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Changing chiropractic's subluxation rhetoric: Moving on from 'deniers', 'vitalists', and 'unorthodox', to realists, post-realists, and absurdists

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Abstract

Chiropractic rhetoric must advance beyond vitalists attacking subluxation deniers, and deniers holding firm to eminence over evidence. I am calling for clear and strong debate in which the issues and their evidence are examined in the manner of traditional philosophical debate.

The purpose of this paper is to present two behaviours that will each change the profession and discipline's narrative about subluxation, scilicet: (i) that an active, intellectual discussion occur and (ii) that it be published in any author's preferred journal of record, indexed by the Chiropractic Library Collaboration with terms that will connect the papers, and be open access for all.

To facilitate this change I present a palette of three terms with exposition to show how we can build our rhetoric into constructive argument from either a realist, a post-realist, or an absurdist view-point.

For the reason the post-realist and absurdist's positions are opinion, have not been thought-through, and show no appreciation of the paradox that they have no evidence at all supportive of that opinion, they should cease gaslighting the realists and anyone who opposes their position.

Chiropractic realism is the conventional position of the majority of the profession and of the discipline. The realists quite rightly demand to see and discuss the evidence held by the post-realists.

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... is chiropractic practice an expression of discipline realism, while condemnation of it is a characteristic of a post-realist profession?

Introduction

At times the chiropractic narrative is vitriolic, perhaps reflective of the emotion inherent in defending DD Palmer's founding principles and tenets in a hostile world. I state my position as being one who continues to work to understand the meanings established by Palmer on his founding of the profession and this means I accept but continue to question and examine his essential idea that small dysfunctions in the spine have an association with health and well-being.

However my position seems at odds with those who openly or covertly deny the existence of the clinical entity called subluxation, no matter how entrenched it is in the medical literature from the time of Imhotep, ^{[1][2]} and indeed I may even be unsupportive of those who vigorously argue a greater role for subluxation in the care of the health of humankind than perhaps the idea can carry.

The ignoring of evidence by evidence-based post-realists

The common denominator of both extremes in the rhetoric is use of speculation in the absence of evidence. Those who make claims about values associated with correcting subluxation seem in my view at times to exceed reason, about which I am conservative. They happily accord great benefit to ideas like salutogenesis, a term emerging in the field of health promotion ^[3] and yet to be addressed in the chiropractic literature with any sense beyond the work of Kent, ^[4] and like genomics, similarly a term not well addressed in the literature of the discipline yet already proposed to become part of the curriculum. ^[5]

On the other hand those who take positions such as that of the *General Chiropractic Council* (GCC) of the UK, scilicet *'programmes promoting and teaching unorthodox explanatory frameworks, such as life force, innate intelligence, vitalism and a belief that manipulating the spine to remove restrictions or 'chiropractic subluxations' can restore health more broadly, will not meet these Education Standards'*, ^[6] are also taking a position without evidence about the chiropractic educational curriculum.

To me as a somewhat experienced chiropractic educator neither group is advancing acceptable argument for their positions, indeed the GCC statement can be seen as a caricature of buffoonery in the classic British manner; my point being that the proposed GCC standards have no relevance nor validity outside the rather parochial environment of the several programs in the United Kingdom. Pompous assertion to the contrary will not make it so, nor will adoption of these standards by the WFC should this be in the planning stage.

Yet there may be some who find the GCC's proposed position attractive. Wickes, President of the *Canadian Memorial Chiropractic College* (CMCC) is on the record as describing *'anyone practicing in a subluxation, vitalistic model as "the gangrenous arm of the profession that needs to be cut off"*. ^[7] These are brave words spoken from an absurdist position given the heavy reliance of CMCC on its alumni for funding. ^[8] Yet this might not matter given the mixed beliefs of Canadian chiropractors ^[9] and knowing that the *'Chiropractic program attended is a significant predictor of orthodox vs*

unorthodox faction membership and professional practice characteristics for Canadian DCs: ^[10]

A side-step is needed at this point to examine the sudden appearance of the term *unorthodox* in the stream of rhetoric. It attempts to identify those who reject subluxation as being the *orthodox* part of the discipline. Puhl introduced this term in his paper ^[10] co-authored with McGregor and in turn it seems the idea to assign orthodoxy to one particular viewpoint arose in McGregor's doctoral thesis. ^[11] McGregor's cohorts included a sample of medical practitioners as a dominant profession, and of chiropractors as the lesser. It seems McGregor took the medical view that their perspective on chiropractic represented orthodoxy, and thus the medical view of chiropractors branded them as *orthodox* when they complied with medicine's view of what chiropractic should be.

The downside is the perpetuation of this flawed judgement to trust medicine's view of chiropractors as representing the orthodox benchmark within the discipline. Does chiropractic deserve to be categorised in this way by medicine, where those aligning with the medical view are considered *orthodox* chiropractors and those with views aligned with the discipline's founding tenets which include subluxation are termed *unorthodox*? This has led to statements such as *key practice characteristics in contravention of national radiation guidelines or opposition to evidence based public health policy are significantly more associated with non-orthodox chiropractic paradigms*. ^[12] To me, this is an overt gaslighting of the conventional, realist understanding of chiropractic.

It continues to destroy student confidence which became offensive with the introduction by Innes and LeBoeuf-Yde of the term *magical thinking*. ^[13] The danger of these descriptors lies in the authors' proposal to screen future chiropractic students for *Magical Health Beliefs* so that institutions could avoid enrolling such students in their education program. This is an application within the chiropractic discipline of China's Social Credit Score, ^[14] where those with views at odds with the state are punished. In chiropractic's case, those potential students with views at odds with, for example the GCC or Wickes' position, would be excluded from an education and consequently from the profession.

