NEW ZEALAND MEDICAL ASSOCIATION

paper presented in support of submissions to the

COMMISSION OF INQUIRY INTO
CHIROPRACTIC IN NEW ZEALAND

by J.S. Boyd-Wilson
To the

COMMISSION OF INQUIRY

INTO CHIROPRACTIC

paper to be presented by

J S BOYD-WILSON, FRACR

in support of submissions by the

NEW ZEALAND MEDICAL ASSOCIATION

and associated bodies
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I N T R O D U C T I O N

This submission is made on behalf of the New Zealand Medical Association. The Association represents some 3,641 members of the profession and is affiliated with the British Medical Association and with the Australian Medical Association. Its objects include the promotion of the medical and allied sciences, and the maintenance of professional standards.

At the outset, and by way of introducing its submission, the New Zealand Medical Association would like to state its chief objection to chiropractic, which is simply this:

That chiropractic, however it may be defined, serves in practice as a system of primary health-care: the chiropractor functions as the initial portal of entry into his own health-care system. The Medical Council of New Zealand has laid down certain standards of education for medical practitioners who provide primary health-care: the education of chiropractors fails to meet those standards. The issue does not concern the availability of manipulative services: chiropractic has its own philosophy to which treatment by manipulation is incidental.

The presentation of this submission is prompted by one consideration, that of the public welfare.
There is no disagreement among chiropractic sources as to the beginnings of chiropractic: Daniel David Palmer discovered the chiropractic principle in 1895 in the city of Davenport, Iowa, where he founded the profession and Palmer College of Chiropractic.

For the sake of completeness, the circumstances of his discovery may be recounted here; it is Daniel David Palmer speaking:

"I was a magnetic healer for nine years previous to discovering the principles which comprise the method known as chiropractic. ... I had discovered that many diseases were associated with derangements of the stomach, kidneys and other organs. ... One question was always uppermost in my mind in my search for the cause of disease. I desired to know why one person was ailing and his associate, eating at the same table, working in the same shop, at the same bench, was not. WHY? ... This question had worried thousands for centuries and was answered in September 1895.

"Harvey Lillard ... had been so deaf for 17 years that he could not hear the racket of a wagon on the street ... I made inquiry as to the cause of his deafness and was informed that when he was exerting himself in a cramped, stooping position, he felt something give way in his back and immediately became deaf. An examination showed a vertebra racked from its normal position. I reasoned that if that vertebra was replaced, the man's hearing should be restored. ... I racked it into position by using the spinous process as a lever and soon the man could hear as before. ...

"I am the originator, the Fountain Head of the essential principle that disease is the result of too much or not enough functionating. I created the art of adjusting vertebrae, using the spinous and transverse processes as levers, and named the mental act of accumulating knowledge, the cumulative function, corresponding to the physical vegetative function - growth of intellectual and physical - together, with the science, art and philosophy - Chiropractic. ... It was I who combined the science and art and developed the principles thereof. I have answered
the time-worn question - what is life?

"Shortly after this relief from deafness, I had a case of heart trouble which was not improving. I examined the spine and found a displaced vertebra pressing against the nerves which innervate the heart. I adjusted the vertebra and gave immediate relief. Then I began to reason, if two diseases, so dissimilar as deafness and heart trouble, came from impingement, a pressure on nerves, were not other disease due to a similar cause?" 2

The secret of disease was revealed to Palmer. Disease is caused by displaced vertebrae which press against nerves:

"By their displacement and pressure they elongate the pathway of the nerve in a manner similar to that by which an impingement upon a wire of a musical instrument induces it to become taut by displacing it from a direct line. This pressure upon a nerve creates greater tension, increased vibration, and consequently an increased amount of heat. Heat alters tissue; altered tissue modifies the transmission of impulses; modified impulses cause functions to be performed abnormally." 2

The principle discovered by Palmer is the frame of reference for modern chiropractic philosophy. A brief review of this philosophy will aid in evaluating and understanding the chiropractor's capability in practice.

A E Homewood, at times President and Dean of Los Angeles College of Chiropractic, Dean Emeritus of Canadian Memorial Chiropractic College, and a member of the American Chiropractic Association's Commission on Standardisation of Chiropractic Principles, explains Palmer's philosophy in his book The Neurodynamics of the Vertebral Subluxation, a widely-used chiropractic textbook:

"Many ingenious approaches to the health problems have been thought out carefully, but none seems to be as all-encompassing as the teachings of D D Palmer. The chiropractor needs to experience no twinge of inferiority as he views the mottled array of theories. The founder
of the science of chiropractic appreciated the working of Universal Intelligence (God); the function of Innate Intelligence (Soul, Spirit or Spark of Life) within each, which he recognised as a minute segment of Universal; and the fundamental causes of interference to the planned expression of that Innate Intelligence in the form of Mental, Chemical and/or Mechanical Stresses, which create the structural distortions that interfere with nerve supply and thereby result in altered function to the point of demonstrable cellular changes, known as pathology."

Whether or not the modern chiropractor accepts the concept of Universal Intelligence and Innate Intelligence, he is a realist: chiropractic organisations in this country have made repeated and determined efforts to achieve the goal of a State subsidy for chiropractic, a chiropractic health benefit. Nowhere is this ambition more succinctly expressed than in the writing of W D Harper, a Fellow of the Palmer Academy of Chiropractic, and President of the Texas Chiropractic College:

".....with the insidious trend toward socialised medicine in this country even though it has or is failing in others, we must prepare ourselves to be part of a team of health providers ..... and be primary care physicians of the future if we are going to get a piece of the action."  

The next section of this submission will deal with the chiropractic lobby; it will show what steps have been taken over the years by the New Zealand Chiropractors' Association and their supporters in order to 'get a piece of the action'.
Whatever the merits of his philosophy, the chiropractor undeniably functions as a 'primary care physician': he is the initial portal of entry into his own health-care system, and so free to treat a wide range of disorders, a freedom largely won by political action.

The role of politics and the functioning of the chiropractic lobby are described in a special Consumer Report published by Consumers Union of United States, Inc., as recently as October 1975:

"... chiropractors today enjoy wider leeway in their scope of practice than any other health practitioner except the physician. By comparison, other independent health-care providers must practise within far stricter limits. A dentist doesn't treat stomach ulcers. A psychologist doesn't order medication for a heart condition. An optometrist doesn't treat epilepsy. But chiropractors may often do all three. And they are permitted to offer treatment in specialties ranging from pediatrics to psychiatry - without having scientific training in any of them. Chiropractors have won that freedom without engaging in research or demonstrating professional capability in those fields. They have won it by one method alone: political action.

"For years, grass-roots politics has been the lifeblood of chiropractic. By marshalling the support of chiropractic patients, the profession has often achieved an effective political voice in legislation affecting its licensure and services. And that voice has been its protection against science. Opponents of chiropractic come to legislative hearings with information, with scientific studies, and with the official endorsements of national organisations. Chiropractors come armed with votes."
"The recent inclusion of chiropractic services under Medicare, after a seven-year campaign by chiropractors and their supporters, provides a classic example. Against the combined opposition of the American Medical Association, the US Department of Health, Education, and Welfare, the National Council of Senior Citizens, and numerous other groups, the chiropractic lobby emphasised one primary weapon: the mailbox. Congressional aides were reportedly astonished over the sacks of prochiropractic mail, which never seemed to diminish. It got the message across."

Following this North American example, chiropractors in New Zealand have made repeated and well-organised efforts to gain official recognition. A statutory prohibition against any statement improperly implying membership of the New Zealand Chiropractors' Association Incorporated was conferred by the Chiropractors' Association Act 1955. The Chiropractors Act 1960 provided for the registration of chiropractors. In 1966 the Social Services Committee of the House of Representatives received a petition from the Chiropractic Patients' Association, Auckland, praying that Workers Compensation benefits be paid to chiropractors. In 1967 the Royal Commission of Inquiry into Compensation for Personal Injury in New Zealand considered submissions made both by the New Zealand Chiropractors' Association and by the Chiropractic Patients' Association that chiropractic be recognised as an appropriate treatment for some types of injury. In 1970 the Health and Social Services Committee of the House of Representatives considered a petition of J McQueen, E J E McQueen and others seeking a chiropractic health benefit. In 1972 the Royal Commission on Social Security in New Zealand received a submission from the New Zealand Chiropractors' Association that there should be a chiropractic health benefit. In October 1974 Mrs D C Jelicich introduced a private member's Bill, the Social Security Amendment Bill (No 2) 1974, which if proceeded with would have allowed a monetary benefit for chiropractic services under the terms of the Social Security Act. And most recently, in June 1975, the Petitions
Committee of the House of Representatives considered the petition of R A Houston and others seeking the inclusion of chiropractic services among the provisions of the Social Security Act 1964 and the Accident Compensation Act 1972; the Petitions Committee recommended that most favourable consideration be given this petition.

From the above it will be seen that much of the evidence relating to chiropractic claims has been laid before Parliamentary Select Committees of one type or another, evidence which has a vital bearing on the validity of chiropractic treatment here in our own country. The procedure of Parliamentary Select Committees, unlike that of Royal Commissions, does not allow cross-examination, so that much of the evidence presented in the various submissions remains untested. The most recent Royal Commission to consider chiropractic claims was the Royal Commission on Social Security in New Zealand in 1972; as an example of the importance of such cross-examination, there is quoted a section of the transcript in which Dr A W S Thompson, for the Department of Health, cross-examines Mr W L Reader for the New Zealand Chiropractors' Association:

"Dr Thompson: If there was a chiropractic benefit, would chiropractors treat children with whooping cough under the scheme?

Mr Reader: I can only answer that this is a possibility.

Dr Thompson: Take a patient obviously suffering from diabetes, would you or a reputable chiropractor treat such a patient?

Mr Reader: Yes.

Dr Thompson: I understand you to say that diabetics you would treat?

Mr Reader: Yes."
Dr Thompson: By spinal manipulation?

Mr Reader: Yes.

Dr Thompson: What about high blood pressure?

Mr Reader: It depends on its origin. But perhaps your Honour, could I ask for your guidance on this particular point. We have covered several specific disorders that Dr Thompson is asking me. Are we going through from A to Z?

The Chairman: I don't know that you are, but it seems the doctor was getting into an area which was so different from the impression you gave from your description of what your activities were...." 6

Here is a fragment of dialogue from the recent past, caught in an eternal sunbeam; the Chairman's remark "..... it seems the doctor was getting into an area which was so different from the impression you gave from your description of what your activities were ....." leads us to the subject of the next section of this submission which deals with the range of disorders chiropractors are prepared to treat - the scope of chiropractic.
Of prime importance in any consideration of the chiropractic issue is the range of disorders chiropractors are prepared to treat, the scope of chiropractic. Evidence is available from many sources to show that in fact chiropractors treat a broad spectrum of disease. Operating as he does in the field of primary health-care, acting as the portal of entry into his own health system, the chiropractor must of necessity be confronted with a wide range of human ills. His patients are not referred to him by other practitioners; the chiropractor is not a specialist who confines his practice to disorders of the musculo-skeletal system. As witness to this fact, there is evidence from the following sources:

**United States of America**

The scope of chiropractic in America is well described by a report published by the US Department of Health, Education and Welfare in December 1968:

"Since the philosophy of chiropractic is all-encompassing, its practitioners treat nearly every type of illness. In a survey made in 1963 for the American Chiropractic Association, 85 percent of the chiropractors reporting said that they treat musculo-skeletal problems most frequently. Approximately 81 percent indicated that conditions other than musculo-skeletal ranked first, second, or third among conditions most frequently treated. The table below shows the percentage of chiropractors stating that they generally cared for the condition listed."
<table>
<thead>
<tr>
<th>Condition</th>
<th>Percent</th>
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<th>Percent</th>
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<tbody>
<tr>
<td>Headache</td>
<td>98</td>
<td>Impaired Hearing</td>
<td>59</td>
</tr>
<tr>
<td>Sinusitis</td>
<td>94</td>
<td>Hemorrhoids</td>
<td>58</td>
</tr>
<tr>
<td>Constipation</td>
<td>94</td>
<td>Goiter</td>
<td>48</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>93</td>
<td>Polio</td>
<td>47</td>
</tr>
<tr>
<td>Common cold</td>
<td>92</td>
<td>Diabetes mellitus</td>
<td>46</td>
</tr>
<tr>
<td>Asthma</td>
<td>89</td>
<td>Impaired vision</td>
<td>44</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>86</td>
<td>Chorea</td>
<td>42</td>
</tr>
<tr>
<td>Low blood pressure</td>
<td>86</td>
<td>Rheumatic fever</td>
<td>37</td>
</tr>
<tr>
<td>Hay fever</td>
<td>83</td>
<td>Hepatitis</td>
<td>32</td>
</tr>
<tr>
<td>Gall bladder</td>
<td>82</td>
<td>Pneumonia</td>
<td>32</td>
</tr>
<tr>
<td>Colitis</td>
<td>80</td>
<td>Mumps</td>
<td>31</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>79</td>
<td>Acute heart conditions</td>
<td>31</td>
</tr>
<tr>
<td>Ulcers</td>
<td>76</td>
<td>Appendicitis</td>
<td>30</td>
</tr>
<tr>
<td>Deficiency anemia</td>
<td>73</td>
<td>Pernicious anemia</td>
<td>24</td>
</tr>
<tr>
<td>Chronic heart condition</td>
<td>70</td>
<td>Cerebral hemorrhage</td>
<td>18</td>
</tr>
<tr>
<td>Genito-urinary</td>
<td>66</td>
<td>Lacerations</td>
<td>12</td>
</tr>
<tr>
<td>Mental, emotional</td>
<td>68</td>
<td>Fractures</td>
<td>9</td>
</tr>
<tr>
<td>Tonsillitis</td>
<td>67</td>
<td>Leukemia</td>
<td>8</td>
</tr>
<tr>
<td>Dermatitis</td>
<td>67</td>
<td>Cancer</td>
<td>7</td>
</tr>
<tr>
<td>Hives</td>
<td>60</td>
<td>Diphtheria</td>
<td>4</td>
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(The method of obtaining these diagnoses is unknown)

"Views of leading chiropractors on the scope of practice appropriate to this discipline are shown in the quotations given below.

"A report on a chiropractic research project by Henry Higley, M.S., D.C., of the Los Angeles College of Chiropractic relates the following findings:

We realize that a large section of the nonchiropractic public appears to assume that chiropractic is confined to the treatment of distresses of the back. They seem to believe that the patients of doctors of chiropractic are limited to those suffering from sciatica, torticollis, and similar conditions affecting the musculature of the back. The careful compilation of patient data from the 1953 records of our chiropractic clinic shows that well over sixty-five different pathologies (e.g., gastrointestinal problems, genitourinary problems, cardiovascular
problems, anemia) were represented. The case reports so far collected for the academic year 1962-1963 indicate that they will also represent a large variety of pathologies. Those who are, or have been, in active practice, recognise the varied pathologies met in chiropractic practices, but now we have statistical data to confirm their experience.

"A report by the Palmer Clinic submitted to the study by the ICA states:

The B J Palmer Chiropractic Clinic presents these case records to demonstrate the effectiveness of Chiropractic with cases medically diagnosed as multiple sclerosis, encephalitis or sleeping sickness, hydrocephalus, epilepsy, sciatica, cirrhosis and cancer of the liver, and tumors. It is hoped these records will benefit both the chiropractor and any interested lay person who may chance to read them.

"While giving testimony before the Ad Hoc Consultant Group of the US Public Health Service in November 1968, H R Frogley, D.C., Dean of Academic Affairs, Palmer School of Chiropractic, was asked the following question: 'Do you think if an acute appendicitis were identified early enough in the disease process that chiropractic can cure it?' His reply was: 'Yes, I do. I say this strictly from experience. I don't say it from only my experience but from the experience of all who practice....'

"In 'Opportunities in a Chiropractic Career', 1967 (submitted by the ICA), produced with the cooperation of both chiropractic associations, the following is found in the chapter entitled 'A Typical Day at the Chiropractor's Office':

IN WHAT FOLLOWS the names used and the situations depicted are all fictitious. The account has been prepared, however, by a chiropractor of more than 40 years' experience. He has drawn upon his recollections of his own days in practice and his wide contacts with professional colleagues to reconstruct what might be considered a fairly typical day in the professional life of the chiropractic doctor......11:45 am. The doctor hurries to the home of the little girl with a fever.
By now she has broken out with a skin rash. He arranges the cushions on a firmly upholstered daybed to improvise a chiropractic table, places the little patient in the appropriate position, locates the point where adjustment is needed and delivers the adjustment, all the while ingratiating himself with the little girl in a joking fashion. The fever begins to subside right away....

The afternoon goes along much like the morning. Fourteen patients have appointments: a woman who recently had a gall bladder attack, a young boy who is an epileptic, a clerk with a stiff neck, another low-back case, a six-year old bed-wetter, a high school boy with acne, a garage mechanic suffering from bursitis of the shoulder, a young woman with painful menstruation, a teen-age girl with a rheumatic heart, a middle-aged woman with spinal arthritis, a woman with a severe head cold, a man who is constipated, a woman who is too fat, and another whose thyroid gland is over-active.

"Thus, although chiropractors see more patients with musculo-skeletal problems than any other kind, it is apparent that they consider themselves competent to treat a wide variety of illnesses. This belief stems largely from their philosophy or approach to health and disease. As a result of this belief, chiropractors do not limit their practice to the care of patients with musculo-skeletal problems but instead undertake the treatment of other patients representing a broad spectrum of diseases."  

New Zealand

The Chiropractors Act 1960 throws no light on the scope of chiropractic in New Zealand; it defines 'chiropractic' as meaning the examination and adjustment by hand of the segments of the human spinal column and pelvis. But this definition simply describes a method of treatment: the Act avoids altogether any consideration of the range of disorders chiropractors are prepared to treat.
The issue is also avoided in an official publication of the New Zealand Chiropractors' Association (Inc.), *The Chiropractor in New Zealand*, which in 1975 described the scope of practice of the New Zealand chiropractor thus:

"Generally speaking, a chiropractor has a very wide range of practice and treatment but in reality he has limited himself, strictly and rigidly, to a specialised field and code as taught in approved colleges of chiropractic.

"Much has been stated and written about what a Chiropractor MAY do in the application of his professional services to his patients. Let us look at it from the opposite point of view and discover just what a Chiropractor in New Zealand may NOT do in the practice of his profession and, which if he did, would place his professional standing in immediate jeopardy. In this way, we believe the exact, self-imposed limitations governing his specialised field are more readily apparent, and coincidentally the fields in which he may legitimately extend and exercise his training and skilled services are more easily discernible.

"WHAT A REGISTERED NEW ZEALAND CHIROPRACTOR MAY NOT DO"

"A Chiropractor may NOT

1. prescribe or administer drugs for use internally or externally:
2. use or direct or prescribe the use of anaesthetics for any purpose:
3. practise medicine, surgery or physiotherapy:
4. practise midwifery:" 8

However, the scope of chiropractic in this country was revealed only too clearly to the 1972 Royal Commission on Social Security in New Zealand when the principal witness for the New Zealand Chiropractors' Association, Mr W L Reader, was cross-examined by Dr A W S Thompson for the Department of Health:
"Dr Thompson: If there was a chiropractic benefit, would chiropractors treat children with whooping cough under the scheme?

Mr Reader: I can only answer that this is a possibility.

Dr Thompson: Take a patient obviously suffering from diabetes, would you or a reputable chiropractor treat such a patient?

Mr Reader: Yes.

Dr Thompson: I understand you to say that diabetics you would treat?

Mr Reader: Yes.

Dr Thompson: By spinal manipulation?

Mr Reader: Yes.

Dr Thompson: What about high blood pressure?

Mr Reader: It depends on its origin....

Dr Thompson: ....Coming back to high blood pressure, assuming you know he is suffering from high blood pressure, would you undertake the treatment?

Mr Reader: If it is hypertension, yes, renal problems, no." 6

From the above it may be seen that the scope of chiropractic both in America and in New Zealand is wider than is commonly supposed. To lend point to the presentation of further evidence bearing on the subject, the next section of this submission will examine the feasibility of limiting the scope of chiropractic by legislation: it will be shown whether or not it is practicable to restrict chiropractic to disorders involving the musculo-skeletal system.
In the second section of this paper, it was shown that Daniel David Palmer discovered the chiropractic principle in 1895 in the city of Davenport, Iowa, where he founded the profession and Palmer College of Chiropractic.

Palmer put forth the concepts of Universal Intelligence and Innate Intelligence. As described by the modern Palmer College of Chiropractic:

"The innate intelligence of the human body uses the brain and nervous system as a means of communication. An organ cannot function normally unless it receives a normal transmission of nerve impulses from the brain.

"The vertebrae (or segments) of the spine give support for the trunk and protection to the spinal cord and nerves as they pass from the brain. They are held in location by ligaments and moved about by paired spinal muscles. Normal spinal movements, such as bending and twisting, are regulated by the nerve supply into the spinal muscles.

