

Present: H. Cohen (Chair) H.B. LéJohn  
R. Bochonko R. Lyric  
J. Brewster P. Maeba  
D.N. Burton P. McClure  
L. Chan D. McKinnon  
G. Clark D. Punter  
A.M. Ducas R. Quackenbush  
H.W. Duckworth G. Robinson  
H. Finlayson P.N. Shivakumar  
J.H. Gee R. Sparling  
A. Gerhard F. Spiring  
B.J. Hann J. Stewart  
J. Hoskins J. Svenne  
J.C. Jamieson V. Syrotiuk  
A. Janzen R. Thomas  
T. Kucera G. Woods  
B. Kunz

Visitors: L. Chartier  
J. McConnell  
C. Presser

Regrets: G. Baldwin N. Losey  
R.C. Barber B. Macpherson  
L. Batten M. Novak  
E. Bock A. Secco  
S. Cheng I. Suzuki  
N. Chow E. Worobec  
N. Halden

1. Approval of the minutes of the 66th meeting of Faculty Council (November 12, 1991) was M/S/C.
2. **Science Library Presentation**

Science Librarian, Ada Ducas, gave an overview of the Science Library. She covered the Science Library history, services provided, and short and long term plans for the library. Ms. Ducas stated that the mission of the Science Library was to secure, preserve and make information accessible to its clients.

The Science library is planning to publish its newsletter four times a year. If faculty have any topics they wish covered, they should contact Ada Ducas.

The presentation was followed by a brief question and answer period. The question of how in-library use of books and journals could be measured was raised. Ms. Ducas indicated that the Library hoped to purchase a bar-code scanner system for this purpose. The point was made that, to ensure in-house use is recorded, users should not reshelf material after use.

With regard to security, Ms. Ducas stated that the security system is very sensitive and working, although 3M has reported that the gates must be replaced.

### 3. Dean's Report

The Dean's Report is appended to the minutes.

Following the Dean's Report, D.N. Burton reported on the following:

- committee on evaluation of teaching
- the Science Deans are members of the following working groups set up by the Vice-President (Academic) and Provost:
  - D.N. Burton: Curriculum
  - H. Cohen: Post-Secondary Education
  - J.P.Svenne: Central Planning
- transition year committee
- environmental Engineering program proposal
- joint University\Red River Community College baccalaureate medical laboratory program proposal.

### 4. Course and Program Proposals

These proposals were approved by the Executive Committee and forwarded to Faculty Council for information. Material was made available to Department offices for perusal by members. No questions were raised by Council members.

### 5. Committee on Courses -- Membership

Dean Burton reported that a request had been made by Ms. Ada Ducas, Science Librarian, to become a member of the Committee on Courses. Upon checking Faculty Council minutes back to their beginning, no terms of reference could be found.

It was M/S/C:

"That the membership of the Committee on Courses be one member approved by each individual department Council and the Science Librarian or delegate."

### 6. Faculty Elections

Dean Cohen reported the following:

- (i) We have received two nominations for the two positions on Senate: Drs. A. Gerhard and H. LéJohn.

It was M/S/C:

"That nominations be closed and that Drs. A. Gerhard and H. LéJohn be elected by acclamation for three-year terms, June 1, 1992 to May 31, 1995."

- (ii) We have received one nomination for the position on the Faculty Endowment Committee:  
Dr. P. Aitchison.

It was M/S/C:

"That nominations be closed and that Dr. P. Aitchison be elected by acclamation for a three year term from June 1, 1992 to May 31, 1995."

As there was no further business, meeting adjourned 4:00 p.m.

## Dean's Report to Science Faculty Council: April 14, 1992

When I reported to you at this time last year, I spoke about our budgetary problems. You will remember that in the previous two fiscal years we had to make baseline reductions from our operating grant of over \$1M. At that time I felt that, as a new Dean, I was being subjected to a "trial by fire ritual", and that if I survived it, then there might be easier and better times ahead. Well, I was wrong--budget restraint and budget cuts are an ongoing fact of life--we have to learn to live with them.

Let me tell you first, that by careful management throughout the Faculty, we shall survive and will continue to fulfil our mission for another year. I remain optimistic for the future and I will say more as to why in a moment. I am still dedicated to the "principle of excellence" in all that we do, be it teaching, research or service. I told you last year that we stand at the core of the University. Indeed, this year, we and the Faculty of Arts have joined together to give this message to the University: we are the core faculties. Science is not only a core faculty--we comprise the "heart and soul" of the University. Teaching is our heart--research is our soul. I believe that our Faculty, dedicated as we are to excellence in both teaching and research, provides a paradigm from which the University can model itself as a true and major teaching/research institute.

