





Matthew Civil, our hardworking Secretary, is leaving NZ Dairy Board, to do a part-time M.Sc in OR at Victoria University, as well as part-time consulting. To help him cope with all this, he is getting married in August to Sarah Hayward, also of the Dairy Board. Our congratulations to them both.

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#### INTERNATIONAL J. of FORECASTING

Originally the Journal of Forecasting, the IJF was founded by the International Institute of Forecasters and is one of the most frequently cited business and management journals.

A "call for papers" has been released for a Special Issue on **MARKETING FORECASTING** (deadline Sept 15, 1986). Empirical papers, reviews and applications papers are especially sought. Papers should be short and highly readable.

The editors are Profs Shelby McIntyre and J. Scott Armstrong.

Contact: Dr R.J. Brodie  
Business Admin Dept  
Canterbury University  
Private Bag  
Christchurch  
(Ph 482-009)

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## EDUCATION

### CONFERENCE of TEACHERS of OPERATIONS RESEARCH

(22 May (pm) - 24 May (am))

Representatives of Industry and Government are invited to provide input into areas of common interest. Areas for discussion are:

1. Curricular Developments in OR
2. Position of OR within the University
3. Resources for Teaching OR
4. OR Projects and Case Studies
5. External Influences in the Teaching of OR
6. Research
7. OR in the Future

Should any member of ORSNZ be interested in attending any conference session and/or making a written submission please contact the Conference Organiser:

Dr Jeffrey J Hunter  
Dept of Maths & Statistics  
University of Auckland  
Private Bag  
Auckland  
(Ph 737-999)

by March 31 1986

### CORRECTION

The December 1985 Newsletter mis-reported corporate subscriptions. The correct fees are:

Corporate Sponsorship \$140  
Corporate Membership \$ 60

We apologize for the error.



## THE THINKING ORGANISATION

Rolfe Tomlinson

Professor of Systems and Operational Research, and  
Director, Institute for Management Research and Development  
University of Warwick

(Wellington Branch Meeting, 17 February 1986)

Prof Rolfe Tomlinson who has just completed 2 months sabbatical at Applied Maths Div., DSIR gave a stimulating talk to about 90 people on the importance of the task of 'thinking' in organisations. He drew on his experience in the UK Coal Board, where he led an O.R. group of about 100, and also from his experience as a consultant to the Tennessee Valley Authority, a large organisation concerned with water control and electricity generation.

The importance of the task of 'thinking' in an organisation is evident when it is considered as a system. In general, a viable system may be comprised of i)the operating manager, ii)the corporate regulating centre, iii)the corporate general manager, iv)the development directorate, and v)the Board.

The task of 'thinking' is undertaken by the regulating centre and the and the development directorate. Prof Tomlinson made a clear distinction between those activities of an organisation which are concerned with 'doing' and those concerned with 'thinking'. The 'doing' include the gathering of statistics, the implementation and monitoring of decisions, while the 'thinking' activities involve planning, systems design and trouble-shooting.

A number of adhoc approaches are adopted by organisations to undertake the task of 'thinking'. This includes the establishment of task forces, the setting up of in-house teams, and the hiring of outside consultants. Prof Tomlinson suggested that the effectiveness of any approach can be improved if the personnel involved are fully aware of the analytical tools which can be used to choose between alternatives. He pointed out that the scope of 'thinking' should not be limited by the expertise of any individual.

The 'thinking' personnel should fully understand the internal functioning and constraints of the organisation.

Prof Tomlinson concluded by lamenting the lack of coordinated training of personnel in 'thinking' in organisations and educational institutions.

Chris Darkey

# A SYSTEMS APPROACH TO STRATEGIC PLANNING

Rolfe Tomlinson

(Wellington, 26 February 1986)

Prof Tomlinson's second seminar on planning was attended by about 100 people. Many of these had, undoubtedly, enjoyed and benefitted from his talk the previous week and were back for more.

He began by defining strategic planning as the process of developing, and continually updating, a world view against which major strategic decisions (major investments, structural reorganisations, policy formulation, etc) can be set and evaluated. He emphasised that the word 'process' implied 'ongoing' and that he was not talking about the drawing up of plans.

Control systems were said to be applicable to this process and a simple one was described. A control system must take account of environmental change, requires resources and has a time lag of corrective measures designed for one environment being applied in a 'new' environment. In the long term a complex control system is required. Information about the system must be fed forward rather than backward. A control system for strategic decision-making, with an outer 'doing' loop and an inner 'thinking' loop was designed to match future performance with an objective or target in a changing world. The elements essential to this control system were listed as :-

1. Set and review objectives ( the business of the organisation)
2. Gap Analysis
3. Selection of options - some forced out if necessary
4. Option formulation and screening
5. A feasibility study
6. Resources - assessment of these must be comprehensive
7. Possible external and internal change
8. A system model
9. A recording system
10. Performance predictors (feedback)
11. An implementation process - a management task

Prof Tomlinson suggested that had he asked the audience to list these elements, at least one would have been missing!

