

WILKINSON ORATION* Professional Education and Social Change

G.N. Davies D.D.S.(N.Z.), D.D.S.(N.U.), F.D.S.R.C.S., F.R.A.C.D.S., F.A.C.D.
Deputy Vice-Chancellor (Academic) University of Queensland

*The lives of great men all remind us
We can make our lives sublime
And departing leave behind us
Footsteps on the sands of time*

When Longfellow wrote those words in the *Psalm of Life* the sort of person he had in mind was assuredly the man in whose labour this Oration was inaugurated.

Dr William Stanley Wilkinson made an immense contribution not only to the development of the specialty of orthodontics in Australia but also rendered conspicuous service in almost all of the varied functions and responsibilities of the Australian Dental Association. He was in the very best sense of the term a well-rounded professional man: skillful practitioner, life-time student, stimulating lecturer, efficient administrator, shrewd dental politician, humanitarian, community leader and benefactor.

He served as President of the Melbourne Dental Hospital, Chairman of the Council of the Australian College of Dentistry, President of the Victorian State Branch, Federal President of the Australian Dental Association, founder and first President of the Australian Society of Orthodontists, member of the National Health and Medical Research Council and member of the governing body of the Royal Flying Doctor Service.

That record says much for Wilkinson the devoted servant of his profession and explains why both the Australian Dental Association and your Society, Mr President, conferred upon him the highest of honours—that of Life Membership.

But the record says little of his warmth, his generosity and his feeling for people. He was a man of strong convictions and expressed his views with such vigour and force that people in high places listened to him with respect and more often than not acted on his advice.

He was the first specialist orthodontist in Victoria and that reminds me to remind you of the quite extraordinary precedent of service to the profession as a whole which he set for other members of your specialty to follow. In particular orthodontists can claim an outstanding record in the administrative leadership of the profession in both Australia and New Zealand. Before I left New Zealand Ron Tonkin was President of the New Zealand Dental Association. Since I have been here the Australian Dental Association had been led by Ken Adamson, Bob Norton and Ren Newbury. They followed the excellent example set by Stanley Wilkinson and I acknowledge their respective contributions with pleasure and gratitude. All of us owe them a great deal. In the words of Longfellow's poem they have followed in the footsteps left behind by Stanley Wilkinson.

I must confess to some surprise when your President invited me to present this oration. While I was very conscious of the honour I was also somewhat dubious of the reason for selecting me especially when he said that I had taken part and

* Delivered at 7th Australian Orthodontic Congress, Queensland, 1977.

"created such an impression in 1966 at our Third Orthodontic Congress held at Surfers Paradise."

That I created an impression I have no doubt because I recall vividly the blistering reaction on the part of at least one of the members to some of the provocative things I said. However, I must confess that I am by no means dismayed by that and, in the hope that Stanley Wilkinson might have approved, I intend to be equally provocative now.

The title of my paper is somewhat misleading. While I do intend to say something about the influence of current political and social change on professional education I want to zero in more specifically on current developments and the future of orthodontics as a health service.

When I talk about the role of the universities in the education of students for entry to the professions it is perhaps necessary to describe what distinguishes a professional occupation from another job. Cassidy (1977) describes professionalism as a code of conduct in which superior knowledge, skill and judgement is applied toward the benefit of another person or society prior to any consideration of self-interest. Thus, as Nelson (1977) says, a professional person has not only a responsibility but an obligation to serve and guide the interests of the public. It is the acceptance of the responsibility for making a value judgement on behalf of another that distinguishes the professional from the craftsman and tradesman.

In fairness I should perhaps add that not everyone sees the professions in this favourable light. George Bernard Shaw, for example, in his play the *Doctor's Dilemma* described all professions as conspiracies against the laity and Henry Thoreau said:

"As for Doing-good, that is one of the professions which are full. Moreover I have tried it fairly, and, strange as it may seem, am satisfied that it does not agree with my constitution."

Fortunately dentists are made of sterner stuff.

Of the many factors which influence professional education two make a thorough review of the present position timely. These are Government action with respect to post-secondary education and socioeconomic policy.

We are living in difficult times. When the economy of the country is in difficulties it is the duty and responsibility of Government to determine national priorities and all educational institutions must expect to contribute to the cutback in government expenditure.

