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THE ORIGIN AND GROWTH OF THE CANADIAN OPERATIONAL RESEARCH SOCIETY*

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RÉSUMÉ

C'est l'histoire de la Société Canadienne de Recherche Opérationnelle qui est rappelée ici, depuis la première réunion des membres fondateurs le 14 avril 1958 jusqu'aujourd'hui. On tente de d'écrire la germination qui a mené un certain nombre de cellules locales à engendrer une société nationale et à exposer les courants subtils qui ont donné son orientation actuelle à la société. Le récit embrasse les cinq premières années, celles de formation et donne une relation fidèle de la naissance d'une société professionnelle maintenant solidement établie.

INTRODUCTION

Five years have elapsed since our Society was launched. Five years in which to forget the subtle forces that aimed us along our present course. Five years in which to mislay the early files.

Actually it is both more and less than five years since CORS was launched. It depends on whether you measure from February 26, 1958, when Dr. Omond Solandt called the preliminary organization meeting in Montreal, or from May 7, 1959, when the first annual meeting and conference was held at Toronto. The official starting date was April 14, 1958, even though the Society then had no members. On that day the self-appointed Council met, agreed to go ahead with the Society and adopted the Constitution that in amended form is still with us.

This paper describes the events leading up to that meeting and the highlights of the first five years. First let me go back a bit and describe the situation that faced us in the fall of 1957.

ANTECEDENTS

In response to the same favourable conditions as in other countries (namely, military experience and demand, business interest, and interest in the potential of our subject by individual scientists), operational research had taken firm root in Canada by 1957. There were two centres of growth. One was the Operational Research Group of the Defence Research Board, with its affiliated branches in the various armed services. The other was the Operations Research Society of Toronto.

Some members of these two groups had opinions of each other, founded more on fancy than on fact, that were interesting if not especially accurate. One group was viewed as a collection of unimaginative civil servants who were studying non-existent military problems in an atmosphere where results really didn't matter since there was no way of putting them to the test. They were alleged to be unable to recognize that good operational research work could be done

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by people who called it operations research and didn't learn it in World War II. The other group was viewed as a slightly shady collection of confidence artists, management consultants, industrial engineers, marketing men, and those looking for the key to the door of the "room at the top." They were alleged to care little for technical precision as long as a result looked spectacular, and to prefer their society meetings in the form of high-priced social functions amply furnished with food and entertainment. These fantasies were soon to fade as some of the scientists from the Defence Research Board joined the business ranks in Montreal and Toronto and some Toronto consultants were invited to work with the military groups.

DEFENCE RESEARCH BOARD

The DRB group was a phoenix that had arisen from the ashes of the wartime operational research establishments. This remarkable reconstruction took place between 1947 and 1949. It has been described in a paper by N.W. Morton ⁽¹⁾ which was delivered in Ottawa in January 1956 to the only meeting of the Operations Research Society of America to be held to date in Canada. It was entitled "A Brief History of the Development of Canadian Military Operational Research."

In this paper Dr. Morton told how British success induced the formation of a RCAF operational research unit under the late Professor J. O. Wilhelm in 1942, of a Navy unit under Dr. J. H. L. Johnstone in 1943, and of an Army unit under Professor Tuzo Wilson in 1944. He described the excellent wartime work of these groups which numbered sixty persons in all. Many well-known Canadian scientists participated. Among them were Professor H. L. Welsh, F. R. S., now head of the Physics Department at Toronto; Professor John Stanley now head of the Zoology Department at McGill; and Dr. J. W. T. Spinks, now President of the University of Saskatchewan; and Dr. John Abrams, one of our Past Presidents. Some professors returned immediately to academic life at the end of the war and remained there. Others such as John Abrams were persuaded to come back to the newly formed Defence Research Board on a full-time basis.

The new Defence Research Board had as its head the eminent Canadian physiologist, Dr. Omond Solandt. He had had a distinguished wartime career overseas which saw him eventually the head of the British Army Operational Research Group. This was an offshoot of the original "Blackett's Circus."⁽²⁾

ORSA AND TIMS

The DRB group had strong ties with Operations Research Society of the America. This Society was founded principally by military and ex-military practitioners and began with two assumptions that have had a profound influence on the development of CORS.

