

MERGING HEALTH PROFESSIONS: EVIDENCE FOR A POSSIBLE CHIROPRACTIC-MEDICAL MERGER

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ABSTRACT

Background: Research has been conducted to examine the circumstances and the accuracy of reports relating to an offer from medicine to integrate chiropractic in California around 1960. The offer sought to exchange chiropractors' registration to that of medical doctors.

Objective: The primary objective of this study is to identify various sources regarding this purported move by organised medicine in the United States. A document or formal published reference was its ultimate aim.

Method: Following mention in source chiropractic texts, I decided to explore as many sources as possible. Contact was made with institutions and individuals as well as a comprehensive search of medical and chiropractic indexes as well as via a general search engine.

Results: In 1961 in California, a similar offer was made to osteopaths who had adopted a number of medical practices such as surgery, gynecology and drug prescription, in order to merge with medicine. For chiropractors, only circumstantial evidence could be found related to such discussions. However, contact between the 2 professions on such a proposal appears to have been floated on 4 occasions. In addition, verbal evidence from chiropractic graduates from the 1950-60's do recall such discussions.

Conclusion: No formal confirmatory evidence for such a proposal could be located. (*J Contemporary Chiropr* 2019;2:138-149)

Key Indexing Terms: Chiropractic; Osteopathy; Medicine

INTRODUCTION

"Perhaps the greatest force promoting the integration of alternative and mainstream therapies is the growing crescendo of consumer demand. For the most part, consumers are not interested in validating a particular model of medicine. They only seek to get well, alleviate

their symptoms, or stay as healthy as they can. "Does it work?" - not "Is it mainstream or alternative?"- is their concern'. (1)

If hegemony is the domination of 1 power, it is difficult to see the medical grasp on health care at all levels as anything other than a monopoly. The imposition and perpetuation of the medical model allows little room or opportunity for the emergence of alternative models of health care, especially the stimulation from competitive ones, but also collaboration. (2-7)

Some may have felt that an amalgamation might mean more of an absorption of chiropractic, and therefore its attenuation. Further, that it may have led to a loss of chiropractic as a separate entity and the possible diminution of spinal manipulation as had happened with the merger of osteopathy with medicine in California in 1961, and subsequently in other states. (8)

The medicalization of osteopathy in the US is unique to that country. In the US, osteopathy is now essentially a parallel profession with medicine, as it includes such specialties as surgery, obstetrics and gynecology and the prescription of drugs. (9)

DISCUSSION

In view of published and verbal reports relating to a dialogue about a possible merger between the medical and chiropractic professions in the 1960's, A search was conducted to see if and in what form a proposal may have been made to members of the chiropractic profession. An offer was reported to substitute chiropractors' registration to that of medical registration. McLeod and Sweaney both recall mention of the topic in discussion with previous generation chiropractors, and as reported by Wilk and Wardwell.(10,11) (McLeod ME. Personal communication. February 2016; Sweaney JA. Personal communication. September 2015).

Such a move may tend to preserve the single-profession model in the domination of healthcare services. It effectively avoids the healthy stimulus of fair and open

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competition. (12) Inglis asks, "Why should there not be two, three, or even more professions of medicine." (8, p260)

It is noted however, that drawn out but successful antitrust litigation against the AMA and others in 1976-1990 should have curtailed such restrictive trade practices. (13,14) That does not appear to have happened. (15-17)

Over the years, there have been reports in the United States concerning offers from organised medicine to merge or absorb the chiropractic profession. Such a precedential concession has occurred in the past with other professions, such as eclectic medicine/naturopathy ('Natural Medicine') (13, p37-38) homeopathy (13, p 25-29) and acupuncture. (18) These moves seem not to have been based on scientific research, but more in order to obviate professional competition. (19)

While he did not put a timeframe on his 1992 prediction, Wardwell felt that chiropractic and medicine were drifting toward a merger. One suspects that any such process would have to overcome entrenched preconceived intransigence in both parties. (13, p140)

The nature of this suggested union was not clearly defined by Wardwell. He suggested that rather than a complete fusion with medicine, chiropractic could eventually be associated in a similar manner to that of dentistry, optometry, psychology and podiatry. (13, p275) Such a cooperative alliance would further develop the collaboration with chiropractors that is now well established in a number of jurisdictions, especially in Europe. There has also been integration of chiropractors in hospitals and armed forces in the US and Canada in particular. (20-25) It is suggested here that eventually some form of universal accord will evolve. (26)

"No joint scientific investigation of the merits of chiropractic was ever undertaken." (13, p5)

The grounds for research into this topic were based on reports in the 1960's that an offer from a medical organisation in California had been made 'to chiropractic' to amalgamate the 2 professions. At the time, these were verbal reports and searches were undertaken to discover firm evidence of such an offer.

Numerous avenues were pursued in order to obtain evidence which sought to clarify any reported offer to merge chiropractors with medical doctors - and osteopaths. At that time, negotiations between osteopathy and medicine were well underway.

A number of college sources and senior members of the chiropractic profession were contacted in order to determine what they recalled of such an offer. A senior Australian chiropractor who attended Palmer Chiropractic College in the 1950's recalls BJ Palmer,

who was regarded as a chiropractic leader at the time, waving a letter regarding an offer and being outspoken in rejecting such a proposal as a sell-out to medicine. Apart from the author, others' colleagues recalled a chiropractic 'pioneer,' Dr HM Himes, informally discussing this offer. Holdway, McLeod and Sweaney all recall Himes recollection of circumstances surrounding such an offer (Holdway KB. Personal communication. March 2016; McLeod ME, Personal communication. February 2016; Sweaney JA September 2015).

Dr Himes was a 1931 graduate from the Palmer college and would have known BJ well. For some years, he was head of the technique department at Palmer College; he also lectured throughout the US and Canada. In latter years, he became dean of the Canadian Memorial Chiropractic College until the mid-1960's. (27)

There was apparently a degree of apprehension concerning the aspect that chiropractic would be absorbed in the way that osteopathy had been. (9) The feeling was that if a merger took place, there would be a loss of identity and ultimately an absorption with eventual diminution of the profession and its perspective. (8, p113)

The most promising sources regarding this 1960's offer were in books on the chiropractic profession by Wilk and Wardwell. (11,28) Although these volumes referred indirectly to an offer, neither provided hard evidence. Copies of "A history of Los Angeles Chiropractic College" (29) and "The Merger - M.D.s and D.O.s in California" (9), were extensive histories of the professions in the state. Reference to such an offer to chiropractic could not be located in these editions. (9,29)

An online search was also conducted of 4 journals from that era. They were the Journal of the American Medical Association, the Western Journal of Medicine (California), the International Chiropractors Association Journal, and the Journal of the American Chiropractic Association. These were expected to provide evidence of such an offer, but again no such indications were revealed

One website alluded to such an offer, but again without noting any 'hard' evidence. Prescott stated that "... at least one of the early chiropractic colleges so that its graduates could elect to go on and acquire the broader license (California Chiropractic College)." (30) Unfortunately, this website seems to have been removed.