The Federal Government has taken two very significant initiatives. It has legislated to abolish the three Commissions which dealt respectively with the Universities, the Colleges of Advanced Education and Technical and Further Education. Instead, there will be a single Tertiary Education Commission responsible for examining the overall provision of opportunities for post-secondary education including the greater rationalization of the use of resources. The new Commission will be advised by three Councils representing the three sectors of tertiary education.

The second initiative has been the establishment of a Committee of Inquiry chaired by the Vice-Chancellor of the University of Sydney, Professor Williams, to study and report on all aspects of tertiary education and training in Australia.

One very important assignment of the Committee will be to clarify and define the respective roles, responsibilities and objectives of the universities, the colleges and the institutions of technical and further education. This is a formidable task

and a task that is of more than passing interest to the dental profession. I do not know whether the dental association made a submission to the Williams Committee but if it didn't it should request the opportunity to do so even though the deadline for the receipt of submissions was March 31st. The reason for this should be obvious. The education of dentists is a responsibility of the Universities but through its commitment to the training and employment of auxiliaries such as dental therapists, dental hygienists, dental technicians and dental assistants the profession also has a very real interest in and concern for the objectives and policies of the Colleges of Advanced Education and the Institutions of Technical and Further Education.

I simply draw your attention to the importance of this matter and say no more about it because it is outside my present brief.

My assignment is to discuss professional education within the University context. It seems to me that Universities have four major functions:

- the pursuit of excellence in teaching and research;
- to improve the quality of courses designed to prepare students for entry to the learned professions;
- to give increasing support to continuing education for graduate members of the professions and to sustain and expand the general level of education in the adult population; and
- to encourage academic staff and students to participate actively in the professional, cultural, political, social and economic life of the community.

Of all educational institutions the Universities should carry the major responsibility for the establishment and maintenance of standards of academic excellence and for the discovery, accumulation and dissemination of knowledge. Note that I linked teaching and research together. This was quite deliberate because I concur with the opinion of Sloman (1970) who said that research in a University which does not inform and enrich the teaching is nearly always sterile and that teaching which does not spring from research and from scholarship is nearly always second-rate. There is also, of course, at least in some professional fields such as ours, a need for highly skilled clinicians who can inspire students through their demonstrable capacity for and insistence on excellence in all they do. Such teachers may devote little or no time to research and may not therefore advance the frontiers of knowledge; they have an essential role to play in the dissemination of skills and attitudes and it should be recognized. But they should not be allowed to dominate the academic work of a University department. A University department which does not have a bold commitment to research has a doubtful place in a University. As Peter Abelard (1976) said:

"constant questioning is the first key to wisdom. For through doubt we are led to enquiry, and by enquiry we discern the truth."

We should not be diverted from this high purpose by the clamour of the anti-intellectuals. What we must do is to instil within our Universities a greater sensitivity to the impact of our research on society and we should not forget that the support for it depends on the beliefs of those who pay for it—politicians, administrators and ultimately the public which produces the revenue.

There is a strong tradition in Australia that a profession gains public recognition only when its entrants are University graduates. The recent expansion in the activities of the Colleges of Advanced Education might change this. Their growth has been

rapid in both size and number but their roles and those of the Universities have become less and less distinguishable until there is now a real risk that unless corrective action is taken soon the duplication of effort and competition for scarce resources will result in an overall decline in the quality of our entire tertiary educational system.

During this century the Universities have had to meet increasing demands for the vocational education of professionals whose knowledge, skills and attitudes are required to sustain and advance the cultural, social and economic objectives of the country. This growth has been so great, indeed, that the Universities have had increasing difficulty in striking a proper balance between the "general education" function and the "professional vocational" function. Furthermore, questions are now being asked whether there is something about a particular profession that can be supplied only by a University and not by an Institute of Technology or College of Advanced Education. This is a question which the Williams Committee will need to consider and answer.

It is the view of the University of Queensland that, if a clear distinction is to be made between the Colleges and the Universities, the Universities will have to re-establish their traditional function of discovering and disseminating new knowledge by placing greater emphasis on postgraduate education and research. The Universities must also play an increasingly active role in continuing education for graduates.