The first was that operations research would be enhanced if eminent wartime practitioners of OR were designated as Fellows of the Society. In my opinion this was a mistake in a country with the traditions of the United States. I have heard it said that disagreement with this policy was one of the several reasons which led a group of eminent scientists to form The Institute of Management Sciences (TIMS). The subsequent developments of these two societies and the contents of their journals have been so nearly equal that the subtle difference can hardly be perceived by Canadians. At any rate it is necessary to belong to both ORSA and TIMS to keep fully informed of the technical developments of our subject in North America.

The other assumption of ORSA was that America meant North America and the society would serve Canada as well as the United States. On the surface and certainly in the early stages, this was a workable arrangement but it could not continue to meet the needs of the growing group in Canada. There was, however, a genuine desire on the part of ORSA for Canadian

participation. In 1957 Dr. Abrams was an Associate Editor of the ORSA journal *Operations Research* and the Canadian member of the ORSA Council. When he was subsequently transferred to Paris. Dr. Solandt was named to fill out the remainder of his Council term. In addition, Canadians have served on many ORSA committees.

By 1957 there was a suggestion to form a Canadian Section of ORSA. The prime movers on the Canadian side were C. E. Law, at that time with the Canadian Army Operational Research Establishment, and Dr. Nigel Hopkins, then with the naval OR group at Halifax. About the same time a group in TIMS approached Patrick Robinson to consider the formation of a TIMS Canadian Section. Pat Robinson was interested in the management use of operations research and had assembled a group of scientists in the marketing research area of Imperial Oil Ltd. He was active also with the Operations Research Society of Toronto.

THE OPERATIONS RESEARCH SOCIETY OF TORONTO

This Society was initiated in 1955 by the Ontario Hydro operations research team of Bernholtz, Shelson, and the author who together placed an advertisement in the financial page of the *Globe and Mail* seeking to contact others in Toronto interested in operations research. We were joined first by Eric Sorensen and Bill McGuire, then both with the British American Oil Company, who were developing an extensive linear program in co-operation with Dr. Josef Kates and others of KCS Ltd. Dr. Harvey Gellman of H. S. Gellman and Co. Ltd., Dr. Alan Paull and John Walter of Abitibi Power and Paper Company, and Dr. D. B. DeLury then of the Ontario Research Foundation were among the group that nurtured the growth of the Operations Research Society of Toronto. The Society was formally established in October 1955 with the long-range plan of making the suggestion to the Ottawa group (at the appropriate time) that together we should form a national society.

IFORS AND SIR CHARLES GOODEVE

In 1956 Sir Charles Goodeve, a Canadian prominent in wartime operational research in Britain and now the Director of the British Iron and Steel Research Association, was visiting Canada to see what could be done regarding Canadian representation at the forthcoming International Operational Research meeting at Oxford for which he was the convener. There was move afoot to establish an international federation of operational research societies. It was expected that this idea would be discussed at the Oxford meeting. Attendance at the meeting was limited and quotas had been assigned to the existing OR societies. For lack of a society of their own, the Canadians came under the ORSA quota. This was not completely satisfactory to Sir Charles. He visited the Operations Research Society of Toronto to see whether it could act as the society representing Canada. The Torontonians were happy to do what they could, but it was doubtful whether they could represent the whole of Canada adequately. In the end, a loose arrangement was reached in which Dr. Abrams and Dr. Solandt attended on the ORSA quota and Pat Robinson went over as an invited delegate to present a survey of OR in Canada which many of us in Toronto helped to compile.

At the Oxford meeting in September 1957, the International Federation of Operational Research Societies was created, and Sir Charles was named as Secretary. He was concerned that Canada had no national society that could join IFORS, and asked Dr. Solandt to try to organize one.

THE MONTREAL CLUB IDEA

A major impetus to the growth of operational research in Montreal was the appointment of Dr. Solandt as Assistant Vice-President, Research and Development, of the Canadian National Railways in 1956 and as Vice-President in 1957. He soon saw the benefits that would accrue to the railroad through operational research and set about developing a large group headed by P. B. Wilson. Peter Wilson had been engaged in operational research for the Royal Navy during the war and at the time of his transfer to the CNR he was Director of the Canadian Army Operational Research Establishment. In the Montreal area were also Dr. George Lindsey and Bob Baglow with the RCAF Operational Research Group at St. Hubert, and I had newly arrived at Trans-Canada Air Line as Director of Operations Research.