Innes judges as *unsuitable* any belief among chiropractic students that is accepting of subluxation and wellness within chiropractic practice. ^[15] I suggest this is an elitist attempt to exclude students who hold beliefs different to his which is a far from a responsible contribution to the development of the profession. It should not be a surprise that one of the less appropriate papers in recent times, a diatribe about chiropractors needing to divorce each other, ^[16] arose from these absurdists.

Nevertheless, it merited a response from my realist perspective written with my colleague. ^[17]

Another piece of nonsense from the realists and absurdists was a peculiar report about a global summit that may not have been all that was reported. ^[18] This too drew a calm but a critical response from a realist. ^[19] At least we see in these two examples the seeds of debate emerging only to seemingly wither.

While these matters demand ongoing discussion there is sufficient tension within the rhetoric, mostly from the defenders, ^{[20][21]} that is uncomfortable if not regrettable. Rhetoric which brands a putative leader of the profession (not the discipline) as a *denier* and *drug pusher* does little to advance the intellectual conversation within chiropractic. I contend it is preferable to be dispassionate in our comments, yet as truthful as truth needs to be.

For example my previously published comment ^[22] regarding the Secretary-General of the WFC states *The term "subluxation" ... is absent from the Secretary-General's proposition that 'Chiropractic is part of the solution to the world crisis in spine-related disability'. In another of Brown's papers, he positions "Spinal Health as the backbone of*

chiropractic's identity"; however, the term "subluxation" appears only 5 times and in an historical, apologetic context.' In the original publication each statement of mine was supported by citation to Brown's published work, and I contend that the better form of chiropractic rhetoric is one that is substantiated by citation of the work which is being commented upon.

From this position arises the specific purpose of this paper regarding the place of subluxation within chiropractic today. In my view two things are required:

1. that an intellectual discussion occur, and
2. that it be published in any author's preferred journal of record and indexed with terms that will connect the papers with open access to all.

To best achieve this I contend that the chiropractic commentariat should use the established terms of philosophy to advance their positions.

A structure for discussion in our town square

Three terms from the broad field of philosophy and not yet used within chiropractic form the basis of my contention. My first term is '*realism*' and from it the people who communicate with a narrative of realism whom I will call '*realists*'. I consider conventional chiropractors to be realists. ^[23]

For those whose rhetoric is concessional where matters narrated by the realists are excluded I will use the term '*post-realism*' with its speakers being the '*post-realists*' across the discipline. Here lies a fascinating distinction which must be made and to which I earlier alluded, and that is between the '*profession*' of chiropractic, being that mass which hangs on to the discipline without necessarily being trained to practice the discipline, and the actual '*discipline*' of chiropractic consisting of people with sufficient training to be considered appropriate to be licensed/registered and to practice chiropractic. The gulf will become apparent.

Defending my lexicon

All discourse requires a lexicon and here I provide the context of my current writing. In Figure 1 I overlay in red the terms '*realism*' and '*post-realism*' on my previous determinations of the distribution of thought within chiropractic which I found to range from '*conventional*' about the mode (or bulk of the profession, ~80%) to a negatively skewed left tail fading to statistical insignificance as the '*concessional*' narrators.

My third term drawn from the lexicon of philosophy is '*absurdism*', practiced by the '*absurdists*'. I hope to show that some post-realists reveal themselves to be absurdists, as do a few realists.

I explore these terms in a moment but first there are other terms which will be used and which I have previously defined and explained in my papers. These include '*conventional chiropractic*', ^[23] '*perspectival truth*', ^[24] and '*subluxation*' as it appears as an idea of a small sprain about the spine. ^{[1][2][22]}

The final preparatory point to make is that within these pages I will offer the names of published writers across the profession, bearing in mind my distinction between one who claims to belong in the '*profession*' of chiropractic and one

who proclaims to practice, legally, the *clinical discipline* of chiropractic. Debate within philosophy is only able to proceed on the basis of free and open discussion about one's ideas and those of others. Thus my mention of a name is not to be seen in any way as *ad hominem*, rather it is me showing my regard for those I mention and their arguments and positions. Each of course is equally expected to name me and either attack or enhance my arguments. This is something I welcome and perhaps it encompasses my wish for intellectual debate to become rampant within both the discipline and the profession of chiropractic.

The explicit context of this paper is contemporary chiropractic discourse, which no matter how intuitively compelling its truth claims, is a form of rhetoric; it is a discourse used both to account for and to influence political decisions that impact the chiropractic profession.