It is now generally agreed that the continuing rapid growth in knowledge and technology has made it essential to provide programs of postgraduate and continuing education to upgrade, refresh and diversify professional and vocational skills. This, of course, has been recognized in dentistry ever since G.V. Black asserted that a professional man has no right to be other than a continuous student. The Australian Dental Association and its affiliated Societies and Study Groups including your Society, Mr President, have set an excellent example to other professional groups. Cooperation with the universities has in general been excellent but before the current trend in the United States to make evidence of continuing education a prerequisite to the renewal of a licence to practice can be adopted here there will need to be a vast expansion in, and rationalization of, our existing educational resources. I understand that the introduction of such a scheme is under consideration by the Education Committee of the Australian Dental Association but I do hope we won't adopt the idea until an effective, meaningful and practical plan is evolved. Tokenism is not good enough and indeed could be positively harmful.

The Universities Commission has proposed that assistance should be provided to Universities to enable them to expand continuing education programs. Unfortunately due to financial difficulties, implementation of this proposal has been deferred but most Universities, and certainly the University of Queensland, are ready and willing to make a substantial contribution as soon as economic circumstances permit.

In a stimulating article in the April 1977 issue of the New Zealand Dental Journal, the Vice-Chancellor of Otago University (Irvine, 1977) specified four functions as descriptive of the purpose of education in a dental school. First, it must preserve, enlarge and spread knowledge through scholarship and research; specifically, to make an exhaustive study of everything already known about a subject, to discover new knowledge and develop new ideas. Second, it should prepare students to play a meaningful role in Society by encouraging them to develop standards with integrity and to defend them with force and eloquence; to show them how to develop habits

of logical thought and intellectual curiosity which enables them to evaluate critically current ideas and facilitate the process by which those ideas will be replaced by new ones. The third function is the obvious vocational function of producing professional personnel with the knowledge and skills required of a competent dental practitioner. The fourth function which he says is so important in a modern dental school that it should have separate status is to link its aims and ideals with the life of the community it serves by continually assessing the relevance of its educational programmes to community needs.

Irvine contends that the training of many dental students of the 1950s and 1960s was satisfactory in a technical sense but unsatisfactory as an education. Students tended to lack curiosity and initiative; their powers of observation were relatively under-developed; their ability to arrange and interpret facts was poor and they lacked precision in the use of words.

In our increasingly complex society we are, he says, faced with the resolution in a technical and social sense of many problems. The conventional wisdom of dental education is that it aims to produce the experts and the ideas required to maintain progress in dental care. He claims that it has an equally important role to produce a group of informed people who can play a part in solving the problems of modern society—people who have been prepared by higher education to see the significance and urgency of the issues of the future. Dentists will only contribute to the solution of these problems if dental education is planned in a much wider sense than it was in the past.

So much for the role of the Universities in dental education. I now turn to an examination of the effect of recent social changes on dental practice.

The major social change which has already had a significant impact on the practice of dentistry in Australia is the introduction of the School Dental Service. The original plan provided, in my view, for a rate of growth which was excessively rapid and would have had a profound influence on those practitioners whose practices included a high proportion of children. These effects would have been most obvious in urban centres where there was a low patient:dentist ratio. Fortunately, because of financial constraints, the rate of expansion of the program has been slowed down. Nevertheless, at least in the short term, there will still be a demonstrable effect on those practices which are either currently in balance or not as busy as they would like to be or could be.

In the long term, however, the operation of the school dental service should result in an increased demand for the services of general practitioners by those children who, having attended the school dental service on a regular basis, cease to be eligible for care under that scheme.

The School Dental Service will have a predictable but quite different effect on orthodontics. As the caries problem is brought progressively under control there will be a steady increase in the demand for orthodontic treatment. This will necessitate a careful re-assessment of the current system of providing orthodontic care and I shall elaborate on that theme in a moment.

Another recent socio-economic factor which will have an increasing influence on conventional private dental practice is the introduction of Medibank. Despite the modifications which have been made to the scheme by the present Government it remains a national affirmation of the principle of making more health services available to more people at a cost that is acceptable to the majority of our citizens. While Medibank is not involved in dentistry it has introduced a strong element of

competition with the private insurance funds.* The response of some of the funds has been to introduce dental benefits. This has attracted a great deal of public support to the benefit of private practice but to the detriment of Australian Dental Plans which, I understand, is now moribund.