Dr. Solandt, Peter Wilson, and I held a meeting following Dr. Solandt's return from the Oxford conference. Our idea was to form an OR club in Montreal along the line of the one in London that had given birth to the Operational Research Society in London, (ORS (UK)). When this was established we planned to seek union with the Toronto Society and the Ottawa group to form a national society.

THE HOPKINS LETTER

Such was the situation in the fall of 1957. Both United States societies were seeking to form Canadian Sections; there were two major groups in Toronto and Ottawa, with a bi-cultural problem of mutual misunderstanding between military and industrial OR; and the use of OR was growing rapidly in Montreal and the rest of Canada. Yet Canada had no society that could be a part of IFORS.

It was just at this moment that Nigel Hopkins, with active assistance from C. E. Law and encouragement from K. J. Radford and John Abrams, sent out his circular letter of October 2, 1957. This contained a request for opinions on the proposal supported by many of DRB group that a Canadian Section of ORSA should be formed.

I helped Peter Wilson to produce a letter, approved by Dr. Solandt, expressing the views of the three of us that association with ORSA would be a mistake as long as TIMS had so many potential adherents in Canada. We said in part: "ORSA and TIMS overlap in function to a large extent. Until they coalesce or separate sufficiently to be distinguishable, we should avoid too close alignment with either. A national organization affiliated to both would in the present circumstances be a more satisfactory solution." We also said: "Many Canadian and US workers are uneasy concerning the adverse effects exerted on professional standards by the mass membership and too rapid growth of both organizations" and we expressed the hope that a Canadian society might do better. This idea that our society should control its membership to include only the "professionals" has been a strong undercurrent ever since and has given rise to suggestions for special grades of membership, ideas of licensing, certification and so forth. The proponents of these suggestions have to face the problem of defining a competent operational research scientist, which in turn includes the equally difficult problem of defining operational research.

Eric Sorenson responded to the Hopkins letter on behalf of the Operations Research Society of Toronto (ORST), of which he was then President, after consultation with his executive and council. He stated that the existence of his society with membership over 50 showed that there were not, as the Hopkins letter averred, "too few Canadian OR workers to support an independent organization now." His letter proposed the immediate formation of a national society and close liaison with other national organizations later. His letter also contained the

statement that “for operations research to succeed, it must rely very heavily on the interaction of scientists and captains of industry” and expressed the view that no United States organization seemed sufficiently aware of this need. He said: “The organization we have here, as well as the one we propose to set up nationally, has, and will have, within the ranks of membership, the scientist as well as the businessman. Without this combination, operations research will fail in Canada.”

He also sent me a private letter indicating that something should be done quickly and that there was some indication that Vancouver would welcome a national society. He hoped that interest in a society could be generated among Montreal scientists, who would see the same problems as the Toronto group, and suggested that Dr. Solandt or I should be the first president of the proposed society. My reply told of the Montreal action to start a club and enclosed copies of our reply to the Hopkins letter. I pointed out: “There is one major point of difference between the Montreal attitude and that of ORST, namely, the question of whether the proposed national organization should be mainly technical or should aim to serve the needs of the management users of operations research. I think a compromise solution is possible, namely, the formation of a national society with wide open membership primarily serving the needs of management and other non-technical class of membership. I envision a technical committee of the society established to serve the needs of the technical members which could organize technical sessions at the national meetings, the dissemination of technical information and the like.” Here was the germ of the Associate and Technical Member dichotomy which has also generated its share of heated discussions.

C. E. Law who had been receiving and tabulating the answers to Hopkins’ circular letter reported the following results on December 2, 1957:

In favour of a Canadian OR organization	33
In favour of a chapter of ORSA	24 (a)
In favour of the local club concept	15 (b), (c)
Not in favour of any national group	1
No opinion	1

Note:

- (a) four of these felt it was the only possible approach;
- (b) four of these suggested a Canadian society should be a combination of such clubs;
- (c) three influential members favoured a somewhat different form of local club combine.

His report went on to state that he had invited the executive of the “Operational Research Club of Toronto” and a group forming in Montreal to meet and discuss all the proposals, and that no further action would be taken pending this meeting.