"If a vertebra loses its normal range of movement, and is misaligned far enough to cause distortion of the spine, it may result in a disturbance with the normal transmission of the vital nerve supply from the brain, not only into the muscles the nerve may contact, but also into some other organ or system of organs in the body. This condition is referred to as vertebral subluxation."
"A subluxated vertebra, disturbing the normal nerve supply of an organ, brings about functional disease which may be followed by pathological disease.

"The chiropractor, having established that a disease has been caused by a subluxated vertebra, directs his efforts to determining which vertebra is subluxated, and to the adjustment of this vertebra back to its normal range of movement. Following the adjustment, the normal nerve supply is restored to the organ or system of organs, and their normal function may be re-established.

"Chiropractors, through careful analysis of the entire spine, may not only locate the subluxated vertebra, but through knowledge of nerve fiber distribution, may locate the region of the affected organ. They may then advise the patient about the nature of his symptoms, and suggest methods of care for the body while it is being restored to a normal state of health."  

Thus, the concept of vertebral subluxation is central to the chiropractic approach to health care. The result is an approach quite different from that of conventional medicine:

"For the chiropractor, diagnosis does not constitute, as it does for the medical doctor, a specific guide to treatment. It is not a major goal of the doctor of chiropractic to specifically name a disease. He does not look upon diseases as an entity to be combated. For him disease is a process; it is physiology gone wrong. The problem is to ascertain why it has gone wrong, and what needs to be done to right the wrong."  

Instead of making a diagnosis in terms of a specific disease, the chiropractor's chief interest lies in making a diagnosis in terms of which vertebra is subluxated and "disturbing the normal nerve supply of an organ".
Chiropractic theory is a total theory of health and disease. It is not a sub-specialty of medicine, nor restricted to a special area of the body; it was founded as an alternative system of medicine in opposition to orthodox practice, and remains so in doctrine. The apparent, limited interest to disorders of the spine is an illusion, an illusion which is effective in gaining public tolerance, and which chiropractors themselves do nothing to dispel.

The failure of North American legislation to impose effective restriction on chiropractic is described by D G Bates, Associate Professor and Chairman of the Department of the History of Medicine at McGill University:

"Despite variations, North American laws on limiting practice all have a common theme. Chiropractors are meant to treat only disorders of the back, and only by the use of the hands. In some instances there is additional provision intended to prevent the harmful use of X-rays.

"Despite years of experience, these attempts to limit chiropractic to back problems, and only to those which are muscular or bony in origin, have failed. The treatment of a wide variety of diseases including diabetes, heart disease, and even cancer, by chiropractors, has continued where such 'controls' are supposed to be in effect.

"This failure is understandable because the very nature of chiropractic theory makes control impossible. Suppose, for example, that a man goes to a chiropractor for a recurring pain in his chest. The chiropractor's theory suggests that the pain is related to some disorder of the spine. He takes X-rays of the spine and his training encourages him to believe that he sees a defect there which can be improved by manipulation of the back. But he has not had adequate training to investigate, or to interpret correctly, the signs and symptoms which would lead to a different conclusion, such as angina
pectoris or spontaneous pneumothorax.

"To restrict a chiropractor to dealing with disorders of the back is not to restrict him at all, since a whole host of complaints are linked by his theory, though not by scientific evidence, to the back."  

The impossibility of restricting the scope of chiropractic by legislation was recognised in the Republic of South Africa where legislation was recently enacted (the Chiropractors Act 1971) prohibiting persons from practising for gain as chiropractors, the Government-appointed Commission having reported:

"... The principle of chiropractic does not lend itself to restriction, and therefore it is not possible to define the scope of its practice or list disorders to which it can be restricted; in other words, conditional recognition of chiropractic is not practicable."  

According to The Chiropractor in New Zealand, the chiropractor "has limited himself, strictly and rigidly, to a specialised field and code as taught in approved schools of chiropractic"; the next section of this submission will examine the scope of chiropractic as revealed by the curricula of those approved schools.
Curricula of Chiropractic Colleges

Of the available evidence concerning the scope of chiropractic, the most revealing is that contained in the published curricula of the chiropractic colleges.

There are eight training colleges approved by the New Zealand Chiropractic Board in terms of Section 29 of the Chiropractors Act 1960:

- Palmer College of Chiropractic. Davenport, Iowa, USA.
- Logan College of Chiropractic. Chesterfield, Missouri, USA.
- The National College of Chiropractic. Lombard, Illinois, USA.
- Los Angeles College of Chiropractic. Glendale, California, USA.
- Cleveland Chiropractic College. Kansas City, Missouri, USA.
- Sherman College of Chiropractic. Spartanburg, South Carolina, USA.
- Canadian Memorial Chiropractic College. Toronto, Ontario, Canada.

Of these eight approved chiropractic colleges, the Palmer College concerns us most for three out of four New Zealand chiropractors have been trained there; there are more Palmer graduates throughout the world than from any other chiropractic college.

At the Palmer College candidates are required to complete a minimum of four academic years of nine months each of classroom work according to the prescribed curriculum. The first two years deal mainly with basic science subjects; the last two years are devoted mainly to clinical subjects.
The scope of chiropractic may be gauged by examining in detail extracts from the curricula from the following approved chiropractic colleges:

PALMER COLLEGE OF CHIROPRACTIC

**Diagnosis - Physical Diagnosis Method**
- 12 hours per week D-321

This fundamental course includes the method of taking a narrative case history as well as the basic method of examination of the skin, head and neck, thorax and lung, cardiovascular system, abdomen and urogenital system, and the neuromusculoskeletal system.

**Chemistry - Clinical Chemistry Lab**
- 10 hours per week C-214

Clinical biochemistry is the main topic dealt with in this lab course. The student is introduced to laboratory procedures in urinalysis, hematology, chemistry and bacteriology. Emphasis is placed on the interpretation of laboratory results and their place in clinical chiropractic.

**Diagnosis - Roentgenology**
- DR-II - 10 hours per week D-413, R-419

This intermediate level course expands the student's understanding of the pathophysiology of the cardiovascular system, blood dyscrasias and lymphatics; thorax and lower respiratory system. He learns to better evaluate this area. The course also deals with the roentgenographic manifestations of pathologies of the respiratory and cardiovascular systems.
Diagnosis - Roentgenology -  
DR-III - 5 hours per week D-426, R-4210

The student's understanding of the pathophysiology of the gastrointestinal and male genitourinary systems is enhanced by this course. These areas and their particular problems are the focus for the student's diagnostic efforts in this course. Roentgenographic manifestations of pathologies in this area are also presented.

LOGAN COLLEGE OF CHIROPRACTIC

671  Dermatology (3 + 0) credits 3

Diseases of the skin, the pathophysiology of the signs and symptoms and common therapeutic measures employed.

673  Pediatrics (4 + 0) credits 4

Fundamental clinical practices, specifically toward the care of children.

770  Psychology (5 + 0) credits 5

Fundamentals of psychology and theory and practice of clinical psychology.

660  Chiropractic (1 + 2) credits 2

Demonstration and practice of manipulation techniques of extra-spinal structures and tissues with emphasis on the extremities.

674  Toxicology (1 + 0) credits 1

Clinical toxicology of poisons, gases and drug abuse.
THE NATIONAL COLLEGE OF CHIROPRACTIC

DX 6531  Clinical Diagnosis: Cardiovascular and Respiratory Systems (3 + 0) credits 3

This course represents a study of the clinical presentations and diagnostic aspects of functional and organic cardiovascular diseases and disorders of the bronchopulmonary system. Emphasis is given to the correlation of physical, clinical and other diagnostic findings in the context of general chiropractic practice. Aspects of chiropractic management are stressed.

DX 6533  Clinical Diagnosis: Eye, Ear, Nose and Throat (3 + 0) credits 3

This course is concerned with the diagnosis and management of diseases of the eye, ear, nose and throat which the chiropractic physician may be called upon to diagnose and treat. 15

CLEVELAND CHIROPRACTIC COLLEGE

Diagnosis 672: Dermatology-Syphilology 3 (48)

A resume of dermatological diseases with respect to etiology, symptomatology, and significance within the scope of Chiropractic analysis, prevention, and care. General concepts of syphilis and its detection are presented.

Diagnosis 682: Obstetrics 4 (64)

A presentation of the anatomical and physiological processes that occur in pregnancy; the signs and symptoms of pregnancy; possible pathological problems involved; recognition of condition of patient; and instruction for the care and safety of the pregnant mother. Pre- and post-partum care are discussed. 16
SHERMAN COLLEGE OF CHIROPRACTIC

Diagnosis 615 (Laboratory II)

This continuation of DIAGNOSIS 608 concentrates on the laboratory techniques involving the chemistry of blood, urine, feces, sputum and cerebrospinal fluid. It considers normal and abnormal values and the diagnostic significance of laboratory findings.

Microbiology 502

A continuation of MICROBIOLOGY 501. Individual characteristics of each type of pathogenic bacteria, their effects and methods of transmission with emphasis on toxoid/toxin and antibody/antigen reactions. The biochemical mechanisms of pathogens and the body's responses to them are major areas of study. 17

CANADIAN MEMORIAL CHIROPRACTIC COLLEGE

236 Nutrition

Clinical nutrition includes the principles of diet therapy in various disorders, such as obesity, diabetes mellitus, disorders of gastrointestinal system, liver and gall bladder, cardiovascular and renal systems.

Also presented is nutrition during pregnancy and lactation, nutrition for the aged and nutritional therapy in childhood diseases.

280 Diagnosis I

A lecture and laboratory course in which the student is taught how to elicit an appropriate case history.

The student is taught to perform an appropriate physical examination using the stethoscope, ophthalmoscope, reflex hammer, etc., and
to interpret the results.

Infectious diseases are also covered under this section. Special emphasis is placed on the early recognition of disease processes and the indication or contra-indication of chiropractic therapy.¹⁸

ANGLO-EUROPEAN COLLEGE OF CHIROPRACTIC

9. Psychiatry

The aetiology and symptomatology of the psychoneuroses, particularly as they relate to psychosomatic disorders; the functional and organic psychoses are also studied to give an understanding of the underlying factors so that proper guidance can be given to emotionally disturbed patients who may be seen in practice.

10. Clinical Pathology

A review of abnormal structure and disordered function in terms of systemic measurement and analysis. The scope of modern techniques and the design of a routine method in the clinical laboratory; logical selection of investigations and the use of screening tests is emphasised.

Regional Pathology: Pathology of specific organs and systems of the body. Pathology of the heart, blood vessels, respiratory system, mouth, neck, oesophagus, stomach, duodenum, intestine, liver and gall bladder, the pancreas, peritoneum, kidneys, renal pelvis, ureters, urinary bladder, urethra and reproductive systems of the male and female. Diseases of the ductless glands, blood and lymph, spleen, central and peripheral nervous system, bones, joints, muscles, skin, tendons and bursae, including dental pathology.¹⁹

The full significance of the content of chiropractic curricula will emerge in the following section of this submission which describes the technique of chiropractic adjustment employed in the correction of vertebral subluxation.
In earlier sections of this paper the discovery of chiropractic was recounted, how Daniel David Palmer, a tradesman from a small frontier town in the United States of America, founded the profession and Palmer College. The chiropractic concept of vertebral subluxation was referred to, and its correction by means of chiropractic adjustment:

"The chiropractor, having established that a disease has been caused by a subluxated vertebra, directs his efforts to determining which vertebra is subluxated, and to the adjustment of this vertebra back to its normal range of movement."¹

The chiropractic adjustment is a specific form of spinal manipulation, not to be confused with manipulative techniques employed by physiotherapists, orthopaedic surgeons, and other members of the medical profession; it is distinguished by the suddenness or speed of the manoeuvre. Chiropractors describe the sudden manoeuvre as the "dynamic thrust".⁵⁸ The dynamic thrust may be performed gently or forcefully but always quickly; the procedure often produces a click-like sound in the adjusted joint. The speed of the chiropractic adjustment prevents control by the patient. By comparison, a patient can voluntarily resist - and therefore control - a manipulation which is performed slowly or rhythmically; if there is pain, for example, the patient can physically resist further movement or advise the therapist accordingly. This latter technique, which is generally called "mobilisation", is the most common type of joint manipulation used by the medical profession.⁵²⁰

The essential difference between the chiropractic adjustment and medical manipulation is, however, best described by Mortimer Levine, D.C., writing in the ACA Journal of Chiropractic in June 1975:
"The Dynamic Thrust

"In discussing chiropractic techniques, it is only proper to note that chiropractic holds no monopoly on manipulation. Manipulation for the purpose of setting and replacing displaced bones, muscles and joints, including spinal articulations, is one of the oldest therapeutic methods known. It has been and still is an integral part of the armamentarium of healers of all times and cultures.

"What differentiates chiropractic adjusting from orthopedic manipulations, osteopathic maneuvers, massage, zone therapy, etc.? In one sentence, it is singularly chiropractic. And it is the identifying feature of chiropractic techniques.

"However, chiropractic's rationale is hardly based on the fact that its adjustive techniques are applied with a sudden impulse of force. Why these techniques are applied, and why they are applied in a certain manner, are the rationale that distinguishes chiropractic from other healing disciplines, manipulative or not. In fact, some chiropractic techniques of recent vintage are not characterised by sudden application. We are thinking of acupressure, contact techniques, non-force, etc. What makes them also part of chiropractic is that they are designed to serve the same purposes as the dynamic thrust." 21

The essential difference between chiropractic adjustment and medical manipulation is "singularly chiropractic", it is "Why these techniques are applied, and why they are applied in a certain manner.....". W D Harper, President of the Texas Chiropractic College, makes exactly the same point:

"It is the reason why that the Science of Chiropractic offers, that differentiates the practice of adjusting vertebrae from that of the medical profession." 4

In other words, it is the application of chiropractic philosophy which is the distinguishing feature of chiropractic adjustment.
The previous section of this submission dealt with the teaching of chiropractors; reference was made to the curricula of the eight chiropractic colleges approved by the New Zealand Chiropractic Board in terms of Section 29 of the Chiropractors Act 1960.

The curricula of all eight chiropractic colleges include study of dermatology, diseases of the skin, and four (Logan College, the National College, Los Angeles College, Cleveland Chiropractic College) refer specifically to the chiropractic treatment of diseases of the skin, as opposed to diagnosis, as follows:

"Logan College: Diseases of the skin, the pathophysiology of the signs and symptoms and common therapeutic measures employed.

"The National College: Common diseases of the skin which might be found in the general practice of chiropractic are discussed. Emphasis is placed on the diagnosis and management of these disorders.

"Los Angeles College: The objectives are to train the student to recognize the more commonly seen dermatological diseases; to recognize those diseases that should be referred and; to utilize any and all of the many methods available to the doctor of chiropractic in the treatment of skin disease.

"Cleveland Chiropractic College: A resume of dermatological diseases with respect to etiology, symptomatology, and significance within the scope of Chiropractic analysis, prevention, and care."

If diseases of the skin are part of the scope of chiropractic, by what form of adjustment are they treated; and at what level is the dynamic thrust to be directed? Perhaps diseases of the skin are treated by some chiropractic technique of recent vintage such as "acupressure,
contact techniques, non-force, etc."

The curricula of all six American chiropractic colleges approved by the New Zealand Chiropractic Board include study of obstetrics and make specific reference to chiropractic care as follows:

"Palmer College: A survey course of the specialty, with emphasis placed upon practical aspects as related to chiropractic practice. Obstetrics lectures cover the physiology of pregnancy, labor and the complications which may arise due to disease.

"Logan College: Clinical approaches to pregnancy and fetal development stressing both ante and post partum.

"The National College: This course is a study of the etiology, diagnosis and differential diagnosis and the therapeutic aspects of the diseases of the gastrointestinal, genitourinary and female reproductive systems. The student receives a correlation between the physical, laboratory and gynecologic examinations as related to the diseases of these particular systems. Also included are the diagnosis and chiropractic management of the obstetrical patient.

"Los Angeles College: Physiology of pregnancy, labor and puerperium and the diagnosis of pregnancy; the pathology of pregnancy, labor and puerperal period, and the indications and contraindications for surgical intervention. Particular emphasis is given to chiropractic methods and procedures in the complete care of obstetrical patients from the antepartum period to the postpartum dismissal.

"Cleveland Chiropractic College: A presentation of the anatomical and physiological processes that occur in pregnancy; the signs and symptoms of pregnancy; possible pathological problems involved; recognition of condition of patient; and instruction for the care and safety of the pregnant mother. Pre- and post-partum care are discussed.
"Sherman College: The study of gestation from conception through parturition. A study of those special considerations which pertain to the expectant mother, such as exercise, nutrition, x-ray, spinal care, and preparations for natural delivery and breast feeding. The complications of pregnancy, their causes and methods of prevention are studied."

It may be asked, what form of chiropractic adjustment is appropriate in the antenatal care of the pregnant female, and what form of chiropractic adjustment is appropriate in her post-natal care? What is meant, above, by the "spinal care" of the expectant mother?

The next section of this submission will pursue the subject, and deal further with the scope of chiropractic.
Previous sections of this submission have dealt with the scope of chiropractic clinical practice both in the United States of America and in New Zealand, and with the scope of undergraduate teaching; in this section excerpts will be taken from the current chiropractic literature which bear on the scope of chiropractic, particularly from the ACA Journal of Chiropractic, the official scientific publication of the American Chiropractic Association. It will be shown how chiropractors come to regard themselves as "total health care physicians."

The ACA is the larger of the two professional associations in the USA, and is of importance because of its special relationship with the Council on Chiropractic Education: in August 1974 the US Commissioner of Education granted the CCE the right to accredit chiropractic colleges as institutions of higher learning.

The material which follows is taken from issues of the ACA Journal of Chiropractic (which is published monthly) dating from January 1974; the title of each paper is given and, where possible, biographical notes concerning the author.

**PEDIATRICS**

By William A Nelson, D.C.
San Francisco, California 23

**Treatment of the Sick Child**

The acutely ill child needs rest, both physical and mental, and an appropriate diet. If the infant is not breast fed, any milk in the diet must be carefully evaluated. If the
child is acutely ill, instinct generally destroys the ap­
tite for solid foods. At this time fluids are both sought
and desirable. Diluted grapefruit or tomato juice, for the
electrolytes and vitamin C, and water become the usual fluids
of choice. Dehydration and excessive ketosis must be avoided.

By frequent manipulation and physiotherapy, the catabolic
processes are usually quickly reversed and stability reestab­
lished in the nervous system. The physician must keep in
mind that even the smallest patient can sense the psycholo­
gical mood of those around him. Close attention must be
kept of all diagnostic signs as changes may occur quickly
in the young.

Infectious and Viral Diseases

The infectious diseases usually respond well to chiropractic
care. Particular emphasis must be placed on restoring nor­
mal function to the nervous and lymphatic systems, thereby
reestablishing normal tissue resistance and vitality.

Digestive Problems

Mesenteric adenitis resembles acute appendicitis with maxi­
mal pain in the lower right quadrant. This may be actually
an iliocecal valve involvement and must be carefully differ­
entiated. As the site of an important autonomic plexus, it
responds well to chiropractic therapy.

Respiratory Problems

Although not respiratory, but a thorax entity, a word
about cardiac problems may be mentioned here. The chiro­
practor must decide whether a heart problem is functional
or structural in etiology. If not an acute emergency, the
easiest way may well be a short period of trial treatment.

Genitourinary Problems

Aside from congenital malformations, the genitourinary
system usually offers little problem to the chiroprac­
tic physician. Functional troubles respond to improved
nervous innervation and suitable physiotherapy.

Venereal infection must be viewed in light of state law. The patient's age and vitality will, to a great extent, determine the best course to pursue. With cooperation on the part of the patient, chiropractic care is to be desired; however, the effective therapy of other disciplines must not be overlooked. In the female patient, good hygiene is important, but douching is not indicated.

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MEGAVITAMIN APPROACH TO SCHIZOPHRENIA

By Donald B Owens, B.S.
Lombard, Illinois

The importance of sound understanding of psychological disorders cannot be denied in this era of stress and social pressure. The doctor of chiropractic must understand the concepts underlying psychiatry and the treatment of mental disorders not only by spinal manipulation but also by megavitamin therapy which is the current trend in certain areas of psychiatry (e.g. orthomolecular psychiatry).
There is a great deal of controversy not only in medical circles but also within the psychiatric profession as to the validity of megavitamin therapy. The concepts advocated by the orthomolecular psychiatrists are not new ones. The chiropractic profession has been a proponent of the "orthomolecular approach" to certain diseases. The purpose of this paper will be to correlate the various theories, megavitamin approaches and management of the schizophrenic patient by the chiropractor.

About the Author
Donald B. Owens obtained his Bachelor of Science degree from the University of Maryland. He is a senior at National College of Chiropractic in Lombard, Illinois. Active in student affairs, Mr. Owens is a member of Chi Rho Sigma International Professional Fraternity and a past president of the Student American Chiropractic Association. He also is an assistant in the Department of Physiology at NCC.

DIABETES MELLITUS

By David C Pamer, D.C.
Mansfield, Ohio 25

Conservative Management of Diabetes Mellitus

The chiropractor's role in the management of a diabetic patient depends primarily on these factors:

1. The type (onset) of diabetes mellitus:
   (a) Insulopenia - juvenile diabetes mellitus.
   (b) Insuloplethoric - usually in overt maturity-onset diabetes mellitus.