A third social factor which has both an immediate and long term effect on private practice is the introduction, in Victoria for example, of legislation to permit direct access to patients by advanced dental technicians. This may mean that an increasing proportion of adult patients will no longer go to private practitioners. This, together with the operation of the school dental service, places the general practitioner in a squeeze-play which will ultimately necessitate a re-evaluation of our present system of delivering dental care.

The fourth factor which I believe will ultimately force change is the growing awareness that our present method of providing regular dental rehabilitative care is excessively expensive and distressingly ineffective in meeting the long-term objective of ensuring that people retain their teeth for life.

The practice of dentistry and the education of dental students has traditionally been mainly concerned with the recognition and restorative treatment or control of discrete oral diseases, disorders or handicaps after they have occurred; despite the fact that treatment won't reduce the prevalence of these defects in the community.

For too long we have happily accepted the proposition that that statement is just academic humbug and bears no relation to what the 'wet-fingered' dentist knows. The trouble is that a rapidly growing bank of independent but objective observations establishes that it is true and it won't be very long before governments and the public who support them also recognize that it is true.

Let me quote just a few examples by way of evidence. In Denmark, Christensen (1976) established that there was no significant difference in DMF rates between adults aged 35-44 years who attended for regular dental treatment and those who did not attend regularly. I established that the same was true for compulsory military training recruits in New Zealand (1959). Holloway (1975) demonstrated that the long-term effect of regular dental treatment under the National Health Service in the United Kingdom was to postpone the breakdown of the natural dentition by only five years—and that, I suggest, is an inordinately expensive use of expert but limited resources. The World Health Organization/United States Public Health Service Collaborative Study (1977) provided further confirmation and revealed that among adults aged 35-44 years the percentage who were edentulous was highest in New Zealand (36%) where regular dental treatment for children up to age 16 has been readily available for many years and lowest in Japan (0%) where regular dental care for children is not provided at all. A final example comes from Finland where Ainamo and Holmberg (1973) evaluated the benefit left from free dental care at school after an average time interval of seven years. The results showed that the average of 10 filled and extracted tooth surfaces at the end of school had increased seven years later to 37. Of the teeth filled at school only 26 per cent needed no further treatment, 15 per cent had been properly retreated, 35 per cent were decayed, 13 per cent were retreated and re-decayed and 11 per cent had been extracted. The authors modestly conclude that *"constant free repair of the teeth does not seem to give long-term relief from the caries problem."*

* Since the delivery of this Oration, Medibank has introduced dental benefits.

From these and other facts I conclude that it is time for the profession to commission an in-depth study of the long-term influence of its current system of providing dental care. Obviously, since the practice of dentistry affects and is affected by the curricula of our dental schools, it is also time to evaluate and review the objectives, effectiveness and future direction of dental education. If we don't it is very likely that economic, social and political pressures will ultimately cause others to do it for us.

Since it is impossible to devote all our resources to health care there must be trade-offs between the prevention and treatment of diseases and all the other things that individuals and society want to do. The resources that individuals and governments make available for health care must inevitably be subject to budget constraints. The central problem is to obtain distributive justice by making sound decisions on the priorities that should be given to the prevention of disease as distinct from the treatment or control of the consequences of disease.

One important aid to making decisions on priorities and the relative merits of alternatives is to use the techniques of cost-benefit and cost-effectiveness analysis. This makes it possible to quantify costs and benefits rather than to be content, as we have in the past, to rely on vague qualitative judgements or personal hunches. The only cost/benefit studies that have been done in dentistry are based on short-term trials instead of extending over a time scale of some forty years as would be done if the studies were done by economists.

But, of course, the first pre-requisite is a clear and practical definition of what we mean by oral health since it is upon such a definition that the objective of dentistry must be based.

I remember once being told that pain is what the patient says he has. It seems to me that any definition of oral health would not be very different.