DR. SOLANDT’S MEETING

By various communications, a time and place for a meeting was established and Dr. Solandt invited Abrams, DeLury, Hopkins, Kates, Law, Lindsey, Paull, Petrie, * Robinson, Sandiford, Sorenson, and Wilson, to attend a meeting in Montreal, February 11, 1959.

Dr. Petrie did not attend but sent R. H. Lowe as his representative. Mr. Lowe was at the time as administrative and training assistant to Dr. Petrie and attended the meeting as an observer. George Lindsey was unable to come and was represented by Bob Baglow. Nigel Hopkins could not leave Halifax and had to miss the meeting. All of the various points that have been described so far were aired in the morning. Notes made by Dr. Kates, which were later adopted as minutes, state “the discussion rambled on, but provided opportunity for all participants to air their views

and emphasize their particular preferences.” These notes go on to say “During the luncheon that followed the participants tended to focus their attention on the immediate need for starting a society, particularly in view of the fact that if they would not, TIMS and ORSA might promote Canadian chapters of their respective society.”

In the afternoon the group adopted Dr. Solandt’s proposals:

1. There should be a national Canadian organization.
2. Its import should be primarily scientific and it should hold one or more national meetings annually.
3. Membership should be open to people showing genuine interest in OR.
4. Actual OR workers should be encouraged to join.
5. We might consider two grade of membership, the lower grade consisting of members who are more interested in finding out about OR, rather than to contribute to OR.
6. The national organization would send delegates to international meetings.
7. The national organization would foster local societies and would take an interest in the character of the local branches.
8. The Toronto group would be invited to join the society as a member group.
9. A constitution would be set up in such a way as to perpetuate the nature and desires of the original meeting and to preserve the technical character of the national program.
10. Local groups would have complete autonomy in running their affairs according to local needs, but it would be hoped that a hard scientific core would keep a strong hand in the local societies.
11. ORSA and TIMS would be approached with a view to the new society’s affiliating with both societies. An approach to ORSA should be made before the next council meeting on May 19, 1958.

Dr. Solandt was elected provisional chairman and Peter Wilson and I were assigned the job of drafting proposals for a constitution, fees, membership, affiliation, etc. and to call a meeting to inaugurate the Society when all this was in order.

All these decisions were accomplished between 10 A.M. and 3 P.M.

ORGANIZATION AND INAUGURATION

The next months were busy ones. Visits were made to Ottawa and Toronto. Peter Wilson drafted a constitution which was described as a “judicious blend of the constitutions of ORSA, ORST and the Canadian Association of Physicists.”

The inauguration meeting was set for Toronto, April 14, 1958. Dr. Abrams was unable to attend the meeting but wrote a letter putting forward his views on Dr. Kates’s notes and the proposed constitution. He felt that it would be advisable to discuss affiliation with ORSA and TIMS before forming a society. Otherwise, he wrote, it would be awkward if they did not wish to affiliate, particularly since ORSA included Canada in its territory and TIMS was an international body and could well wish to set up a group in Canada anyway. He felt that there would be a loss to Canada if ORSA should become a purely United States organization.

The April 14 meeting featured heated discussions. These centred partly around Dr. Abrams’ excellent advice, generalized to include relationships with ORS (UK) as well, and partly around the provisions of the draft constitution.

The meeting finally agreed to go ahead with the Society and to adopt the constitution after some changes in wording. Dr. Solandt was elected as President, with the author as Secretary. I was instructed to run an election among the remainder of the founding group to fill the offices set forth in the constitution.

THE FIRST ELECTION

This election was conducted by means of an ingenious ballot in which each person of the original group in effect proposed a preferential slate for the offices, other than President and Secretary, by indicating his order of preference for each person for each post. To preserve secrecy, the actual ballots were opened by my secretary and the contents recorded on a large chart which I did not see until all ballots were in. After the election the 1958-1959 council was as follows:

President: DR. OMOND M. SOLANDT, Vice-President Research & Development, Canadian National Railways, Montreal.

Vice-President: DR. JOHN W. ABRAMS, Scientific Adviser to Chief of Air Staff, Department of National Defence, Ottawa.

Secretary: DR. PETER J. SANDIFORD, Director of Operations Research, Trans-Canada Air Lines, Montreal.