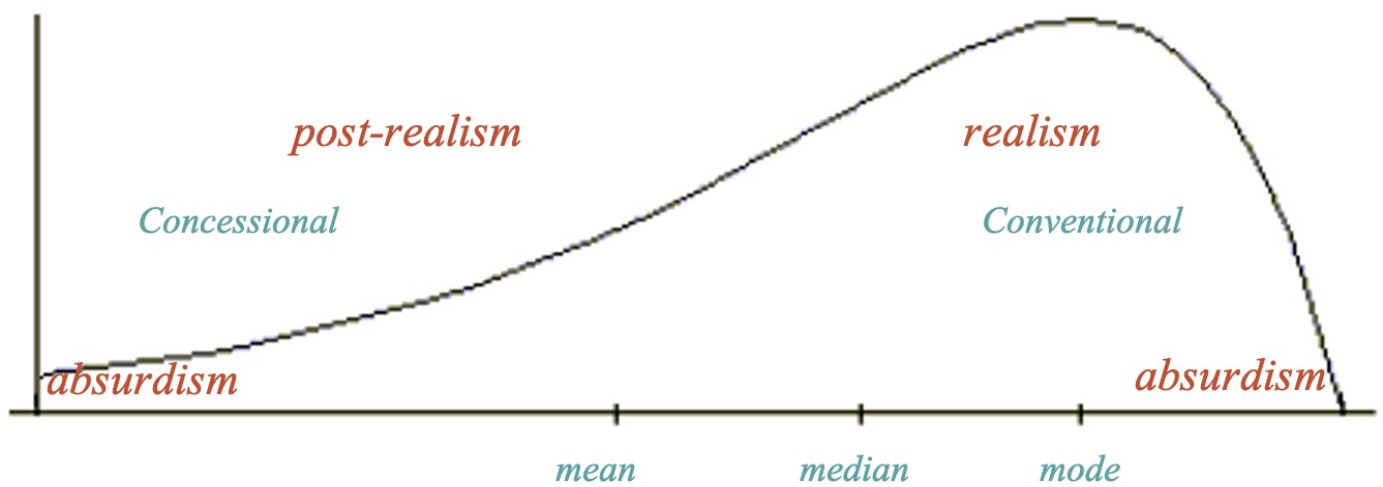


Figure 1. Predictive left-skewed distribution of chiropractic identity as previously published (23)

The realists

I shall speak of *realists*' whom I identify as figures like Foster 1915,^[25] Firth first in 1919 then revised in 1967,^[26] BJ Palmer in detail in 1961,^[27] Homewood in 1962,^[28] Wardwell in 1992,^[29] and Lantz in 1995.^[30]

Most notable is Gatterman who examined subluxation's historical perspectives in 2009,^[31] argued her understandings as peer-reviewed papers in 1992^[32] and 2009,^[33] as a letter in 2009,^[34] and in 2 editions of a comprehensive textbook.^{[35][36]}

I must also include my contemporaries Kent^{[37][38]}, Leach,^{[39][40]} and Rome & Waterhouse.^[41] These commentators use real-world terminology to describe what subluxation could be as they understand it and in terms of what they perceive chiropractors do with it. Should I be so bold I would add Schwartz^[42] who advanced the role of chiropractic in mental health in 1973, and of course I include such notable institutions as the Spear's Hospital,^{[43][44][45]} and Kentuckiana.^{[46][47]}

I can not include Senzon's decatuech^[48] as these writings are more historical reportage than contemporary

interpretative philosophical argument.

The realist's view of chiropractic is one narrative, but one narrative with many forms reflective of chiropractic's reality. In some instances I consider the realist's canon to resemble more a linguistic bouillabaisse of over-statements and semantics than a consommé of common sense. However there is one unified theme which is consistent in its presence within reports by realists of their clinical practice; in essence and as a rather minimalist summary the rhetoric of realists reduces to '*subluxations occur, affect health and well-being, can be identified and corrected, resulting in positive outcomes*'. Denial of this idea is denial of clinical reality, or post-realism.

The post-realists

I must provide a context for my use of the term 'post-realism' in describing the nihilistic left-tail of the distribution of thought in chiropractic (Figure 1). [23] To cite from Quora '*post-real is what remains when the consensus version of reality is recognised as an illusion and put to one side - where absurdists may say it really belongs. Remove the meanings and purposes for living by which we're expected to make our version of reality accord with everybody else's, and "reality" is no longer real but post-real*'. [49]

Any evolutionary epistemology must recognise that there always exist other knowledge processes.[50] The fatal flaw in the rhetoric of chiropractic's post-realists is their rejection of any epistemological processes other than their own narrow world-view [51][52][53] published within their own journal. [54]

The post-realist's desire to centralise their perceived power seems an important motivation. These actors within the chiropractic profession are guided by identities, interests, and values, and by social and cultural practices such as those of the *World Federation of Chiropractic* (WFC) [55] which has no inherent organisational intelligence but which acts to claim and assert authority within the global field of chiropractic discourse. [56] The Secretary-General of the WFC is the aforementioned Brown who has also led the *British Chiropractic Association* (BCA), a matter noted by Ernst whom we will get to (p. 13).

The most harsh expression of post-realism, published or not, is denial that chiropractic's realism of subluxation exists and instead is a relic of history. This is the position of the GCC [57] of which Byfield [58] and Newell [59] are servants and about which I have commented. [60] In particular I note Newell's rhetoric is that '*there is "zero" evidence for subluxation*'. [61]

All post-realists hold that chiropractic's discourse is in error when subluxation is mentioned. It is this view which I hold to be chiropractic's current state of ignorance. I will now present my argument for this claim, starting with a recap of my expressions up until this time.

A short history of my rhetoric

A decade ago I published a little piece called *What's in a name?* [62] It was a response to what I saw as the growing post-realism movement in chiropractic fighting for a toe-hold in the field of chiropractic thought. It followed attempts by the emerging post-realists to stamp their ideology on the profession for which the *Mercy Conference* served as a source of '*guidelines*' [63] which were promptly rejected by the realists. [64]

More recently I reported two historical papers^{[1][2]} documenting a history of the idea of sublaxation. These show that the idea of sublaxation is neither 'dated' not 'putative' as held by Newell^[65] but 'timeless'; a very distinct difference. I have recently also provided a universal meaning of sublaxation^[22] drawn on this timeless characteristic which I found to be deeply cross-cultural.