W.H.O. defines *Health* as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. If this means, as is commonly supposed, that a person cannot be healthy unless he is completely free of disease or infirmity then it is not only a demanding but an unobtainable and unrealistic objective for all but a minute proportion of the world's population. On the other hand if it means that a person can be in a state of physical, mental and social well-being when he is completely adjusted to the presence of some physical defect or disability then it is an attainable though demanding objective. For example, an orthodontist might regard with horror my locked occlusion, cross-bite and malaligned supernumerary lateral incisor. He might insist that since my parents could have afforded it I should have had fixed appliance therapy and a jacket crown to conceal my peg-shaped lateral incisor. No doubt such therapy would have brought considerable technical and economic satisfaction to the orthodontist but it certainly would have done nothing for my mental and social well-being. You see, I happen to have become fully adjusted to my malocclusion. Indeed I rather enjoy it because it distinguishes me from other skinny, grey-haired "healthy" males. Note I said healthy. I say so deliberately because in the value judgement that I apply to this situation the malocclusion is a physical characteristic which has nothing whatever to do with my state of health. If that is heresy, I make no apology for it.

My point is that some so-called malocclusions are not only acceptable but, at least for some people, are in fact highly desirable characteristics.

At the annual meeting of the FDI in Chicago in 1975 I chaired a symposium entitled "*Who Needs and Wants Orthodontic Treatment.*" The panel of speakers

included two orthodontists, an epidemiologist, a periodontist, a sociologist, a representative of the Consumer Federation of America, and a public health officer. It was a very interesting session and provoked a vigorous and lengthy discussion. The following were some of the points of view that were expressed and are relevant to my present theme.

The first point was that psycho-social factors are more important determinants of an individual's need for orthodontic treatment than morphological or physiological factors. Very few malocclusions are physiologically handicapping and even in those which are there is almost always an associated emotional or cosmetic factor which is directly related to a defect in facial appearance. Many of you will recall the excellent Wilkinson Oration given by Thornton-Taylor at your third Congress. He reminded us that facial beauty is an intensely individual characteristic. He said that *"the classic face can be a bore."* He cautioned you to beware of making individuals conform to a group average for to do so is to ignore variation which is the outstanding characteristic of individual beauty. The extent to which variation is acceptable does, however, vary markedly from one cultural group to another and from a sociological point of view any marked deviation from the norm may be a culturally valid reason for orthodontic treatment.

Even within the same country cultural norms vary from time to time. In the United States, for example, decorating the teeth with gold which was popular at about the end of last century has been replaced by a white, even and sparkling appearance as the attractive norm. Somewhat ironically advertisements in the American Dental Association Journal for Bioblend artificial teeth point out that teeth have been arranged to provide the sort of asymmetry and irregularities found in nature.

The importance of orthodontic treatment as a status symbol was exemplified by an article in the *New York Times* (Cohen, 1974) which said that *"Today, far from being an affliction, appliances are practically a badge of honor . . . a symbol of beauty, endurance and wealth."*

Several surveys in the United States have shown that, except for some government sponsored crippled children's programs, orthodontic treatment to-day is available only to the economically privileged and that for the economically disadvantaged orthodontic treatment is a luxury. This is why family striving for upward social mobility appears to be positively related to a perceived need for orthodontic treatment.

Another conclusion from the symposium was that malposition of teeth has not been proven to be a factor of any significance in the etiology of inflammatory periodontal disease. While malposed teeth may make plaque removal more difficult, specific oral hygiene measures should overcome this handicap. (Stahl, 1975).

A third conclusion was that while there are now reasonably satisfactory methods for the assessment of occlusal traits future research should attempt to determine the influence of psycho-social factors on the assessment of the need for orthodontic treatment. In particular attempts should be made to determine the characteristics which make it possible to differentiate those people who need and want orthodontic treatment from those who need it but don't want it and those who want it but don't need it.

In a paper given at the International Conference on Oral Biology in Copenhagen in March this year, Helm (1977) made the same point and said that the major public health problem in this field is to bridge the gap between the recognition of

the occurrence of single traits or combinations of traits and the need for the treatment of these conditions.

The evaluation of the interaction between these factors may take some time but it is the sort of research that should be encouraged because it is socially relevant and highly desirable from a public health point of view.

Until such time as more reliable and valid methods are available for assessing the community need for orthodontic care we must rely on the orthodontists' subjective clinical judgement.