2. The probable cause and duration of the disease based on glucose levels, history, signs and symptoms.
3. The rate of progression and degree or levels of hyperglycemia.
4. Other factors include the etiology of the disease, pathology involved in the condition, presenting health status of the patient, associated pathophysiologic conditions, and age of the patient.

The "pre-maturity onset diabetic prodrome" consists of a slightly elevated (5-15 mg percent above top normal) fasting glucose level and associated history, signs and symptoms. It has been the experience of this clinician that these "pre-diabetic" patients often respond well to conservative therapy which should include a carbohydrate-restricted diet, vitamins, and pancreatic enzymes. It is of utmost importance to run serial fasting glucose levels to ascertain the response of the patient to the conservative therapy. These initially must be run frequently then on a regular basis thereafter. If a satisfactory reduction or stabilization cannot be maintained the patient must then be referred.

About the Author
Dr. David C. Pamer, a member of the ACA Council on Diagnosis and Internal Disorders, received his preprofessional education at Ohio State University. He received his D.C. degree at Cleveland Chiropractic College in Los Angeles, Calif. He then did a two-year residency in internal diagnosis at Associates Diagnostic and Research Center in Tallmadge, Ohio, and has since become its director of physical and laboratory diagnosis.

ATHEROSCLEROSIS: PATHOGENESIS, DIAGNOSIS AND TREATMENT

By William J Wasinger
Student, Logan College of Chiropractic

The Committee on Nomenclature of the American Society for the Study of Arteriosclerosis defines atherosclerosis as a disease primarily of large arteries, characterized by plaque-like intimal deposits which contain neutral fat, cholesterol, lipophages or sometimes blood or other evidence of hemorrhage. The purpose of this paper is to present the pathology of atherosclerosis, the methods of
diagnosis and chiropractic treatment of the condition.

The treatment of atherosclerosis involves several areas since there is no single adjustment, vitamin, exercise or drug which will save man from this affliction. The chiropractic manipulation of an atherosclerotic patient would follow the theory of all chiropractic adjustments, that is, to remove the subluxations so that the patient will be free to recover not only from atherosclerosis, but to maintain his health. An adjunct to the chiropractic adjustment is nutritional therapy, which like the adjustment, is aimed at the patient's total health, not just one condition.

The medical world's difficulties in dealing with heart problems are reflected in the ever-increasing coronary death figures. While the nature of chiropractic is not to deal in symptoms, many chiropractors have used manipulation with success in handling coronary problems. Dr Major B DeJarnette tells chiropractors they can multiply their service to humanity by preventing coronary attacks in their patients with chiropractic treatment.

A good portion of chiropractors believe that adjustments of the upper thoracic spine in some way aid sympathetic innervation to the heart and coronary artery blood flow. The theory here is that a lack of innervation from the upper thoracic spine, combined with atherosclerosis, leads to serious heart trouble.

DeJarnette says that coronary occlusion can be prevented by manipulation of the second thoracic vertebra, heart reflex areas on the anterior chest wall, along with relaxation of the psoas muscle to allow the diaphragm to move freely, permitting the heart enough room to work unrestricted. He also recommends that the patient eat beef heart, use safflower oil in cooking and salads and take vitamin E.

Another chiropractic proponent of vitamin E therapy for atherosclerosis is Dr F W Cox. Dr Cox says he has verified heart conditions with EKGs and then proceeded to place the patient on a regimen of manipulation and vitamin E therapy, continually raising the dosage until the patient is asymptomatic. He says this usually
occurs in the 1600 to 2400 International Units per day range, and tells his patients they must remain on this dosage as long as they want to be free of heart trouble.

The next section of this submission will deal further with the American Chiropractic Association and with the Council on Chiropractic Education; the sequence of events leading to the accreditation of four chiropractic colleges will be described, Palmer College of Chiropractic not being one of them.
The American Chiropractic Association is "dedicated to the health of mankind on the premise that the relationship between structure and function in the human body is a significant health factor. The Association is pledged to protect, promote, and promulgate the advancement of the philosophy, science and art of chiropractic and the members of the chiropractic profession". 27

The ACA is by far the larger of the two American professional associations* (the other being the International Chiropractors Association with some 37% of practitioners) 5 and is described as the "spokesman for chiropractic throughout the world;" 28 it deserves attention because of its special relationship with the Council on Chiropractic Education, and because of the breadth of its philosophy - the scope of practice of ACA members is wider that that of other chiropractic associations, including as it does nutritional supplementation, physiotherapy, the prescription of vitamins and orthopaedic appliances.

The Council on Chiropractic Education dates from 1947. The CCE is an autonomous national organisation, currently sponsored by the ACA and the Federation of Chiropractic Licensing Boards; its bylaws made provision for sponsorship by the ICA which until 1977 declined support. The Council is composed of two sections: an institutional members' section (one official representative of each member college) and the Accrediting Commission. Of the eight members of the Accrediting Commission, three are nominated by the sponsoring national associations; two by the sponsoring Federation of Chiropractic Licensing Boards; two by the institutional representatives of the Council; and one, a layman, by the full Council. 31 As its name suggests, the CCE is concerned with educational standards in general and with the accreditation of colleges in particular.

*As at 1 March 1976 the ACA claimed 8,438 graduate members. 38
In August 1974, the US Office of Education, itself a division of the Department of Health, Education and Welfare, listed the Accrediting Commission of the CCE as a nationally recognised accrediting body. This decision to grant to the CCE the right to accredit chiropractic colleges as institutions of higher learning was rightly regarded by the ACA as a historic decision: such accredited institutions are eligible for federal funding. Other implications are described by William H Dallas, D.C., ACA President:

"There is little doubt that HEW recognition is the single most significant development toward improving the credibility of our profession. On the state and federal level, political resistance to our requests has noticeably diminished. It has given us the opportunity for professional and clinical development which has never before been permitted. It has certainly given us increased stature in all segments of society and, as a direct result, has greatly improved our economic position. While its application is directed to education, the spin-off to our efforts in achieving parity in the health-care delivery system is readily apparent. The wall of fear and distrust erected by the AMA is crumbling, and each of us is sharing in a greatly improved opportunity to serve more patients, which naturally provides us with a higher income." 32

To date, four institutions have been granted full accreditation by the CCE; they are:

The National College of Chiropractic
Los Angeles College of Chiropractic
Northwestern College of Chiropractic
Texas Chiropractic College.

It will be noted that of the six US chiropractic colleges approved by the New Zealand Chiropractic Board in terms of Section 29 of the Chiropractors Act 1960, only two, The National College and Los Angeles College, have been accredited by the CCE; it will be further noted that Palmer College, where three out of four New Zealand chiropractors have received their training, has not been accredited.
As already stated, the US Office of Education which listed the Accrediting Commission of the CCE as a nationally recognised accrediting body, is itself a division of the Department of Health, Education and Welfare which only six years earlier reported to Congress that:

"Chiropractic theory and practice are not based upon the body of basic knowledge related to health, disease, and health care that has been widely accepted by the scientific community. Moreover, irrespective of its theory, the scope and quality of chiropractic education do not prepare the practitioner to make an adequate diagnosis and provide appropriate treatment." 7

The incongruity of these events will not escape the Commission of Inquiry; when the American Medical Association appealed against the listing of the CCE as a recognised accrediting body, counsel for the Office of Education stated that the Commissioner of Education was "not called upon to express his opinion as to the legitimacy or social usefulness of the field of training of the agency seeking listing". 33

The next section of this submission will deal further with the scope of chiropractic as described by the New Zealand Chiropractors' Association (Inc.) in its submission to the Parliamentary Select Committee considering the Petition of R A Houston and others on Wednesday 21 May, 1975. For the information of the Select Committee, James Ernest Woodbridge, Vice-President of the New Zealand Chiropractors' Association, prepared a special brief on the Scope of Chiropractic as an Appendix No: 10; the full text of this appendix forms the substance of the next section of this submission.
Under consideration at a meeting of the Petitions Committee of the House of Representatives held on Wednesday, 21 May 1975, was the petition of R A Houston and others worded as follows:

"We, the undersigned, pray that Chiropractic services be subsidized under Social Security and Accident Compensation so that patients of Registered Chiropractors may receive their services on the same basis as they receive other Health services within the community and We pray also for the passing of legislation to achieve this without delay."

The New Zealand Chiropractors' Association was represented by its Vice-President, J E Woodbridge, a member of the Chiropractic Board from 1961-1972. With his paper presented to the Petitions Committee, there was tabled a special brief on the Scope of Chiropractic as an Appendix No: 10 which because of its importance is reproduced hereunder:

"Appendix No. 10

The Scope of Chiropractic As A Clinical Discipline

It is totally impossible to exactingly demarcate the scope of practice of a general practitioner in the healing arts and sciences, (the term general practitioner being used in the generic sense as one who treats the whole body rather than such local areas and organs as the feet-podiatrist; teeth and gums-dentist; eyes-optometrist). In this generic sense the doctor of chiropractic is a general practitioner. He does not treat the spine per se, he treats those afflictions that are of the spine and surrounding structures, but also those ailments which result from the neurological disturbances invoked by mechanical spinal involvements yet may give symptom expression quite distal
to the spine. In addition the doctor of chiropractic also concerns himself with the articular, muscular, neurological and vascular involvements of the body appendages and torso.

"Indeed the practitioner of chiropractic majors in the managing and treating of a certain variety of human ailments to which the therapeutic patterns of chiropractic are uniquely and effectively suited and certainly this is the real purpose and intent of any measure, procedure or technic of therapy, whether in medicine and its specializations, surgery and its specializations, osteopathy and its evolving differentiations, dentistry and its variations, or chiropractic. Every practitioner should emphasize the handling of those conditions for which his therapeutic armamentarium was essentially designed.

"What then are the major clinical areas in which chiropractic has primary application? The following listing or classification is fully arbitrary and represents but an effort and a generalization of a matter that cannot be pinpointed.

"I. Spinal and pelvic involvements proper.
   a. Disc syndromes.
   b. Low back syndromes associated with interosseous disrelations (subluxations), developmental defects and degenerative-proliferative spondylotic changes.
   c. Cervical lumbosacral and sacroiliac sprains, strains and subluxations.
   d. Headpains - such as cervical and suboccipital migraines having origin in the cervical spine.
   e. Acute and chronic recurring torticollis (wry-neck).

"II. Spino-somatic syndromes (those that arise in consequence to disturbances in the spine and pelvis but extended onto the extremities and the torso. Essentially these include:
   b. Shoulder-elbow-hand syndromes associated with cervico-brachial spine involvements.
   c. Radiating neuralgias extending along the somatic sensory distribution of the spinal nerves. In brief
such may include:

1. Supra and subscapular neuralgia.
2. Variations of brachial neuralgia - ulnar, radial, auxiliary median.
3. Intercostal neuralgia.
4. Femoral, obturator, sciatic, peroneal, lateral cutaneous and gluteal neuralgia, etc.

d. Spinal nerve motor reaction syndromes such as:

1. Acute reflex muscle group spasms, such as torticollis, lumbago, rotary cuff spasm, hiccoughs, etc.

"III. General musculoskeletal ailments such as:

a. Fatigue and postural defect, back and neck pains.
b. Myofascitis involving the musculature and fascias of the spine and pelvis especially.
c. Sprains and strains of the ribcage, and the joints, and relating tissues of the extremities.
d. Stress, strain and traumatic bursitis and synotenonitis.
e. Many of the athletic injuries and involvements other than frank fractures and dislocations.
f. Trigger point syndromes.

"IV. Spinovisceral syndromes (those functional disorders of internal organs and systems that are the consequence of or aggravated by derangements of the spine and pelvis).

Some of these may include:

a. Asthmatic syndromes.
b. Functional cardiovascular syndromes.
c. The high blood pressures associated with peripheral tensions and vasomotor spasms.
d. Gastrointestinal neuroses.
e. Enuresis.
f. Functional dysmenorrhea.

"V. Other non-classified ailments such as:

a. Post-traumatic and post-polio pareses or paralyses.
b. Non-infectious arthritis.
c. Chronic degenerative-arthritis of such articulations as the knee joint, etc.
"The foregoing in no way is a complete listing. It is but suggestive and representative of what might be considered.

"It should also be strictly acknowledged that a patient who for example is a diabetic or who is suspected of having an incipient malignancy of a pelvic organ or any other visceral structure, may also be afflicted with any one of the afore-mentioned ailments for which the services of a doctor of chiropractic should be enlisted concurrent to those of a medical practitioner in the care of the condition that does not reside within the acceptable scope of clinical chiropractic."

Here is the first full and frank statement from the New Zealand Chiropractors' Association - hitherto unpublished - as to the scope of chiropractic in this country, to the effect that its members feel free to practise some fraction, at least, of what is known as internal medicine. The involvement of chiropractic with internal medicine will be explored further in the next section of this submission by examining in detail the chiropractic concept of vertebral subluxation.
CHIROPRACTIC VERTEBRAL SUBLUXATION

The concept of vertebral subluxation is central to chiropractic philosophy. In the second section of this submission, it was shown how chiropractic was discovered by Daniel David Palmer, the father of the movement; Palmer's description of subluxation is recounted in his own words:

"Harvey Lillard ... had been so deaf for 17 years that he could not hear the racket of a wagon on the street ... I made inquiry as to the cause of his deafness and was informed that when he was exerting himself in a cramped, stooping position, he felt something give way in his back and immediately became deaf. An examination showed a vertebra racked from its normal position." ²

As defined by the modern Palmer College of Chiropractic:

"If a vertebra loses its normal range of movement, and is misaligned far enough to cause distortion of the spine, it may result in a disturbance with the normal transmission of the vital nerve supply from the brain, not only into the muscles the nerve may contact, but also into some other organ or system of organs in the body. This condition is referred to as vertebral subluxation." ¹

For Palmer's disciples, the doctrine of vertebral subluxation has long held a mystical quality, a transcendence attributable to the chiropractic dogma. A searching analysis of the meaning and presence of vertebral subluxation is to be found in the writings of W D Harper, a Fellow of the Palmer Academy of Chiropractic, and President of Texas Chiropractic College:
"Subluxation is the greatest single cause of disease, as each of you can testify ... it is necessary that we define the subluxation in its strict sense as an anatomic disrelation of an articulation and then to establish the reason D D Palmer found that this was the greatest cause of disease. If this can be done, we will find that in the reason lies the basis of the Science of Chiropractic that differentiates it from the practice of medical manipulation."

The quality of transcendence in vertebral subluxation can also be recognised in the writings of A E Homewood, former President of Canadian Memorial Chiropractic College:

"The founder of the science of chiropractic appreciated the working of Universal Intelligence (God); the function of Innate Intelligence (Soul, Spirit or Spark of Life) within each, which he recognised as a minute segment of Universal; and the fundamental causes of interference to the planned expression of that Innate Intelligence in the form of Mental, Chemical and/or Mechanical Stresses, which create the structural distortions that interfere with nerve supply .......

The confusion of more modern chiropractic thinking is described by S Haldeman in the Journal of the Canadian Chiropractic Association for September 1975:

"The determination of the clinical significance of the spinal subluxation has been clouded by the large number of widely varying, and in many cases, diametrically opposed opinions on this subject which have often been dogmatically adhered to without adequate investigation. The exact clinical significance remains difficult to determine because of the great diversity in its etiology, the complex nature of the subluxation and the comparative lack of research."
There is no quality of transcendence in the description of spinal subluxation arrived at by the ACA following chiropractic inclusion in Medicare where regulations provided that "payment may be made only for the Chiropractor's manual manipulation of the spine to correct a subluxation (demonstrated by x-ray to exist) which has resulted in a neuro-musculoskeletal condition for which such manipulation is appropriate treatment". A matter of days after President Nixon signed into law PL 92-603 under which Medicare payments could go to chiropractors, the Houston Conference of November 1972 took place: representatives from eight chiropractic colleges, the American College on Chiropractic Roentgenology, the Council on Chiropractic Orthopedics, and others agreed upon a classification of subluxation, particularly the radiological manifestations, "to be uniformly used in Medicare reporting". 35

As described by the statement regarding subluxation from the Houston Conference of November 1972:

"Through the years there have been numerous concepts within the chiropractic profession of what constitutes a subluxation. Each of these has had its own rationale and each has had certain validity that has been a contribution to our understanding of this complex phenomenon."

(In other words: from the beginning there has been confusion among chiropractors as to the nature of subluxation, particularly the scientific validity of the numerous concepts.)

"The advent of chiropractic inclusion in Medicare has brought the absolute necessity for a uniform method of describing, documenting, and reporting spinal sub-luxation so that those who will administer the law will not be confused by the present lack of uniformity and differences in reporting terminology, to our detriment." 35
(That is to say: unless differences are settled and there is agreement upon a definition of subluxation which is acceptable to lay administrators, no Medicare payments will go to chiropractors.)

In the event, the "Radiological Manifestations of Spinal Subluxations", as documented by the Houston Conference of November 1972, proved to be no more than the ordinary signs of degenerative spinal disease (spondylosis) familiar to every practising radiologist, and which may be identified in the majority of spinal radiographs of patients who are without symptoms referable to the spine.

Three pages are reproduced from the Basic Chiropractic Procedural Manual, Volume I, as reprinted by the ACA Journal of Chiropractic for January 1975, depicting the radiological manifestations of spinal subluxation "to be uniformly used in Medicare reporting":
Classifications of radiologic manifestations:

A. Static Intersegmental Subluxations:

1. FLEXION MALPOSITION. In this lateral schematic we see the characteristics of this particular type of subluxation as a radiograph would portray it. Note that in flexion there is wedging of the disc space toward the anterior as the vertebral bodies approximate one another somewhat anteriorly. The spinous processes become separated and the inferior articular processes of the vertebra above glide upward upon the superior articular processes of the vertebra below. This makes the neural foramina appear to be larger.

2. EXTENSION MALPOSITION. In this kind of subluxation, which is one of the most common encountered, especially in the low back, you will note that the vertebral bodies become approximated posteriorly and the disc narrows posteriorly. The facet articulations show imbrication as the inferior articular processes of the vertebra above glide downward relative to the superior articular processes of the vertebra below. As a motor unit extends, the neural foramina appear to become smaller.

3. LATERAL FLEXION MALPOSITION. This subluxation is characterized by lateral wedging of the disc interspace produced by approximation of the vertebral bodies on the side toward which the vertebra above is flexing. This also causes the facet articulation on the side of disc narrowing to imbricate while the contralateral articulation shows separation of the articular processes as the inferior articular process of the upper vertebra glides upward upon the opposing process of the lower segment.

4. ROTATIONAL MALPOSITION. Intervertebral rotation, even in subluxation, is extremely limited at any single intervertebral level except in the upper cervical spine. As is depicted in this line drawing, there are usually several segments involved in rotational disrelationship. The preponderance of the body of a rotated vertebra relative to its spinous process on the side toward which the vertebra has rotated posteriorly is well known to all doctors of chiropractic.

This line drawing, taken from an actual radiograph, shows reverse rotation between the vertebrae portrayed in dotted line with the top three and the lower two vertebrae rotated in corresponding relationship to one another.

The next three types of subluxation to be considered are those where the suffix "Listhesis" is employed. This means slipping, and these are usually rather gross displacements.
5. ANTEROLISTHESIS OR SPONDYLOLISTHESIS. This malposition usually is allowed by interruption of the isthmus of the displaced vertebra at its pars interarticularis, which allows separation of the anterior portion of the motor unit to separate from the posterior portion, resulting in anterior slipping of the vertebral body above upon the lower one. In a few cases slight anterior slipping may occur without pars separation if considerable disc degeneration and facet arthrosis have developed to make the motor unit markedly unstable.

6. RETROLISTHESIS. Posterior malpositioning of the upper of two vertebrae is known as retrolisthesis. The displacement is relatively obvious to depict. It is usually accompanied by some extension of the motor unit and/or approximation of the vertebral bodies due to disc narrowing.

7. LATERAL-LISTHESIS. The lateral slipping that is characteristic of this type of subluxation is always accompanied by considerable segmental rotation. The result is a demonstrable overhang of the lateral margin of the vertebral body of the upper segment relative to the one below.

8. ALTERED INTEROSSEOUS SPACING. This is probably the most common of all subluxations in elderly people. It occurs mainly when degeneration of the disc has caused narrowing which approximates the vertebral bodies and facet articulations. Rarely there may be some swelling or other abnormality of the disc which will cause an increased interosseous spacing.

9. The last of the static subluxations, FORAMINAL OCCLUSION, may be a consequence of several of those malpositions already covered. On the other hand, there may be, on rare occasions, no other evidence of disrelationship, per se.
B. Kinetic Intersegmental Subluxations will be the next classifications considered.

1. **HYPOMOBILITY**, called fixation subluxation by some, may affect one or several motor units. It is demonstrated here as diminution of motion at C-5 in the cervical spine, which has been forced to the extreme of forward bending or flexion. Stress studies or cine-radiography are necessary to depict this and other kinetic subluxations radiographically, but orthopedic testing and motion palpation will usually show its presence clinically.