In contrast Newell does not yet seem to have thoughtfully reported on sublaxation, the concept of which he is critical and one in which he is untrained as he is not an educated, licensed chiropractor.

Realists, post-realists, and absurdists

The original chiropractic realist was Daniel David Palmer.^[66] We owe much to McDowall for his rich evidential reporting of Palmer's thinkings, writings, and expressions of understanding.^{[67][68]} I can not see an argument against my identification of Palmer as the original chiropractic realist given it was he who not only founded chiropractic but named it. This seems indisputable however Oakley Smith, an early post-realist, tried to claim Palmer copied chiropractic from others^[69] and went on to establish a discipline based on his own ideas.^{[70][71]}

It logically follows that those over time who rejected part, most, or all of Palmer's founding ideas and knowledge constitute the post-realists in chiropractic, a movement which led to therapists of assorted persuasions self-proclaiming as chiropractors. I have analysed and reported this in depth using Australia as my example.^{[72][73][74]} In looking at the development of the profession around the 1940s there seems little option but to classify Nugent^{[75][76]} as a post-realist, perhaps due to his personal grievance against BJ Palmer.^{[77][78]} Nugent certainly did not justify his radical curriculum changes with evidence, just politics.

Not a lot has changed as we now have a *Committee of Deans* of the UK's *Royal College of Chiropractors*^[79] offering education standards^[80] without supportive evidence, and the GCC stating that programs based on vitalism, inherent in DD Palmer's founding concepts, will not be accredited by them. As given earlier in this paper they state: *'programmes promoting and teaching unorthodox explanatory frameworks, such as life force, innate intelligence, vitalism and a belief that manipulating the spine to remove restrictions or "chiropractic sublaxations" can restore health more broadly, will not meet these Education Standards'*^[81]

Post-realistic rhetoric revolves around a belief paraphrased to be that chiropractic must be evidence-based, notwithstanding the post-realist's inability to identify any evidence for their position against any role of sublaxation within the discourse of the realist's. The paradox is that the post-realists claim to favour evidence, yet are unable to present any let-alone a philosophical argument to support their sublaxation-agnostic position. They hold the view that their eminence makes them speakers of truth.

The post-realists are yet to report any examination of their null hypothesis *sublaxation does not exist*. There are weaker null hypotheses which similarly lay unaddressed, for example *'the term sublaxation is not used within the majority of chiropractors' clinical practice'*. The one they did address was that *'sublaxation did not appear in the majority of chiropractic curricular globally'* which on finding that it did appear in the majority of curricula meant their null position was rejected.^[82] Mirtz^[83] sits with Newell as being untrained in chiropractic yet offering vocal commentary against the

profession's tenets.

We have little option but to categorise this *Committee of Deans* as a Committee of *post-realists*, if not *absurdists*.

My contention is straightforward: the post realists either have evidence for their claim that subluxation is an irrelevant historical artefact, in which case they must produce their evidence that subluxation can not exist, or they do not and can not which I suspect was the case in 2010. ^[17]

Realists today speak the dialect of conventional chiropractors. By and large their training allows an understanding of the complexity of subluxation as a clinical entity expressed as a rhetoric which deconstructs this complexity into a language understandable within the patient's context.

Post-realists reject the conventional chiropractic rhetoric. Absurdists are insidious in their gas-lighting of the profession. Some are not qualified to comment on chiropractic as the discipline.

Post-realists as absurdists

There is something obscene about using power to extract compliance from others on the say-so of a minority who are unable to offer an evidence-based position, while at the same time gaslighting those who have made the effort to understand subluxation by claiming the realists are the ones without evidence, and further gaslighting the realists to a deeper, more insidious degree by holding that they, the post-realists, actually have evidence (which they are yet to present). The Emperor stands very naked indeed.

In this sense a self-proclaimed member of the chiropractic profession, being one who is not trained and licensed as a chiropractor, can also be considered an absurdist. Here I include the writings of Newell, ^[59] Mirtz, ^[83] and Chapman-Smith, ^{[84][85]} none of whom is trained as a chiropractor yet through some affiliation is seen as a representative of the profession.

There is a line of distinction to be drawn here as not all non-chiropractors who associate with the profession can be considered absurdists. I could not countenance consideration of Keating Jr, ^[86] Wardwell, ^[87] Rosner, ^[88] and Jamison ^{[89][90][91]} as absurdists; their writings, while at times provocative if not controversial and at all times perceptive and informative, consistently made positive contributions to the advancement of chiropractic thought in general and its philosophy in particular. I consider these to using the rhetoric of realists.

Keating once described himself to me as *chiropractic's inside outsider* and his copious writings attest to his

understanding of both chiropractic the discipline and chiropractic the profession. Wardwell's knowledge of who chiropractors are as a profession is second to none, and both Rosner and Jamison, as non-chiropractors, have publications that attest to their understanding of chiropractic as a discipline and which I also consider to be second to none. I am yet to see evidence from Newell or Mirtz or Chapman-Smith about which I could state the same.

Chiropractic's state of ignorance

And here is our state of ignorance, a phrase considered for the subtitle of this paper; chiropractic's *state of ignorance* is its rhetoric and not its position.