Planning is a management task, not the responsibility of the analyst who advises management. The analyst's tools are data and intelligence, models of behaviour (learning/experience, corporate and external), projections and decision aids (for converting qualitative information into quantitative terms). The relationship between the analyst's tools and the elements of the planning process were described.

Prof Tomlinson's concluding words of advice were that good decisions evolve as information is acquired and analysed, that management who make decisions must be 'involved' in planning, and that there must be somebody to make sure that planning is implemented. He advocated self-consistent scenarios rather than independent extrapolations of data for testing options. More than one scenario should be used and likely ones are preferable to extreme ones.

Cheryl McDonald

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# IFORS XI

Buenos Aires, Argentina

10-14 August 1987

"OR: Supporting Decisions  
Around the World"

Members planning to go should notify the ORSNZ Secretary by 30 June 1986, with abstract of paper, if they wish to be considered for New Zealand's National Contribution.

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A summary of Prof Tomlinson's first talk on "The Thinking Organisation" and the paper on Which "A Systems Approach to Strategic Planning" was based are available from:

Rona Bailey  
AMD, DSIR, Box 1335  
Wellington  
(Ph 727-855)

for a processing charge of \$2 each.

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## FORTHCOMING CONFERENCES

- Apr 14-16 ORSA/TIMS  
(Los Angeles)
- June 15-18 6th Int. Symposium on Forecasting, (Paris)
- Aug 18-22 3rd Latin-Ibero American Congress on O.R. & Systems Engineering (Santiago, Chile)
- Sept 16-19 EURO VIII  
(Lisbon, Portugal)

For further information, contact:

The Secretary  
ORSNZ  
Box 904  
Wellington

### WOMEN in O.R.

As for most voluntary surveys, IFORS' request for statistics on this subject has, so far, brought in the (in)significant number of zero(0) responses.

ORSNZ has had capable women amongst its ranks for many years. For example, our Immediate Past Secretary, Vicky Mabin, and Immediate Past Treasurer, Karen Garner, not to mention others.

But any numbers, folks? We are supposed to be a numerate profession!

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+ The DEADLINE for the JUNE +  
+ issue of the NEWSLETTER is +  
+ 16 MAY. Please send notices +  
+ news items, etc. to: +  
+ Gary Eng +  
+ Newsletter Editor +  
+ ORSNZ +  
+ Box 904 +  
+ Wellington +  
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# I.F.O.R.S.

INTERNATIONAL FEDERATION OF OPERATIONAL RESEARCH SOCIETIES

*letter from the president*

REMAINING CONCERN

No. 35, November 1985

The Operational Research community could be much more influential than it is today. This is my concern that remains after my term of office as IFORS President terminates. An increase of our influence could be based upon both, "technical" OR and "social" OR.

The field of "technical" OR is mathematics, logic, algorithms. Their potential possibilities have by far not been exhausted. There is hardly an enterprise or a public authority in which one does not stumble over problems which seem to cry for good "technical" OR - in the sense of formal structure analysis, optimisation, simulation, or forecasting. These organisations sometimes even have an OR group - but they seem to be seldomly asked. Why not? I have the impression that managers know too little about good technical OR.

Technical OR expertise may have a great future in connection with the further ascent of computer sciences/informatics. Contemporary and forthcoming information systems consist of big databases surrounded by a rich variety of "intelligent" knowledge processing full of techniques contributed by the OR community. But neither much credit is given to the OR community for such information systems - nor seem as yet many OR experts to take a lead in the development of such systems.

On the other hand, there is "social" OR. It is more problem oriented and is to help to understand social systems as well as to design and to operate them properly. Its real virtue is the interdisciplinary approach. This approach is particularly important in our time of rapid technological progress. Society, i.e. the individuals of any nation, has continually to be prepared for technological progress in order to transfer it into economic growth and in order to manage the corresponding societal change. Is this not a worthwhile task and fascinating challenge for the OR community?

In connection with this societal task there still remains a gap to be bridged, the gap between the "two cultures" of natural sciences on the one hand and social sciences (humanities, liberal arts) on the other hand. To bridge this gap would be a value in itself, independently of its many positive practical consequences. It would lead to mutual understanding between the two basic forces of the world of ideas and ideals - of research, education, and practice. "Social" OR could contribute to build this bridge.

I foresee a great future for the OR community, but it seems to need more active marketing - particularly in connection with information processing - and broader activation of the old OR virtue: interdisciplinarity.

My concern remains that such strategic aspects how to make OR more helpful in practice and to get it better appreciated are not generally shared in the international OR community.

Heiner Müller-Merbach  
President of IFORS (1983-1985)