

Ffookes described a symbol test for visual acuity. From a chart, the child had to recognise only a square, a circle, or a triangle and pick up an object of the same shape (contour matching). This is a simple test that can readily include parent involvement for teaching the child.

Orthoptists should seize these new learning possibilities and develop them. They now have an encouragement to pursue earlier and earlier testing. They should watch the commercial games and toys and see if they can be adapted to their advantage.

The main bugbear of squint treatment is that before it can be given on the sensory side, children have ingrained binocular perversions or adaptations that cannot be removed because they are too deeply established before the child can benefit from formal instruction. Orthoptists need to watch the more sophisticated early learning of children and take any advantage of it in their work.

Many children now receive very early surgery that gives cosmetically good-looking eyes, but leaves many of these eyes without good binocular function. In these infants there is a grave risk of amblyopia in one eye. Ideally, one should be able to measure the visual acuity of each eye soon after the operation and continue to check it.

After a few visits without definite measurements of vision, some parents think that nothing is being achieved by repeated examinations, and as there seems to be nothing wrong with the eyes they fail to bring the child for further supervision. Unfortunately in these cases, the first accurate test is delayed until the School Medical Examination at perhaps age six years. Amblyopia which is then discovered may not respond to treatment. These are tragedies.

We need earlier and earlier testing, not necessarily as refined as later, but of sufficient accuracy to show any significant difference in the vision between the two eyes. We need repeated assessment of learning ability of young children for procedures that may be useful for the training of vision.

With those challenges I have much pleasure in declaring open this Annual Scientific Meeting.

REFERENCE:

Ffookes, O. (1965) *Vision Test for Children*. Brit. J. Ophthal., 49:312.

Presidential Address

ORTHOPTICS: PAST, PRESENT, AND FUTURE

Patricia Lance

Part I. Presented in Canberra, April, 1973

In welcoming you all to our Annual Congress I feel I can safely predict that this meeting in Canberra will be a memorable one. First and foremost it is a wonderful occasion because it has brought together 74 orthoptists in one place - by far the largest gathering of orthoptists ever held in Australia, and I hope the forerunner of many such meetings. It is also important because it is the first time that strabismus has been a central topic in a scientific meeting of the Australian College of Ophthalmologists. We are privileged once more to be able to attend these meetings, and are pleased that some of our members have been invited to read papers.

This meeting is important too because the future of orthoptics in Australia depends on decisions now being made. The imminent removal of the New South Wales School of Orthoptics from the guidance of the Orthoptic Board of Australia, and its forthcoming inclusion in a College of Advanced Education, make this a time to take stock, to take a short look back into the past and to ponder for a moment on our possible future.

About 20 years ago, in a moment of youthful enthusiasm, I attempted to trace for you the history of strabismus and its treatment from the earliest historical records up to 1950. I am not so foolish as to repeat that today, but I do think it is important to keep our history up to date, and to remind some of our newer members of our own early days.

Australian orthoptics has developed from, and is still closely connected with orthoptics as prescribed by the British Orthoptic Board, and reciprocity between graduates of the British schools and the two Australian schools is a much valued privilege. Orthoptic treatment probably began in France with such famous men as Cantonnet, Remy, and Javal. However, long before Javal treated his sister's squint with stereoscopic exercises, Kreche, an optical physicist from Utrecht, was using prisms to treat squint; so present day prism therapy is not such a new idea. Emils Donders, also of Utrecht, demonstrated the relationship between accommodation and convergence and was the first to treat convergent squint by correcting the hypermetropia. Many more examples could be given, but in spite of the great men from other countries who contributed to the understanding of strabismus and its treatment, modern orthoptics still looks to England; here it was that the first non-medical women commenced to work with ophthalmologists and became known as orthoptists.

Thanks to some of the early work in England by such men as Priestly-Smith and Claud Worth, Ernest Maddox decided to train his daughter Mary to work with him in the treatment of squint. Miss Maddox started orthoptic work in London in 1919, and was the first orthoptist appointed to a hospital. She founded the orthoptic clinic at the Royal Westminster Ophthalmic Hospital in 1930, and was followed there a year later by two of her pupils, Miss Sylvia Jackson and Miss Irvine.

In 1934 the British Orthoptic Board was formed, the first syllabus for training orthoptists was devised, and training schools developed in various parts of Great Britain. In 1936 the first orthoptic examinations were held in England and in 1937 more than 50 orthoptists met in London to form the British Orthoptic Society.