The rhetoric of rejection of the idea of subluxation by the post-realists is the behaviour of absurdists and is their two-edged sword of Damocles; they promote a claim without providing a skerrick of evidence for that claim, while rejecting the extraordinarily rich body of empirical evidence, both objective and subjective, supportive of the idea of subluxation. As an example, at the time of writing this paper (October 2022) the *Index to Chiropractic Literature* returned 1,603 articles as a Case Report or Study or Series indexed with the term '*subluxation*'. This is a body of literature with 1,603 first-hand reports of the realism of chiropractic practice; it is evidence which can not be ignored, no matter its arrogant dismissal by the post-realists and absurdists.

In contrast the literature shows a small subset of about 10 chiropractors who completely reject subluxation in addition to the members of a former iteration of the *Research Committee* of the WFC.^{[92][93][94]} Those now unrelated to the *Research Committee* have been named^[95] as Kawchuk, French, Axén, Hartvigsen, Descarreaux, and Kolberg. They gave the reason for their departure as being no longer able to function as independent academics, a strange claim given one's role on such a committee is to bring independent academic nous to the table.

Perhaps it was their overt post-realist stance against subluxation at a meeting in Berlin^[96] which helped the WFC appreciate that the absurdist view of subluxation is not acceptable to the majority of the discipline whom I describe as realists and conventional chiropractors.

In addition to these, and Newell, Byfield and Mirtz, this subset includes Walker,^[97] Reggars,^[98] Simpson,^[99] Young,^[100] Perle,^[101] and Mirtz with Perle.^[82] Walker and Perle hold influence as journal editors.^[102] Together with 37 self-proclaimed '*expert chiropractors*'^[103] and some 150 '*signatories*' to a specific position of chiropractic politics,^[104] there are about 200 concessional chiropractors and associates which represents an insignificant sect under 0.2% of all chiropractors.

Some also offer absurdist rhetoric similar to that from the former WFC *Research Committee*, however to their credit they have published their commentaries with open access.^{[97][101][105]} while a stream of well-reasoned post-realist rhetoric is also evident.^{[106][107]} Open publication of one's views is always preferable to hijacking a conference meeting.

I also contend that there is a tangential thread of Danish thought unravelling from what the literature shows is the conventional practice of chiropractic in Denmark.^[108] In that nation the profession has developed regardless that '*government's dualistic action relative to the Danish chiropractic community*' may have '*inhibit(ed) the spontaneous evolution of contemporary Danish chiropractic practice.*'^[109] Its characteristics include nearly half (47% in 2014)^[110] of

practitioners being trained locally at the country's only chiropractic training program delivered as '*Clinical Biomechanics*'^[111] and developed to build the profession's legitimacy.^[112] As expected the management of mechanical low back pain accounts for around half (49%) of all patient visits.^[113] Within the Nordic region both maintenance care^[114] in the absence of evidence beyond *reasonable consensus*^[115] and infant care is common^[116] including for infantile colic,^[117] a practice cautioned against in Australia^[118] with optimistic suggestion that such practitioners require '*a minimum 2 years of post-graduate training in paediatrics*' and Board endorsement.^[119]

The evidence shows that regardless of the post-realist rhetoric found within unraveled *Danish Thought*, clinical practice in Denmark and other Scandinavian countries seems very much to be the practice of realists, inclusive of maintenance care and paediatric care in the absence of evidence.

If nothing else this observation warrants investigation to determine why it exists. Is there a mass delusion among the realists of the discipline, or is there a deliberate blinding of data by the post-realists of the profession? Indeed, is chiropractic practice an expression of discipline realism, while condemnation of it is a characteristic of a post-realist profession? Is this the crux of the matter?

Or worse, are the GCC and other absurdists trying to impose their concessional post-realist belief system which logically does not and can not be rightly called chiropractic? Are they mimicking Oakley Smith's removal of Palmer's core concepts to be replaced with their own generic manipulation ideas, probably drawn from the Bohemians?^{[120][121]} Or given they are British, are they regressing to the 1820s manipulative style of Harrison?^[122] Is the GCC proactively erasing the discipline of chiropractic as practiced by the greater majority of chiropractors globally? Who or what is behind their agenda? Could it be Big Pharma as suggested by Ernst?^[123]

It is primarily for these reasons that I make this call for more frequent and vigorous debate in the chiropractic literature. The post-realists must explain why and how they see their aerated version of chiropractic replacing the realist's substantive version, otherwise risk being absurdists compounded by their refusal to present evidence for their stance.

Chiropractic's state of ignorance is its intellectual silence

In a previous paper I reported^[23] my findings of a skewed distribution of thought in chiropractic. In very crude terms it is a unimodal negatively skewed distribution with a fading tail to the left.

Whilst I stand by that report on the basis of the evidence from which it was drawn, the discussion it generated has led me to now offer an interpretation of places on my chart (Figure 1) of thought distribution. I place realists about the mode and post-realists about the tail.

A third and blatant placement is for the untrained individual who offers critical comment within the chiropractic ecosphere. Their refusal to accept subluxation in the absence of any training about it means they have made a significant concession which places them to the far left and in an insignificant minority. This is indeed an absurdist position.

The two challenges are:

1. trying to understand those to the left of the mean (Figure 1) who progressively extract elements from conventional realist knowledge to end up in the absurdist position, and

2. trying to understand why their concessional conversations seem to be louder and more persuasive with legislators.

Why does this matter?