A further publication covering 120 years of the California Medical Registration Board was also obtained. (31) Despite being a rather candid and extensive presentation, the text surprisingly did not allude to the topic of the medical-osteopathic integration in 1961, let alone an offer to the chiropractic profession.

"Early twentieth century medical science refused to investigate the embryonic neurobiological science of chiropractic care or recognise the value of the ageless art of manipulative therapy to help the pandemic of back pain." (17, p32)

During his time at chiropractic college in the latter half of the 1960's, the author and others mentioned earlier recall mention of an offer being made to chiropractors by organised medicine in California. We understood that the proposal was to merge registered chiropractors as registered medical practitioners - virtually a conversion of chiropractors' registration licenses. No dated document or conditions of the offer could be located or identified.

It is likely that the purpose of such an offer was for the economic protection of medical practices - an antitrust or anti-competition matter. Such a notion tends to be supported by subsequent revelations through litigation exposed by Wilk-v-AMA and others court case. (11,13, 32-34)

In researching the merger, I found that there had been previous moves to assimilate other health professions during the 1900's. (11, p26-27) In 1903, the AMA (US) "even accepted homeopaths as members." (11, p29) Based on historical precedents with these other professions, the amalgamations with medicine appeared to be more a form of defending professional territory. Wardwell notes this as "Organised medicine (having) a long history of opposing types of healing that might encroach on its 'turf' " (11, p161)

This chiropractic offer was apparently relayed to 1 of the prime leaders of the profession at the time, BJ Palmer, and presumably others. As recalled by McLeod, Palmer was reportedly adamant against the offer, preferring that the chiropractic profession not be contained under the medical umbrella. He purportedly felt that such an amalgamation would lead to the demise of the chiropractic profession as an independent healing science due to a dilution of its *raison d'être*. Chiropractors from the time clearly recall BJ Palmer openly discussing the key terms in what could be interpreted as a compromising proposal. (McLeod M. Personal communication)

Following the 1961-62 absorption of osteopathic schools and practitioners into medicine in California, fears were expressed in that state's chiropractic circles of a similar move that could 'eliminate chiropractic.' (32, p111)

It is not known if the 1960's proposition to the chiropractic profession in California was verbal or in documented form. In any case, a computer-based search plus a number of inquiries could not locate any hard records of the offer. A direct inquiry to the Palmer

College of Chiropractic, where BJ Palmer oversaw much of the profession's activities, stated that it was unaware of any such document. But if spinal manipulation was to dissipate as feared, it could be said that allopathy had "turned its back on functional illness - leaving sufferers from headaches, if no organic cause could be found, with nothing better than aspirin." (8, p115-116)

In the US, there had been an exodus of general medical practitioners into medical specialties. In 1930, 66% of medical doctors were in general practice. By 1963 this had dropped to 5%. This opened opportunities for chiropractors and osteopaths to establish successful general practice services at the primary contact level. (8, p116)

In 1987, Baer recognised the growing accommodation of medicine and chiropractic, but acknowledged that unlike other 'heterodox' health professions, chiropractic had not been 'absorbed' by the dominant biomedical profession at this stage. (35) The AMA had an established history of strongly opposing the existence of other health professions, only to subsequently absorb, embrace, or adopt them or many of their concepts. (35)

Merger Proposals

"Thus, while one segment of medicine castigates chiropractic as a worthless cult, the other is admitting its value and is negotiating with chiropractors to obtain 'their useful manipulative skills.' (10 p,97)

Further evidence, but of a cursory nature, was provided by Wilk in his text, "Chiropractic Speaks Out." Wilk cites two references for this, but unfortunately it was not possible to retrieve these at this time. (10,36,37) He noted that in "The November 15, 1971 issue of the American Medical News, a publication of the AMA, revealed a plan of absorbing chiropractors into medicine. In a two-page article largely devoted to chiropractic it stated how doctors of chiropractic had attended nine-month courses at Duke University, and became licensed 'physician's assistants.' [He noted further that] ...these doctors of chiropractic had to renounce their independence of medicine, reject their doctor's title, and fall under the total domination of medical physicians." (10)

Claims have been made that the closest chiropractic came to assimilation with medicine was in the 1930's in California. (38) The profession there established the Physicians and Surgeons Post Graduate Course for chiropractors. Essentially, this would have positioned the chiropractic profession whereby it became more or less on a parallel path with allopathy (and osteopathy). The chiropractic profession debated the idea vigorously, but rejected it. (10, p96-98)

Wardwell was a Professor Emeritus in the Department of Sociology at the University of Connecticut. Although not a chiropractor, his reviews on the profession's inter-professional relationships were rather comprehensive. He stated that there were "...proposals by California medical leaders to 'solve the problem of chiropractic' ('encroachment on medical turf') by upgrading those already in practice and cutting off further licensing, as was done there with osteopathy in 1961, (and that) met with little favourable response from chiropractors.' (11,39)

Today in general practice, there is a palpable willingness toward inter-professional collaboration at an individual or on a personal inter-practitioner level. Professional co-operation also exists in research, at hospitals around the world, and with conference presentations. (25,39) That trend continues with chiropractic college teaching and clinical positions held by medical doctors, as it has for over 100 years. (40)

Some 2 decades ago, Wardwell opined that chiropractic could become a "limited" (medical) profession, as had dentistry, podiatry, optometry and psychology. He noted that differences in these other health professions "did not challenge medicine's fundamental principles." (13, p43-44) They all appear to remain under a rather broad medical umbrella if not dominance, but at least collaborative and co-operative. Given the current but tardy trend, one could expect that Wardwell's observations may well be fulfilled.

