its Council called a meeting of provincial association representatives in February 1926 in which, technically, the Institute itself had no part. Just over a year later, in October 1927, the first formal discussions took place within the EIC Council on the problem of developing closer relations with the associations and of the 'consolidation' of the profession. As a result of this, a Committee on Relations with the Provincial Associations was appointed. It reported to the Annual Meeting of the Institute in February 1930, stressing the importance of uniformity in examination and admission standards and membership qualifications. The report was accepted by the members, and the Committee went back to work. It reported again, to the Council, in September 1930 and to the AGM of the Institute in February 1931. Around the same time, a Committee of Four representing the provincial associations was set up to study the question of consolidation. This evolved into a Committee of Eight - with one representative from each of the existing provincial associations - to continue the study.

Discussion within the Institute continued into 1933 and 1934, but it provided no useful solutions to the consolidation problem. However, a member, Gordon M. Pitts, made a firm proposal for the reorganization of the profession as a whole. Pitts reviewed it at a meeting of the Montreal Branch of the Institute in January 1935, as a result of which a booklet was published on *The Proposed Consolidation of the Engineering Profession in Canada* authored by him. EIC was to be renamed the Royal Engineering Institute of Canada, and a Charter for it was included in the booklet. The underlying logic was described in this way :

The organization proposed..... (shows) the Engineering Institute of Canada as the Dominion-wide, correlating body of the profession, carrying out the general functions it at present performs. The provincial field is covered by the legally qualified and constituted provincial professional bodies, whose Acts are at present in force and whose membership requirements are determined by law. Whereas the various provincial associations may not be on an absolute parity at present as to their Charter rights, membership requirements, examination standards and By-Law provisions, these can gradually be brought into uniformity with the assistance of a properly constituted Dominion organization, as has been done in the case of other professions in Canada. Should any provincial organization be unable for any reason to take part in this federation, it is quite practical, under the proposed scheme, to carry on the reorganization with the other provinces until such time as it may see its way to join.

In other words, the Pitts paper - copies of which were widely circulated within the Institute and the associations - maintained that the consolidation, co-ordination or federation - call it what you wish - of the profession could be brought into being given the goodwill of the parties involved. It took for granted that there would be criticism of the proposals and that opponents would maintain that 'history' was against it. On the other hand, there was a need for change, and these proposals presented

a definite scheme for this. Indeed, the existence of a national body would stimulate the process. The combination of the 'learned' aspect, brought by the Institute, and the 'regulatory' one, brought by the associations, would be to the nation's advantage and duplication of organizations and fee structures would be avoided.

Initial reaction to the Pitts proposals among the Institute's branches and in the associations was generally positive. At the EIC's Annual Meeting in February 1935, it was resolved unanimously that the Institute should go on record as being in favour of the consolidation of the profession in Canada. To implement this resolution, a Committee on Consolidation was set up, and seven members were appointed to it, including Gordon Pitts, who became its chairman. Robert Legget was appointed secretary. Representatives of several provinces also attended the meeting.

It is important to recognize that this first attempt to consolidate the profession was an Institute initiative and its pursuit was an Institute responsibility. It also took place during the years of the Great Depression, when membership in the Institute at least was falling. And, while the provincial associations had the so-called Committee of Eight, it did not yet have the formal or legal status to bind the individual associations or to commit them to particular courses of action. Each was considered a 'unit' in the discussions that followed, as was each Institute branch, but in some provinces joint branch-association committees were also formed.

In May 1935 the Pitts Committee developed a general questionnaire that was circulated to the Institute branches and the associations. The individual questions referred to the 'broad principle of consolidation,' to common membership in the 'national organization,' to EIC being the 'national organization,' to there being a single membership fee for individuals instead of two, and to the associations sharing with the Institute responsibility for admission to membership and the collection of fees. When the results were counted, all questions were supported by large majorities. However, three Institute branches (St. Maurice Valley, Lethbridge and Vancouver) and two associations (Alberta and British Columbia) did not respond to the questionnaire. Indeed, the Vancouver branch submitted an extensive critique of the Pitts proposals.