Treasurer: MR. PETER WILSON, Chief of Operations Research, Canadian National Railways, Montreal.

Council Members Elected: DR. ALLAN PAULL, Abitibi Power and Paper Co. Ltd., Toronto;
MR. CECIL E. LAW, Defence Research Board Operational Research Group, Ottawa;
MR. PATRICK J. ROBINSON, Co-ordinator of Marketing Research, Imperial Oil Limited, Toronto.

Representing ORST: MR. E. E. SORENSEN, Operational Research Supervisor, British American Oil Co. Ltd., Toronto.

Subsequently a Montreal representative and the chairmen of committees were added:

Representing Montreal: MR. J. G. TODDS, Manager, Operations Research, Northern Electric Co. Ltd., Montreal.

Standing Committees

Membership: MR. C. E. LAW.

Education & Information: PROFESSOR D. B. DELURY, Chairman, Dept. of Mathematics, University of Toronto, Toronto.

Programme: DR. A. E. PAULL.

Public Relations: MR. P. J. ROBINSON.

Publications: MR. P. J. ROBINSON.

THE FIRST YEAR, 1958-59

The first task was to recruit members. We attempted to obtain a small list of potential charter technical members through recommendations of the original group. The list produced was so large (147 names) that it was agreed that all members should be made Associates initially and that obviously well qualified Associates should be urged to submit a further application for "Technical" membership. Any others who might apply for Technical membership without this invitation were to be processed in an identical manner through the Membership Committee. Thus every Technical Member of the Society, including those from the originating group, has filled out the application form for technical membership and has had his qualifications reviewed by the Society. There have been no "honorary" members.

The actual invitation to membership took the form of a letter sent out on January 2, 1959, over Dr. Solandt's signature, to all those known to the Council to be actively interested in operational research. Response to this letter was most encouraging. At the final Council meeting

of that society year, held May 6, it was reported that the Society had 161 members, 77 of whom had applied and been accepted as Technical Members (probably 80 per cent of those then eligible in Canada).

The second task was negotiating arrangements with other societies. Dr. Solandt appeared before the ORSA Council and had a discussion also with D. B. Hertz, a Vice-President of TIMS. Peter Wilson and I visited Dr. Hugh Miser who was then Secretary of ORSA. With him we arrived at the idea of a mutual 20 per cent reduction in fees for CORS and ORSA members. This arrangement was subsequently ratified by both Councils.

Arising from the meeting with D. B. Hertz, it was arranged that Dr. Solandt, Peter Wilson, and I should meet with Dr. Roger Crane, the Past President of TIMS, in St. Louis. Following those meetings, TIMS was also very helpful. As a matter of policy, they did not wish to give special treatment to those of their Canadian members who were also members of CORS. To help us, they reduced their fees for all North American members outside the United States from \$10.00 to \$8.00. In grateful recognition, the CORS Council designated them a "co-operating society" and thus made their members able to join CORS at a 20 per cent reduction. TIMS wished to see the term Management Science in the name of the Society. Dr. Crane suggested that we try a title such as The Canadian Operational Research and Management Sciences Society. This was considered by the Council to be too large a mouthful. Instead the Constitution was amended to include a statement that our use of the term "operational research" was intended to include both operations research and management science.

We also had some help from Britain. The ORS (UK) made its publication, *The OR Quarterly*, available to CORS members at a 15 per cent discount.

The third task was the establishment of the Montreal Section. This was created at a meeting in the Board Room of Trans-Canada Air Lines called by the CORS executive and attended by Peter Wilson and myself. Since this meeting was held before the invitation to CORS membership was issued, none of the others in the room has any idea that a national society was well along the way. We were so anxious to encourage local autonomy that we made little reference to the existence of CORS. We were spectacularly successful. It took about two years for the last member of influence in the Montreal Section to realize that the national society predated the Montreal organization meeting and had in fact initiated it.

The idea of local autonomy was originally introduced to meet imagined opposition that the Torontonians might otherwise raise. Far from opposing the new development, the Toronto Society rapidly modified its name and constitution to become a Section of CORS. The "separatist" difficulties were all located in Montreal! This anomalous situation gave rise to much amusement and was the cause of a variety of confused discussions at Council meetings that five years have barely straightened out.