You will be aware I am sure that plans are already being made for the provision of orthodontic treatment within the School Dental Service. This makes it urgent to develop reliable methods of measuring the need; or more realistically as Suckling (1977) said recently, the extent of public demand which is well below the level which dentists consider desirable. Current estimates that some 50–60 per cent of children in Australia need orthodontic treatment are I believe, greatly inflated. In Sweden (1975) estimates of treatment need in children aged 7 to 16 years ranged between 19 per cent and 35 per cent. In Norway 31 per cent of the child population actually receive orthodontic treatment (1975). In Denmark all children attending the senior classes in the schools in a small town were investigated independently by six orthodontists. Roughly, one third were considered unanimously by all six examiners to need orthodontic treatment, one third were assigned to the no-treatment category while for the remaining third there was disagreement between the examiners (Helm et al, 1975). A National Academy of Sciences report last year stated that 37 per cent of children in the United States were judged to need orthodontic treatment. (Committee on Handicapping Orthodontic Conditions, 1976).

According to Helm (1977) it would seem justifiable to conclude that approximately one third of school children would benefit from an orthodontic health service and that orthodontic treatment is urgently needed by at least 14–18 per cent of children.

In a survey of over 3000 country children in Queensland a few years ago Davies, Kruger and Homan (1969) used simple criteria and found that 55 per cent of the sample had a malocclusion, 29 per cent (952 children) required treatment but only 28 or less than 1 per cent were actually receiving it. Freer and Olive (1976) said that it would be impossible to provide orthodontic treatment for all who needed it even if it were to be provided as part of the School Dental Service.

Even if only 20 per cent of Australian children require orthodontic treatment there are insufficient orthodontists to provide it. Three solutions need to be considered. The first is to increase the resources of the universities to enable them to provide more opportunities for postgraduate specialty training. The second is to follow the example of other fields of dentistry to train auxiliaries who can assist orthodontists to increase their productivity and to enable them to provide treatment at a cost that is more realistically related to other social and health needs—provided, as Freer and Olive point out, an orthodontic scheme is based on efficient diagnosis and treatment planning; and not on the use of auxiliaries to treat the illusory 'simple' cases. The third solution is to encourage through continuing education a greater interest in orthodontics by general practitioners who can provide an extensive service for patients whose problems have been properly assessed by qualified orthodontists. Fortunately your Society, Mr President, has through its Orthodontic Services Committee, already made valuable and constructive recommendations in regard to all three of these matters.

To conclude I shall attempt to bring together the rather diverse topics that I have mentioned.

I began by saying that because of the current socio-economic condition of the country and the mounting interest and concern of government it is now time to review the current system of post-secondary education and particularly to clarify and define the respective roles and objectives of the Universities, the Colleges and Institutions of Technical and Further Education.

The dental profession has a vested interest not only in the professional education of dentists in the Universities but also in the education and training of dental auxiliaries in the Colleges and the TAFE institutions.

I described what I believe are the major objectives of the Universities and emphasized that if they are to retain an identity clearly distinguishable from the Colleges of Advanced Education they will in future have to place greater emphasis on postgraduate education, research and continuing education. Such activities are again of direct concern to the dental profession.

There are other social changes which, since they influence the nature of dental practice, should also be taken into account when consideration is given to the objectives and content of dental curricula. In this connection I discussed the implications of the rapid expansion in the School Dental Service, Medibank and the licensing of advanced dental technicians.

I then introduced a more provocative element by claiming, after mentioning some supporting evidence, that our present system of providing regular dental rehabilitative care is excessively expensive and distressingly ineffective in preserving the natural dentition for life. I suggested that the profession should instigate a detailed and long-term study of this problem using appropriate techniques of cost-benefit and cost-effectiveness analysis.

From these general observations on the current status of the profession I turned to some specific difficulties facing the specialist practice of orthodontics. I stressed that psycho-social factors were more important determinants of the need for orthodontic treatment than morphological or physiological factors. That indeed some malocclusions are not only acceptable but desirable characteristics which highlight a person's individuality. Unfortunately, from a public health point of view our current methods of assessing the need for orthodontic treatment are defective because we have as yet no satisfactory method of measuring psycho-social determinants with any acceptable degree of reliability. The need for research to resolve this difficulty is now urgent because the advent of the School Dental Service will greatly increase the demand for orthodontic care. Planning to meet this demand should begin now not only by expanding courses of postgraduate education of specialists but also by providing greater access to continuing education programs for general practitioners and the introduction of courses of training for orthodontic auxiliaries.