The Pitts proposals and the results of the questionnaire formed the basis for an extensive discussion of consolidation at the Annual General Meeting of the Institute in Hamilton in February 1936. Coincident with this meeting, another was held by the provincial associations at which the Dominion Council of Professional Engineers (DCPE) formally came into existence - replacing the Committee of Eight - to coordinate and lead the associations in matters of national and inter-provincial importance. Before the end of this meeting, there was a 'round table' between representatives of EIC and DCPE, chaired by C.C. Kirby, the newly elected chairman of DCPE, which was now able to appoint representatives formally to the EIC Committee on Consolidation. The final decision on this whole matter, however, would still rest with the results of a letter ballot of EIC's membership sometime in the future on the By-Law changes that consolidation would make necessary.

I should comment at this point that, in 1936, the combined membership of the provincial associations was around 5000, while that of the Institute - in all grades - was just over 4000, of whom 3000 were

corporate members, this figure being more comparable with the DCPE one. In other words, the associations' membership had already out-numbered the Institute's, although many engineers at that time belonged to both.

So, discussions of the Consolidation Committee's proposals continued. A lengthy one was held in mid-October 1936 when the EIC Council met to discuss, among other things, the changes to the Institute's By-Laws proposed by the Committee. Representatives of Committee and of the Dominion Council participated in this part of the meeting. The DCPE president, C.C. Kirby, said he believed the majority of engineers in Canada wished to have closer cooperation between the provincial associations, some form of alliance with a national body organized so as to avoid the present duplication of fees, and that this same national body would 'represent' the profession as a whole. There appeared, however, to be a wide gulf between accepting these objectives in principle and realizing them in practice. The main issues at this meeting appear to have been: the degrees of willingness of the individual associations to sign consolidation agreements with the Institute; a guarantee of the continuation of the autonomy of these associations; the functions of the new national body; and admission, membership conditions and fees - especially for those engineers who were not members of the Institute or of an association. There were also some additional requirements submitted by the associations in British Columbia and Ontario. On the whole, however, the Consolidation Committee's By-Law proposals were minimally amended at the October meeting, with the exception of the most contentious one on members and admission. (There is an extensive account of this meeting in the December 1936 issue of the *Engineering Journal*.)

Following this meeting, the revised proposals were distributed for discussion and were on the agenda at the EIC's AGM in early 1937. The letter ballot of the Institute's corporate membership was sent out shortly thereafter and the results were recorded in the May issue of the *Engineering Journal*. But as the scrutineers reported, the revisions directly related to consolidation failed to gain the required two-thirds majority required for approval. Shortly thereafter the Committee was disbanded and the issue disappeared as a prime concern of the engineering profession. However, one of the results of this two-years-and-more exercise was that several of the smaller provinces negotiated operational agreements with the Institute.

The coming of World War II kept engineers' attention elsewhere. As an issue, consolidation - or as it became in the 1950s - confederation - of the profession in Canada did not arise seriously again until it was over.

The Second Attempt

In April 1954, EIC's Council accepted the recommendation of an ad hoc committee that a national Committee on Confederation be established. The idea was that, before serious negotiations with the Dominion Council and the associations began, the Institute should have a clear idea of the objectives of such a 'confederation' and how it might be achieved. Time was not of the essence, the Council said, but eventual success was. Three years later, this Committee's report to the Annual General Meeting

noted little progress, due in part to the fact that the report of the Dominion Council's parallel study committee - also appointed in 1954 - had only just been received by EIC. Even so, some familiar problems were already evident - for example, that in DCPE's view membership of a provincial association would be essential for full membership in the national organization. Some new problems, such as Quebec's insistence on citizenship as a condition of membership, which had arisen as the result of post-war immigration to Canada. But two much more basic questions were also being asked: First, why try to amalgamate two organizations with widely differing mandates and, second, why is the process taking so long?