I am not a statistician. People say that you can use selective data to prove anything. Well, if you look at our baseline budget, it has actually increased over each of the past three years. Moreover, the number of faculty has stayed level over the past three years. From these numbers alone one might naively argue that we have no problem. Is this the source of my optimism? Not really, but what this analysis tells us is that we do have funds to work with. A more honest assessment of the data reveals that these funds are indeed insufficient. We have lost ten full-time support staff over the past three years; moreover, graduate student support through teaching assistantships and funds for supplies and equipment are asymptotically tending to zero. In reality, this is no way to operate an effective Faculty.

Why then am I optimistic? Well for one reason, we have initiated our Strategic Hiring and Bridge Funding (SHBF) Plan, albeit at a reduced level. Let me remind you that this plan is aimed at rebuilding our faculty in advance of anticipated retirements; the plan is to be financed on the basis of a loan from the University; the loan is to be amortized through future salary recovery from these retirements. The baseline cut this year is just under \$3/4M and therefore we have had to cut back on the level of this plan to a 50% implementation, but we are proceeding with it nevertheless.

Last year I told you we would need to think and work smarter and harder. This message has not changed. I also told you that we would need to find new ways of doing things--even to the point of restructuring the Faculty. Of course, academic excellence requires that we always examine doing this, even in good fiscal times. But, now I believe that we need to develop contingency plans for a possible downsizing of the Faculty and a possible downsizing of the student body. Courses and programs need to be prioritized and cuts initiated. Such a plan would not be inconsistent with our current 5-year strategic plan; it is just a restricted scenario of that plan, a scenario in which the current fiscal situation places us. It has become clear that we need to use our resources in new ways. My optimism stems from the belief that we have within our faculty the brainpower and innovation to implement the required changes while retaining academic excellence. I invoke you to turn your creativity to find new, efficient and effective ways for us to teach and to offer our programs. Can we not develop strategies for research and service that bring with them new and more resources?

Our aim in this Faculty has always been to provide excellence in quality and quantity. Clearly, quality should and must always move upward; hence quantity can only stay level within a new framework. Whatever its form, this framework must encompass the restoration of our support staff and a commitment of more resources to our graduate students. Graduate students are the lifeblood of our advanced study and the catalyst for our research excellence. Further, they are the instrument with which to provide a satisfactory educational experience to our undergraduates.

One of my strategies since becoming Dean has been to initiate linkage with the University of Minnesota. Minnesota is a world class institution; it utilizes innovative teaching, it does world class research, it serves the needs of its community. We are now the only non U.S. participating member of Minnesota's Institute for Mathematics and its Applications (IMA); our new Institute for Industrial Mathematical Sciences (IIMS) is patterned on theirs and they have helped in its development and operation. We have already hosted a successful Matrix Methods workshop for local industry and faculty. Next month the Institute will hold a workshop on Expert Systems and in the fall, one on the topic of Mathematical Biology. I would like to complement Dr. Shivakumar who, as acting director of the Institute, has arranged for these workshops.

I believe that this new arrangement with Minnesota is only the start of a partnership that can have many benefits. When Peter King, Head of Computer Science, was there last month their officials offered our Faculty the free use of their supercomputers available either through the Minnesota Supercomputing Institute or the High Performance Computation Center. When I was there a few weeks ago I struck an arrangement with their Physics Department for an exchange of theoretical physicists over the next six months to be carried out on a cost sharing basis for travel expenses. We talked about a joint effort aimed at putting on regional workshops, summer schools and conferences. My aim is that we collaborate with them in all areas of science, both in teaching and research. But it is up to you to access their resources and to make such a partnership work.

The University has discovered our interaction with Minnesota and are now following our lead. A large delegation which included the President, all Vice-Presidents and many Deans visited Minnesota last month. Other Faculties are also following our lead in now formulating their own SHBF plans. I believe that we also lead the University in other respects. We have a consultative five-year plan developed by the Administrative Council, recommended by the Faculty Executive Committee and approved by the faculty as a whole. Part of this plan is composed of the Unit Performance and Needs (UPN) Process, one which was developed with faculty-wide participation, by a large group of academics representing all interests within our Faculty. I wish to thank the committee and many others who worked for two years to develop this process. With a new Vice-President and Provost in place it now appears that the University as a whole will be required to develop analogous plans and processes.