Australia was well to the fore in this new venture. Just one year after Miss Maddox started work at the Royal Westminster Hospital the first orthoptic clinic was opened in Melbourne (in 1931) as the Sight Saving Clinic at the Alfred Hospital. Dr. J. Ringland Anderson brought the first synoptophore to Australia and Mrs. Alan Southey was the first orthoptist to practice in Melbourne. Others followed, entering private practice, and the Victorian Eye and Ear Hospital soon opened its orthoptic clinic.

In 1932 Miss Emmie Russell travelled from Sydney to train with the four orthoptists working in Melbourne, and was joined by Miss Gilchrist and Miss Willoughby. These last two together with Miss Fox then went to England and obtained the diploma of the British Orthoptic Board. On their return Miss Fox resumed her practice in Melbourne, Miss Gilchrist set up practice in Hobart, and Miss Willoughby (now Mrs. Retaillic and happily at this meeting today) commenced orthoptics in Adelaide. Miss Russell returned to Sydney and entered private practice in 1933; six months later she started the first orthoptic clinic in Sydney at the Royal Alexandra Hospital for Children. Orthoptic clinics were soon opened at Royal Prince Alfred Hospital, Sydney Hospital, and the Medical Eye Service of New South Wales.

In March 1938 the first meeting of the Orthoptic Council of New South Wales (a sub-committee of the Ophthalmological Society of New South Wales) was held, with Dr. Granville Waddy in the chair. This committee examined for registration the five orthoptists already working in Sydney, and required that future applicants for registration, unless holding the diploma of the British Orthoptic Board, should undergo a twelve months course of instruction followed by an examination. Two such courses were held in 1939 and 1941 before training of students was suspended until after the conclusion of World War II. During the war orthoptists were employed as civilians in the Royal Australian Air Force, at first testing candidates for air crew and later giving treatment, especially of paralytic

squints and heterophorias.

Following the inauguration of the Ophthalmological Society of Australia in 1938, an Orthoptic Board of Australia was formed with ophthalmologists representing each State. Dr. Norman Gregg (later Sir Norman) of Sydney was the first chairman and Dr. F. Fenton of Melbourne the Honorary Secretary. This Board was at first responsible for the training and examining of students in Victoria and granted registration to the successful examinees as well as to diploma holders of the Orthoptic Council of New South Wales or of the British Orthoptic Board. In 1947 reciprocity was granted by the British Orthoptic Board and there has been an exchange of orthoptists between the United Kingdom and Australia ever since.

After the war an increasing number of orthoptists were trained in both Sydney and Melbourne. Annual training courses commenced in Sydney in 1953 and in 1956 the course was extended to two years. Graduates of the two schools set up clinics in all State capitals and many country centres.

In 1942 Miss Diana Mann of Melbourne (now Mrs. Craig, and also here today) was invited by Miss Emmie Russell to Sydney to join in planning the formation of an association of orthoptists. As a result of this meeting the Orthoptic Association of Australia was officially inaugurated in 1943 with the late Sir Norman Gregg as its first president. The Association has met annually since that time to hold formal business meetings and scientific programmes. On these occasions we have had many distinguished guest speakers, and interesting papers have been read by our own members.

The proceedings of the early meetings were duplicated and sent out as typed notes to members and interested ophthalmologists. Later a more ambitious bound publication was the Annual Report of these meetings, and in 1966 the first printed journal was published. The Australian Orthoptic Journal has now become a suitable medium for the publication of articles by our members, with a much wider distribution. For the sake of their historical value, Miss Jane Russell of Sydney has collected, indexed, and photocopied all numbers of the early transactions. Three full sets have been bound, each into two volumes. One pair of these is in the library of the New South Wales branch, and one in the library of the Paramedical College. I now have the honour to present to this Association a copy which I dedicate to the memory of my late father Dr. Arnold Lance, an ophthalmologist who from the early days was a good friend to this Association. It has been suggested that the National Library in Canberra would be a suitable place for these two volumes to be housed.

Turning again to the history of our Association, 1964 stands out as an important year. That year saw the twenty-first birthday celebrations of the Orthoptic Association of Australia; the first joint examinations were conducted by the Orthoptic Board of Australia for students from both the orthoptic schools, and for the first time orthoptists were represented on the Orthoptic Board. The next major milestone may well prove to be 1973.

This year sees our membership increased to 120, of whom 96 are ordinary members. While the greatest number still come from New South Wales and Victoria, it is very pleasing to see the increase in numbers in the other States. All States are now represented in our Association and the two training schools are increasing their intake of students to supply this demand. There is a tendency now for orthoptists to practice in more peripheral areas of the big cities and in the larger country towns, in fact wherever there is an ophthalmologist practicing. More are working in so-called sponsored practices with individual or group practice ophthalmologists, most on a part time basis. There is a growing trend for some ophthalmologists to use orthoptists as ophthalmic assistants or technicians, so one matter which our Association is now called upon to consider is the exact role of an orthoptist.