WHO Guidelines for MD's Obtaining Chiropractic Qualifications

Based on the historical precedents of a number of medical doctors becoming chiropractors, it would seem natural that contemporary medical doctors would also show interest in attaining postgraduate chiropractic qualifications. In Australia and elsewhere, a number of chiropractic graduates have, or are currently undertaking, standard university courses to obtain medical registration. (26)

In 2005, the World Health Organisation recommended that medical doctors undergo a 3-year course "to attain minimal registrable requirements to practice safely and relatively effectively as chiropractors." (41) Chapman-Smith states that the 3-year course is also available for physiotherapists and notes that "...chiropractic education and skills development are significantly different from physiotherapy." (42)

The WHO chiropractic guidelines also recognise the need to "appreciate the expertise and scope of chiropractic and other healthcare professionals in order to facilitate intra-disciplinary and inter-disciplinary cooperation and respect." (41,43)

In contrast, the Duke University program-designed course was for chiropractors to become physician assistants in 2 years. (10)

In Australia, a weekend course was offered to teach medical doctors spinal manipulation. (44,45) This is considerably shorter than some 120 hours in articular and soft tissue assessments and approximately 100 hours in technique application courses in an Australian chiropractic institution. (Ames R. Personal communication. October 18, 2019).

Course in Chiropractic for Medical Students

There is demonstrable interest from medical students in complementary and alternative medicine. The American Medical Students Association has established a curriculum to study chiropractic, osteopathy and other complementary and alternative models. In contrast to the WHO recommendations, this chiropractic component comprised a "Six-week elective mini-course (which) combines lecture and hands-on instructions in the diagnosis of musculoskeletal neck and back conditions commonly seen in the primary care setting. Non-pharmacological treatment options will be the focus. Course objectives include being able to identify structures/tissues via palpation, to discriminate between tender points and trigger points, to identify normal and abnormal spinal motion via palpation, and to determine the appropriate non-pharmacological treatment options." While the online listing seems to be no longer available, it is also posted on the website for Science-Based Medicine as 'Manipulative Therapies: Chiropractic and Osteopathy'. (46)

Such a development would tend to prepare these graduates to appropriately identify and refer those patients experiencing biomechanical neurovertebral conditions and who would be best managed under manual care.

Medical Care Personnel Use CAM

As reported by Johnson *et al.* in 2011, the use of complementary and alternative medicine (CAM), including chiropractic, is highest among medical doctors compared to other professions. "U.S. health care workers, especially doctors and nurses, use complementary and alternative medicine (CAM) far more than do workers in other fields, according to a new study. CAM includes diverse therapies outside the realm of conventional medicine. Overall, 76 percent of health care workers report CAM usage, compared with 63 percent of the general working population." (47) A similar finding with nurses by Dawson, also appears to contradict critics of the CAM health professions. (48) While in 2000,

Eastwood noted the consumer demands was leading to medical practitioners adopting alternative concepts in their practices. (49)

Collaboration

There has been apparent medical interest in chiropractic since the early years of the chiropractic profession. Around the advent of chiropractic in 1895, open collaboration with allopathic doctors was relatively harmonious. Indeed, medical doctors comprised 33% - 5 of the 15 student members taught by DD Palmer. This was followed by medical doctors lecturing at Palmer's college in 1905; one, Dr Alfred Hender, became dean of the college in 1912. (11, p134, 20,38)

Surgeon Became Chiropractor

Baer noted that early in the 1900's a member of the medical faculty at the University of Pennsylvania Dr A F Walters, an orthopaedic surgeon, became a chiropractor "who wrote and lectured extensively on his new profession." (35)

There appears to have been conflicting attitudes toward chiropractic between independent MDs and political medicine as many "chiropractors had some MDs as patients." (11, p245-246) In 1952, Wardwell noted that "relations between physicians and chiropractors are often surprisingly close with inter-professional collaboration in spite of organised medicine's taboo on cooperation with 'irregulars'." (50) It was around this time that the AMA was particularly active in opposing chiropractic. (8,10, 11, p161-178,13,18,32,51)

Wardwell cites Cherkin *et al*, who noted in 2 papers in 1988 and 1989 that in Washington State, 57% of general practitioners encouraged patients to see chiropractors. A Canadian survey reported in 1980 found that 84.5% of chiropractors had received referrals from medical practitioners. In addition, a 1990 Canadian medical study found that 62.6% of medical doctors referred patients to chiropractors. In 1980, that 96% of chiropractors had referred patients to medical doctors, and 49% of chiropractors had MDs as patients. (11, p245-246)

In 1980, Berliner and Salmon acknowledged the resurgence of patient interest in alternative care when they stated that demand for chiropractic "can be in part attributed to increasing consumer dissatisfaction with the present system of medical care delivery...." and further that there is an "assumption of hegemony by scientific medicine and its practitioners" which also appears to be a factor. (52)

In more recent developments, chiropractors are integrating practices with medical practices and multidisciplinary practices, hospitals, and the armed forces in the US and Canada. ([11, p25-29],53-61)

International Collaboration

Internationally, inter-professional relationships appear to be steadily strengthening between medical doctors and chiropractors. Visiting rights and use of chiropractic health services in hospitals are becoming standard practice, particularly in Europe, South Africa, Canada and the US. (26)

In a further sign of warming inter-professional associations, in 2011, a chiropractor, Dr Anthony Hamm, was elected to the position of co-chair of the American Medical Association's Health Care Professionals Advisory Committee Review Board (HCPAC). In his role as HCPAC co-chair, Dr. Hamm also served on the AMA/ Specialty Society Relative Value Scale Update Committee (RUC). The RUC makes annual recommendations on relative values regarding new and revised services to the Centers for Medicare and Medicaid Services (CMS), and performs broad reviews every five years of the Resource-Based Relative Value Scale (RBRVS), which determines Medicare provider reimbursement. (62,63)

As with examples in Switzerland, Denmark, South Africa, Canada and many other countries, healthcare in Russia is well on the way to incorporating chiropractic practices and models into standard health services. In 1991 the Russian medical school at the Pirogov Institute of Moscow announced the formation of a chiropractic faculty through the efforts of Dr Stephen Press, a chiropractor, and Dr A. Fedin, the chief neurologist. Shpilko confirmed the inclusion of chiropractic as 1 of 8 alternative therapies "officially recognised" by the Russian Ministry of Health, and stated that such health services reach 60% of the population.(64,65)