I should make the point that, in 1958, the Institute had 18,500 members in all grades, of whom 8000 were corporate members and the remainder either juniors or students. The associations belonging to the Dominion Council had around 30,000. In other words, in spite of increased Institute membership, the dominance of the associations had become even more pronounced during the 20 years between the two consolidation/confederation attempts. I should also mention that, by this time, DCPE had become the *Canadian Council of Professional Engineers (CCPE)*.

The next step was to bring the EIC and CCPE committees closer together, and this began to happen early in 1958. The joint committee reported in March 1959. In June, a letter ballot asking the same basic 'approval in principle' questions as in the 1930s was sent to EIC corporate members (but not to the members of the associations). It was approved overwhelmingly, after which the Engineers' Confederation Commission, including representatives of EIC and CCPE, was formally established. John H. Fox of CCPE was named chairman, with George Dick of EIC, and later Leo Roy, as vice-chairman. A number of sub-committees were also set up to deal with aspects of the overall problem: the Charter of the new national organization; its By-Laws and administration; finance; branches; relations with the provincial associations and other societies; services; and the coordination of the project as a whole. This time around, discussion was confined pretty much to the meetings of Commission members and communication with the memberships was not as frequent as it had been in the 1930s. This lack of discussion was later the subject of criticism.

The Commission held its third plenary meeting in late November 1960, after which a press release was issued. Among other things, it gave some indication of the effort that was being put into its work. It said:

Since October 1959, when the Commission and its eight committees became operative, a total of 68 recorded formal meetings and a large number of informal ones were held, during which some 8000 man-hours were spent by some 25 delegates who had to travel collectively an estimated total of 300,000 miles to attend these meetings.

After 13 months, during which each important aspect of the plan was carefully studied, both individually and in relation to other aspects, the Commission was finally in a position to consider a complete project and, as a result, several important decisions were taken, although many details remained to be worked out.

After its fourth plenary meeting in early March 1961, the Commission produced its final report with its proposals. This was made available a month later in both English and French. The summary of the proposals covered 9 pages. The details occupied a further 80 pages. Significantly, it was noted that:

It should be understood that the report makes no recommendation for Confederation but, in accord with the terms of reference, does include a proposed constitution, By-Laws and legal details. The Charter has been prepared in such a manner that, in the opinion of legal counsel, it would protect the interests of all parties to any agreements and would preserve the many desirable aspects of the Engineering Institute of Canada Act of 1887 and the amendments of 1918.

Similarly, the rights of the provincial associations would remain inviolate. However, the individual associations would be required to agree to participate in the new Institute. There was no thought, this time, of asking that the prefix "Royal" be sought for the title. The new body would be known, simply, as the Canadian Institute of Professional Engineers in English or L'Institut des Ingénieurs Professionnels in French.

The objectives of the Institute in regard to the dissemination of technical information were retained. Uniform admission and registration standards were to be *encouraged*. And the new Institute would act as the national voice of the profession. Essentially, the "old" EIC would not disappear. The section on full membership appeared to favour the views of the CCPE. It said that the only means of gaining it would be by holding membership in a provincial association. The corporate members would be the fellows and full members and would, this time, also include the junior members. Existing branches or sections of the Institute and the associations would be allowed to continue, although new ones could be established and old ones amalgamated. Implementation would require approval of the Commission's reports by the Councils of EIC and CCPE, plus approval by referendum (letter ballot) among the membership of the Institute and formal approval by each of the provincial associations prior to legal action being taken to amend the EIC's parliamentary Charter. After these hurdles had been jumped, final agreements between the new Institute and the individual associations would be required.