Should orthoptists continue in the strictly conventional role of testing and treating cases of ocular muscle and binocular vision defects? How far should they undertake work as ophthalmic assistants? Can these two functions be combined? Fears have been expressed that routine work as ophthalmic assistants will lower the status of an orthoptist and some employing authorities already assert this. However, many orthoptists report great satisfaction from their additional roles in working as part of the eye care team. Certainly these appear to give more employment prospects. I ask all members to ponder these matters carefully.

In 1970 the Minister of Education in New South Wales decided to include orthoptics in the New South Wales College of Paramedical Studies to join the schools of physiotherapy, occupational therapy, speech therapy and advanced nursing. Thus orthoptics has entered the field of government subsidised advanced tertiary education. In 1971 an interim council was formed to organise the Paramedical College and Dr. M. Sterling-Levis and myself were appointed to this council. On Dr. Sterling-Levis' retirement due to an extended visit abroad, his place was taken by Dr. Bruce Goodwin Hill and last month on my appointment as Head of the Orthoptic School, Miss Helen Hawkeswood was appointed to take my place. The council has worked extremely hard to plan for the development of the College and to co-ordinate the education of the paramedical professions. At present the schools are scattered around Sydney, but it is hoped to build a central campus as soon as possible.

The decision of the orthoptic school to enter this College was not taken lightly. The New South Wales branch of the Orthoptic Board of Australia has had to decide how far its members could relinquish their role as teachers and examiners; the Orthoptic Board of Australia has had to decide whether it will register orthoptic diplomates of the College; and the New South Wales branch of our Association has had to consider its position in the light of these developments. Not all of these matters have been decided at the time of speaking to you.

My appointment is too recent for me to pass on any constructive ideas to you but as the Orthoptic School does not officially come under the jurisdiction of the College until July 1st this year, there will be few if any changes at present.

Next year I hope I will be able to be more informative. Meanwhile you may rest assured that this appointment has not in any way changed my attitude to orthoptics. The school will be part of an independent tertiary institution, but I am first and foremost an orthoptist. As a founder member of this Association who is honoured to be your president and proud to be an Honorary Member, I can assure you that I will continue to be loyal to the Orthoptic Association and will have your interests always at heart. My aim will be still to train orthoptists whom we can be proud to welcome in the future as colleagues.

Part II: presented in Adelaide, April, 1974

When the New South Wales College of Paramedical Education was established to supply an increasing need, recognised by Federal and State Governments, for more qualified practitioners in the health professions, it assumed responsibility for the teaching hitherto provided by the New South Wales College of Nursing, the New South Wales School of Orthoptics, the New South Wales College of Occupational Therapy, the New South Wales School of Physiotherapy, and the New South Wales Speech Therapy Training School.

The main college is to be built on a forty acre site at Lidcombe to provide for about 1800 students. Until a move to Lidcombe is feasible, the College will continue to operate in five separate places in Sydney. Over 750 students are enrolled for 1974. The Orthoptic School has joined the School of Physiotherapy in Salisbury Road, Camperdown.

The Interim Council "has sought to provide an academic structure which recognises the academic autonomy of each school, involves the academic staff in policy making and course development, and provides machinery whereby the College can develop as a unified tertiary institution."

The governing body of the College is the Council. It is advised by the Principal, who presides over an Academic Council, made up of the permanent teaching staff. Nine Standing Committees of the Academic Council deal respectively with admissions, clinical education, education, examinations and progressions, resources, research, student affairs, and time tables and calendar. These committees report to the Executive Board, which is composed of senior members of staff and conducts the daily affairs of the College.

Teaching, research, supervision and examination of subjects related to any one profession are the responsibility of the Head of the relevant School. Two Departments, one of Behavioural and one of Biological Science, provide undergraduate courses for all Schools, offer elective strands in the undergraduate programme, and course units in the post-graduate programmes.

Each head of a school or department is chairman of a Board of Studies made up of all permanent teaching staff in the same body, which considers curriculum proposals and passes them on to the Academic Council and appropriate Committee. A proposal for any significant change must be referred to an External Advisory Committee, which is chaired by a member of the Council, appointed by the Council, and includes members of the profession concerned.