In 1994, Dr Andrei Pikalov, a Russian medical doctor, stated that "recognition of manual therapy (manipulation) in Russia started about 30 years ago" – circa 1965. There are now 6 institutes teaching such methods in Russia. He stated that it is practiced in all hospitals and outpatient clinics in Russia as the field of vertebroneurology. This term would seem a particularly relevant designation as it emphasises the neurological element in the chiropractic vertebral subluxation model. (66)

The restraint on chiropractic appears to be both inconsistent and incongruous, in view of the developments resulting from the 1979 NZ Inquiry of chiropractic and the 1990 US antitrust law suit against the AMA. The claims are further contradicted when:

- The medical version of chiropractic, manipulative medicine, is a growing element in medicine, (67)
- Manipulation under anaesthesia (MUA) in hospitals as conducted by chiropractors in

conjunction with medical theatre staff is also in growing demand. (68,69)

- The old medical claim that vertebrae cannot be manipulated is now superseded despite the claim. (70-72)
- There is precedential evidence and recognition of the vertebral lesion - the vertebral subluxation complex (VSC) in the medical literature. (73,74)
- Disturbed spinal mechanics have been shown to affect neural elements such as somato-autonomic reflexes, mechanoreceptors, nociceptors and other sensory receptors. (75-83)
- There is ongoing independent and collaborative medical/chiropractic research, into the understanding of the neurobiological elements of the chiropractic model. (84-87)
- There is a growing trend in collaborative care of patients. (88)
- Authoritative chiropractic research is published in medical journals. (89,90)
- Contemporary and historical chiropractic and osteopathic research papers with animal subjects have been published. (91-94)
- There are papers on the chiropractic model of care of animals published in veterinary and chiropractic journals, (95-102)
- Papers in medical journals report the manipulative management of visceral conditions. (103-108)
- Papers in medical journals report on the spinal manipulative management of infants for a variety of childhood conditions. (70,71,109,110)
- Chiropractic has been shown to be a particularly safe procedure. (111-117)
- The author am not aware of any formal scientific study which refutes or contradicts the basis for the chiropractic model – nor the vertebral subluxation premise. (11, p162)

Despite the adoption of fundamental chiropractic concepts in medicine, there are still some who purport to reject these established facts, or just choose to ignore them. Overall however, developments would suggest a

gradual blending and mutual recognition, with political rather than clinical or scientific aspects still being the primary hurdle.

Without the success in positive patient outcomes, patient demand, and the perseverance of chiropractors, neither medicine nor physiotherapy would have been interested in developing or adopting their version of manipulation.

Chiropractic is a health profession offering options for a range of conditions. It is not a synonym for manipulation, which can at times be a part of the chiropractic model of care.

The practice of health care is a human right. Every individual must have the possibility of accessing it, without discrimination of any kind and in a fair, balanced and true spirit, which requires mutual recognition with a spirit of friendship, solidarity and understanding all in the best interest of patient health and welfare.

- Adapted from the Olympic Charter Fundamental Principles of Olympism. Clause 4. www.olympic.org/documents/olympic_charter_en.pdf. 2013. p11.

CONCLUSION

"Inasmuch as medicine, in spite of its emphasis on objectivity and scientific research, is resistant to changing its basic formulations, chiropractic performs the important function of furnishing another channel of medical innovation.....and physicians know practically nothing about chiropractic." Wardwell 1952 (50)

Given the degree of informal as well as formal interaction between medical doctors and chiropractors over many decades, there are reasonable grounds to expect that some form of an integration offer to the chiropractic profession may have been floated by organised medicine, at least in California. Although a few references alluded to such offers, The author could locate no documentation that outlined terms conditions or formerly recognised any negotiations.

The relationship between the 2 professions in North America does appear to have improved in recent years. It took the US Court of Appeal's decision in The Wilk Case to expedite this. (118-120) Following the decision, 50,000 chiropractors obtained the formal ability to consult professionally with MDs, use hospital facilities and apply for hospital appointments, access co-admitting rights (similar to dentists and podiatrists in the US), administer treatments, and importantly, order diagnostic tests, offer dietary advice and recommend physiotherapy for their patients. By the early 1990's after the court judgement, at least 60 hospitals or ambulatory centres employed chiropractors on staff. (39) Given the patient demand for

such services, it should not have taken a court decision to accomplish all this.

Varying degrees of interaction between chiropractors and medical doctors are quite commonplace throughout the world at the clinical level. Collaboration is also taking place at an organisational level involving hospitals, insurance companies, workers' compensation, educational institutions, health funds, and in veteran affairs health services. Once initiated, this integration seems to be quite successful.

At the political-organisation-professional level in some countries, there still remains resistance to chiropractic. However, in others, there is open recognition of chiropractic as an independent yet affiliated health profession.

The merging of osteopathy in California, which spread to the rest of the US, was one of a series of amalgamations where medicine absorbed or integrated other health professions. Medicine has had a traditional record of taking over other health professions, and as such, that may have been a factor alerting chiropractors at the time of the osteopathic merger. Based on previous history, the concern held by many chiropractors is that merging could well lead to submerging and subsequent an abatement of the profession in a loss of identity.

Serious debate as to whether a monopolistic healthcare model is best for patients has yet to take place. (14-17,121) However, as reflected in trade practices legislation, a dominant cabal-like cartel is discouraged in non-medical commercial areas as not being in the best interest of consumers, and the same could apply to health care.

"Faced with different, modalities of treatment, we choose medicine not necessarily because it is the best care, or even the logical choice, but because we have been programmed to think of health care as consisting of drugs and surgery."

'Is there any reason why the same freedom should not exist in the field of health as exists in business or politics, or religion, or anything else? Is there any reason why one single approach to the problem of health, backed by powerful financial interests, should be given a complete monopoly?' (10 p 165)

There has traditionally been persistent resistance toward chiropractic at a political medicine level. This appears quite different at an individual and clinical level where collaboration and co-operation takes place. This dichotomy of medical attitudes tends to reflect a contradiction and inconsistency to the claims against chiropractic and supplies an element of support for the possibility of merger discussions taking place at some stage.

Despite indications, I found no evidence that could confirm any formal offer made to chiropractors in California or any other US state.

Efficacy and patient demand could be possible factors explaining any medical interest in engulfing chiropractic. By its continued existence and growth, chiropractic essentially challenges medicine as the ultimate authority on all health matters.