We continue to be successful in our funding from NSERC, but I do have some concerns that the overall level of this support may be falling. This April our grand total of new and renewed research grant and contract funding from all sources is \$5.6M which is up slightly from last year. We have received two new NSERC PDFs--one in Geological Sciences and one in Physics. New Faculty of Science PDFs have gone to Computer Science, Mathematics, and Zoology.

Our new program in environmental science was initiated last fall with an enrolment of thirty students. I understand that the interest in this new program for next year is considerably increased. We have received approval from the University to offer this program as a Coop Work/Study program. The Faculty has submitted an application to EIC for the necessary funding with which to initiate the program and if we receive the necessary grant its operation can begin this fall. I suggest that you speak to Dr. Robinson or Dean Burton for further details with regard to this new venture.

Within the past year we have had a number of distinguished visitors including two Nobel Laureates: Drs. Richard Taylor as a University Distinguished Lecturer and Murray Gellman, both of whom attended the Canadian Association of Physicists Conference held on our campus. As well, Professor James Lighthill visited our Mathematics Departments and Math. Institute as a Distinguished University Lecturer.

I would like to congratulate the following:  
Drs. Barber, Clark, and Gee for being reappointed as Heads of their respective departments, Physics, Geological

Sciences, and Zoology; Dr. F. Hawthorne as a Killam Fellow; Dr. P. Shivakumar for being honored with a D.Sc. from University of London; Dr. L. Chan, editor: Canadian Journal of Statistics; Dr. G. Robinson, University Outreach Award (joint award with Russ Mead), and Dr. B. Sherriff, University Outreach Award.

Part of our mission is service, service internal to the University and service external to the University. Our faculty members do yeoman work within the University serving on many important university committees, the Senate and the Board of Governors. External service include service to the high schools through the Chemistry and Mathematics Departments. In the area of public awareness our Women in Science (W.I.S.) committee is doing an outstanding job by taking the message of science awareness into the schools. The Statistics Department has considerable interaction with the business community with their Total Quality Management (TQM) workshops and of course I have already mentioned the IIMS workshops. Despite all this I sense that the external community harbours many misimpressions about us and are generally hostile to us.

I have talked about broad challenges to the Faculty. Let me be specific about a few of these:

**Teaching:** Should we be doing more T.V. teaching in front of a live audiences with satellite classes that can interact on a live audio-visual network? Can we utilize more computerized courses in a live classroom setting? Professors Gratzner in Mathematics and Loly in Physics are doing this and I congratulate them for this initiative. How about more interactive assessment of students during and after class such as suggested by Richard Light of Harvard when he visited here?

**Research:** How can we foster more collaborative research across departmental lines but right within our own Faculty?

**Service:** How can we get a message to all segments of the general public that will raise their esteem of what we do?

I invite all of you to convey to me your ideas on these or any other matters. I will be pleased to hear from you in writing or to meet with you at your convenience.

One last word of a personal nature--my research/study leave was too short; I accomplished only 1/2 of what I planned. I want to close by thanking Dr. Svenne for filling in for me during my absence and to acknowledge a really superb job on his part.

P. Pachol, Secretary  
Faculty Council of Science

*Lecture for HC  
Slide projector with  
remote for AD*

**THE UNIVERSITY OF MANITOBA**  
Faculty of Science  
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**Inter-Departmental Correspondence**

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April 6, 1992.

TO: All Members of the Faculty Council of Science

FROM: P. Pachol, Secretary

*P. Pachol*

The 67th meeting of the Faculty Council of Science is scheduled for Tuesday, April 14, 1992 at 3:00 p.m. in Room 207 Buller Building.

**Agenda**

1. Approval of the Minutes of the 66th meeting of Faculty Council, November 12, 1991 (previously distributed)
2. Science Library Presentation -- Ada Ducas
3. Dean's Report
4. Course and Program Proposals. These have been approved by the Executive Committee and are forwarded to Faculty Council for information. Material has been made available to Department offices for perusal by members. Questions may be raised from the floor.
5. Membership of Committee on Courses
6. Faculty Elections (attached)
7. Other Business

/pap

Encl.