It matters because the realism that conventional chiropractors are known to exhibit is actually a realism within which the idea of subluxation, however it is expressed, forms a guide to their practice, no matter what they may consider their practice to be; [23] here I mean the technique of choice ranging from Gonstead Methods to Activator Method® to CBP® to Applied Kinesiology (AK) to Thompson Drop and so on through all the different techniques identified by Cooperstein and Gleberzon. [124]

In the absence of any such guide it is valid to ask what it is that post-realist chiropractors address in practice? Indeed, are they *chiropractors* or *manual therapists*? If the latter, why not follow Oakley Smith and form their own professional grouping apart from chiropractic? Perhaps this could become the schism called for by Strahinjevich and Simpson, [99] or perhaps and somewhat frighteningly, Walker's '*New Chiropractic*'? [97] Except of course it could not be called '*chiropractic*'.

I contend that the surfeit of conventional chiropractors has been intellectually abused by the post-realist commentariat through ridicule of any and all claims in favour of the idea of subluxation. It fascinates me that while the existence of subluxation is rejected by the post-realists, the evidence shows good reliability in identifying this clinical lesion. [125][126][127] A rather odd finding for something claimed to be only an historical relic of no clinical value.

The abuse represents gaslighting as the post-realists deny that the conventional chiropractors hold evidence for their position while not producing evidence for their own position. I can see that we are now at the point where the majority of chiropractors are saying '*show us your evidence for why the idea of subluxation is dated*', and for why '*subluxation has no clinical use in chiropractic today*'.

To Newell, Byfield and others in this self-important elitists' group, we are saying '*show us your evidence*', it has been claimed for such a time that it should not be too hard to produce. In fact it will be harder for the post-realists to admit they have no evidence than to produce it. Byfield has a record of publication dating from 1988, and Newell from 1989. Perhaps Byfield's ideas are frozen in that preceding period during which he attended chiropractic college. No such concession can be made for Newell as he is not trained as a chiropractor.

Byfield and Newell can only offer *opinion* which is sufficient for the GCC to warrant their perceived status in the UK profession, the epitome of *Eminence-Based Medicine*. As far as I can glean, neither have published on the topics of subluxation, [35][36] vitalism, [128] or tone, [68] so actually neither is qualified-by-publication to offer an evidence based argument one way or the other. Yet they must defend and justify their position to members of the discipline they are seeking to dismantle.

What do we do about it?

Bold statements must be made because if chiropractic is to take any position on subluxation then it must be a

position based in evidence. The eminence-based stance of the *Committee of Deans* is tenuous because it has not one published paper to support it. The document itself does not cite from the literature. The same applies to Brown and his positions [129][130] on behalf of the WFC; in the absence of evidence for his positions they hold no substance. Brown provides no supportive argument which is the hallmark of eminence-in-action.

On this basis the conventional chiropractor is streets ahead. Paper after paper shows the majority of chiropractors base their practice around the idea of subluxation, no matter what they call it and no matter how they practice its identification and correction.

Conclusion

Chiropractic has moved on from a handful of British elites meeting over a pint in a pub and thinking it was a good idea to kiss subluxation goodbye, as seemed to have occurred in 2010. [60]

For the reason that this position is opinion, has not been thought-through, and shows no appreciation of the paradox that they have no evidence at all to hold that opinion, the post-realists and absurdists must cease calling on anyone who opposes their position to show their evidence.

The chiropractic realist, representing the conventional position of the majority of the discipline, quite rightly asks to 'see the evidence held by the post-realists'.

Thus until the post-realists and absurdists in the minority left-tail (Figure 1)^[23] produce evidence supporting their position that subluxation has no contemporary clinical relevance in the practice of chiropractic and should not appear at all within the sphere of influence of the profession, chiropractic's narrative will remain fractured into 'deniers' and 'vitalists', terms which do not enhance the discipline's professional reputation.

It is time we collectively moved forward with courteous debate in the mode of philosophical argument from our respective positions as a 'realist', a 'post-realist', or an 'absurdist'.

References

1. ^{a, b, c}Ebrall P, Bovine G. A history of the idea of subluxation: A review of the medical literature to the 20th Century. *J Contemp Chiropr.* 2022;5:150-69. URL <https://journal.parker.edu/index.php/jcc/article/download/219/106>.
2. ^{a, b, c}Ebrall PS. DD Palmer and the Egyptian Connection: A short report. *Asia-Pac Chiropr J.* 2020;1:011 URL <https://www.apcj.net/ebrrall-egyptian-palmer-and-subluxation/>.
3. [^]Mittelmark MB, Bull T. The salutogenic model of health in health promotion research. *Global Health Promotion.* 2013;20(2):30-38. doi:10.1177/1757975913486684.
4. [^]Kent C. Chiropractic and mental health: History and review of putative neurobiological mechanisms. *J Philos Princ Pract Chiropr.* 2018 Aug. URL <https://www.vertebralesubluxationresearch.com/2018/08/29/chiropractic-and-mental->

health-history-and-review-of-putative-neurobiological-mechanisms/.

