

PROPOSAL FOR AN INSTITUTE FOR ADVANCED RESEARCH
IN CANADA

Draft by I. Halpérin

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1. Proposed name. THE H.M. TORY INSTITUTE.
2. Proposed objectives (i) To conduct research and seminars on research at the post-doctoral level in the theoretical natural sciences, including mathematics; the research to be carried out by a small number of permanent senior staff and by a larger number of researchers visiting for 1 or 2 years; the research to be of such excellence as to stimulate the improvement of the quality of all scientific research in Canada.
(ii) To take an active role in improving communication and teaching in science.
(iii) To operate as a national centre in the best interests of Canada, admitting non-Canadians as deemed desirable.
3. Proposed structure of the proposed institute.
The institute should be incorporated as a non-profit corporation, with a national charter, authorised to receive gifts and to give receipts which provide for tax-exemption.
The corporation should consist of a board of trustees, independent of governments and other organizations, the trustees to hold office for specified periods of time and new trustees to be appointed from time to time according to specified procedures.
4. The role of advisors.
A number of eminent scientists in different countries should be appointed by the trustees, to appraise the work of the Institute and to give advice on new appointments to the permanent staff.
5. Order in which departments should be set up.
The trustees should first set up a school of mathematics and after that school is soundly established consider action to set up schools in the other theoretical natural sciences.
6. Proposed procedure to set up a school of mathematics.
The Centre de Recherche in Mathematics at the University of Montreal should be phased out as rapidly as possible. The space and facilities now at the disposal of the Centre should be turned over to the school of mathematics of the proposed institute, to operate there for a provisional period of 3 years.

The budget for a school of mathematics, enjoying rent-free working space at the University of Montreal should be:

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| 3 senior staff (one to be Director) @ \$50,000. | = | \$ 150,000. |
| 13 temporary workers, average \$15,000 | = | 195,000. |
| secretarial staff, supplies, services | = | |
| 25% of \$345,000 | = | 85,000. |
| Visitors, travelling, reserve | = | 70,000. |
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| Total | | \$ 500,000. |

7. Financing.

The N.R.C. should provide a 3 year grant of \$500,000 per year, the school of mathematics to be set up without commitments beyond the first 3 year period.

The Government of Canada should undertake to provide up to a maximum of 20 million dollars on a 50-50 matching basis, to match funds raised elsewhere; the total of 40 million dollars to provide 10 million dollars for building and endowment for each of four schools.

8. Site of the Institute.

After the School of Mathematics is soundly established on a temporary basis at Montreal, the best site should be chosen (presumably at Montreal, Ottawa or Toronto) for a permanent Institute consisting of several schools.

9. Possible trustees.

L. Siminovitch (geneticist, Toronto)
H.E. Johns (physicist, Toronto)
J.P. Blewett (physicist, Brookhaven)
G. Herzberg (physicist, Ottawa)
Guy Rocher (sociologist, U. of M.)
G. McCarthy (vice-president, Met. Life Ins. Co.)
I. Halperin (mathematician, Toronto)
H. Schneider (president, N.R.C.)

10. Possible advisors.

Michael Atiyah (Oxford)
Henri Cartan (Paris)
F. Hirzebruch (Bonn)
I.M. Gelfand (Moscow)
Richard Brauer (Harvard)
I. Kaplansky (Chicago)

11. Possible senior staff.

Robert Langlands (Institute for Advanced Study)
Louis Nirenberg (Couvant Institute)
Hale Trotter (Princeton)
L. Siebenmann (Orsay, France)
Raoul Bott (Harvard)