

Proceedings of the
Sixth Australian International Conference on
SPEECH SCIENCE AND TECHNOLOGY

Adelaide
10-12 December, 1996

Edited by
Paul McCormack
Alison Russell
Flinders University of South Australia

Australian Speech Science and Technology Association
Canberra 1996

SST-96 PROCEEDINGS

Australian Speech Science and Technology
Association 1996

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Cover Picture: A Magnetic Wire Speech Recorder and an Oscillograph, as demonstrated by the Postmaster-General's Department at the Speech Sciences Unit, ANZAAS, 1946.

(Photo courtesy of The History Trust of South Australia)

FOREWORD

SST-96 is the sixth in the biennial series of Australian International Conferences on Speech Science and Technology. It was held in Adelaide from December 10-12. This conference series is organised by the Australian Speech Science and Technology Association (ASSTA). Its aim is to bring together Australian and International researchers and students from a range of disciplines from fields of speech science and technology. The program for SST-96 reflects the broad spectrum of professionals involved in this field.

The Sixth Australian International Conference on Speech Science and Technology (SST-96) marked fifty years of speech conferences in the Southern Hemisphere (and possibly the world). In 1946 the Australian and New Zealand Association for the Advancement of Science held its 25th meeting in Adelaide, including for the first time a "Unit on Speech Sciences", which ran for three days and was divided into sections on Speech Research, Speech Therapy, and Speech Education. There was also a "Demonstration by the Postmaster-General's Department of magnetic wire speech recorder, oscillograph and other apparatus". A reproduction of the program from that meeting follows, and gives us some insight into the interests of some of the pioneers in the areas of speech science and technology.

Adelaide's long tradition in speech research continues into the present, with groups active at all three South Australian universities in areas ranging from speech pathology to signal processing. SST-96 once again reflected this multidisciplinary tradition by providing opportunities for interaction between professionals from many diverse areas of expertise including engineering, communications, electronics, computer science, information processing, acoustics, phonetics and linguistics, psychology, physiology, and human communication disorders.

The conference papers are presented in these proceedings in the chronological order of papers presentations at the conference. There were over 100 papers presented with substantial overseas participation.

I would like to extend warmest congratulations to the three winners of this year's ASSTA New Researcher Awards. They were: Karen Jenkin, Parham Mokhtari, and Marija Tobain. Once again we are grateful to Cochlear Ltd and General Manager Jim Patrick for sponsorship of this award.

Finally, I would like to thank all of the authors for contributing to the success of this conference.

Andrew Butcher
Chairperson SST-96

SST-96 ORGANISING COMMITTEE

Chairperson	Andrew Butcher, Flinders University of South Australia
Secretary	Alison Russell, Flinders University of South Australia
Treasurers	Paul McCormack, Flinders University of South Australia Lynda Penny, Flinders University of South Australia
Committee Members	Andrew Downing, Flinders University of South Australia David Powers, Flinders University of South Australia Simon Dixon, Flinders University of South Australia Bill Cowley, University of South Australia John Asenstorfer, University of South Australia

Australian and New Zealand Association for the
Advancement of Science

✕ ✕

Adelaide Meeting

21st-28th August, 1946

✕ ✕

PROGRAMME

*This Programme should be retained throughout
the Meeting. There will be no further issue.*

Members should consult Notice Boards
in the Elder Hall for alterations or
additional information.

The first speech science conference held in Australia was part of the Annual Scientific Congress of the Australian & New Zealand Association for the Advancement of Science, Adelaide, August 1946. Speech science was a unit within Section F, Anthropology. The distinguished anatomist, Sir Victor Negus, is thus probably the first overseas visitor to an Australian speech science conference.

The program of that unit of the conference follows.

UNIT ON SPEECH SCIENCES

Committee - (President) Professor J A FitzHerbert, MA (Cantab.), University of Adelaide;
Professor J McKellar Stewart, MA, DPhil, Vice-Chancellor of the University of Adelaide;
Professor Kerr Grant, MSc, University of Adelaide;
Sir Trent Champion de Crespigny, MD, FRCP, University of Adelaide;
T D Campbell, DSc, DDSc, Dental Department, Royal Adelaide Hospital;
C Fenner, DSc, FRGS;
Professor A A Abbie, MD, DSc, PhD, University of Adelaide;
Sir Stanton Hicks, MD, ChB, MSc, PhD, FRIC, University of Adelaide;
E Allen, MA, Acting Director of Education, South Australia;
Miss Olive Abotomey, BA, LCST (London), Speech Therapist to the Education Department of South Australia and Lecturer in Speech Education to the Adelaide Teachers' College.