5. [^] Burnham KD, Takaki LAK. Making a case for genomics in chiropractic education. *J Chiropr Educ*. 2022 Mar 1;36(1):37-42. DOI 10.7899/JCE-20-17. PMID: 34170312; PMCID: PMC8895837. URL <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8895837/>.
6. [^] GCC Education standards consultation draft. General Chiropractic Council. July 2022:6. URL <https://www.gcc-uk.org/gcc-news/news/entry/education-standards-public-consultation-launched>.
7. [^] President of Canadian Memorial Calls Subluxation Chiropractors the "Gangrenous Arm" of the Chiropractic Profession. [News]. *The Chronicle of Chiropractic*. 13 November 2018. URL <http://chiropractic.prosepoint.net/160489>.
8. [^] Alumni. Canadian Memorial Chiropractic College. Home. URL <https://www.cmcc.ca/support/index>.
9. [^] Biggs L, Mierau D, Hay D. Canadian chiropractors' attitudes towards chiropractic philosophy and scope of practice: implications for the implementation of clinical practice guidelines. *J Can Chiropr Assoc*. 1997;41(3):145-54. URL <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2485157/>.
10. ^{a, b} Puhl AA, Reinhart CJ, Doan JB, et al. Relationship between chiropractic teaching institutions and practice characteristics among Canadian doctors of chiropractic: A random sample survey. *J Manipulative Physiol Ther*. 2014;37(9):709-18. URL <http://www.ncbi.nlm.nih.gov/pubmed/25439035>.
11. [^] McGregor, Marion, *Jurisdictional Control of Conservative Spine Care: Chiropractic versus Medicine*. [Thesis, University of Texas, 2006]. University of Albany Collection. URL <https://archives.albany.edu/concern/daos/vx0220302>.
12. [^] Gíslason HF, Salminen JK, Sandhaug, L. et al. The shape of chiropractic in Europe: a cross sectional survey of chiropractor's beliefs and practice. *Chiropr Man Therap*. 2019;27,6. URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-019-0237-z>.
13. [^] Innes S, Goncalves G. & Leboeuf-Yde C. Who are the chiropractic students favouring a limitless scope of practice? Exploring the relationship with personality, magical thinking, and academic achievement. *Chiropr Man Therap*. 2022;30:30. URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-022-00440-6>.
14. [^] Hong K. The complicated truth about China's social credit system. [Business]. *Wired*. 7 June 2019. URL <https://www.wired.co.uk/article/china-social-credit-system-explained>. URL <https://www.wired.co.uk/article/china-social-credit-system-explained>.
15. [^] Innes SI, Leboeuf-Yde C, Walker BF. How frequent are non-evidence-based health care beliefs in chiropractic students and do they vary across the pre-professional educational years. *Chiropr Man Therap*. 2018;26. URL <https://doi.org/10.1186/s12998-018-0178-y>
16. [^] Leboeuf-Yde C, Innes SI, Young KJ, et al. Chiropractic, one big unhappy family: better together or apart?. *Chiropr Man Therap*. 2019;27,4. URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-018-0221-z>.
17. ^{a, b} Ebrall P, Murakami Y. A Critical analysis of the Reality Distortion of chiropractic among scientists with constructive criticism of the current debate. *J. Phil Princ Prac Chiropr* 2019;July 11:1-11. <https://www.vertebralesubluxationresearch.com/2019/07/10/a-critical-analysis-of-the-reality-distortion-of-chiropractic-among-scientists-with-constructive-criticism-of-the-current-debate/>
18. [^] Côté P, Hartvigsen J, Axén I, et al. The global summit on the efficacy and effectiveness of spinal manipulative therapy for the prevention and treatment of non-musculoskeletal disorders: a systematic review of the literature. *Chiropr Man*

- Therap.* 2021;29:8. URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-021-00362-9>.
19. [^]Lawrence DJ. Letter to the editor: the global summit on the efficacy and effectiveness of spinal manipulative therapy for the prevention and treatment of non-musculoskeletal disorders: A systematic review of the literature. *Chiropr Man Therap.* 2021;29:25. URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-021-00378-1>.
 20. [^]Subluxation Denier & WFC Secretary General Gives Keynote at Cleveland Centennial. News. *The Chronicle of Chiropractic.* 26 October 2022. URL <http://chiropractic.prosepoint.net/179367>.
 21. [^]WFC Secretary General Richard Brown Appointed Visiting Professor at AECC - Known Subluxation Denier & Chiropractic Drug Pusher. News. *The Chronicle of Chiropractic.* 26 October 2022. URL <http://chiropractic.prosepoint.net/179366>.
 22. ^{a, b, c}Ebrall P. Determining a universal meaning of subluxation in chiropractic. *J Contemp Chiropr.* 2022;5:222-39. URL <https://journal.parker.edu/index.php/jcc/article/download/236/120>.
 23. ^{a, b, c, d, e, f}Ebrall P. The conventional identity of chiropractic and its negative skew. *J Contemp Chiropr.* 2020;3(1):111-26. URL <https://journal.parker.edu/index.php/jcc/article/view/133>.
 24. [^]Ebrall P. The perspective-dependent knowledge claim as an explanation of chiropractic's subluxation conundrum. *J Contemp Chiropr.* 2021;4:52-65. URL <https://journal.parker.edu/index.php/jcc/article/download/157/70>.
 25. [^]Forster A. *Principles and practice of spinal adjustment.* The National School of Chiropractic; Chicago, IL: 1915. [Google Scholar].
 26. [^]Baltzell LG. *Firth's Technic Notes, Revised 1967.* Self published. 1967.
 27. [^]Palmer BJ. *Our masterpiece.* Hamilton: Hamilton Press. 1961.
 28. [^]Homewood AE. *The neurodynamics of the vertebral subluxation 3e.* St. Petersburg: Valkyrie. 1977.
 29. [^]Wardwell WE. *Chiropractic, history and Evolution of a new profession.* St. Louis: Mosby. 1992.
 30. [^]Lantz CA. Back to basics. A review of the evolution of chiropractic concepts of subluxation. *Top Clin Chiropr.* 1995;2(2):1-10.
 31. [^]Gatterman MI. The subluxation – Historical perspectives. *Chiropr J Aust.* 2009;39(4):151-64.
 32. [^]Gatterman MI. The vertebral subluxation syndrome: is a rose by another name less thorny? *J Can Chiropr Assoc.* 1992;36(2):102-4.
 33. [^]Gatterman MI. Subluxation - Historical perspectives: Part 2. *Chiropr J Aust.* 2009;39:51-64.
 34. [^]Gatterman MI. Chiropractic in the Twenty-First Century [Letter]. *Chiropr J Aust.* 2009;39:51-64.
 35. ^{a, b}Gatterman MI. Ed. *Principles of Chiropractic: Subluxation.* St Louis: Mosby. 1995.
 36. ^{a, b}Gatterman MI. *Foundations of chiropractic: Subluxation. 2e.* St Louis: Elsevier Mosby. 2005.
 37. [^]Kent C, McCoy M, Gutierrez V, et al. Open Letter from Council on Chiropractic Education. Foundation for Vertebral Subluxation. 2011. URL http://www.mccoypress.net/subluxation/docs/cce_response_open_letter.pdf.
 38. [^]Kent C. Proposed neurobiological processes associated with models of vertebral subluxation: Dysafferentation, dyskinesia, dysponesis, dysautonomia, neuroplasticity and ephaptic transmission. *Ann Vert Sublux Res: Aug 2019(2019):* 113-116. URL <https://vertebralsubluxationresearch.com/2019/08/02/proposed-neurobiological-processes-associated-with-models-of-vertebral-subluxation-dysafferentation-dyskinesia-dysponesis-dysautonomia-neuroplasticity-and-ephaptic-transmission/>