Social and economic changes in society impose challenges and increase the responsibilities of the professions. Education is by definition a process of change. Clearly, the strength of our educational and professional organizations depends on their ability to adapt to the constant disequilibrium in society. Our profession in general and your Society in particular have always in the past reacted positively to the pressures placed upon them. When Stanley Wilkinson was President of the Australian Dental Association he had to react to the possible introduction of a National Dental Health Scheme which he regarded as premature. A form of national

scheme is now with us and I am confident that you will react to it positively and to the ultimate benefit of those who you are pledged to serve—the public of Australia.

References

- Abelard P (1976): quoted in The Frank Muir Book. *An Irreverant Companion to Social History*. Heinemann London.
- Ainamo J and Holmberg S (1973): A retrospective longitudinal study of caries prevalence during and 7 years after free dental care at school in Finland. *Comm Dent Oral Epidemiol* 1: 30–36.
- Barnes D E (1977): Global problems of oral diseases. Paper presented at 7th Int Conf on Oral Biology Copenhagen. In press.
- Cassidy J L (1977): President's Inaugural Address. *J Amer Coll Dent* 44: 10–14.
- Christensen J (1976): Oral health status of 35–44 year old Danes. WHO Internat Study of Oral Health. Paper presented at Annual Meeting FDI Athens.
- Cohen M (1974): Parent and child: A child's garden of malocclusion. *N.Y. Times Magazine* Page 53.
- Committee on Handicapping Orthodontic Conditions (1976): *Seriously handicapping orthodontic conditions*. National Academy of Sciences Washington D.C.
- Davies G N (1959): The dental condition of compulsory military training recruits: Third Survey. *N Z dent J* 55: 77–80.
- Davies G N Kruger B J and Homan B T (1969): Dental survey of children in country districts of Queensland. *Aust dent J* 14: 153–161.
- Freer T J and Olive R (1976): A survey of malocclusion and treatment needs. *Aust orthod J* 4: 128–135.
- Helm S (1977): Epidemiology and public health aspects of malocclusion. Paper presented at 7th Int Conf on Oral Biology Copenhagen. In press.
- Helm S Kreiborg S Barlebo J Caspersen I Eriksen J H Hansen W Hanusardottis B Munck C Perregaard J Prydso U Reumert C and Spedtsberg H (1975): Estimates of orthodontic treatment need in Danish schoolchildren. *Comm Dent oral Epidemiol* 3: 198–200.
- Hojem J (1975): Kjeveortopedisk tannhelsetjeneste i norge i dag *Norsk Tannlagenforen Tid* 85: 455–462.
- Holloway P J (1975): The success of restorative dentistry? *Int dent J* 25: 26–30.
- Irvine R O H (1977): Vocational training in a University setting. *N Z dent J* 73: 88–91.
- Nelson R J (1977): The essence of professional worth. *J Amer Coll Dent* 44: 17–25.
- Sloman A (1970): *Universities: Boundaries of Change*. Panther London.
- Social departementet (1975): Tandlakarnas utbildning. Stockholm Departementets Offsetcentral Ds S 14.
- Stahl S S (1975): A periodontist's view (of who needs and wants orthodontic treatment) Symposium Annual Meeting FDI Chicago.
- Suckling G (1977): Orthodontics. Demand for treatment. *N Z dent J* 73: 98–99.

University of Queensland
St. Lucia
Brisbane
4000.

THE SOUTH AFRICAN SOCIETY OF ORTHODONTISTS

Prof. D. Woodside will present a course to our Society entitled "The Clinical Application of Facial Growth and Development with particular reference to problems in the Vertical Plane of Space". The course will take place at the Milpark Holiday Inn, Johannesburg on the 6th, 7th and 8th February 1978. Application and other details regarding this course can be obtained from the Hon. Secretary of the Society, PO Box 10754 Johannesburg 2000, South Africa.