While the chiropractic profession is under sustained opposition from politico-medical quarters, this resistance is inconsistent with worldwide trends involving individual practitioners. Critics' claims are hardly justified or supported by the published scientific evidence when key elements of chiropractic are adopted by these other once-critical professions. They are also effectively contradicted by the legal outcomes against political medicine under the findings in the 1990 US Supreme Court - the case of *Wilk-v-AMA & others*. (15, 118-120) All the fears of safety and unscientific claims about chiropractic seem to suddenly become acceptable to hospitals and health funders/insurers. This has made sceptical patients and independent minded allopaths open to reviewing the original source of their opinions.

Wolinsky and Brune state that "there have always been multiple schools of medical thought." (19, p122) These have essentially all remained within the medical empire. Such a blurring of realms may be a reason to retain optional care with a separate and distinct yet collaborative and cooperative profession, somewhat akin to the medical-dental relationship. It would seem however, that the terms of membership could be somewhat restrictive to any absorbed profession.

Should the preconceived notions against chiropractic dissipate in light of scientific research (as expected), the writer suggests that a form of inter-professional alliances and greater collaboration between established health professions would evolve.

However, like dentistry, chiropractic should and will remain an optional system of healthcare in its own right. Further, many in medicine would have difficulty in publicly accepting the findings that it has denied acknowledging the potential in the chiropractic model for so long, and fostered unsubstantiated claims against chiropractic. Wardwell sees chiropractic being a "limited" profession like dentists - limited by its own model of healthcare. He does not see chiropractic becoming an ancillary profession but that it remains more independent with close interprofessional collaboration. (11 p 280-287)

In researching this topic of a possible merging of chiropractic with medicine in California, The author felt that definite if informal overtures and discussions

may well have taken place, despite the lack of available documented evidence.

No apparent reason could be found as to why there should be a limit on the number of health professions. It may be said that hegemony has effectively resulted in a cartel which dominates so much of this essential service. The gatekeeper model appears self-serving in that it actively discourages evolving and stimulating options and theories in healthcare.

In essence, patient preferences were suppressed by a hegemonic model in health care. Patient preferences challenge the dominant forces in healthcare, which in turn is decidedly slow in responding to patient demands. In addition, political response and change should be patient-driven, not a response to a dominant profession's powerful position of influence.

Due to the basic philosophical tenets of each profession, the interprofessional relationship would best serve patients by remaining as a fully collaborative but independent and fully cooperative in a similar vein to that of dentistry,

I would be grateful if any reader had definitive documentation or further confirmation regarding any move concerning a merging of chiropractic and medicine. Please contact me at cadaps@bigpond.net.au

"The chiropractic profession is assuming its valuable and appropriate role in the health care system in this country (USA) and around the world. As this happens the professional battles of the past will fade and the patient at last will be the true winner." Jonas W (MD) 2000 (122)

REFERENCES

- Goldstein MS.(1) *Alternative health care - medicine, miracle or mirage*. Philadelphia: Temple University Press, 1999
- Reforming America's healthcare system through choice and competition. U.S. Dept Health & Human Services, U.S. Dept of the Treasury, U.S. Dept Labor. https://www.hhs.gov/sites/default/files/Reforming-Americas-Healthcare-System-Through-Choice-and-Competition.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosvitals&stream=top. (Accessed 13 Oct 2019)
- Smith JC. Reforming Georgia's Workers' Compensation through choice, competition and chiropractic care. <https://documentcloud.adobe.com/link/track?uri=urn%3Aaaaid%3Aascds%3AUS%3A70671a8f-9bfc-446d-ab12-9f9441d7aa3d>. (Accessed 13 Oct 2019)
- Smith JC. Reforming American healthcare. https://chiropractorsforfairjournalism.com/Reforming_Healthcare.html (Accessed 13 Oct 2019)
- Green BN, Johnson CD. Interprofessional collaboration in research, education, and clinical practice: working together for a better future. *J Chiropr Educ* 2015;29(1):1-10
- Dafny LS, Lee TH. Health care needs real competition. *Harvard Business Review*. 2016. <https://hbr.org/2016/12/health-care-needs-real-competition> (Extracted 13.10.2019.)
- Gaynor M, Mostashari F, Ginsburg P. Health care's crushing lack of competition. *Forbes*. June 28, 2017. <https://www.forbes.com/sites/realspin/2017/06/28/health-cares-crushing-lack-of-competition/#7a585d5d14ff>
- Inglis B. *Fringe Medicine*. London: Faber & Faber; 1964;114
- Reinsch S, Seffinger M, Tobis J. *The merger: M.Ds and D.Os in California*. Los Angeles: Xlibris, Self-Publishing Co. 2009
- Wilk CA. *Chiropractic speaks out. A reply to medical propaganda, bigotry and ignorance*. Park Ridge, Ill: Wilk Publishing Co; 1973:97
- Wardwell WI. *Chiropractic: history and evolution of a new profession*. St Louis: Mosby Year Book;1992:139-141
- Logan J, Green DG, Woodfield A. *Healthy competition*. Auckland. The Centre for Independent Studies. 1989
- Wilk CA. *Medicine, monopolies and malice*. Garden City Park, New York. Avery Publishing Group. 1996;159
- Smith JC. *The medical war against chiropractors. The untold story from persecution to vindication*. Self-Published. 2011
- Burkhart LA. *Wilk v. AMA 25 years later: why it still isn't over*. ACA News. March 2012
- Rubinstein HM. *Wilk v. AMA: The lingering effects of an inadequate injunction to remedy malignant anti-trust violations against the chiropractic profession - a search for the cure to federal and state executive, legislative, and judiciary inaction to continued discrimination of chiropractic as related especially to insurance*, 11 U. Miami Bus. L. Rev. 131 (2003) (Available at: <http://repository.law.miami.edu/umbl/vol11/iss1/6>)
- Beychok T. *Wilk v. AMA: almost thirty years later* *Chiropr Econ*. 2015. <https://www.chiroeco.com/wilk-v-ama-almost-thirty-years-later/> Accessed Oct 13, 2019
- Baer H. *Biomedicine and alternative healing systems in America*. University of Wisconsin. 2001