THURSDAY, 22nd AUGUST (In Anatomy Theatre)

Speech Research -

Chairman - Professor J McKellar Stewart, Vice-Chancellor of the University of Adelaide

9.30 am: Presidential Address - "The Old and the New in Speech Science" by
Professor J A FitzHerbert, MA

Papers -

10.20 am: "Rhythmic Structure of Aranda Chants," with gramophone recordings, by
T G H Strehlow, MA

10.50 am: Morning Tea

11.10 am: "Some Aspects of Spoken English in Australia," by Miss Olive Abotomey,
BA, LCST

11.30 am: Gramophone recordings. Films - "The Human Voice," "Breathing," "A Case of Spastic Paraplegia." (Loaned by the Education Department of South Australia.)

12.15 pm: *Discussion*

2.00 pm: Presidential Address for Section F.

(In Physics Department)

3.00 pm: Demonstration by Postmaster-General's Department of Magnetic Wire Speech Recorder, Oscillograph and other apparatus. This apparatus will also be exhibited throughout the Congress.

UNIT ON SPEECH SCIENCES - continued

FRIDAY 23rd AUGUST
(In Rennie Theatre)

Speech Therapy -

Chairman - Professor A A Abbie, MD, DSc, PhD

Papers -

9.30 am: "The History of Our Knowledge of Cerebral Control of speech," by
Professor A A Abbie, MD, DSc, PhD

10.15 am: *Discussion*

10.30 am: "Theory as to the Causation of Stammering and its Treatment," by
D W H Arnott, MB, ChM, FRACP, and Miss Elinor Wray, LCST

10.50 am: Morning Tea

11.10 am: "Voice Therapy for Certain Voice Disorders," by Miss Margaret Badcock,
FCST

11.30 am: "Speech Disorders in Australian School Children," by Miss Olive Abotomy,
BA, LCST

11.50 am: *Symposium - "Physical Defects Affecting the Speech Mechanism and their
Treatment: -*

- (1) G M Turnbull, MB, BS
- (2) D G McKay, MB, BS, FRCSE, FRACS
- (3) T D Campbell, DSc, DSc

12.30 pm: Note on "The Function of the Cricopharyngeus Muscle and its Bearing on the
Re-education of Patients After Laryngectomy," by V E Negus, MS, FRCS

12.45 pm: *Discussion*

(In Barr Smith Library)

2.30 pm: Linguistic Atlases and other publications will be discussed by
Professor J C FitzHerbert, MA

(In Physics Theatre)

7.30 pm: Address - "Problems in the Transmission of Sound," by F P O'Grady, Chief
Transmission Engineer, Postmaster-General's Department, with demonstration of
apparatus supplied by Postmaster-General's Department

8.15 pm: *Discussion*

8.30 pm: Gramophone recordings of English Dialects

9.00 pm: Scenes from the British film "Pygmalion," will be shown by courtesy of
Caumont-British dominions Film Distributors, 20th Century Fox Film Corporation
(Aust) Pty Ltd., and Film Renters' Association of Australia, Ltd.

UNIT ON SPEECH SCIENCES - continued

MONDAY, 26th AUGUST
(In Classics Room)

Speech Education and General Session

Chairman - (To be announced)

Papers -

- 9.30 am: "A New Tendency in Swedish Word Formation," by H Pollak, DrPhil
- 9.50 am: "Speech Education in Victorian Schools," by Miss Ellie Colelough, LASA
- 10.10 am: "Recent Developments in New Zealand" (by a representative of the Speech Therapists of New Zealand)
- 10.30 am: "Speech Therapy in Great Britian," by Miss Margaret Badcock, FCST
- 10.50 am: Morning Tea
- 11.15 am: *General Discussion* -
- (1) A Plan for Speech Education
 - (2) Phonetics and the Study of Foreign Tongues
 - (3) The Development of Speech Research, Therapy and Education in Australia and New Zealand

A collection of Linguistic Atlases and other publications will be exhibited in the Barr Smith Library through the Congress.

By courtesy of the Postmaster-General's Department and the Department of the Army, recording and other apparatus will be demonstrated throughout the Congress in the Physics Department of the University of Adelaide. It will be possible for members wishing to do so to hear recordings of their own speech. The Postmaster-General's Department has also invited members to visit places of interest in the Department. Further details of this will be announced at the Meeting.

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