2. **HYPERMOBILITY**, called loosening of the vertebral motor unit by Earl Rich and Junghanns, may also be found at one or several motor units. It is often found as a compensatory mechanism accompanying hypomobility or fixation at one or more other levels. We show it here as hypermobility at C-4/C-5, allowing an excessive range of motion during neck flexion. Again, this entity can be demonstrated by clinical means, but takes stress radiography to document its presence.

3. **ABERRANT MOTION** exists when one or several vertebrae move in a manner which is not in phase or coordination with their neighboring segments during some movement of the spine. This illustration shows one vertebra, arrowed, which is not in phase with the overall movement of the neighboring segments.
The fallacious nature of such a radiological classification of spinal subluxation is described by D C Drum in the Journal of the Canadian Chiropractic Association for September 1974 when emphasising a dynamic, as opposed to a static, concept of spinal subluxation:

"..... because most subluxations visible on x-ray are not 'chiropractic' (this is reducible with adjustment) such a classification is inappropriate to the special nature of our therapy." 36

No matter how inappropriate to the special nature of chiropractic, the definition and classification of subluxation as agreed upon at the Houston Conference in November 1972 "are to be uniformly used in Medicare reporting". This pragmatism is best described in the ACA President's own words:

"..... HEW recognition is the single most significant development toward improving the credibility of our profession ... each of us is sharing in a greatly improved opportunity to serve more patients, which naturally provides us with a higher income." 32

The following section of this submission will give further consideration to the not-unimportant subject of chiropractic Roentgenology. Although chiropractic philosophy is firmly based on the concept of spinal subluxation, it will be shown that chiropractic Roentgenology is in no sense restricted to the examination of the spinal column.
The discovery of x-rays by the German scientist Wilhelm Conrad Roentgen took place in 1895, the same year that Daniel David Palmer discovered chiropractic. The response to Roentgen's preliminary communication, *Ueber eine neue Art von Strahlen*, was immediate, dramatic and, above all, international; his discovery led to developments of extraordinary importance in physics, in medicine, and in the allied sciences - developments that were world-wide. By contrast, more than 80 years after its discovery chiropractic has no scientific standing in any part of the world; far from being international, its spread has been slow and limited to a tiny fraction of the world population, that fraction exposed to American cultural influence.

The diagnostic use of x-rays has long been part of the armamentarium of the chiropractor, and recently the subject of self-evaluation. Because of the known risk of ionizing radiation, this interest has been paralleled - in those parts of the world where there is chiropractic - by the concern of Government agencies responsible for public health.

It has been shown that the modern chiropractor looks upon himself as a primary-care physician practising an alternative system of medicine and that his apparent, limited interest in disorders of the spinal column and pelvis (as defined by the New Zealand Act) is an illusion; so it is with chiropractic Roentgenology, the true scope of which is described by the American Chiropractic College of Roentgenology in cooperation with the Radiological Consulting Committee of the ACA:

*A New Kind of Radiation*
"Roentgenology in Chiropractic Education

As one of the major diagnostic disciplines, roentgenology receives significant emphasis in the curricula of all chiropractic colleges. Among the colleges accredited by The Council on Chiropractic Education is general agreement that diagnostic roentgenology should be taught as a broad concept and that radiologic examination of all body parts and systems falls within the interest of the doctor of chiropractic."

(The importance of the Council on Chiropractic Education will be remembered: its Accrediting Commission is listed as the nationally-recognised accrediting body. Thus the CCE accredits colleges which in turn train New Zealand chiropractors.)

"While chiropractic students are fairly well educated in this field, the intention is not to make roentgenologists of them. They are well-grounded in fundamentals and are encouraged to utilize the services of chiropractic roentgenologists as consultants and for those procedures beyond ordinary office practice.

"Chiropractic education in roentgenology does not end with graduation. The colleges maintain an extensive division of postgraduate education. Numerous syllabi are available for groups of chiropractic physicians to select from, should they desire further education or refresher courses. In addition to these courses, a program is available for those who wish to seek specialty status in this field.

"American Chiropractic Board of Roentgenology

The president of the Council on Roentgenology appoints members to the American Chiropractic Board of Roentgenology from the membership of the American Chiropractic College of Roentgenology after having cleared their educational credentials through The Council on Chiropractic Education. The function of this board is to examine all candidates for the status of diplomate. The subjects in which candidates are examined by the Board of Roentgenology are:
1. Physics and radiation safety.
2. Spinography.
4. Gastrointestinal system.
5. Gall bladder.
6. Genitourinary system.
7. Arthopathies.
8. Lung fields and chest walls.
9. Cardiovascular system.
10. Myelography.
11. Skull and intracranial contents.
12. Sinuses and facial bones.
13. Oral and written reports including the following:
   a. Oral osseous film interpretation
   b. Oral soft tissue film interpretation
   c. Narrative report writing.

"Roentgenologic Diagnosis"

For better perspective in the overall use of roentgenology we might cite the customary procedure in patient management. After the case history is obtained and a physical examination performed, x-ray examination and other clinical diagnostic procedures may be instituted. These diagnostic procedures then lead to a tentative or working diagnosis for treatment of the patient. Although his primary therapeutic effort is directed at the spinal column, the doctor of chiropractic is concerned with the total patient and therefore roentgenology may be utilized in any body system. Examples of this include the chest examination and the abdominal evaluation including gastrointestinal and gall bladder studies, usually performed by a roentgenologist. The general practitioner DC, however, may well perform such procedures as chest roentgenology and other soft-tissue studies which do not require the use of contrast media, as well as extremities, skull, and sinuses.

"In summary, to put the role of roentgenology in its proper perspective, it is a particularly valuable diagnostic procedure for the chiropractor. The general practitioner DC may be somewhat limited in the scope of his radiologic procedures, however, it is to be supplemented and expanded upon by the use and services of the chiropractic roentgenologist."
So much for the scope of modern chiropractic Roentgenology, and for the illusion of its restriction to the demonstration of "vertebral subluxation". There is now a distinction - at least in the US where almost all New Zealand chiropractors are trained - between the "general practitioner DC" capable of performing simple radiography, and the consultant "chiropractic roentgenologist" to whom patients may be referred for those procedures beyond ordinary office practice, procedures which require the use of contrast media.

So far, evidence has been produced to show the true scope of chiropractic both in clinical and radiological practice. If much of this evidence is taken from American sources, it is nonetheless valid in the sense that chiropractic is an American phenomenon: chiropractic was conceived in America and flourishes there as nowhere else. Of prime importance is the fact that virtually all New Zealand chiropractors are trained in North America, as the next section of this submission will show.
The failure of North American legislation to limit the scope of chiropractic has been described by the Chairman of the Department of History at McGill University:

"Despite variations, North American laws on limiting practice all have a common theme. Chiropractors are meant to treat only disorders of the back, and only by the use of hands ... Despite years of experience, these attempts to limit chiropractic to back problems, and only to those which are muscular or bony in origin, have failed." ¹⁰

In New Zealand, as elsewhere in the Commonwealth of Nations, legislation dealing with chiropractic has been largely concerned with the question of licensure, and prompted by the consideration of public welfare. The definition of chiropractic contained in the New Zealand Act - "the examination and adjustment by hand of the segments of the human spinal column and pelvis" - unrealistic as it is, has failed in turn to limit the scope of chiropractic in this country.

The first legislation dealing with chiropractic in New Zealand was the Chiropractors' Association Act 1955, an Act to prohibit the improper use of words implying membership of the New Zealand Chiropractors' Association Incorporated.

The Chiropractors Act 1960 provides for the registration of chiropractors; it is administered not by the Department of Health (which opposed the Bill and refused to administer the Act) ⁵⁵ but by the Department of Justice. A Chiropractic Board is constituted as follows:

(a) The Chairman, who shall be a barrister of the Supreme Court of New Zealand of at least seven years practice.
(b) Two chiropractors to be nominated by the New Zealand Chiropractors' Association.

(c) Two persons to be nominated by the Minister of Justice, of whom one shall be a chiropractor.

One of the functions of the Chiropractic Board so constituted is to approve institutions at which the whole or any part of any course of training or instruction for the purposes of the Act may be undergone. As at 20 April 1977 the following institutions were approved:

- Palmer College of Chiropractic. Davenport, Iowa, US.
- Logan College of Chiropractic. Chesterfield, Missouri, US.
- The National College of Chiropractic. Lombard, Illinois, US.
- Los Angeles College of Chiropractic. Glendale, California, US.
- Cleveland Chiropractic College. Kansas City, Missouri, US.
- Sherman College of Straight Chiropractic. Spartanburg, South Carolina, US.
- Canadian Memorial Chiropractic College. Toronto, Ontario, Canada.

Examination of the Register of Chiropractors as at 1 March 1978 showed 96 chiropractors with practising certificates, 73 of whom received their training at Palmer College; seven at Canadian Memorial Chiropractic College; five at Lincoln, and two at The National College*; three at Los Angeles College; three at Anglo-European College; and three at other US colleges.

Thus, three out of four New Zealand chiropractors have been trained at Palmer College of Chiropractic whose educational standards (and financial structure) were examined recently and found wanting: in October 1972 a Chiropractic Study Committee, having personally visited Palmer College, recommended

to the Governor's Health Planning and Policy Task Force in neighbouring Wisconsin:

"That the State refuse to permit the use of any public resources for any purpose which would tend to further the use of chiropractic." 39

Palmer College was selected for specific attention in that 46% of Wisconsin's chiropractors were Palmer graduates. The full committee visited Palmer College and spent a long day on its campus, reporting:

"1. The faculty-student ratio is too low for effective teaching: At Palmer there are 27 faculty members and five assistant instructors for approximately 1,300 students. Seven of those listed as full faculty members also have administrative responsibilities. In fact, that seven hold all of the administrative offices with the exception of President, Secretary and Director of Public Relations. Many of the faculty also maintain active private practices.

"2. Teaching in the basic sciences is done by persons who themselves lack adequate training: Among the 27 persons listed as full faculty members at Palmer, the highest non-chiropractic academic degrees listed are one M.S. and one M.A.; both of these are held by persons who also must function as administrators; the disciplines in which these degrees were awarded is not noted. Many faculty members had only D.C. degrees from Palmer with no other academic credentials.

"3. Library facilities are inadequate: With respect to Palmer College this is gross understatement. The collection of books is small and obviously not up-to-date. A check of circulation records indicated that withdrawals for student use were almost non-existent. The periodical collection is obviously inadequate: The only periodicals which are bound are Newsweek and Scientific American; the subject matter ranges from Reports of the Grand Lodge of Free and Accepted Masons of Iowa through Glamour; there are
no journals of the basic sciences in evidence and the chiropractic journals are not even bound.

"4. The quality of instruction has been criticized: At Palmer lecture presentations appear to be of a programmed nature with emphasis on rote learning. There was no evidence that students were ever required, or even encouraged, to do independent research. The student body apparently does not find the curriculum too demanding as many were encountered who were holding full-time jobs.

"5. As institutions chiropractic colleges engage in little or no research: There were no research projects underway at Palmer College.

"6. Requirements for admission to chiropractic colleges are generally regarded as sub-standard for academic achievement: Palmer College is currently changing its admission requirement from high school graduation to two years of college. Historically, few, if any, persons applying have ever been denied admission. The administration candidly admits that the higher standard is being adopted for purposes of improving the school's academic image, rather than for anticipated academic improvement.

"7. Laboratory facilities have been found wanting in most previous studies: During the committee's tour of the physical plant, no laboratories were pointed out. Two x-ray machines were viewed; one of them can most kindly be described as obviously antiquated.

"8. The financial structure of Palmer College is obscure. While it has recently changed from a proprietary college corporation to a non-profit institution, its ties to the Palmer family interest appear close and complex." 39

This, then, is the academic standing of the training institution approved by the New Zealand Chiropractic Board (but not by the US Council on Chiropractic Education) where three out of every four New Zealand chiropractors qualify.

The next section of this submission leaves the subject of the chiropractor for that of his patient, the chiropractic consumer.
The past fifteen years have seen a number of investigations into chiropractic, in the United States of America, in Canada, in Australia and in South Africa; no such investigation has taken place in the United Kingdom (where chiropractic is virtually unknown) or in New Zealand. For the most part, these have been commissions of inquiry into the question of the registration of chiropractors; in some cases government agencies have been responsible for specific studies, an example being the US Department of Health, Education and Welfare's study of independent practitioners under Medicare.

When the reports of such investigations have been unfavourable to the chiropractic cause (the HEW report being a notable example) professional and institutional bias against chiropractic has been claimed. But no such bias can be claimed for two recent and manifestly independent studies, one made by the Consumers Union of United States, Inc., the other by the Consumers' Institute of New Zealand.

The New Zealand Consumer Review of February 1976 had this to say:

"THE SCOPE OF CHIROPRACTIC?

"As is our policy we sent a draft of our article for comment before publication to the New Zealand Chiropractors' Association. We did this in early December with the request that replies be in by early January. The NZCA protested that with the Christmas holidays intervening a month was insufficient time and, in any case, they wished to reserve comment until their annual meeting in February. We rejected the latter proposal but extended the deadline by three weeks. To assist the NZCA and ourselves we asked that organisation - along with the Chiropractic Board - six straightforward questions which we believe any chiropractor in New Zealand could
answer.

1. Is chiropractic confined to manipulation of the spine to relieve or correct dislocations of it?
2. If chiropractic involves more than correction or alleviation of spinal disorders, what further things does it do?
3. Is it true, as stated and implied in literature available in New Zealand, that chiropractic claims to be able to cure all or most diseases by manipulation of the spine?
4. Is it true, as implied in some literature available in New Zealand, that chiropractic claims to cure or alleviate such diseases as diabetes, leukemia and other cancers, thyroid conditions, jaundice and hay fever by manipulation of the spine alone?
5. If the basic principle of chiropractic is that derangements of the nervous system cause illness, are there any diseases that chiropractors consider are not caused by derangements of the nervous system?
6. Whether or not chiropractic claims that all diseases result from disorders of the nervous system, is the average chiropractor reasonably capable of diagnosing a wide range of medical conditions? If so, on what training?

"While both the NZCA and the Chiropractic Board took strong issue with our article, neither responded to our six questions." 41

In a later issue of Consumer, for July 1976, this further comment was made:

"In mid-March, because our printing schedule had been disrupted, we renewed the offer to receive comments with a further extension of time. We have never received a reply nor, at this time of writing (mid-May), has the NZCA conference been held. The previous one was in June 1975.

"In our experience, people with legitimate points to make usually make them promptly and directly. For their part, the NZCA and individual chiropractors have chosen to answer us through the press." 42

The New Zealand Consumer Review concluded:
"We suspect that there is a major theoretical muddle in New Zealand chiropractic. The Palmer gospel continues to be preached though some, perhaps many, practitioners behave as though they no longer fully believe it. We suggest that before chiropractic seeks public support, it should attempt to reconcile theory with present practice and declare publicly where it now stands." 41

In examining the validity of chiropractic, the United States Consumers Union reviewed chiropractic and medical literature, as well as the findings of national, state and provincial studies conducted in the US and Canada in the previous ten years. CU visited three chiropractic colleges - Palmer College, The National College and Canadian Memorial Chiropractic College - and interviewed officials of the principal chiropractic associations, the membership of which included virtually all the 15,000 US chiropractors in active practice, and some 1,400 chiropractors in Canada:

"Chiropractic officials and educators invariably told CU that the chiropractor's role was that of a primary physician, not a muscle-and-joint practitioner. They emphasised that chiropractors should serve as one of the 'portals of entry' to the health-care system, functioning essentially as family doctors and referring patients, when appropriate, to other health professions." 5

Such a role assumes that chiropractors receive an adequate training in diagnosis and that they are competent to make the decision as to which patient should be treated, and which patient should be referred. But differential diagnosis, in medical terms, is not part of chiropractic philosophy:

"For the chiropractor, diagnosis does not constitute, as it does for the medical doctor, a specific guide to treatment. It is not a major goal of the doctor of chiropractic to specifically name a disease." 9
As will be shown in a later section of this submission, the scope, quality and length of chiropractic education cannot provide the depth of diagnostic training necessary to equip the chiropractor for his chosen role of a primary health-care physician.

"Overall, CU believes that chiropractic is a significant hazard to many patients. Current licensing laws, in our opinion, lend an aura of legitimacy to unscientific practices and serve to protect the chiropractor rather than the public. In effect, those laws allow persons with limited qualifications to practise medicine under another name."  

This final comment of the US Consumers Union re-states the New Zealand Medical Association's objection:

That chiropractic, however it may be defined, serves in practice as a system of primary health-care: the chiropractor functions as the initial portal of entry into his own unique health-care system. The Medical Council of New Zealand has laid down certain standards of education for medical practitioners who provide primary health-care: the education of chiropractors fails to meet those standards.

So far, little mention has been made of chiropractic in Britain, the reason for which will appear in the following section of this submission.
Chiropractic is virtually unknown in the United Kingdom; there is one chiropractic college (Anglo-European College of Chiropractic in Bournemouth, established in 1965) and less than two chiropractors per million of population (the British Chiropractors' Association had 85 members in 1975-76); 43 chiropractors are not registered: members of this Commission may well wonder how it is that two great English-speaking nations - the United States and the United Kingdom - share scientific medicine equally, but do not share chiropractic.
The importance of Palmer College in the context of chiropractic cannot be exaggerated: it is fairly described as the Fountainhead for with the exception of three colleges founded in the past three years, all American chiropractic institutions can trace their origins, through lineal descendency or merger, to schools which were functioning before the Founder died in 1913.44

Daniel David Palmer discovered the chiropractic principle in 1895 in the city of Davenport, Iowa, where he founded the profession and Palmer College of Chiropractic. Together with his son, Bartlett Joshua Palmer (usually known as "B.J."), and until his arrest in 1903 and subsequent imprisonment for six months on a charge of practising medicine without a license, Daniel David Palmer taught chiropractic at what was then known as the Palmer Infirmary and Chiropractic Institute.44

From that time and for more than fifty years until his death in 1961, "B.J." took his father's place as leader of the profession and president of the Fountainhead of Chiropractic at what came to be known as the Palmer School. Whereas Daniel David Palmer is acknowledged as the Founder, "B.J." is described as the Developer of Chiropractic, a tribute to his exceptional commercial and promotional skills - for example, "B.J." became a radio pioneer with a transmitting station in Davenport known as WOC (Wonders of Chiropractic); and it was "B.J." who pioneered chiropractic involvement with the then new and exciting x-ray machines.

Dr David D Palmer, only son of "B.J." and President of the Board of Directors of Palmer College since his father's death in 1961, is referred to as the chiropractic educator.1
By far the largest training ground for chiropractic in the world, with some 2,100 students enrolled in 1975, Palmer College's influence extends to New Zealand where three out of every four chiropractors are alumni. Nor does any reversal of this preponderance of Palmer graduates seem likely: of the last 31 chiropractors registered in New Zealand, in the five-year period from June 1971 to June 1976, 23 were from Palmer College.

In 1972, the Chiropractic Study Committee of the Governor's Health Planning and Policy Task Force in the neighbouring State of Wisconsin visited Palmer College; its report on the educational standards there has already been quoted in section 13 of this submission.

More recently, the educational standards of Palmer College were examined on behalf of the Committee of Inquiry into Osteopathy, Chiropractic and Naturopathy in Victoria which reported in November 1975. Eric L Unthank, B.Sc., B.Ed., Ph.D., Physics (RAAF) Department, University of Melbourne, visited the Palmer College of Chiropractic in November 1974 and commented as follows:

"Staff:

There is an active effort being made to improve the student-staff ratio to 15 to 1 as required by CCE. New staff are to be hired at the rate of 5 per quarter to achieve this ratio with an attempt being made to seek those with wider qualifications so long as these are relevant. The preponderance of qualifications in all departments still tend to be those of Palmer College. The director of Anatomy and Dissection Department is a former Victorian primary school teacher, although it is not explicitly stated whether he has his T.P.T.C. (Frankston Teachers College). One Adelaide University B.Sc. graduate, currently a student, is listed as an assistant lecturer in chemistry."
"Student:

Current enrolment is 2,188 students of whom 269 are international, including twenty-four (24) Australian students. A large proportional of the international students are from Canada.

"The current dropout rate is estimated to be 30% between registration and graduation, spread 10% in each of the first two years and 5% in each of the final two.

"The college does not impose any limit to part-time work by students but the pattern is changing because of the workload which is getting heavier.

"Library:

The library is housed in rather limited quarters with seating space for about forty (40).

"It is a requirement of CCE that 5% to 10% of the total college budget must be spent on the library. This has not yet been achieved at Palmer.

"The general impression was one of inadequacy. For a college of this size and stage of development there did not appear to be suitable staffing, space or prospective space suitable for a student body which may grow to 3,000.