19. Wolinsky H, Brune T M. Medical monopoly waging war on alternative medicine. In: *The serpent on the staff. The unhealthy politics of the American Medical Association*. New York: G.P. Putnam's Sons, 1994:121-122
20. Boudreau LA, Busse JW, McBride G. Chiropractic services in the Canadian Armed Forces: a pilot project. *Mil Med*. 2006;171(6):572-576
21. Anon. Veteran's Affairs Canada. 2013. [www.chiropracticcanada.ca/en-us/.../VeteransAffairs Canada](http://www.chiropracticcanada.ca/en-us/.../VeteransAffairs%20Canada)
22. Paskowski I, Schneider M, Stevans J, Ventura JM, Justice BD. A hospital-based standardised spine care pathway: report of a multidisciplinary, evidence-based process. *J Manipulative Physiol Ther* 2011;34(2):98-106
23. Staff. Brigham and Women's Hospital, June 30th 2012. http://www.brighamandwomens.org/departments_and_services/medicine/services/oshercenter/aboutus_staff.aspx?sub=0
24. Anon. Department of Defense Liaison with New Chiropractic Benefits Committee Addresses Chiropractic Coalition Legislative Day Gathering. Circa 2005. <http://www.chiropractic.org/index.php?p=news/deptofdefense>
25. Anon. Chiropractic care residency pilot initiative. New chiropractic care program. Dept of Veterans Affairs. July 23rd. 2013. http://www.va.gov/oa/archive/20130723_ChiropracticResidency_RFP.PDF
26. Rome PL. Chiropractic hospital appointments in Australia – an international comparison. *Chiropr J Aust* 2016;44(2):142-163
27. Keating J. The Search for a Science of Straight Chiropractic: Herbert Marshall Himes, D.C., Ph.C., F.I.C.C. *Dynamic Chiropractic* – December 14, 2000;18(26):<http://www.dynamicchiropractic.com/mpacms/dc/article.php?id=32046>
28. Wilk CA. *Chiropractic speaks out. A reply to medical propaganda, bigotry and ignorance*. Park Ridge, Ill: Wilk Publishing Co; 1973:97
29. Keating JC, Phillips RB. *A history of Los Angeles Chiropractic College*. Whittier: Southern California University of Health Sciences; 2001
30. Prescott D. Lessons from the California practice rights litigation, Part 6: Who's in charge? elective education and training. www.prescott-law.com/.../Fourth%20Series%20-%20Part%206%20. <http://www.chiropracticuniverse.com/mobile/ITEM-Lessons-from-the-California-practice-rights-litigation-Part-13-Certifying-the-practice-of-homeopathy-3829.html>
31. McCready LA, Harris B. *From quackery to quality assurance: The first twelve decades of the Medical Board of California*. Sacramento, Ca., 1995;109pps
32. Rubinstein HM. *Wilk v. AMA: The lingering effects of an inadequate injunction to remedy malignant anti-trust violations against the chiropractic profession - a search for the cure to federal and state executive, legislative, and judiciary inaction to continued discrimination of chiropractic as related especially to insurance*. University of Miami Business Law Review. 2003. <http://repository.law.miami.edu/umbl/vol11/iss1/6/>
33. Hays J. The untold story behind the AMA's plot to destroy chiropractic <https://www.youtube.com/watch?v=vXP-vzBdqQA&feature=youtu.be>
34. Andrews GP. Press release. Aug 28, 1987. http://www.mccoypress.net/docs/subscriber_extras/wilk_press_release.pdf
35. Baer HA. Divergence and convergence in two systems of manual medicine: osteopathy and chiropractic in the United States. *Med Anthropol Quarterly, New Series*. 1987;1(2):176-193
36. Ex-chiropractors enter training as MD assistants. *American Medical News*. November 15, 1971:8-9. (Cited by Wilk CA (12) p. 97.)
37. Chiropractors as physicians' assistants. *Medical Economic News*, April 12, 1971:48. (Cited by Wilk CA. (12) p.97.)
38. Wardwell WI. Differential evolution of osteopathic and chiropractic professions in the United States. *Perspectives Biol Med*. 1994;37(4):595-608.
39. Gibbons RW. Chiropractors as interns, residents and staff: the hospital experience, 1910-1960. *Chiropr Hist* 1983;3(1):51-57
40. Gibbons RW. Physician-chiropractors: medical presence in the evolution of chiropractic. *Bull Hist Med* 1981;55:233-245
41. W.H.O. Guidelines on basic training and safety in chiropractic. 2005. Geneva. World Health Organisation 2005:27 <http://www.who.int/medicines/areas/traditional/Chiro-Guidelines.pdf>
42. Chapman Smith D. 2007 21(2). W.H.O. conversion course for MDs & physiotherapists to become chiropractors. *The Chapman-Smith Report* 2007;2:3
43. Zhang X. Coordinator Traditional Medicines. WHO guidelines on basic training and safety in chiropractic. Geneva. World Health Organisation. 2005:11. <http://apps.who.int/medicinedocs/en/d/Js14076e/> W.H.O. Guidelines on basic training and safety in chiropractic.
44. Medical correspondent. Doctors to study art of massage. *Sydney Morning Herald*, 1972; July 15
45. Spinal manipulation. <https://www.learnspinalmanipulation.com/> Extracted Oct 13, 2019