The fourth task was to initiate a request for membership in IFORS. On Sir Charles Goodeve's advice, it was decided to wait until the following year, when our membership level would be easier to assess.

The fifth and largest task was the organization and operation of what was optimistically called "The First Annual Meeting and Conference," May 7 and 8, 1959, at the University of Toronto. This optimism was justified. More or less successful meetings of the same pattern have been held each year since. There were thirteen technical papers at the first meeting ranging from psychology to dynamic programming applications. Through the good offices of Pat Robinson and Imperial Oil Ltd., it was possible to publish a Proceedings within our slender budget. These took the form of extensive abstracts of the papers connected by narrative passages.

MEMBERSHIP GROWTH

An analysis of the membership records made early in the second year gives a picture of the extent of OR in Canada at that time. The Technical members, numbering then about 80, were employed in 40 institutions (30 business firms, 5 universities, and 5 government agencies). The greatest number in one institution was 19 at the Defence Research Board, followed by six at K.C.S. Ltd.

There has been a rapid increase in membership since the Society was established. The following table shows the growth:

	1958-59	1959-60	1960-61*	1961-62	1962-63
Technical	77	102	96	114	123
Associates†	84	154	160	219	258
Total	<u>161</u>	<u>256</u>	<u>256</u>	<u>333</u>	<u>381</u>

*These figures partly reflect the fact that some members were dropped for failure to pay dues. They also reflect the difficulty of maintaining accurate records in such a decentralized and changing organization. The Society's records were at the mercy of the weak communication link between the Secretary and the Sections, where renewals of membership were received.

†The growth rate for the Associates has been more than three times that for Technical Members and has accounted for 79 per cent of the growth of the Society.

C. E. Law has been Chairman of the Membership Committee since the inception of the Society.

THE BULLETIN

Major aims of the Society are the dissemination of information on operational research and stimulation of contact between OR workers. It was early recognized that the regular publication of a newsletter or bulletin should be one of the principal activities of the Society. Pat Robinson undertook to initiate the *Bulletin* but a series of obstacles prevented him from getting started. John Walter was pressed into service. He was able to organize sufficient help to produce the regular series which he edited until 1963.

Dr. Hopkins, unable through distance to participate otherwise in CORS, decided to become a regular contributor to the *Bulletin*, a task he has continued from both Halifax and The Hague. It seems to many of us that the farther afield he is transferred, the more interesting his column becomes.

MEMBERSHIP IN IFORS

CORS was accepted as a member of IFORS as of July 1, 1959. Our Technical members are accepted as "qualified members" for IFORS purposes. The annual financial contribution to IFORS from a member society is proportional to the number of its "qualified members" and its voting strength to the square root of that number.

CORS was well represented at the IFORS Conference at Aix-en-Provence in 1960. Horace Hearne of Du Pont of Canada Ltd. was named as Canadian editor of *International Abstracts in Operational Research* which was established by IFORS that year. J. H. G. Whitton took over this duty when Horace Hearne moved back to the United States.

LOCAL SECTIONS

The Society has promoted the formation of local sections. The Vancouver members, notably Charles Clapham at the B.C. Research Foundation, organized a Section in 1959-60. An Ottawa Section was established in 1960-61.

All the local Sections have been active. They usually hold monthly meetings except in the summer. The members of all Sections have participated in extension and other evening lectures given by the universities in their areas, both as teachers and as pupils.

CONFERENCES

The conferences have been held as follows:

<i>Year</i>	<i>Place</i>	<i>Programme Committee Chairman</i>
1959	University of Toronto	A. E. Paull
1960	McGill University	Frank King
1961	University of Ottawa	David McLimont
1962*	University of Toronto and Park Plaza Hotel	George Norton and D. B. DeLury
1963†	University of Ottawa	J. F. Ruddell

*This was a joint meeting with TIMS.

† Returned to Ottawa because of the Joint CORS/ORSA Meeting planned for Montreal 1964.

These conferences have been successful in bringing Canadian OR workers together and in acquainting many persons in Canada with the nature and scope of operational research. The quality of the papers was best, in the writer's opinion, at the first conference. This is perhaps to be expected in view of the backlog that was available then. It has not been the custom to publish proceedings. Instead abstracts have been printed in the *Bulletin*.