"Laboratories:

Bio-Chemistry:

Dr Silverstein, B.A., M.S., Ph.D., is in charge of this laboratory and is doing his DC concurrently. The class observed was a second year group of about eighty (80) doing two hours per day for one quarter. There were three staff supervising and forty-five (45) clinical microscopes supposedly available. In a class which involved manual blood counts, smears, staining and venous puncture etc., a different task was set each day, but little or no writing up of procedure and a minimum of the result were required. This class still had twenty-five (25) to thirty (30) minutes of the two hours remaining and there appeared to be very little bio-chemical activity. Closed circuit TV camera and monitors were available in this laboratory.
"Dissection:

A large laboratory of fairly recent origin which could house approximately 140 students. Closed circuit TV to eight 25" monitors around the room could be used to demonstrate dissection to the class. First year students do dissection of the cat and the monkey. Large supplies of these carcasses were held in an adjoining storage area.

"There is difficulty in obtaining human cadavers in Iowa and they may not be transported across State lines. Such few as can be obtained are usually reserved for fourth year students as a review course prior to licensure board examinations.

"X-Rays:

Dr Coelho, Director of X-ray had done three years of a four year course in geology and metallurgy at the University of Pretoria before doing DC at Palmer.

"The teaching of X-ray is being up-graded and it is hoped to be able to buy and use the set of individual learning kits produced by the Institute of Radiologists (California). This is a programmed set which enable students to proceed at their own pace. (Several days later, Dr Howe at National College stated that Palmer would not be able to get these at the moment as they do not have a roentgenologist who would satisfy the requirements of the suppliers.)

"Conclusions:

Again there are obviously big changes afoot but the present appearance is of a student body far too large for the facilities. The staff are largely Palmer graduates and far too many in relatively senior positions appear to be both students and Faculty."

So much for the quality of teaching at Palmer College where three out of every four New Zealanders receive their training; two recent studies, one in 1972 and one in 1974, have shown that training to be
deficient. However, the crucial question concerns not the quality of chiropractic teaching, but the validity of chiropractic philosophy: if chiropractic theory is false, the risks attendant upon its practice, far from being diminished by more intensive teaching, will be compounded.

Before examining the validity of chiropractic philosophy it will be necessary to consider the International Chiropractors Association to which Palmer College of Chiropractic is affiliated, and describe how the ICA delined to share sponsorship of the Council on Chiropractic Education with the ACA until it applied to do so in 1977; the International Chiropractors Association, therefore, forms the subject of the next section of this submission.
In a previous section of this submission the American Chiropractic Association was described, the ACA being the dominant US chiropractic association not only on account of its numerical strength but because of its special relationship with the Council on Chiropractic Education. The importance of the CCE will be remembered: its Accrediting Commission is listed as the nationally-recognised accrediting body; thus the CCE accredits colleges which in turn train New Zealand chiropractors. The CCE had long been sponsored by the American Chiropractic Association and by the Federation of Chiropractic Licensing Boards, but not by the International Chiropractors Association: it was not until 1977 that the latter applied to become a co-sponsor, this in spite of the fact that there had always been provision in the bylaws of the Council for sponsorship by the ICA. 46 67

With an audited graduate membership of 2,542 in 1972, the ICA is significantly smaller than its rival ACA with 8,438 graduate members as at March 1976. 58

The ICA defines chiropractic as that science and art which utilizes the inherent recuperative powers of the body, and deals with the relationship between the nervous system and the spinal column, including its immediate articulations, and the role of this relationship in the restoration and maintenance of health. 47 According to the ICA:

"The chiropractor is a specialist in analyzing spinal conditions and in relieving them through the chiropractic adjustment. Drugs or surgery are not prescribed. Neither does the practice of chiropractic include physiotherapy or nutritional and diet therapy." 47
This conservatism is the chief feature which distinguishes the ICA from the ACA and is exemplified by the representations made to the US Department of Health, Education, and Welfare study of Independent Practitioners Under Medicare in 1968 when the ICA requested "strict confinement of chiropractic care to spinal analysis and adjustment..." 38

The ICA Chiropractic Education Commission approves the following chiropractic colleges:

- Cleveland Chiropractic College. Kansas City, Missouri, USA.
- Cleveland Chiropractic College. Los Angeles, California, USA.
- Columbia Institute of Chiropractic. New York, New York, USA.
- Logan College of Chiropractic. St Louis, Missouri, USA.
- Palmer College of Chiropractic. Davenport, Iowa, USA. 47

Of these ICA approved chiropractic colleges, two, Cleveland Chiropractic College of Kansas City and Palmer College of Chiropractic, are approved by the New Zealand Chiropractic Board in terms of Section 29 of the Chiropractors Act 1960.

The ICA is concerned for "the preservation of chiropractic as a separate and distinct health care service" and "the maintenance of chiropractic as a primary point-of-entry health care provider"; this concern is expressed when describing its relationship with the CCE:

"ICA supports the approval of the Council on Chiropractic Education by the United States Office of Education, and feels it is a positive step forward for the profession; however, ICA will zealously guard the academic freedom of our colleges." 48

Whatever the risk to academic freedom, the ICA is a member of the chiropractic lobby described in section 3 of this submission:
"ICA was a major factor in effecting the inclusion of chiropractic under Medicare. ICA is currently submitting testimony to Congress urging amendatory legislation to provide for payment of chiropractic X-rays and to allow chiropractic services to be based either on X-rays or other chiropractic procedures. ICA legislative efforts also assisted in causing chiropractic services to become a provision of the Federal Employees' Compensation Act. The association is now working with the National Association of Retired Federal Employees, aiming for the inclusion of chiropractic services in their Health Benefits Program. A recently launched effort is to contact all members of the Senate and Congress to encourage their favorable consideration of chiropractic's being part of any eventually adopted National Health Insurance plan."  

In the June 1976 issue of the ACA Journal of Chiropractic, the attitude of the American Chiropractic Association towards the International Chiropractors Association is summarised as follows:

"... the actions of the ICA are more becoming a group of people with a great devotion to a person, idea, or thing, rather than a profession. Fortunately, however, the majority of the profession is more concerned with developing and sustaining a meaningful health service rather than the preservation of a dogma long out-dated to meet the needs of society."  

This commentary on the ICA should be regarded by the Commission as an important statement picturing as it does the futility of chiropractic based on historical principles; strip chiropractic of its dogma, deny its quality of transcendence, and the Palmer version of chiropractic must be seen for what it is, an anachronism in any modern health-care system.

If accreditation by the US Office of Education is seen by the ACA as the single most significant development toward improving the credibility
of chiropractic, it may presage the end of chiropractic as a separate and distinct health-care service, a risk recognised only too well by the ICA and responsible for the latter's reluctance to share sponsorship of the CCE: hand-in-glove with Federal funding will come insistence on orthodoxy, a fact which has prompted the concern of the ICA for the academic freedom of its colleges. The higher ratio of faculty to students (one condition of accreditation) and the influx of faculty with true scientific qualifications, must inevitably lead to a questioning of chiropractic dogma.

The validity of chiropractic philosophy will be examined next in this submission.
It has been shown that chiropractic philosophy is by no means uniform, and that it varies significantly from one school to another; in examining the validity of chiropractic, therefore, it will be necessary to consider each philosophical variant separately:

1: Daniel David Palmer

Daniel David Palmer's concept "... that disease is the result of too much or not enough functionating" need not be examined closely; always regarded by the medical profession as scientifically untenable, his theory is now rejected by modern chiropractic as well. \(^{38}\) That Palmer's writings remained the frame of reference for chiropractic well into the twentieth century is itself a remarkable fact, and attributable to the metaphysical quality of his doctrine.

2: The International Chiropractors Association

But the philosophy of the modern Palmer school, with its close ties to the International Chiropractors Association, deserves more attention:

"The chiropractor, having established that a disease has been caused by a subluxated vertebra, directs his efforts to determining which vertebra is subluxated, and to the adjustment of this vertebra back to its normal range of movement. Following the adjustment, the normal nerve supply is restored to the organ or system of organs, and their normal function may be re-established." \(^{1}\)
The philosophy of the ICA rejects surgery and the prescription of drugs:

"Neither does the practice of chiropractic include physiotherapy or nutritional and diet therapy." 47

There remains, therefore, a system of medicine based on the single premise that disease is due to vertebral subluxation:

"A subluxated vertebra, disturbing the normal nerve supply of an organ, brings about functional disease which may be followed by pathological disease." 1

The validity of this theory of vertebral subluxation was tested by E S Crelin, Professor of Anatomy at the Yale University School of Medicine, in an experiment described in the September-October 1973 issue of the American Scientist:

"This experimental study demonstrates conclusively that the subluxation of a vertebra as defined by chiropractic - the exertion of pressure on a spinal nerve which by interfering with the planned expression of Innate Intelligence produces pathology - does not occur. This is what should be expected when one recognizes that the vertebral column has been evolving for over 400 million years to support the body and protect the central nervous system. By a process of natural selection the vertebral column of mammals has evolved into one in which the articulations allow an overall range of motion so that individuals may function well for survival within their environment. At the same time the selective process has favored vertebral columns that have spacious intervertebral foramina in combination with the barest minimum of displacement between adjacent vertebrae - two factors that preclude impingement upon the spinal nerves as they pass through the foramina." 49
In Professor Crelin's experiment, the vertebral columns of six individuals were studied, three infants and three adults; each vertebral column was excised within three to six hours after death and immersed in physiological saline at body temperature. Compressive and torsional forces were applied and at the same time the spinal nerves and their intervertebral foramina observed: any reduction in the size of the foramina during the application of these forces was insignificant in relation to the spinal nerves passing through those foramina.

It may be argued that Professor Crelin's experimental conditions were unphysiological; a Workshop held at the National Institutes of Health in Bethesda, Maryland, in February 1975 examined the research status of spinal manipulative therapy, and concluded:

"Like the biomedical evidence for the cause of back pain in general, the evidence for the chiropractic subluxation is inferential rather than experimental ..." 50

Spinal manipulative therapy was chosen as the theme of the Workshop since it is the primary therapeutic modality of chiropractic and would serve as a base for evaluating the scientific data dealing with the theory of chiropractic subluxation:

"A definition of the chiropractic subluxation was offered as: 'an alteration of the normal dynamic, anatomical or physiological relationships of contiguous articular structures.' Etiologic (e.g., traumatic, inflammatory, reflex, etc.) symptomatic (e.g., fixed, hypermobile, painful, etc.) and patho-physiologic (e.g., primary, secondary) character-
istics of the 'nidus' were presented. To avoid semantic misunderstandings, the term 'nidus,' meaning focus of a morbid process, is used to incorporate the various clinical terms used by the several professions. The use of specific adjustive thrusts and the general techniques of spinal manipulation were described as methods for the reduction of positional abnormalities (subluxations), increasing movement at a 'locked joint' and/or the 'reduction' of disc lesions, with each therapeutic maneuver requiring the attainment of motion between vertebral segments to achieve its goal. The evidence for the pathophysiologic consequences of the proposed 'nidus' remains unclear. The etiology of disc disease is still not completely understood and the chain of events resulting in pain and incapacity is surmised rather than demonstrated. Because of their rich sensory innervation, the posterior spinal articular facets and their associated ligaments are suggested by some as a 'nidus' for back pain and the locus of the subluxation phenomenon. Flexion and/or rotation subluxations are described in anatomical and biomechanical terms, but their pathophysiologic effects on spinal roots, paravertebral tissues, inter-articular capsules or segmental neural transmission are presented as hypotheses rather than the results of experimental studies. The lack of a relevant and reproducible animal model may be one important obstacle to clarification of these issues. The pathophysiologic role of subluxation as a cause or concomitant of organic disease (e.g., diabetes mellitus) was not presented or discussed. Like the biomedical evidence for the cause of back pain in general, the evidence for the chiropractic subluxation is inferential rather than experimental, the scientific references being selected from a broad and dispersed literature; however, the evidence at this time for disqualification of the hypothesis also is inferential. Thus, subluxation remains a hypothesis yet to be evaluated experimentally."

Inferential or not, the evidence bearing on the validity of the chiropractic hypothesis, according to the modern Palmer school and the ICA, need not be examined further for reasons which will appear in the next section of this submission.
The previous section of this submission examined the validity of chiropractic philosophy as professed by the modern Palmer school and the ICA. But the ICA is far from being the dominant political or academic force in the US, its membership having remained static for a quarter of a century: a census in 1950 showed a membership of 2,512 \(^{51}\) compared with 2,542 in 1972. \(^{38}\) With 8,438 members in 1976, \(^{38}\) the ACA is by far the larger of the two associations, and the more influential on account of its special relationship with the CCE; as well, its membership is growing. \(^{51}\) Although not yet accredited, Palmer College has recognised candidate status with the CCE and as a consequence of accreditation must inevitably lose academic freedom. All the evidence suggests, therefore, that in the long term the influence of the Palmer school and the ICA will diminish, and that the Fountainhead of pure chiropractic philosophy will be submerged in the deeper waters of the ACA; that this risk is real is shown by the fact that new chiropractic colleges are being established in the US (Sherman College of Chiropractic being one of them) for the sole purpose of preserving chiropractic philosophy in a pure form. \(^{45}\)

3: The American Chiropractic Association

There is nothing inferential about the evidence bearing on American Chiropractic Association philosophy; ACA President William H Bromley is explicit: the traditional concept of pure chiropractic philosophy is discarded in preparation for the role of a primary health-care physician in the mainstream of medicine:
"ACA policies reflect the will of the overwhelming majority of the profession and how they practice. We do not believe a small minority should impose their will on the majority under the guise of keeping the professional concept pure.

"The ACA seeks unity with all chiropractic organizations to give maximum impact to the chiropractic thrust. However, unity must not be for unity alone, but instead, a coming together in thought and ideas for the common good. Ideas and philosophies change to keep in step with modern times. Therefore, flexibility and open-mindedness are essential qualities that are pertinent during our entrance into the mainstream health-care system." 52

As part of that changing philosophy, the orthodox concepts of clinical and differential diagnosis are emphasised:

"The ACA has always maintained that clinical and differential diagnosis is a prerequisite to accepting the role as a primary point-of-entry health-care provider. This assures complete and proper treatment to the consumer of health care." 52

In preparation for entrance into the mainstream health-care system, the ACA Council on Chiropractic Diagnosis and Internal Disorders is preparing a diagnostic course for the "Internist":

"This council proposes to assist DCs in preparing for the forthcoming government health services. We have the outline for a fine diagnostic course. We have members eager to accept. We all must now encourage the colleges to sponsor this course for us." 53

The ACA will not tolerate practices that jeopardize relations with insurance companies, federal programs, and entrance into National Health Insurance; 52 nor is the chiropractic lobby inactive:
"ACA has a highly concentrated, on-going public relations program that is geared to build a positive image for chiropractic. Every area of communications has been covered in order to cement relations with molders of public opinion and decision-makers. In the past year alone, more than $2 million in public service time has been placed on television and radio stations, in addition to newspapers, billboards and miscellaneous media exposure. ... ACA's public relations activities on a local, state and national level have been lauded for their effectiveness and professionalism.

"The ACA Commission on Legislation convenes frequently at great expense to lobby, establish rapport, and maintain the day-to-day chiropractic impact with state and federal legislators.

"The ACA is the only national association that has a monthly publication for the patient. Healthways tells our story to the consumer by making him more knowledgeable about health problems and our approach to them. It clarifies our position and projects a professional and scientific image. A publication like Healthways is vital for the tasteful delivery of public information."  

The following section of this submission will deal further with the validity of chiropractic by examining in detail the teaching of those institutions accredited by the CCE; as the bulletin of one of them, Los Angeles College of Chiropractic, puts it: "the requirements of universal Prepaid Health Insurance demand that chiropractic primary providers acquire a public image as diagnosticians ..."
Previous sections of this submission have examined different variants of chiropractic philosophy: the original doctrine of Daniel David Palmer, with its metaphysical overtones; the pure philosophy of the ICA, with newly established chiropractic colleges such as Sherman College founded in order to preserve that purity; and the pragmatism of the ACA, its philosophy flexible with the prospect of National Health Insurance.

Four chiropractic colleges have been accredited by the CCE; they are:

- The National College of Chiropractic
- Los Angeles College of Chiropractic
- Northwestern College of Chiropractic
- Texas Chiropractic College.

The special relationship between the Council on Chiropractic Education and the American Chiropractic Association has already been described: the ACA finances the CCE. According to ACA President William H Bromley:

"ACA totally supports CCE, its criteria and standards. ACA sees CCE as a totally autonomous council ... not politically responsible to anyone. It does and it must function independently for educational credibility and progress."  

The curricula of the four chiropractic colleges accredited by the CCE show a strong resemblance to those of orthodox medical schools; as described by Reginald R Gold, Vice President of Sherman College of Chiropractic, when interviewed by Eric L Unthank on behalf of the Victorian Osteopathy, Chiropractic
and Naturopathy Committee, such colleges are:

"... so close to a medical school that it doesn't matter. They don't teach chiropractic."

And when describing the founding of Sherman College:

"There was no college in America teaching chiropractic, hence the establishment of this one." 45

As described by a recent editorial in the Journal of Clinical Chiropractic:

"... official recognition has heaped responsibility on our leaders and our colleges. These responsibilities have forced them to place a great deal of importance on the teaching of the basic sciences.

"This is so true that it could almost be said that our present students are forced to search for 'the art of examination and correction of subluxations' outside of our official establishments of learning!" 56

Los Angeles College of Chiropractic was founded in 1911 and on its own admission has the largest student body and the best facilities of all the chiropractic colleges in California; it is accredited both by the CCE in the United States, and by the Chiropractic Board in New Zealand. The full text of the curriculum of Los Angeles College is reproduced from its 1978-1979 bulletin: 54
The instructional department of the college are grouped under two divisions, each headed by a chairman.

1. Division of Basic Sciences:
   - Department of Anatomy
   - Department of Chemistry and Nutrition
   - Department of Physiology
   - Department of Microbiology and Public Health

2. Division of Clinical Sciences:
   - Department of Pathology
   - Department of Diagnosis
   - Department of Radiology
   - Department of Psychiatry
   - Department of Principles and Practice

CLASSIFICATION AND NUMBERING OF COURSES

The first digit of the course indicates the college year level of the course, counting from the first year after high school. Since two years of pre-chiropractic are required, first year professional courses are numbered 300. The second digit indicates the department and the letters a, b, indicate course has more than one semester. L – indicates that all or part of the work is supervised laboratory or other work.

DEPARTMENT OF ANATOMY

Tuan A. Tran, Ph.D., Chairman
A.V. Nilsson, D.C., Chairman Emeritus

301 abcl Gross Anatomy -- Dissection 11 units
A combined lecture and laboratory course emphasizing structural, functional, developmental and clinical aspects of correlative regional anatomy and organ systems of the human body. Subject matter is illustrated and explained with visual aids; slides, diagrams, charts, models and osteological specimens. Laboratory dissection deals with human specimens.

Human dissection is preceded by special lectures by the faculty. The course is scheduled as follows: back, thorax, abdomen, pelvis, perineum, lower extremity, upper extremity, head and neck. The class is divided into small groups in order that each student may have the fullest opportunity for individual dissection.

Lecture 10 hours per week
Laboratory 10 hours per week
305 abL Human Histology 7 units
A combined lecture and laboratory course devoted to the microscopic study of the tissues of the human body. A course primarily concerned with a correlation of gross anatomy and microscopic anatomy. The development aspects and the correlation of morphological and functional characteristics are stressed. Special study of prepared slides is used in the laboratory, including the preparation of fresh tissue for examination. The lectures are complemented by special demonstrations with microprojectors and motion pictures.

306 abL Neurology 8 units
Anatomy of the Nervous System
A thorough study of the human spinal cord and brain, utilizing models, and specimens from the anatomical dissection laboratory. The correlation of morphology with development and function is stressed.
A detailed study of the central connections, course and distribution of the cranial nerves, spinal nerves and autonomic nervous system. This is a lecture demonstration and laboratory course with emphasis on the correlation between the anatomical and physiological aspects with the principles of chiropractic spinal analysis and therapy.

402 L Special Senses 1 unit
A special subdivision which considers the gross anatomy in detail of such organs as the eye, ear, nose, tongue, etc., supplemented by laboratory experimentation.

403 Embryology 2 units
The objective of the course is to stress the practical structural and functional correlations for understanding of gross anatomy, diagnosis and chiropractic therapeutics. The course includes: gametogenesis, spermatogenesis, oogenesis, genetics, ovulation and fertilization, ovarian, uterine and hormonal cycles, cleavage, morula, blastula, implantation and ectopic pregnancies, bilaminar germ disc and gastrulation, neurulation; spinal cord, brain and ventricles, autonomic nervous system, development of organ systems and tissues, Developmental anomalies and fetal membranes and fetal circulation.

705 Seminar in Anatomy
A special research seminar in selected fields of anatomy open only to selected students, or graduates. Credits and hours to be arranged.
DEPARTMENT OF CHEMISTRY
AND NUTRITION

Paul G. Schultz, B.A., Ph.D., Chairman

321-322 General Chemistry
321 Inorganic Chemistry 5 units
Lectures, recitations, demonstrations and laboratory covering the structure of matter/theoretical and practical basis for chemistry; the elements and their properties; chemical reactions; the types and properties of compounds and mixtures, with emphasis on solutions and their behavior including their physiochemical considerations.