With the new college assuming responsibility for the Orthoptic School on July 1st, 1973, it was agreed that students already in training should continue with the curriculum that they had commenced and should be examined by the Orthoptic Board of Australia as usual at the end of 1973. The eight Second Year students all passed their final examinations and were registered by the Orthoptic Board of Australia.

The eight First Year students were also examined by the Orthoptic Board of Australia in November, 1973 in anatomy, physiology and optics and in addition were given an orthoptics paper by the School. These students commenced their second year in January this year with their curriculum substantially the same in content as before. The only addition has been the inclusion of a short course of ten lectures in introductory psychology being given by a member of the Behavioural Studies staff of the College.

A few weeks ago at the beginning of March, fourteen students were admitted to the College to commence a two-year programme in Orthoptics. There has been too little time to make any real change in the curriculum so the syllabus of the Orthoptic Board of Australia has been used as the basis of this course. These students are however taking the Psychology I strand with the students of the other Schools of the College. General anatomy, general physiology and the physics of light and lenses are being taught by members of the department of Biological Sciences of the College. The same ophthalmologist lecturers as last year are teaching ocular anatomy and physiology and physiological optics.

The Orthoptic School is fortunate to have obtained the services of Miss V. Spooner, D.B.O. (T) as visiting lecturer for twelve months* and she is giving most of the orthoptic lectures and tutorials. Miss Spooner graduated from Moorfields Eye Hospital, London, in 1951 and gained wide clinical experience in England and Scotland. In 1957 she went to Canada where she was involved in training orthoptic students until 1961. During this period she obtained the American Certification of Orthoptics. During 1962 and 1963 she was on the teaching staff of Moorfields and obtained her teacher's certificate in London. In 1964 she opened the first Orthoptic School in Wales at the University Hospital of Wales in Cardiff.

* Now extended to eighteen months

Throughout this year continual assessments will be made of the students' standards in all subjects. As well, term examinations will be given by the lecturers in each subject.

The Orthoptic School is preparing a submission for the Advanced Education Board for recognition of a three year course in Orthoptics to be conducted by the College. At the moment this submission is being closely examined by the school's External Advisory Committee comprised of ophthalmologists and orthoptists. If the submission is successful a three year course should be commenced in 1975. The syllabus being considered is the same as that of the Orthoptic Board of Australia with the addition of some behavioural studies. In recent years however, it has become increasingly clear that the student needs to study certain areas of Orthoptics in greater depth and to have a general background in both the behavioural and biological sciences. The need to develop a three year Orthoptics Course in this College has become apparent. More specifically the development of this course has become necessary due to the need to give the student a better understanding of ocular anatomy, ocular physiology and optics by providing a more thorough basis in general anatomy, physiology and physics; the need for the student to have a more comprehensive understanding of the behavioural sciences; the need to give each student time for elective study of special aspects of orthoptics; the need to fit the required number of clinical hours into the expanded academic programme; and the need for the course, which already extends over 94 weeks, to be accommodated within the organizational format of the New South Wales College of Paramedical Studies as a whole.

NEW BINOCULAR FACTORS IN READING DISABILITY

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ABSTRACT.

An orthoptic survey of a group of reading disabled high school pupils matched with an equal number of normal pupils is discussed. A new orthoptic test for reference eye in central binocular vision is introduced, which will be of value in differentiating the visual type of dyslexia.

Introduction

A study in 1971 on primary school children with reading disability revealed interesting new results in the analysis of binocular vision and laterality. Visual tests employed in the study included a new orthoptic test for reference eye in central binocular vision.

For many years, hand-eye dominance has been investigated, discussed and reviewed in relation to cases of learning disability (Walls 1951, Lederer 1961, Critchley 1970, Brod & Hamilton 1971, Gronwall and Sampson 1971). Various methods have been used to decide on the dominant eye, from the early sighting eye tests which were obviously monocular, to the controlling eye test used by Berner and Berner in 1953 and more recently by Bettman et al (1967), Norn et al (1969), Helveston et al (1970), and Hurtt (1971).

Reading normally involves the use of both eyes so that it is not surprising that investigations using monocular tests have yielded inconsistent results. Attempts to introduce a binocular element into the investigations by the use of controlling eye tests or tests based on retinal rivalry (Raynor-Smith 1970) similarly produced non-significant results. In retinal rivalry the two images are too dissimilar to allow normal fusion, and in the controlling eye test one image has been suppressed at the point of decision.

Helveston (1968) remarked that "of the 15 eye functions he listed, only binocular eye control behaviour and phorias were considered to be even possibly significant."

The significance of the newly discovered central overlap of binocular fields is