The registration fees for the conferences have been set at the "break even" point with an allowance for contingencies and have generally produced a small profit for the Society. The exception was the 1962 meeting with TIMS. Internal organization problems in TIMS delayed the mailing of advance programmes. This was held to be the cause of the discrepancy between the number TIMS members expected to attend and the number that showed up. It was only by prompt cancellation of certain commitment to the hotel and co-operation by the hotel management that heavy financial losses were avoided.

DR. WILLIAM HOSSACK

The year 1961 was a sad one. Dr. Bill Hossack and his wife were killed in an automobile accident. At the time, Dr. Hossack was driving from Montreal to Ottawa as part of his work on a project for the Royal Commission on Government Organization. He strongly believed that operational research had much to offer as an aid to government decisions at all levels.

He had contributed to operational research with the Defence Research Board, with industry in Toronto, and with a firm of consultants. From the first he had been a staunch supporter of the Society. He was President of the Toronto Section in 1959-60 and was the Toronto representative on the Council at the time of his death. Canada and CORS have missed him, and our Society will continue to be the weaker for his loss.

CONSTITUTIONAL PROBLEMS

Although the constitution did not provide for it, there was a general agreement that the task of running the Society should rotate around the Toronto, Ottawa, Montreal cycle. An exception has been the post of Secretary. It is an advantage to keep one man in that job as long as he is willing to shoulder the heavy load. After the organization year and the first two formal years of existence, I was only too pleased to turn the work over to Dr. William Archer of the Defence Research Board. He continued as Secretary for the remaining three years of this story.

The presidency had followed the rotational principal. Dr. Solandt served for two terms. He was succeeded by Dr. D. B. DeLury who had recently been appointed Head, Department of Mathematics, University of Toronto. The fourth year, Dr. Lindsey of Ottawa became President.

A small crisis was precipitated in 1961-62 by the transfer of the acclaimed President, Dr. George Lindsey, to Italy. At that time he was with the Joint Chiefs of Staff in Ottawa. The question arose as to whether an Ottawa replacement should be sought or whether the Vice-President should be promoted, with the further question of next year's President. The constitution was silent on this subject. The situation was further entangled by the fact that there had been, for the first time in the Society, a vote for Vice-President and a spare good man was available in the defeated candidate. Because of the rotation principle, it was felt the neither myself nor C. E. Law, both from Montreal, should serve out Dr. Lindsey's term. Fortunately, Dr. Abrams was returning to Ottawa and as a former Vice-President, it was natural that he should serve as President. This permitted a satisfactory solution to the problem but pointed up the need for a clearer wording of the constitution.

In the fifth year, major constitutional changes were drafted. These were partly to improve the wording of the original document, partly to ensure that the Vice-President automatically becomes President, but mainly to reshape the constitution into a form suitable for incorporation. The spectre of personal financial liability that haunts the officers of every volunteer organization became more palpable with the narrow escape from the financial loss at the CORS-TIMS conference. When it is finally achieved, incorporation will provide protection for the officers of the Society and of the Sections.

THE CORS JOURNAL

The major event of 1962-63 was the decision to try to establish a Journal. There were many in the Society, particularly in the Montreal Section, who felt that the time was ripe for us to establish a proper publication. Jim Radford was also strongly in favour and became the architect of a complete plan.

The Society has always been fortunate in the behind-the-scenes assistance it has received from the organizations employing various people active in the Society. From time to time, such organizations as Trans-Canada Air Lines, British American Oil Company, Ltd., Imperial Oil Ltd., and Canadian National Railways have given extensive secretarial, printing, and mailing help. However, to launch a Journal requires substantial cash reserves. It was therefore decided to seek personal and corporate sponsors to ensure financial backing for the first issue.

The fact that you are reading this paper indicates that the effort was successful. The Canadian Operational Research Society has passed through the stages of initial growth and is now entering on a new stage of mature development. May it with ever increasing strength continue "the advancement of the theory and practice of Operational Research in Canada."

REFERENCES

- (1) N. W. Morton, *Operations Research*, vol. 4, no. 2 (April, 1956), p. 187.
- (2) Florence Trefethen, "A History of Operations Research", in *Operations Research for Management*, ed. McCloskey, Trefethen, PP. 3-35, Baltimore: Johns Hopkins Press 1954.