322 Organic Chemistry 5 units
Covers organic chemistry as related to the special fields of human physiology. The chemistry of the carbon compounds of both the alphatic and aromatic series are covered. Demonstrations, motion pictures and laboratory are used in the course.

323 Biophysics 1 unit
An introduction to the physics encountered in living systems. Active and passive circuit elements relating to physiotherapy physiology and x-ray are treated quantitatively in a lecture course emphasizing problem solving. Special attention is devoted to voltage and current effects on and sources in living tissues, resistance, capacitance, and power relations in tissues. Elementary thermodynamics and simple kinesiology are presented from a problem solving point of view. Emphasis on the development of quantitative models for the relevant biophysical parameters and solving problems based on these models is stressed.

326L Biochemistry 7 units
Lectures, recitations and laboratory work covering the chemistry of the fundamental cell components, enzymes, colloids, proteins, carbohydrate and fat metabolism; the chemistry of energy metabolism, the chemistry of the vitamins and biological aspects of digestion, excretion and respiration; the composition of tissues and body fluids; the aspects of both abnormal and physiological biochemical reactions are considered, including acid-base regulation. Laboratory classes are divided into small groups for personal instruction. The students conduct selected experiments in various physiologic and biochemic processes.

327 Introductory Nutrition 1 unit
A lecture course devoted to the consideration of the rules of nutrition. Careful consideration is given to the protein, carbohydrate, lipid, water, mineral and vitamin requirements.
527-528 Clinical Nutrition and Dietetics  
A lecture course devoted to the application of the principles of nutrition to the human body. The nutrition of the organs and body systems is covered, together with the nutrition of special pathological conditions. Particular detail is given to minerals and vitamins in human nutrition. Special diets in general and hospital practice are included.

PHYSIOLOGY

James Wood, Ph.D., Chairman

Physiology I b  
Physiology of Blood, Heart, Circulation, and Respiration
Lecture, laboratory experiments, and motion pictures present respiratory and cardiovascular physiology in health and disease. Formed and fluid elements of the blood, erythropoiesis, hemostasis, gas transport and buffering are examined in detail. The fluid compartments and fluid shifts, and their measurement in health and disease are discussed quantitatively. The normal and abnormal electrocardiogram is studied with emphasis on more commonly encountered abnormalities. The heart as a pump and circulatory adjustments in various physiological states are examined. Emphasis is placed on the control of circulation and respiration.

Physiology I a 316-417  
Physiology of Nerve & Muscle Cells, Synaptic Transmission
A lecture and laboratory course on the physiology of excitable tissues. Lecture and laboratory emphasize active transport, resting and action potentials, synaptic transmission and muscle physiology. The mechanical and electrophysiological properties of skeletal and cardiac muscle are examined in detail. Mechanical, ionic, and pharmacological effects on smooth muscle are studied. Emphasis is placed on the physiology of excitable tissue as it relates to current theories of chiropractic.

Physiology II 416-418L  
Cell Physiology, Kidney, Energy Metabolism, Endocrinology, Alimentation, and Neurophysiology
General cell physiology is presented with a consideration of the functions of cellular organelles, taking cognizance of related material presented in biochemistry, histology, and embryology. Renal physiology including filtration, secretion, and reabsorption is presented as is a consideration of the concept of plasma clearance and renal acid-base balance. Energy metabolism, metabolic rate and thermoregulation are covered in lecture and laboratory exercises. Gut motility, secretion and absorption are discussed, as are models of the control of appetite and feeding behavior. Both systems analysis and cellular approaches are used in the considerations of basic endocrinological control mechanisms in health and disease. Neurophysiological aspects of the special senses are dealt with in detail, using the anatomical foundations provided in special senses.
517 Physiology III
Nerve receptor and effector function is reviewed, with special attention devoted to the autonomic nervous control of selected effectors and the relationships between the somatic and autonomic nervous systems. Evidence for central somato-viscero and viscerosomatic interaction is presented with implications for possible chiropractic mechanisms.

DEPARTMENT OF MICROBIOLOGY AND PUBLIC HEALTH
Maurice A. Strobbe, Ph.D., Chairman

346 abL Bacteriology
General Bacteriology
The bacteria, rickettsiae, spirochetes and filterable viruses with reference to their morphological characteristics. Lectures include demonstrations and motion pictures. The laboratory work provides the student with an opportunity to study intimately the complex phases of bacterial behavior.

Advanced Bacteriology
A combined lecture and laboratory course concerned primarily with the epidemiologic relationship of bacteria and their pathogenicity in man and animals. Laboratory practice in staining, isolating and identifying pathogenic bacteria.

447 Parasitology
Protozoa, helminths and anthropods important as the causes and vectors of human diseases, special emphasis being placed on their laboratory diagnosis. Throughout the course, the transmission and control of these diseases are considered in detail.

355 Hygiene and Public Health I
A lecture presentation of modern concepts of the principles and practice of public health and industrial health, including problems of food, water and milk supplies and sewage disposal. Field trips for observation are made to dairies, packing plants, water, sewage disposal plants, and industrial establishments with deputy health officers of the Health Department of the County of Los Angeles.

556 Hygiene and Public Health II
A study of the epidemiology of communicable diseases, their control and preventive measures. Restrictive and quarantine regulations, vital statistics and their relation to the chiropractic physician are discussed. Members of the Health Department of Los Angeles County, visiting the college, present the various phases of public health administration.
DEPARTMENT OF PATHOLOGY
Vrajial H. Vyas, B.S., M.D., A.S.C.P.

431 abL Pathology I 6 units
General Pathology
A lecture and laboratory course which considers fundamental principles of disease process. Special emphasis is given to the role played by various causes such as organisms, physical, genetics, and immunology. And also processes like internal environment disturbances, inflammation and repair, coagulation thrombosis, and embolism causing degenerative and proliferative cellular reactions. Tissue changes in benign and malignant tumors are also studied.

432 L Pathology Ila and IIb 6 units
Systemic Pathology
The Pathology of disease processes affecting structures (gross and microscopic) and altering the functions of the respiratory, genitourinary, and endocrine systems. The pathology of circulatory, digestive systems (including hepatobiliary, and pancreatic systems), reticuloendothelial systems, and neuro-musculoskeletal systems are also studied. The entire field of pathology and disease is completely reviewed. The course is closely correlated with the material presented in the diagnostic departments and is further correlated with pathologic specimens in the laboratory; thus, the student understands the disease processes in relation to the human body.

DEPARTMENT OF DIAGNOSIS
Jeffrey Greene B.S., D.D., Chairman

496 L Physical Diagnosis 3 units
Demonstrations and practice in the methods of physical diagnosis. An attempt is made to have the students recognize average normal body conditions and to contrast these with the abnormal conditions. The class is divided into small sections for practical training in the examination of patients, including the use of special instruments for regional examinations of patients, such as ophthalmoscope, otoscope, laryngoscope, proctoscope, electrocardiograph, and other methods of determining disease conditions. The student spends extra hours in the clinic where he learns the latest methods of diagnosis under direction of the attending chiropractic physicians.
597ab Clinical Diagnosis 7 units
The objectives are: to instruct the student to recognize the various diseases by their signs, symptoms, laboratory tests and x-ray evaluation. To teach the student to apply his diagnostic knowledge and; To educate the student to recognize those conditions that come within the scope of chiropractic practice and those conditions that require consultation and/or referral.

591 Differential Diagnosis 3 units
The course is designed to enable the student to differentiate one disease from another by systemically comparing and contrasting subjective, objective, laboratory and x-ray findings.
This is accomplished in part by using cases from the clinic when available and/or the use of clinical pathological conference papers. These are presented and discussed with the students participating so that they may learn to evaluate the case histories and arrive at a diagnosis.

598 Clinical Neurology I and II 4 units
A study of the mechanism of production of symptoms resulting from disease of the nervous system, an analysis of the methods of eliciting information relative to nerve function; the neurological signs and syndromes; a study of the etiology, diagnosis and case management of disease of the nervous system.

590L Laboratory Diagnosis 3 units
A lecture and laboratory course covering the interpretation of clinical laboratory findings. The student is acquainted with the type of laboratory tests required for the diagnosis of the different diseases, and practices the collection of specimens, e.g., blood, smears, etc.

492 Dermatology and Syphilology 2 units
The objectives are to train the student to recognize the more commonly seen dermatological diseases; to recognize those diseases that should be referred and; to utilize any and all of the many methods available to the doctor for chiropractic in the treatment of skin disease.

594 Pediatrics 2 units
A lecture course in the diagnosis and chiropractic treatment of the diseases and disorders of infancy and childhood. Clinical experience is gained in the Pediatrics Department of the Clinic.
595 Geriatrics 3 units
A lecture course in the diagnosis and treatment of disease of old age. Special instruction in feeding problems of the aged patient. The student gains additional experience in the problems of the aged while in special conference with the staff of the Clinic.

593 Eye, Ear, Nose and Throat 2 units
The objectives of the course are to train the student doctor of chiropractic to properly examine and diagnose the more commonly seen disease of the eye, ear, nose and throat; to instruct the student in the proper use of the various instruments and; to recognize those conditions outside the scope of chiropractic and refer these patients to a specialist of an allied profession.

565a Gynecology 3 units
A lecture and demonstration course covering the etiology, pathology, diagnosis and treatment of disease peculiar to women. Motion pictures and film slides are used to clarify the instruction. Special emphasis is placed upon female disease produced by faulty body mechanics and their treatment by chiropractic manipulation.

565b Obstetrics 3 units
Physiology of pregnancy, labor and puerperium and the diagnosis of pregnancy; the pathology of pregnancy, labor and puerperal period, and the indications and contraindications for surgical intervention. Particular emphasis is given to chiropractic methods and procedures in the complete care of obstetrical patients from the antepartum period to the postpartum dismissal.

DEPARTMENT OF ROENTGENOLOGY
Philip C. Runsten, B.A., D.C., Chairman

401L Roentgenological and Topographical Anatomy 2 units
A lecture, demonstration course of the surface marking that guide the doctor in his examination of deeply situated organs and structures. Correlation of anatomy with x-ray procedures is emphasized.

408 Principles of Roentgenology 1 unit
Lectures and demonstrations in the elementary physics of x-rays, radiation safety, and the technique of making radiographs, with special emphasis on spinography.

581 Roentgenological Diagnosis 4 units
Lectures on the fundamental principles of diagnosis by means of radiographs. Demonstrations, by films and slides, in the interpretations of radiographs with special attention to the anatomy and pathology of the spine and adjacent structures. All phases of radiological diagnosis are included: gastrointestinal, heart, lungs, and the use of dyes for the special methods in radiology.
DEPARTMENT OF PSYCHIATRY
M. Wayne Brown, A.B., D.C., Chairman

461 Introductory Psychiatry 2 units
A detailed consideration of the social and biological aspects of man's behavior with special emphasis on perception, learning, motivation and personality development.

561 Clinical Psychiatry 3 units
An intensive exploration of the origins and dynamic interactions of the personality which contribute to the development of emotional disorders and mental illness. The student is given an opportunity to develop skills in both recognizing and dealing with the emotionally disturbed patient.

DEPARTMENT OF PRINCIPLES AND PRACTICE
William G. Schirmer, B.S., D.C., Chairman

Chiropractic Principles I
A lecture course presenting the historical basis of chiropractic philosophy and the scientific basis of chiropractic principles.

372 Chiropractic II 2 units
A discussion of the chiropractic concept of health and disease, and the anatomic and physiologic basis for chiropractic diagnosis and treatment. This course is designed to establish fundamentals for the further studies of chiropractic therapeutics.

373 Palpation and Spinal Biomechanics 2 units
A lecture and laboratory course to develop the ability to detect the location and relationship of osseous and soft tissue structures by the sense of touch, especially of the vertebral column. The methodology of motion palpation, observation and instrumentation is studied. Correlation of physical findings of spinal diagnosis with scoliograms and accepted uniform vertebral listing of subluxations are stressed.
472 Technique I (a and b)  2 units
The student begins to practice the control of the dynamic adjustive thrust which is the distinctive and specific form of manipulation used by the chiropractor. Direction, depth, speed and quantity of force required is practiced.

The application of the chiropractic adjustment to the thoracic and lumbar spine after palpating and diagnosing the structural distortion and subluxations is learned. The use of the applied physics of leverage and fulcrumage is demonstrated and practiced. Specific types of adjusting, indications and contraindications are taught and practiced under supervision of the staff. Specimens, models, and x-ray visualizations supplement the demonstrations and closed circuit T.V. provides a means of correcting errors of stance and application.

Consideration is given to the neurological factors involved in subluxation and its adjustment.

571 Technique II (a and b)  2 units
This segment of the technique course continues the development of skill in palpation, spinal diagnosis, and adjusting of the spine. The special forms of cervical adjustive technique are demonstrated and practiced. Similar visual aids are utilized and throughout the sections of technique instruction the uniform listings and neurological influences of adjusting are emphasized.

572 Technique III (a and b)  2 units
Attention is directed to the application of the chiropractic adjustive thrust to the correction of articular dislocations other than the spine. Techniques for adjusting feet, knees, hips, hands, elbows, shoulders, ribs, clavicles, etc., are demonstrated and practiced under supervision, as well as some methods of normalizing muscular hypo or hypertonicity.

573 Technique IV (a and b)  2 units
This section reviews all the techniques learned, provides supervised practice to increase skill, then advanced forms and modifications are discussed, demonstrated and practiced under supervision. Meridian Therapy and Acupuncture are considered.

It is to be noted that slight deviations of arrangement of material is necessitated for Fall and Spring enrollments, although the same techniques are taught.
575 Orthopedics  
2 units  
A clinical approach combined with practical demonstrations involving musculo-skeletal conditions. Lectures involve consideration of specialized signs and symptoms that relate to abnormal body mechanics and their neurological involvement. Outside guest lectures introduce advanced mobilization and immobilization methods with special emphasis on support appliances and their application. Discussion of diagnostic laboratory tests as they relate to orthopedic problems. Correlation of corrective manipulative procedures and roentgenological interpretation are presented.

470 Principles of Physiotherapy  
1 unit  
Lectures and demonstrations in the physiological properties of the generally accepted physical agents used in chiropractic therapeutics. The course covers the field of electrotherapy, hydrotherapy, mechanotherapy, phototherapy and thermotherapy. Each physical agent is defined, its development, present status, uses, and contra-indications described.

570 Applied Physiotherapy  
3 units  
Lectures and demonstrations of the techniques of application, indications, contraindication, dangers and limitation of the physiotherapy modalities in the treatment of disease are thoroughly discussed. The use of physical agents for diagnostic purposes is considered. Each type of modality is demonstrated and each student receives practical experience in the physiotherapy laboratory.

574 Minor Surgery and First Aid  
3 units  
A lecture and demonstration course in the care of emergencies and common accidental injuries. Practical work in the application of tourniquets, emergency bandages, dressings, splints, casts and the proper application of the usual type of office bandages. Special instruction is given in the clinic in addition to the classroom demonstrations.

475 Toxicology  
2 units  
To offer to the student a course dealing with the source, composition, action, tests (limited), and antidotes of poisons. Emphasis is placed on the toxic or allergic reactions of drugs, poisonous plants, and industrial chemicals including those used in agriculture. Reference is also made to various venoms of animal origin.
672 abc Office Procedures

Jurisprudence
A series of lectures on the relationship of the chiropractic physician to the law, his responsibilities to his patients, the community and the state. A survey of the processes of law, civil and criminal; the essentials of medical evidence and expert testimony, and the Medico-Legal aspects of the Workmen's Compensation and Industrial Accident Acts.

Economics and Office Management
A series of lectures on chiropractic economics and the relation of the chiropractic doctor to his patients, the community and his professional associates in the healing arts.

Clinic Procedure
A series of lectures and demonstrations, as well as practical application of the conduct of a practice, examination, differential diagnosis, all types of common forms and narrative reports, and determination of patient care of choice. This course attempts to integrate the classroom education and clinical experience of the extern.
It has been stated that the curricula of chiropractic colleges accredited by the CCE bear a strong resemblance to those of orthodox medical schools; examination of the curriculum of Los Angeles College confirms this statement. By orthodox standards, however, such chiropractic curricula show a notable imbalance in that there is undue emphasis on manipulative therapy and no provision whatsoever for the teaching of pharmacology and clinical surgery, an imbalance which can be explained on historical grounds.

This is not to say that the quality of chiropractic teaching in any way equals that of orthodox medical schools; as explained by the US Consumers Union:

"'The medical doctor has the benefit of patient exposure that we do not have,' says Andries M Kleynhans, D.C., director of clinical sciences at National College. Because of the lack of chiropractic hospitals, chiropractors seldom see or treat diseases that the medical doctor does. That gap, Dr Kleynhans told CU, places chiropractors at a disadvantage in their diagnostic training.

"Nor do they have the benefit of the more extensive education and training required of physicians. In contrast to the chiropractor's two years of college (now) and four years of professional school, the physician must have four years of college, four years of medical school, and usually three or more years of hospital residency. Moreover, the physician's subsequent affiliation with a hospital provides a center for continuing education. At the hospital, the physician's medical knowledge is reinforced and expanded through conferences, discussions, and association with colleagues, as well as through experiences with patients. Chiropractors, in comparison, generally work alone."

If by orthodox standards the curricula of CCE-accredited chiropractic
colleges show an imbalance in their content, this is not to call into
question the validity of those subjects that are dealt with: it is
simply that the scope, quality, and length of chiropractic education
do not match the depth of diagnostic training provided by orthodox
medical schools, a depth of training which is essential for practitioners
in the field of primary health-care.

Thus, there is ample justification for the New Zealand Medical
Association's submission:

That chiropractic, however it may be defined, serves in
practice as a system of primary health-care: the chiro-
practor functions as the initial portal of entry into his
own health-care system. The Medical Council of New
Zealand has laid down certain standards of education for
medical practitioners who provide primary health-care:
the education of chiropractors fails to meet those standards.

The next section of this submission leaves chiropractic theory for
the realities of chiropractice, particularly in the field of paediatrics.
THE CHIROPRACTIC PEDIATRICIAN

21 The chiropractic adjustment of young children, particularly sick children, is an issue which must be of special concern to the Commission; whereas it may be argued that any adult suffering ill-health possesses a fundamental right to seek help or advice from whom he pleases, whether from a registered medical practitioner or from a chiropractor, the law has long recognized the need for special protection of young persons.

The preoccupation of chiropractic with paediatrics is exemplified by the following exchange between Mr W L Reader, for the New Zealand Chiropractors' Association, and Mr L Ring, for the New Zealand Physiotherapists Private Practitioners' Association, at the Royal Commission on Social Security in New Zealand in 1972:

"Mr Ring: ... Cyril Phelps. He is a member of your organisation?

Mr Reader: Yes, he is.

Mr Ring: Tell me, Mr Reader, if a child of ten days' old were brought to you, would you x-ray this child?

Mr Reader: No.

Mr Ring: Do you think that it is possible for a child of 10 days old to have a subluxated spine?

Mr Reader: I do.

Mr Ring: Mr Phelps has suggested here, 'Bring the children in for checkups. Do not wait until they are desperately ill before they receive their first adjustment. Some of our mothers have had babies whose first chiropractic checkup was when they were only ten days' old.'
"Mr Reader: Yes.

Mr Ring: How, if you don't take an x-ray of a baby could you tell if there was a subluxation?

Mr Reader: Physical findings.

Mr Ring: Merely by looking at it?

Mr Reader: No, by digital examination. If I may, I have adjusted a child of my own, seven days' old."

The preoccupation of chiropractic with paediatrics is also exemplified by the fact that the curricula of all eight chiropractic colleges approved by the New Zealand Chiropractic Board include study of the diagnosis and treatment of diseases of infancy and childhood by chiropractic methods:

"Palmer College: Physical and mental development, disorders of childhood and the special needs of children are considered in this course. Special attention is paid to the febrile disorders of childhood. Clinical application of such studies to the practice of chiropractic is emphasized.

"Logan College: Fundamental clinical practices, specifically toward the care of children.

"The National College: This course covers the special considerations in the diagnosis and treatment of pediatric and geriatric patients.

"Los Angeles College: A lecture course in the diagnosis and chiropractic treatment of the diseases and disorders of infancy and childhood. Clinical experience is gained in the Pediatrics Department of the Clinic.

"Cleveland Chiropractic College: The study of the diseases and health problems affecting infants and children with emphasis on the Chiropractic procedure in the correction of body malfunctions, maintenance of vital resistance, and prevention of common disorders. Clinical cases are discussed."
"Sherman College: Study of the growth changes of the developing child, as well as the physical, nutritional and psychological needs in states of health and sickness. This course also includes the common childhood diseases and other afflictions of children as well as care of the well child and preventive needs.


"Anglo-European College: The disorders and diseases which primarily affect children from the neonatal period to puberty. The importance of early correction of spinal problems is emphasised and studied."

The special risk to sick children of chiropractic care was recognised by the 1975 Victorian Osteopathy, Chiropractic and Naturopathy Committee which recommended that:

"Chiropractors and osteopaths should be limited to treating neuro-muscular-skeletal conditions and to persons aged more than twelve years unless upon written referral by a medical practitioner." 45

The Committee took the view that the chiropractic adjustment of children raised special problems, citing common symptoms such as headache and abdominal pain which might be simply explained in the case of an adult able to provide a detailed history, but not in the case of a child.