46. Coughlin P, Bezilla T. AMSA EDAM Initiative: a national curriculum for medical students. Chiropractic and osteopathy. CAM Education Committee, ACAM – American College for the Advancement of Medicine. 2002. Cited now on: <https://www.sciencebasedmedicine.org/the-american-medical-student-association-a-corrosive-force/>
47. Johnson PJ, Ward A, Knutson L, Sendeelbach S.. Personal use of complementary and alternative medicine (CAM) by US healthcare workers. Health Serv Res online, 2011
48. Dawson M. Doctors, nurses often use holistic medicine for themselves. Center for Aging Health. <http://www.cfah.org/hbns/2011/doctors-nurses-often-use-holistic-medicine-for-themselves>
49. Eastwood HL. Complementary therapies: the appeal to general practitioners. Med J Aust. 2000;173:95-98
50. Wardwell WI. A marginal professional role: the chiropractor. Social Forces 1952;30:339-348
51. Trevor W. In the public interest. Los Angeles. Scriptures Unlimited..1972.
52. Berliner HS, Salmon JW. The holistic alternative to scientific medicine: history and analysis. Int J Health Serv 1980;10(1):133-147
53. Bracha Y, Svendsen K, Culliton P. Patient visits to a hospital-based alternative medicine clinic from 1997-2002: experience from an integrated healthcare system. Explor. 2005;1(1):13-20
54. Branson, RA. Hospital-based chiropractic integration within a large private hospital system in Minnesota: a 10-year example. J Manipulative Physiol Ther. 2009;32(9):740-748
55. Dunn AS, Green BN, Gilford S. An analysis of the integration of chiropractic services within the United States military and veterans' health care systems. J Manipulative Physiol Ther 2009;32(9):749-757
56. Garner MJ, Birmingham M, Aker P, *et al.* Developing integrative primary healthcare delivery: adding a chiropractor to the team. Explore (NY) Jan-Feb 2008;4(1):18-24
57. Green BN, Johnson CD, Daniels CJ, Napuli JG, Gliedt JA, Paris DJ. Integration of chiropractic services in military and veteren health care facilities: a systematic review of the literature. J Evid Based Complimentary Altern Med 2016;21(2):115-130
58. Green BN, Johnson CD, Lisi AJ, Tucker J. Chiropractic practice in military and veterans health care: The state of the literature. J Canad Chiropr Assn 2009;53(3):194-204
59. Horwitz AD, Hosek R, Boyle J, Ciancuilli A, Glass J, Codario R. A new gatekeeper for back pain. Am J Manag Care 1998;4(4):576-579
60. Pfefer M, Strunk R, Hawk C, Ramcharan M, Pa Xiong E, Hill D, Davis L, *et al.* Integration of Chiropractic Services into a Multidisciplinary Safety-Net Clinic. Topics in Integrative Health Care 2010, Vol. 1(1) ID: 1.1005. <http://www.tihcij.com/Articles/Integration-of-Chiropractic-Services-into-a-Multidisciplinary-Safety-Net-Clinic.aspx?id=0000204>
61. Sarnat RL, Winterstein J, Cambron JA. Clinical utilization and cost outcomes from an integrative medicine independent physician association: an additional 3-year update. J Manipulative Physiol Ther 2007;30(4):263-269
62. Press Release. Dr. Anthony Hamm Brings History of Interprofessional Cooperation and Payment Policy Expertise. www.acatoday.org/press_css.cfm?CID=5431. March 7, 2014
63. Press Release.. ACA Delegate Dr. Anthony Hamm Is First DC Elected Co-Chair of AMA HCPAC Review Board. www.acatoday.org/press_css.cfm?CID=4430. May 18, 2011
64. Editorial. Soviet medical school to offer chiropractic degree. www.dynamicchiropractic.com/mpacms/dc/article.php?id=44513
65. Shpilko I. Russian-American health care: Bridging the communication gap between physicians and patients. Patient Educ Counselling 2006;64:331-341
66. Pikalov A. Manipulative therapy in Russia. Part 1. Dynamic Chiropr, 1994;12(2). <http://www.dynamicchiropractic.com/mpacms/dc/article.php?id=41027>
67. Lewit K, Ellis RM. The place of manipulative therapy and its future. In: Manipulative Therapy. Chapter 10. 2010;377-380. <https://www.sciencedirect.com/topics/medicine-and-dentistry/manual-medicine>
68. Francis R. Spinal manipulation under general anaesthesia: a chiropractic approach in a hospital setting. ACA J Chiropr 1989 Dec;12:39-41
69. International MUA Academy of Physicians. Manipulation under anaesthesia didactic and clinical proctoring protocol for MUA certification courses. <http://www.muaphysicians.com/protocols.html>
70. Lewit K. Manipulative therapy in rehabilitation of the locomotor system. 3rd ed. Oxford, Butterworth Heinemann. 1999
71. Biedermann H, Manual therapy in children. Edinburgh, Churchill Livingstone. 2004
72. Maigne R. Orthopaedic medicine: A new approach to vertebral manipulations. 1972:164
73. Rome PL. Commentary: Medical evidence recognising the vertebral subluxation complex. Chiropr J Aust 2016;44(4):304-307

74. Rome PL. Commentary: A basis for the theory of a central chiropractic principle - the vertebral subluxation. *Chiropr J Aust* 2012;43(1):2-10
75. Sato A, Sato Y, Schmidt RF. Somatosensory modulation of the digestive system. In: *The impact of somatosensory input on autonomic functions. Reviews of Physiology Biochemistry and Pharmacology.* Blaustein MP *et al* Eds. Springer-Verlag, Berlin. 1997;v130
76. Sato A. Somatovisceral reflexes. *J Manipulative Physiol Ther* 1995;18(9):597-602
77. Sato A, The reflex effects of spinal somatic nerve stimulation on visceral function. *J Manipulative Physiol Ther* 1992;15(1):57-61
78. Cramer G D, Darby SA. Basic and clinical anatomy of the spine, spinal cord, and ANS. St Louis, Publisher: Mosby-Yearbook: 1995
79. Bakkum BW, Henderson CNR, Hong SP, Cramer GD. Preliminary morphological evidence that vertebral hypermobility induces synaptic plasticity in the spinal cord. *J Manipulative Physiol Ther* 2007;30(5):336-342
80. Jänig W. The integrative action of the autonomic nervous system. *Neurobiology of homeostasis.* Cambridge: Cambridge University Press;2006
81. King HH, Jänig W, Patterson MM. The science and clinical application of manual therapy. Edinburgh. Churchill Livingstone/Elsevier. 2011
82. Pickar JG, McLain RF. Responses of mechanosensitive afferents to manipulation of the lumbar facet in the cat. *Spine* 1995;20(22):2379-2385
83. Korr IM (ed). *The Neurobiological Mechanisms in Manipulative Therapy.* New York, Plenum Press, 1978
84. Jinkins JR. The pathoanatomic basis of somatic, autonomic and neurogenic syndromes originating in the lumbosacral spine. In: Giles LGF, Singer KP, *Clinical anatomy and management of low back pain.* Vol 1. Jordan Hill: Butterworth Heinemann; 1997. p. 255-272
85. Muller R, Giles L G.F. Long-term follow-up of a randomised clinical trial assessing the efficacy of medication, acupuncture, and spinal manipulation for chronic mechanical spinal pain syndromes. *J Manipulative Physiol Ther.* 2005;28(1):3-11
86. Bolton PS, Kerman IA, Woodring SF, Yates BJ. Influences of neck afferents on sympathetic and respiratory nerve activity. *Brain Res Bull* 1998;47:413-419
87. Green BN, Johnson CD. International collaboration in research, education, and clinical practice: working together for a better future. *Chiropr Educ* 2015;29(1):1-10
88. Riva JJ, Muller GD, Hornich AA, *et al.* Chiropractors and collaborative care: an overview illustrated with a case report. *J Canad Chiropr Assoc* 2010;54(3):147-154
89. Pickar JG. Neurophysiological effects of spinal manipulation. *Spine J* 2002;2(5):357-371
90. Haavik-Taylor H, Murphy B. Cervical spine manipulation alters sensorimotor integration: A somatosensory evoked potential study. *Clin Neurophysiol* 2007;118(2):391-402
91. Rome PL. Neurovertebral influence upon the autonomic nervous system: some of the somato-autonomic evidence to date. Part I. [Table 5. Animal research on visceral dysfunction, neural disturbance and the vertebral subluxation.] *Chiropr J Aust* 2009;39(1)2-17
92. Cleveland CS. Researching the subluxation of the domestic rabbit: a pilot research program conducted at the Cleveland Chiropractic College. Pub Cleveland Chiropractic College, Kansas City, Missouri, 24pps. (See also *Sci Review Chiropr Aug* 1965;(4):5-28
93. Agocs S. Cleveland's rabbits: the use of animals to study vertebral subluxation. *Chiropr Hist* 2016;36(1))63-69
94. Burns L, Chandler LC, Rice RW. Pathogenesis of visceral disease following vertebral lesions. *Am Osteop Assoc Chicago* 1948. (Note Dr Burns has also published at length on her extensive research, particularly in the *J Am Osteop Assoc* and the *AT Still Research Institute Bull*, the most recent is circa 1953.)
95. Rome PL, McKibbin MR. A review of chiropractic veterinary science – an emerging profession with somatic and somatovisceral anecdotal histories. *Chiropr J Aust* 2011;41(4):127-139
96. Rome PL. Animal chiropractic neutralises the claim of placebo effect of spinal manipulation: historical perspective. *Chiropr J Aust* 2012;42(1):15-20
97. Kamen D, *The well-adjusted dog.* Brookline MA. Brookline Books, 1996
98. Kamen D. *The well-adjusted cat.* Cambridge MA. Brookline Books. 1997
99. Kamen D. *The well-adjusted horse.* BrooklineMA. Brookline Books. 1998
100. Browning D. Animal chiropractic: the new family practice. *ICA Rev* 2007;63(3):29-35
101. Rosner A. Getting down to brass tacks: the neurophysiology of spinal manipulation. *Dynamic Chiropr* 2015;33(17) <https://www.dynamicchiropractic.com/mpacms/dc/article.php?id=57469>
102. Lindahl O, Hamberg J. Angina pectoris symptoms caused by thoracic spine disorders. Neuro-anatomical considerations. *Acta Med Scand Suppl* 1981;644:81-83