Meanwhile, the branches of EIC and the member associations of CCPE - as well as individual members - were encouraged to discuss the Commission's final report, and committees of the Institute and the Council were formally asked to study it. In his message to the Institute membership published in the September 1961 issue of the *Engineering Journal*, President Ballard said that the earlier vote in 1959 did not authorize the implementation of confederation but gave the Commission authority to make concrete proposals that might later become the basis for it. He went on to say that the Institute could survive without the confederation of the profession. The question was whether or not the profession would be better served if confederation did take place.

During the fall of 1961 the Councils and Executive Committees of EIC and CCPE discussed the report and suggested modifications. A joint meeting of the Executive Committees was held in

Montreal in December 1961. But progress was limited since CCPE was not yet able to make proposals for changes on behalf of its associations. This did not happen until June 1962 when, at a joint meeting of the Councils, it became clear that there was disagreement between them on several points - for example: that the branches of the Institute would, under confederation, come under the jurisdiction of the provincial associations; that the full proposed fee increase to cover the operation of the new Institute would not be endorsed by some of the associations; and that there was a strong feeling on the part of several associations that there should be no compulsion for their members to join the new Institute. The following has been taken from the report on confederation made to the EIC AGM in June 1962 and included in the October issue of the *Engineering Journal*:

The result (of the December 15, 1961, meeting) was that both bodies came to the conclusion that further negotiations were pointless and that the time had come to obtain the opinion of their memberships. It was agreed by the representatives of CCPE and EIC to recommend to their Councils that a letter ballot regarding the acceptability of the final report of the Engineers Confederation Commission be taken to their respective memberships. At the same time, accompanying the letter ballot, will be a statement of the 'pros and cons' regarding it, plus a statement of the opinion of the Councils. This will not be a joint statement and each Council will be free to prepare its own statement independently.

The EIC Council approved this step. The CCPE associations also approved it, and EIC was informed of this in October. The AGM of the Institute in early 1963 also approved it, and the letter ballot was finally mailed in late May. The results were reported in the August issue of the *Engineering Journal*. The referendum narrowly failed to achieve the required two-thirds majority within the Institute or to fully meet the requirements of CCPE and its associations. As a result, CCPE wrote to the Institute to say that it had no mandate to proceed further with discussions or negotiations. Confederation was therefore a dead issue.

To Sum Up....

The idea of a 'united' engineering profession in Canada was a good one that deserved to be explored - which it was, seriously, on two occasions. But the basic problems surrounding the achievement of this unity would not go away, no matter how much goodwill was placed on the table, how much good work was done by however many people, or however many meetings were held. Given the different objectives of the learned and regulatory sides of the profession, the fact that the BNA Act had defined federal and provincial responsibilities, and the fact that the views of the individual branches of the Institute and the Associations within CCPE diverged, the dice were effectively loaded against consolidation/confederation. The fact that the Model Act made no provision for cooperation between the two sides did not help, although it is hard to blame the framers of the Act for this since no one then had any direct experience of professional regulation. And while agreement in principle was easily and generally accepted, the working out of the details showed the size of the

gaps that had to be closed.. Which was all too bad since, in both the 1930s and the 1950s-60s, not a few engineers gave a great deal of their time and energy to the consolidation/confederation exercise.

In today's world, I see no chance that this issue will arise again.

For one thing, the Institute and the Council have pursued their separate activities and the Institute, itself, has undergone significant internal changes through the formation of the Member Societies and refinements to its mandate. For another, on the basis of numbers, CCPE and the provincial associations have become ever more dominant within the profession. ACEC, essentially a business organization which has firms and not individuals for members, has no direct interest in things learned or regulatory to do with the individual professional, although it did participate in the celebratory profession-wide national conferences held in 1967 and 1987. The Academy is relatively new and is still developing. It is also very small in terms of numbers and its interests are profession-wide rather than discipline oriented. There were thoughts before the establishment of CAE that it might be a part of the Institute or of CCPE, or even of the Royal Society, but in the end it was designed for independence.

And apart from all of this, engineering research and professional practice have changed significantly since the 1960s, thanks to a large extent to two engineered innovations: the chip and the computer.