In its study of the controversy surrounding chiropractic in the United States and Canada, the most bitter criticism of chiropractic encountered by the US Consumers Union was from pediatric hospitals, particularly a report issued jointly by the Montreal Children's Hospital and the St Justine Hospital for Children in 1972. The US Consumers Union made a strong recommendation:
"Above all, we would urge that chiropractors be prohibited from treating children; children do not have the freedom to reject unscientific therapy that their parents may mistakenly turn to in a crisis."
THE NEED FOR CHIROPRACTIC

Under consideration by the Petitions Committee of the House of Representatives on 21 May 1975 was the petition of R A Houston and others worded as follows:

"We, the undersigned, pray that Chiropractic services be subsidized under Social Security and Accident Compensation so that patients of Registered Chiropractors may receive their services on the same basis as they receive other Health services within the community and we pray also for the passing of legislation to achieve this without delay."

Both the petitioner himself, R A Houston, Barrister-at-Law of Hamilton, and J E Woodbridge, Vice-President of the New Zealand Chiropractors' Association, emphasised the need for chiropractic in New Zealand:

"The evidence which comes to me of a strong public demand for chiropractic services."

- R A Houston

"The NZCA wishes to impress upon this Select Committee that a need exists for the specialist health services provided by Chiropractors registered under the Chiropractors Act 1960 and to support, wholeheartedly, proposed legislation aimed at providing such services under the Social Security Act 1964 and the Accident Compensation Act 1972. The current petitioning of Parliament by R A Houston and one hundred thousand others is adequate and tangible proof of need in this respect.

- J E Woodbridge
The New Zealand Medical Association respectfully submits that the size of a given petition does not necessarily bear direct relationship to the merit of the petitioners' case; politicks being mentioned to Samuel Johnson in 1769, the great Doctor observed:

"This petitioning is a new mode of distressing government, and a mighty easy one." 57

The need for chiropractic appears to vary markedly from one end of New Zealand to the other; reference to the Register of Chiropractors as at 15 July 1976 shows one chiropractor registered for every 21,000 of the Auckland statistical division of population, one per 31,000 for the Wellington division, one per 80,000 for Christchurch, and one per 119,000 for Dunedin.

It is submitted that this geographic distribution of chiropractic is inconsistent with that of a soundly-based discipline; the question may be asked whether this distribution, particularly the preponderance of chiropractic in northern latitudes, satisfies the needs of patients, or satisfies the needs of chiropractors.
The sole accrediting agency for chiropractic colleges in the United States of America is the Commission of Accreditation of the Council on Chiropractic Education (CCE), approved as such by the US Office of Education in 1974.

Accredited member colleges of the CCE are:

- Los Angeles College of Chiropractic - California
- The National College of Chiropractic - Illinois
- Northwestern College of Chiropractic - Minnesota
- Texas Chiropractic College - Texas

Recognised candidates for accreditation (institutions that have indicated an intent to work toward accreditation) are:

- Columbia Institute of Chiropractic - New York
- Logan College of Chiropractic - Missouri
- Palmer College of Chiropractic - Iowa
- Western States Chiropractic College - Oregon

But the influence of the CCE extends far beyond its member colleges in the US: there are affiliate members located outside the United States which subscribe to the policies and regulations of the CCE; they are:

- Anglo-European College of Chiropractic - England
- Canadian Memorial Chiropractic College - Canada
- International College of Chiropractic - Australia

Thus, for practical purposes, wherever New Zealand chiropractors are trained, the scope and quality of that training are largely determined by the CCE. Member colleges of the CCE base their standards on a minimum of two
years of preprofessional college work, followed by four academic years of resident study at a chiropractic college. The complete chiropractic curriculum includes the following subjects:

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<td>Physical Therapy</td>
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<td>Chiropractic Principles</td>
<td>First Aid</td>
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<td>Obstetrics</td>
<td>Chiropractic Practice</td>
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<td>Gynecology</td>
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The standard 4-year curriculum recognised by the CCE consists of approximately 4200 hours. In some schools this course of study covers 4 calendar years; however, by operating on the "quarter system" many colleges cover the complete 4-year course in 36 consecutive months.

These are the requirements for the Doctor of Chiropractic degree. Candidates for graduation in all approved colleges must be at least 21 years of age.

According to a vocational guidance manual "Planning a Career in Chiropractic" published by the American Chiropractic Association:

"Chiropractic is a broad field. The clinical practice of chiropractic has proved applicable in a wide variety of diseases. While general practice is often first choice for many doctors of chiropractic, there is ample opportunity in the profession for development in a specialized field. A chiropractor may specialize in athletic injuries, diseases and disorders of children,
industrial or insurance problems, mental and nervous disorders, etc. Many practitioners devote their entire practice to chiropractic roentgenology -- that is, taking and interpreting X-ray pictures for the general practitioner." 61

Better than any words, the following photographs show the modern Doctor of Chiropractic in his new role of a primary health-care physician, "thoroughly trained in all accepted standard methods of diagnosis"; 61 they are reproduced from recent publications of the ACA and CCE.

In The Chiropractic Colleges published in 1977 by the Foundation for Chiropractic Education and Research (FCER) and the Council on Chiropractic Education (CCE) for college guidance counsellors and prospective chiropractic students, a Doctor of Chiropractic is seen examining a child's ear by means of an auroscope; note the stethoscope: 60
In a vocational guidance manual *Planning a Career in Chiropractic* published by the American Chiropractic Association, a Doctor of Chiropractic may be seen examining a child's eye by means of an ophthalmoscope; another Doctor of Chiropractic holds her stethoscope ready to examine a child's chest.
If there is now a certain similarity between the curricula of CCE-approved chiropractic colleges and those of ordinary medical schools, so the appearance of the modern Doctor of Chiropractic – with his white coat, stethoscope and other diagnostic instruments – resembles that of the ordinary doctor; moreover, he calls himself a doctor, thus completing the illusion.

Many overseas studies of chiropractic have drawn attention to the confusion which must ensue on this latter account; thus the report issued jointly by the Montreal Children's Hospital and the St. Justine Hospital for Children in 1972 comments:

"By calling himself a 'doctor'... the chiropractor creates a false image as to his ability to deal with paediatric problems. This leads directly to the delay in the proper diagnosis being made and the correct therapy being started..." 59

The Committee on the Healing Arts in Ontario in 1970 commented upon chiropractors' use of the prefix "Doctor" thus:

"This situation seems to us unsatisfactory and dangerous... the Committee is opposed to the indiscriminate use of the term 'Doctor' which can be misleading to the public". 62

The Royal Commission on Chiropractic in Quebec (the Hon. Mr Justice Gérard Lacroix, Commissioner) in 1965 reported:

"We believe that the title of 'doctor' should be authorized only for those who have received such a title from a recognized university having the right to confer such title. Chiropractors should therefore be permitted to refer to themselves only by the name of 'chiropractor'.

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"We have noted that, in a number of laws, the chiropractor was permitted to use, following his name, the letters 'D.C.', but our inquiry has allowed us to establish beyond doubt that chiropractors currently have themselves referred to as 'doctors'.

"We believe that this constitutes an abuse and a regrettable source of confusion..."
Joseph Janse, President of The National College of Chiropractic, gives four contemporary definitions of chiropractic in his paper *History of the Development of Chiropractic Concepts* delivered at a Workshop on the Research Status of Spinal Manipulative Therapy convened by the National Institute of Neurological Diseases and Stroke at Bethesda, Maryland, in 1975:

1. "Chiropractic is the study of problems of health and disease from a structural point of view with special consideration given to spinal mechanics and neurological relations, presenting the hypotheses that:
   (a) disease may be caused or aggravated by disturbances of the nervous system.
   (b) disturbances of the nervous system may be caused by derangements of the musculoskeletal structures."

2. "Chiropractic is a discipline of the scientific healing arts concerned with the pathogenesis, diagnostics, therapeutics and prophylaxis of functional disturbances, pathomechanical states, pain syndromes and neurophysiological effects related to the statics and dynamics of the locomotor system, especially of the spine and pelvis."

3. "Chiropractic is the science concerned with defects in the mechanics, statics and dynamics of the human body."

4. "A definition by exclusion relates to chiropractic as 'the system or method of treating human ailments without the use of drugs or medicines and without operative surgery'."  

It is noteworthy that none of these definitions includes the concept of
subluxation, currently defined as "the alteration of the normal dynamics, anatomical or physiological relationships of contiguous articular structures",\(^65\) and already referred to in an earlier section of this submission.

In 1972 the Congress of the United States passed legislation which enabled payment of some chiropractic services for Medicare beneficiaries. The language of that legislation clearly bound chiropractic to the concept of subluxation, a concept, moreover, which was primarily radiological. Coverage of chiropractic services was strictly limited:

"Payment may be made only for the chiropractor's manual manipulation of the spine to correct a subluxation (demonstrated by X-ray to exist) which has resulted in a neuromusculoskeletal condition for which such manipulation is appropriate treatment. No reimbursement may be made for X-rays or other diagnostic or therapeutic services."\(^66\)

Because of Medicare there has been an increasing tendency in the US for third-party payers, state and federal agencies to categorise chiropractic according to the Rules and Regulations which apply; but these Medicare guidelines in no sense bear on the true definition of chiropractic and its emergence as an alternative system of primary health-care.

"The basis of chiropractic is manipulative therapy, not subluxation. A doctor of chiropractic is trained to be a primary physician".\(^65\)

The New Zealand Medical Association offers the following definition of modern chiropractic, an elaboration of the New Zealand Chiropractors' Association's own definition by exclusion:
The modern chiropractor regards himself as a primary physician, a physician who because of his training (or lack of it) is prevented from prescribing life-saving drugs. He believes that spinal manipulation is a panacea for a wide spectrum of human ills. With no depth of training in diagnosis - the essential skill of the physician - he is prevented from developing that skill by the fact that he practises in academic isolation. As put by the US Consumers Union, modern chiropractic allows "persons with limited qualifications to practise medicine under another name". 5
The question as to whether chiropractic constitutes a valid healing art, one which is distinct from other medical services, must largely depend upon how chiropractic is defined, a subject dealt with in the previous section of this submission.

There can be no doubt that from a historical point of view the chief distinguishing feature of chiropractic has been the application of its own unique philosophy:

"It is the reason why that the Science of Chiropractic offers, that differentiates the practice ... from that of the medical profession." 

In modern times the distinction is preserved, not only by the ACA which:

"... strongly supports chiropractic as a separate and distinct healing art" 

and by the ICA which advocates:

"... the preservation of chiropractic as a separate and distinct health care service..." 

but also by the New Zealand Chiropractors' Association in almost identical terms:

"The Chiropractic profession has developed as a separate and distinct profession in the healing arts due to its adherence to principles which have been rejected by organized medicine."
However, the definition given chiropractic by the New Zealand Chiropractors Association differentiates chiropractic from other medical services merely by exclusion; this definition, paraphrased, describes chiropractic as:

"the system or method of treating human ailments without the use of drugs or medicines and without operative surgery." 8

Whereas the rejection by chiropractic of pharmaceutical and surgical principles (despite their obvious advantages) may be simply explained on historical grounds, the rejection is often expressed in emotive terms, as by ACA President Stephen E Owens:

"Finally, we are healers in the midst of this extraordinary therapeutic drug culture explosion with its iatrogenic nightmares, surgical promiscuity, hospital horrors and merchants of medicine crying that health can be purchased..." 69

The New Zealand Chiropractors' Association, perhaps making a virtue of necessity, claims chiropractic to be the largest drugless healing profession in the world. 8

Previous sections of this submission have described the North American chiropractor's ambition to become a primary point-of-entry health-care provider, 52 and the efforts of chiropractic organisations in New Zealand to achieve the goal of a State subsidy for chiropractic, a chiropractic health benefit.

According to Los Angeles College of Chiropractic the requirements of such a benefit ('universal prepaid health insurance' in the US) demand that chiropractic primary providers 'acquire a public image as diagnosticians', 54 to function essentially as family doctors, referring patients, when appropriate, to other health professions; 5 these requirements are stressed by ACA Chairman Edward J McGinnis:
"We must be skilled in differential diagnosis and be alert to the necessity of referral to specialties when indicated." 70

and again by Joseph W Howe at a seminar on chiropractic held at The National College of Chiropractic in December 1975:

"chiropractic physicians must be trained to broadly diagnose human ailments, or at least be diagnostically competent to recognise those disease processes they should refer for alternate or concurrent therapy." 65

The New Zealand Chiropractors' Association adopts the same position:

"... a graduate learns to become a competent diagnostician so that where surgery or other health treatment is indicated, he may immediately refer such patients..." 8

But to whom will such patients be referred? To physicians responsible for the "therapeutic drug explosion", referred moreover by practitioners who are proud to be members of the largest drugless healing profession in the world? Or to surgeons with their "promiscuity" and attendant "hospital horrors"?

This then is the chiropractor's dilemma: whether his philosophy should remain flexible with his entrance into the mainstream health-care system, 52 and as a consequence of that flexibility renounce his claim to membership of the largest drugless healing profession, referring patients to medical practitioners duly qualified to prescribe those drugs; whether chiropractic should no longer be preserved as a separate and distinct health care service, its academic base broadened beyond recognition and its distinction from other medical services blurred; whether pure chiropractic principles
should be discarded and the scope of his practice virtually unlimited; all so that he may qualify as a primary point-of-entry provider in the mainstream (State subsidised) health-care system, and all at the risk of his being absorbed - like osteopaths before him - into that system.

The next section of this submission will examine Chiropractic in Australia where on 22 April 1977 a Federal Committee of Inquiry recommended that chiropractic should not be given legal recognition in any form which would imply that it constituted an alternative health system.
CHIROPRACTIC IN AUSTRALIA

The situation concerning chiropractic in Australia is more confused than in any part of the English-speaking world. Whereas in New Zealand there is legislation providing for the registration of chiropractors, this is true of only one Australian State, Western Australia; and whereas virtually all New Zealand chiropractors are trained in North America (three out of four at a single college, Palmer College of Chiropractic), the majority of Australian chiropractors are Australian-trained, and at institutions with educational standards lower than those of Palmer College. The precise number of practising chiropractors is unknown, partly on account of the fact that other drugless healers calling themselves naturopaths and osteopaths practise manipulation, blurring any distinction there might be between the different vocations.

Against this complex background the Australian Government in 1974 appointed an expert Committee of Inquiry to:

"... fully investigate and report on the practices of chiropractic, osteopathy and naturopathy, especially as to the scientific basis of these practices, the desirability of registering practitioners and, if so, under what conditions, and the relationship of these practices to other medical services in the community." 71

The Committee of Inquiry reported on 27 April 1977.

The composition of the Committee of Inquiry, the way in which it conducted its investigation, as well as its principal recommendations, all deserve comment:
There were four members of the Committee: two eminent scientists, a medical practitioner expert in the field of administration, and another scientist representing the Australian Consumers' Association. In that order there were Emeritus Professor E C Webb, a non-medical biochemist (Chairman); Professor M J Rand, a non-medical pharmacologist; Dr C J Cummins, formerly Director-General of Public Health of New South Wales; and Emeritus Professor R H Thorp, Chairman of the Council of the Australian Consumers' Association (retired Professor of Pharmacology, University of Sydney).

The Committee held eighteen meetings, the first in October 1974; it was early decided "not to have open sittings for oral evidence, but where written submissions seem to introduce useful evidence the authors would be invited to attend a meeting for further discussion." A great part of the Committee's investigations was carried out between meetings by correspondence. The procedure adopted by the Committee of Inquiry, therefore, like that of the Parliamentary Select Committees which have examined chiropractic claims in this country, did not allow cross-examination. Apart from formal submissions, the Committee received some 5000 letters of a testimonial character, the majority of which were from chiropractic patients:

"... many were couched in similar terms. They could scarcely be regarded as spontaneous or as representing the viewpoint of the community generally."

"The Committee realised that many of these letters were solicited by the chiropractors themselves."

The terms of reference laid down for the Committee of Inquiry were:

"to conduct a scientific evaluation of chiropractic, osteopathy and naturopathy by -
(a) examining available evidence and
(b) obtaining new evidence as necessary."
It became clear to the Committee that although the available evidence included a voluminous literature, much of that literature was polemical or anecdotal; there was virtually no scientific evidence from properly controlled experiments or from the statistical analysis of large samples. Accordingly, the Committee supported a number of research projects from funds put at its disposal by the Australian Government.

Registration was sought by chiropractors on various grounds, one being the claim of the chiropractor to be a "prime contact physician". This concept was attacked by the medical profession on the basis that the educational content of chiropractic is inadequate for this role; that its philosophy denies the scientific infra-structure on which orthodox medicine is based; that it lacks research and evaluation of its proclaimed results; and that it would be disadvantageous to patients involved in established systems of health delivery if chiropractors are supported and encouraged to continue as therapists of first contact. On this question the Committee of Inquiry recommended:

"... that chiropractic and osteopathy should not be given legal recognition in any form which would imply that they are alternative health systems."

On the question of registration, the Committee of Inquiry considered some form of registration inevitable, recommending:

"... that chiropractors and osteopaths be registered in each State and in the Commonwealth Territories ..."

Admitting that "chiropractic is difficult to define in terms of its philosophy and resultant vocational practice" the Committee of Inquiry offered the following definition as a condition of registration:
"Chiropractors and osteopaths should be defined as 'persons, other than registered medical practitioners or registered physiotherapists or registered manipulative therapists who manipulate the human vertebral column and associated joints for fee or reward'."

Disregarding the implication of these two recommendations, one advocating registration of the chiropractor, the other denying him his chosen role as a primary health-care physician, the Australian Committee of Inquiry failed to acknowledge the impossibility of restricting the scope of chiropractic by legislation. Not so in the Republic of South Africa where a similar Commission reported:

"... The principle of chiropractic does not lend itself to restriction, and therefore it is not possible to define the scope of its practice or list disorders to which it can be restricted; in other words, conditional recognition of chiropractic is not practicable." 11

The failure of North American legislation to restrict the scope of chiropractic was described by Professor D G Bates of the Department of History of Medicine at McGill University:

"To restrict a chiropractor to dealing with disorders of the back is not to restrict him at all, since a whole host of complaints are linked by his theory, though not by scientific evidence, to the back." 10

In framing its principal recommendations, therefore, the Australian Committee of Inquiry failed to recognise the plain fact that so long as the chiropractor preserves his position as a primary point-of-entry provider, there can be no limitation placed on his practice by legislative provision, however well-intentioned.
This simple but all-important fact, the New Zealand Medical Association respectfully submits, should be one which is recognised by this Commission of Inquiry.
There is evidence, not all of it anecdotal and stemming from chiropractic sources, to explain the benefit which may be derived from chiropractic; the Brisbane study commissioned by the Australian Committee of Inquiry described the reaction of patients to chiropractic care thus:

"Almost uniformly, there was an extremely high level of satisfaction expressed with the care received and the improvement experienced as a result of treatment."\(^7\)

This study indicated that over two thirds (67%) of those patients seeking chiropractic care had previously consulted another practitioner for the "presenting ailment", a fact which suggests that the bulk of chiropractic patients suffer from disorders which do not respond readily to treatment whatever its nature. The practitioner previously consulted was not necessarily a medical practitioner: in 29% of cases he was a different chiropractor.

If patients receive benefit from chiropractic care, that benefit may be derived in a number of different ways:

1. **Manipulation**

   It is possible, although by no means certain, that some of the benefit derived from chiropractic care may be due to the actual process of manipulation however it be described, whether as chiropractic adjustment or by other terms such as dynamic thrust, acupressure, contact techniques, non-force, etc. What is certain is that there is no
objective evidence for or against this hypothesis, either from chiropractic or other sources:

"The NINDS Workshop on the Research Aspects of Spinal Manipulative Therapy and staff review and analysis of available data clearly indicate that specific conclusions cannot be derived from the scientific literature for or against either the efficacy of spinal manipulative therapy or the pathophysiologic foundations from which it is derived. The efficacy of spinal manipulative therapy is based on a body of clinical experience in the 'hands' of specialized clinicians. Chiropractors, osteopathic physicians, medical manipulative specialists and their patients all claim spinal manipulation provides relief from pain, particularly back pain, and sometimes cure; some medical physicians, particularly those not trained in manipulative techniques, claim it does not provide relief, does not cure, and may be dangerous, particularly if used by nonphysicians. The available data do not clarify either view."