103. Sjaastad O, Saunte C, Hovdahl H, Breivik H, Grønbaek E. Cervicogenic" headache. An hypothesis. *Cephalalgia* 1983 Dec;3(4):249-256
104. Krag E. Other causes of dyspepsia - especially abdominal pain of spinal origin. *Scand J Gastroenterol Suppl* 1982;79:32-37
105. Bogduk N. Cervicogenic headache: Anatomic basis and pathophysiological mechanisms. *Curr Pain Headache Rep* 2001;5(4):382-386
106. Bogduk N, Lambert G, Duckworth JW. The anatomy and physiology of the vertebral nerve in relation to cervical migraine. *Cephalgia* 1981;1:11-24
107. Vaňásková E, Hep A, Lewit K, *et al.* Cervical dysfunction with disturbed oesophageal motility – scintigraphic assessment. *J Orthop Med* 2001;23(1):9-11.
108. Rome PL Medical management of pediatric and non-musculoskeletal conditions by spinal manipulation. *Chiropr J Aust* 2013;43(4):131-136
109. Rome P, Waterhouse J, Maginness G, Ebrall P. Medical management of infantile colic and other conditions with spinal manipulation: a narrative review of European medical literature. *J Contemp Chiropr* 2019;2:60-75
110. Lauretti WJ. What are the Risks of Chiropractic Neck Adjustments? 2003. http://www.chiro.org/LINKS/FULL/What_are_the_Risk_of_Chiropractic.shtml
111. Neck adjustment: benefits and safety. Chiropractic College of British Columbia. October, 2009. www.bcchiro.com/.../2009-10-neck_adjustment_benefits_and_safety.pdf
112. Rosner A. chiropractic care and risk of stroke: the shoe moves to the other foot. 2015;33(15). <http://www.dynamicchiropractic.com/mpacms/dc/article.php?id=57444>
113. Cassidy JD, Boyle E, Côté P, *et al.* Risk of vertebrobasilar stroke and chiropractic care: Results of a population-based case-control and case crossover study. *Spine* 2008;33(4 Suppl):S176-183
114. Cassidy JD, Boyle E, Côté P, Hogg-Johnson S, Bondy SJ, Haldeman S. Risk of carotid stroke after chiropractic care: a population-based case-crossover study. *J Stroke Cardiovasc Dis*, 2016
115. Whedon JM, Mackenzie TA, Phillips RB, Lurie JD. Risk of traumatic injury associated with chiropractic spinal manipulation in Medicare Part B beneficiaries aged 66-99. *Spine* 2015;40(4):264-270
116. Church EW, Sieg EP, Zalatimo O, *et al.* Systematic review and meta-analysis of chiropractic care and cervical artery dissection: no evidence of causation. *Cureus* 8(2): e498. DOI 10.7759/cureus.498
117. Todd AJ, Carroll MT, Robinson A, Mitchell EKL. Adverse events due to chiropractic and other manual therapies for infants and children: A review of the literature. *J Manipulative Physiol Ther* 2015;38(9):699-712. DOI: <http://dx.doi.org/10.1016/j.jmpt.2014.09.008>
118. Getzendanner S. Getzendanner Decision in the United States District Court for the Northern District of Illinois Eastern Division. 1987. No. 76 C 3777
119. Getzendanner S. Permanent injunction order against AMA. *J Am Med Assoc* 1988;259:81-82
120. Wilk *et al.*, v. American Medical Assn. *et al.*, 671 F. Supp. 1465 (1987), *aff'd*, 895 F.2d 352 (7th Cir. 1990), *cert. denied*, 498 U.S. 982, 111 S. Ct. 513 (1990)
121. Willis E. Medical dominance. St Leonards. Allen and Unwin. 1989
122. Jonas W. Facts on Chiropractic. World Federation of Chiropractic, 2000. The Chiropractic Profession, NCMIC Group, 2000. http://www.wfc.org/website/index.php?option=com_content&view=article&id=122&Itemid=138&lang=en