2: The Placebo Effect

There can be no doubt that many manipulative therapists, whether they be chiropractors or medical practitioners, have faith in manipulation as a form of treatment and that this faith is shared by their patients; as well, there can be no doubt that in many cases the benefit of chiropractic stems from this shared faith. The transference of confidence from chiropractor to patient and the placebo* effect were described in the New South Wales study commissioned by the Australian Committee of Inquiry. In that study 84 patients attending a chiropractor were interviewed before and after the consultation; the authors gave the following description of chiropractic treatment:

"It was estimated that the initial assessment and treatment lasted approximately half an hour. Most patients had a history taken, were provided with a diagnosis and an explanation, received a massage and a spinal manipulation, and were confidently reassured about an optimistic outcome. This resulted in a rapid relief of symptoms, and a considerable reduction in the expectation of serious morbidity. Theories as to the origins and nature of this healing effect deserve consideration, but remain at present speculative. What is the contribution of the spinal manipulation? How much is contributed by other therapeutic ingredients - an expectation of help in the patient, the confident offering of help by the chiropractor, a clear explanation of the problem and the 'naming' of the disorder, the potentially pleasurable relaxing effects of a massage and a clear expectation of what further treatment might involve? This raises the possibility of a placebo effect." 71

3: Doctor-patient Relationship

Although medical practitioners and chiropractors emphasize different methods of treatment in musculo-skeletal disorders, particularly in cases of low-back pain, a recent study concluded at the University of Utah College of Medicine shows no essential difference in the outcome of either form of therapy; patients of chiropractors, however, were more satisfied with the degree to which they were made to feel welcome. The authors stressed the implication of those patients' reactions:

"On the basis of our study and others, it appears that the chiropractor may be more attuned to the total needs of the patient than is his medical counterpart. The chiropractor does not seem hurried. He uses language patients can understand."
He gives them sympathy, and he is patient with them. He does not take a superior attitude toward them. In summary, it is an egalitarian relationship rather than a superordinate/subordinate relationship."

Their findings, the authors concluded,

"... underscore the powerful potential for the doctor-patient relationship in effective treatment, whether in chiropractic or traditional medicine." 72

4: Spontaneous Remission

A primary physician, the modern chiropractor considers himself competent to treat a wide range of illnesses; nonetheless, there is much evidence to suggest that patients with musculo-skeletal disorders consult him more frequently than do others. 7 62 71

As with the common cold, the clinical course of common musculo-skeletal disorders shows a strong tendency toward self-limitation, to improve with treatment, to improve without treatment, or to improve in spite of treatment. And many of these disorders are subject to periods of spontaneous remission; the symptoms of lumbar disc degeneration, one of the common causes of low-back pain, are classically episodic. Because of these factors, the tendency toward self-limitation and spontaneous remission, the efficacy of any form of treatment of musculo-skeletal disorders is notoriously difficult to assess; as stressed by the New South Wales study commissioned by the Australian Committee of Inquiry, it is a matter for speculation as to whether the clinical improvement claimed for chiropractic care in a given case is due to the coincidence of spontaneous remission with
follow-up. The US Consumers Union makes the same point:

"Even some chronic disorders, such as rheumatoid arthritis or multiple sclerosis, have spontaneous remissions. The symptoms may disappear regardless of treatment for months or more, affording temporary or, at times, long-term relief. If the patient happens to be under treatment at the time, the practitioner and the type of therapy may get credit for such relief." 

In summary, therefore, there is little or no evidence to suggest that the benefit of chiropractic care is in any way due to the mechanical effects of manipulation; on the contrary, there is good evidence to suggest that the benefit stems from the transfer of confidence from chiropractor to patient, the sharing of faith in manipulation as a form of therapy, the placebo effect of the laying-on of hands, and the fact that the minor musculo-skeletal disorders which are the backbone of chiropractic are themselves self-limiting or subject to spontaneous remission.

But not all patients derive benefit from chiropractic care; a subsequent section of this submission will examine the Risk of Chiropractic.
The attention of the Commission is drawn to certain circumstances surrounding the founding of Sherman College, and more recently its change of name, which provide evidence of philosophical divisions within the chiropractic profession itself, divisions which bear on the future of chiropractic in this country.

The founding of Sherman College of Chiropractic in 1973, the first such college to be established in the Southeastern United States, was described by Vice President Reginald R Gold:

"There was no college in America teaching chiropractic, hence the establishment of this one." 45

At its annual meeting in December 1976 the Sherman College Board of Trustees voted to change the name of the college to Sherman College of Straight Chiropractic; President Thom A Gelardi said:

"This new name expresses our ideals and goals more explicitly." 73

Of the eight institutions approved by the New Zealand Chiropractic Board, six subscribe to the policies and regulations of the US Council on Chiropractic Education, Sherman College not being one of them. If Sherman College was founded in order to preserve chiropractic in a pure form, to teach straight chiropractic, by inference other chiropractic colleges do not teach straight chiropractic; such colleges are:

"... so close to a medical school that it doesn't matter. They don't teach chiropractic." 45
Whereas recognition of the Accrediting Commission of the CCE by the US Office of Education is seen by the ACA as the single most significant development toward improving the credibility of chiropractic, it may bring an end to all pretension that chiropractic constitutes a healing art which is separate and distinct from other medical services, and promote a situation in this country which allows "persons with limited qualifications to practise medicine under another name."
Earlier sections of this submission have described new chiropractic colleges founded in order to preserve chiropractic philosophy in a pure form; one of these was Sherman College of Straight Chiropractic, the first such college to be established in the Southeastern United States, in 1973. Another, more recently founded, is Adio Institute of Straight Chiropractic in Levittown, Pennsylvania. The name ADIO is an acronym derived from the phrase 'Above Down, Inside Out' which is said to describe one of the key principles of chiropractic philosophy. 74

The following account of the philosophy of straight chiropractic is taken from the Adio Institute of Straight Chiropractic bulletin 1977-78; the full text is as follows:

"THE PHILOSOPHY OF STRAIGHT CHIROPRACTIC"

"The ability to adapt, by constantly reorganizing in response to the demands of an ever changing internal and external environment, is what differentiates the living from the non-living.

"It is the prime characteristic of life. The greater the ability to adapt, the more complex are the mechanisms involved. The biological sciences have identified but a small percentage of the numerous adaptative mechanisms of the human body, and of those few identified, most are only partially understood. Despite the inability of science to fully identify or fully comprehend the human adaptative mechanisms, the human body does nevertheless adapt. We must recognize that these mechanisms do exist, and do function no matter what the level of educated understanding. In a new-born babe, they exist with no educated understanding at all.

"There is obviously an inborn regulatory factor involved. This factor has been called variously 'The wisdom of the
body' to use Cannon's famous term, and 'That mysterious something' to quote another standard medical text. Chiropractors refer to this inborn regulatory factor as the 'Innate Intelligence' of the body.

"Chiropractic philosophy expresses a profound respect for the inborn body wisdom or innate intelligence, that controls, regulates, integrates, and coordinates the mechanisms of adaptation.

"Life is characterized by the ability to adapt, and absence of life, by the absence of ability to adapt. The more adaptability, the more expression of life. The less adaptability, the less expression of life. Anything that lessens adaptability, lessens life expression.

"There are, of course limitations to the body's ability to adapt. Each individual's maximum potential for adaptation is predetermined by genetic and other factors and no two individuals are alike.

"Straight Chiropractic is not an attempt to stimulate or inhibit the function of any organ or adaptative mechanism. It is certainly not an attempt to reduce symptoms or to treat or cure any disease condition. It is merely a method of eliminating vertebral subluxations, a major factor which, when present, inhibit the nerve channels by which the innate intelligence of the body coordinates adaptative processes. The correction of vertebral subluxations allows the body, once again, to achieve its own maximum potential to adapt for its own maximum expression of life and health."

The scope of practice advocated by Adio Institute of Straight Chiropractic includes:

"a. pre- and post-analysis of the spine to locate, identify and categorize vertebral subluxations by means of Chiropractic spinographic x-ray study, Chiropractic palpation of the spine through its immediately adjacent tissues, and/or observation of structures related to the spine."
b. the correction of vertebral subluxations by means of specific Chiropractic adjustments.
c. educating patients and the public at large to the philosophy and principles of straight Chiropractic.
d. nothing else.74
In a previous section of this submission it was suggested that many patients derive benefit from chiropractic care — particularly if suffering from minor musculo-skeletal disorders — and that in most cases the benefit stems from the transference of confidence from chiropractor to patient, the placebo effect of the laying-on of hands, and the sharing of faith in manipulation as a form of therapy, rather than to the mechanical component of manipulation. But chiropractic care may not always be beneficial.

However slight, some element of risk is attached to any form of medical treatment, whether chiropractic or osteopathic, medical or surgical. The risk may stem from acts of commission, or acts of omission: the principal risk of chiropractic is in the latter category, having nothing to do with the mechanics of chiropractic adjustment.

Under cross-examination during the proceedings of the Royal Commission on Social Security in New Zealand, the witness for the New Zealand Chiropractors' Association described the chiropractic treatment of children with whooping cough by spinal manipulation, as well as that of patients suffering from diabetes, and from hypertension. 6

Whooping cough is a common disorder of childhood, with which most people are familiar; it is caused by a bacillus, and has an appreciable morbidity and mortality, the principal complication being that of bronchopneumonia. Untreated severe disease in infants under one year of age has a poor prognosis; adequate treatment gives an excellent prognosis. It is inconceivable, to us, that chiropractic adjustment can have any effect whatsoever on the course of the illness, except to postpone proper medical care.
Diabetes mellitus is probably the most important of all endocrine diseases. Over 4% of females and 2% of males in the United States are, or will eventually become, diabetic. The disorder is characterised by polyuria and glycosuria, an increased flow of urine containing glucose. Most of the metabolic abnormalities in diabetes can be traced to the inability of the body to metabolize glucose properly, a metabolic defect which can be corrected by the administration of insulin. To say the least, it is difficult to see how chiropractic adjustment can in any way correct the defective metabolism of glucose, and act as a substitute for insulin; any patient who abandons orthodox medical treatment does so at the risk of his life.

Essential hypertension, the term reserved for cases of high blood pressure with no readily definable cause, is associated with increased peripheral arteriolar resistance; if the hypertension is sustained, the initially reversible arteriolar narrowing becomes permanent. Although most patients with slight elevation of blood pressure live years in comfort without treatment, those with more severe hypertension develop complications and die sooner. There are now many effective drugs, the use of which has greatly improved the outlook for patients with hypertension. Ganglionic blocking agents block the action of acetylcholine on the postganglionic neurone, preventing reflex vasoconstriction in the upright position. Some newer drugs block the action or the release of circulating norepinephrine at alpha-adrenergic receptor sites, and others cause direct relaxation of vascular smooth muscle. Drugs acting on the renal tubules affect arterial pressure partly by causing sodium diuresis and volume depletion, partly by direct action on the muscular wall of small arteries. The aim of therapy is to use these drugs, alone or in combination, so that arterial pressure is returned to normal levels; the mode of chiropractic adjustment in reducing arterial pressure defies analysis.
It is submitted that there is real risk attached to the chiropractic treatment of these disorders. Spinal manipulation – as defined by the New Zealand Act – is no substitute for **ganglionic blocking agents** in the treatment of hypertension; for **insulin** in the treatment of diabetes; for **immunisation** in the prevention of whooping cough, and for **antibiotics** in the treatment of whooping cough or its complications.

But the risk of chiropractic is nowhere more apparent than in the case of sick children, the field of paediatrics. On his own admission, the New Zealand chiropractor has a very wide range of practice as taught in approved colleges of chiropractic; and it has been shown that all eight chiropractic colleges approved by the New Zealand Chiropractic Board include study of the diagnosis and treatment of diseases of infancy and childhood by chiropractic methods. Two of the "Purposes of the Palmer College of Chiropractic" as listed in the Bulletin for the sessions of 1977-1978 are to:

"Prepare its graduates to enter field practice competent and well-qualified in the art and science of chiropractic to perform as primary health care providers."

and to:

"Teach, promote and protect chiropractic as a separate and distinct science." ¹

In the senior year, five hours per week are devoted to disorders of childhood: "Special attention is paid to the febrile disorders of childhood. Clinical application of such studies to the practice of chiropractic is emphasised." ¹
The code of practice advocated by Palmer College epitomizes the risk of chiropractic in the field of paediatrics: the New Zealand chiropractor is to function as a primary health-care provider (while protecting chiropractic as a separate and distinct science) and pay special attention to the febrile disorders of childhood - whooping cough is an example.

The risk of chiropractic care in the case of sick children was recognised by the 1975 Victorian Osteopathy, Chiropractic and Naturopathy Committee:

"The treatment of children raises particular problems ... Whereas the adult can possibly give a detailed case history which explains the cause for the condition, the same may not apply with a child."

The Victorian Committee recommended that:

"Chiropractors and osteopaths should be limited to treating neuro-muscular-skeletal conditions and to persons aged more than twelve years unless upon written referral by a medical practitioner." 45

The risk of chiropractic care in the case of sick children was emphasised by the 1972 report issued jointly by the Montreal Children's Hospital and the St Justine Hospital for Children:

"By calling himself a 'doctor'; by taking x-rays; by pretending to be qualified, the chiropractor creates a false image as to his ability to deal with paediatric problems. This leads directly to the delay in the proper diagnosis being made and the correct therapy being started which might affect the child for the rest of his life." 59

The US Consumers Union recommended in 1975:
"Overall, CU believes that chiropractic is a significant hazard to many patients. ... Above all, we would urge that chiropractors be prohibited from treating children; children do not have the freedom to reject unscientific therapy that their parents may mistakenly turn to in a crisis."  

The following section of this submission describes those risks of chiropractic in the other category, risks attendant upon acts of commission.
Much has been written concerning the use of ionizing radiation by chiropractors: called by Ralph Lee Smith "the chiropractor's toy", and described as "gratuitous radiation" by the US Consumers Union, the subject has been examined in varying detail by the several Commissions of Inquiry referred to in this submission. The Victorian Osteopathy, Chiropractic and Naturopathy Committee found in 1975 that:

"... the chiropractors in Victoria who graduated from the Palmer school still take full length radiographs of the spine. The radiograph is 14 inches by 36 inches."

The Committee recommended that:

"... this 14 inches by 36 inches type of radiograph be banned in Victoria because of the over exposure of the patient to radiation."

In the context of this Inquiry, these studies are perhaps of historical interest only, pre-dating as they do the emergence of the chiropractor as a primary point-of-entry health-care provider; his new, public image as a diagnostician; and the birth of the chiropractic Roentgenologist.

The following account is taken in its entirety from a paper compiled by a select committee of the American Chiropractic College of Roentgenology, in cooperation with the Radiological Consulting Committee of the ACA - the relationship of the ACA to the CCE, and the relationship of the CCE to the New Zealand Chiropractic Board, have already been described:
"Roentgenologic Diagnosis

"Roentgenology is one of the most important tools of diagnosis available to the doctor of chiropractic. It is used in addition to physical diagnosis, clinical laboratory diagnosis and other special procedures. X-ray photography is of special importance because of its ability to depict for the chiropractor the functional abnormalities of the spinal column in addition to the various pathologic alterations which may occur in the osseous or soft tissues of the body. Using roentgenology as a diagnostic tool, the chiropractor's interest lies within all body tissues and systems, but the primary emphasis is the spinal column and pelvis. In spinal roentgenology the depiction of the entire spinal column is frequently the criterion procedure because of the interrelationship of the various areas of the spinal column, one to the other. For example, a cervical aberration may well be manifested or produced by mechanical malfunction or alteration in the lumbar spine or pelvis. By the same reasoning, malfunction in one area of the spine may have far-reaching effects on any other portion of the spinal column as well as in peripheral areas or other body systems. It should be further mentioned that the use of full-spine radiography with proper technical procedures actually produces less total radiation than the standard approach of x-ray filming the various areas on a segmental basis.

"For better perspective in the overall use of roentgenology we might cite the customary procedure in patient management. After the case history is obtained and a physical examination performed, x-ray examination and other clinical diagnostic procedures may be instituted. These diagnostic procedures then lead to a tentative or working diagnosis for treatment of the patient. Although his primary therapeutic effort is directed at the spinal column, the doctor of chiropractic is concerned with the total patient and therefore roentgenology may be utilized in any body system. Examples of this include the chest examination and the abdominal evaluation including gastrointestinal and gall bladder studies, usually performed by a roentgenologist. The general practitioner DC, however, may well perform such procedures as chest roentgenology and other soft-
tissue studies which do not require the use of contrast media, as well as extremities, skull, and sinuses.

"Most doctors of chiropractic are not specialists in this field, and therefore utilize roentgenologists as consultants and for the purpose of doing special procedures. As with other health practitioners, the use of x-ray examination is only a portion of the total diagnostic picture in patient management. In the process of the diagnostic evaluation, the chiropractor is not primarily interested in attaching a name to the condition which his patient exhibits but rather in determining his overall state of health. It is with this total approach that the chiropractor utilizes the x-ray procedure in his diagnostic work-up.

"Alterations of spinal alignment and function are frequently well depicted by the use of both static and stress radiography. As a result the chiropractic physician depends to a great extent upon the information obtained via the roentgenogram in determining his approach in treating the patient.

"In summary, to put the role of roentgenology in its proper perspective, it is a particularly valuable diagnostic procedure for the chiropractor. The general practitioner DC may be somewhat limited in the scope of his radiologic procedures, however, it is to be supplemented and expanded upon by the use and services of the chiropractic roentgenologist." 37

By this declaration, two duly authorized bodies, the American Chiropractic College of Roentgenology and the Radiological Consulting Committee of the ACA, have determined policy affecting both the teaching and practice of chiropractic diagnostic radiology in the United States, policy which has the tacit approval of the New Zealand Chiropractic Board, and which must ultimately be reflected in the performance of chiropractic radiology in this country. The modern chiropractor is trained to practise as a community radiologist; no longer restricted to the concept of vertebral subluxation and its demonstration by the traditional "14 inches by 36 inches type of
radiograph", the scope of his diagnostic training is widened to include other body systems, training which is designed to promote his image as a diagnostician and further his acceptance as a primary health-care provider.

Neither the New Zealand Medical Association nor the New Zealand Branch of the Royal Australasian College of Radiologists sees the risk of chiropractic diagnostic radiology as a technical issue: the quality of the chiropractor's equipment, the standard of his radiography - much less the size of his radiograph - count for nothing by comparison with the quality of his training. The quality of that training must be matched against its medical equivalent, the example of the medical practitioner who, in addition to his undergraduate and post-graduate medical studies, has undertaken specialized training in diagnostic radiology; who holds a hospital appointment with the provision of continuing post-graduate education in his speciality; who has undertaken research, and contributed scientific papers to journals of international standing.

The Medical Council of New Zealand recognises certain standards of education in the case of medical practitioners who specialize in diagnostic radiology: the training of chiropractic roentgenologists fails to meet those standards.

It is the chiropractor's training (or lack of it) which is the principal hazard of chiropractic Roentgenology, not gratuitous radiation.
SUMMARY

1. In essence, the New Zealand Medical Association case is that modern chiropractic encourages 'persons with limited qualifications to practise medicine under another name'.

2. There is abundant evidence - not only from North American sources but also from New Zealand - to show that the scope of chiropractic is wider than commonly supposed: the modern chiropractor trains and practises as a primary physician, not as a manipulative therapist.

3. The legislative restriction of chiropractic (for example, its restriction to spinal disorders) is not practicable so long as the chiropractor adopts a primary role.

4. Under the terms of the Chiropractors Act 1960 the New Zealand Chiropractic Board approves institutions at which chiropractors receive their training; of the eight institutions at present approved, six subscribe to the policies and regulations of the Commission of Accreditation of the Council on Chiropractic Education which has the authority of the United States Office of Education.

5. It is the policy of the CCE to broaden the scope of chiropractic education, to equip the chiropractor for his chosen role as a primary physician; the complete chiropractic curriculum now includes the following subjects:
6. Excluded from this curriculum is the study of surgical and pharmaceutical principles. With no depth of training in diagnosis - the essential skill of the physician - the modern chiropractor is prevented from developing that skill by the fact that he practises in academic isolation.

7. Always regarded by medicine as scientifically untenable, the principle of Palmerian philosophy has been abandoned by modern chiropractic: new colleges, isolated from the influence of the CCE, are being founded in the United States to preserve chiropractic philosophy in a 'pure' form. Today, chiropractic training differs from that given the ordinary medical student only in its quality and in the singular emphasis placed upon chiropractic spinal 'adjustment'.

8. The medical profession acknowledges the fact that many patients believe in chiropractic, and in some way derive benefit from it; equally, there must be many patients who derive no benefit, and who are at risk while under chiropractic care.
9. The available scientific evidence suggests that the benefit of chiropractic - if benefit there be - is largely due to the transfer of confidence from chiropractor to patient, the sharing of faith in manipulation as a form of therapy, the placebo effect of the laying-on of hands, and the fact that the minor musculo-skeletal disorders which fall into the province of chiropractic are themselves self-limiting or subject to spontaneous remission.

10. The Medical Council of New Zealand has laid down certain standards of education for medical practitioners who provide primary health care; the standards set for chiropractors by the US Office of Education fail to meet those of the Medical Council.

11. The New Zealand Medical Association respectfully submits that:
   a. modern chiropractic is not a healing art which is separate and distinct from other medical services;
   b. its scientific and educational basis is inadequate by the standards of the Medical Council of New Zealand; and
c. its contribution to the health services of New Zealand is not such that chiropractic benefits should be provided under the terms of the Social Security Act 1964 and the Accident Compensation Act 1972.
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