39. [^] Leach RA. *The chiropractic theories. Principles and clinical applications 3e*. Baltimore: Williams & Wilkins 1994.
40. [^] *Doing the same thing and expecting a different outcome: It is time for a questioning philosophy and theory-driven chiropractic research*. *J Chiropr Humanit*. 2019 Dec;26:60-74. URL <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6911892/?report=classic>.
41. [^] Rome PL, Waterhouse JD. *Neurodynamics of vertebrogenic somatosensory activation and Autonomic Reflexes - a review*. [Special collection, 13 papers]. *Asia-Pac Chiropr J*. 2021:1-4. URL <https://www.apcj.net/papers-issue-2-4/>.
42. [^] Schwarz HS. *Mental Health and Chiropractic*. New York. Sessions Publishers. 1973.
43. [^] Rehm WA. *Price of dissension: The private wars of Dr Leo L Spears. 1921-1956*. *Chiropr Hist*. 1995;15(1):27-37.
44. [^] Gibbons RW. *Prairie Thunder: Dr Leo Spears and his hospital by William S. Rehm*. [Book Review]. *Chiropr Hist*. 2000;20(2):7-9.
45. [^] Gibbons RW. *The hospital they tried to close: The 35 year saga of a chiropractic dissident*. *Chiropr Hist*. 2001;21(1):25-6.
46. [^] Panter J. *Kentuckiana: Delivering special care for special needs*. *Today's Chiropr*. 2002;31(5):18022.
47. [^] Vallone SA, Barnes TA, Whittman R, et al. *Dr. Lorraine M. Golden - leading an eloquent life at Kentuckiana Children's Center*. *Chiropr Hist*. 2007;27(2):21-33.
48. [^] Senzon SA. *The chiropractic vertebral subluxation. Parts 1 through 10*. *J Chiropr Humanit*. 2018;25:10-168. URL <https://www.sciencedirect.com/science/article/abs/pii/S1556349918300184>.
49. [^] *What does Post-realism mean?* Quora. URL <https://www.quora.com/What-does-post-realism-mean?share=1>
50. [^] Beer FA, Hariman R. *Learning from the Pandemic: Catastrophic Epistemology*. *Social Epistemology Review and Reply Collective*. 2020;9 (5):19-28. URLs https://social-epistemology.com/wp-content/uploads/2020/05/beer_hariman_learning_from_the_pandemic_serrc_5-8-2020.pdf and <https://wp.me/P1Bfg0-4Wa>.
51. [^] Côté P, Bussi eres A, Cassidy JD, et al. *A united statement of the global chiropractic research community against the pseudoscientific claim that chiropractic care boosts immunity*. *Chiropr & Manual Ther*. 2020 ;28(21):1-5. URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-020-00312-x>.
52. [^] Hartvigsen J, French SD. *So, what is chiropractic? Summary and reflections on a series of papers in Chiropractic and Manual Therapies*. *Chiropr & Manual Ther*. 2020 ;28(4). URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-019-0295-2>.
53. [^] Ax en, I., Bergstr om, C., Bronson, M. et al. *Misinformation, chiropractic, and the COVID-19 pandemic*. *Chiropr Man Therap* 28, 65 (2020). URL <https://doi.org/10.1186/s12998-020-00353-2>.
54. [^] *Chiropractic and Manual Therapies*. Home. URL <https://chiromt.biomedcentral.com/>.
55. [^] *World Federation of Chiropractic*. URL wfc.org.
56. [^] *Pohlman and Khan Given Positions on WFC Research Committee - Seen as Reward for Supporting WFC Position on Immune Function*. [News]. *The Chronicle of Chiropractic*. 21 June 2022. URL <http://chiropractic.prosepoint.net/178670>.
57. [^] *General Chiropractic Council (GCC)*. Home. URL <https://www.gcc-uk.org/>.
58. [^] *David Byfield BSc (Hons), DC, MPhil, FCC, FBCA, FFEAC*. [Profile]. WFC. October 2022. URL https://www.wfc.org/website/index.php?option=com_content&view=article&id=377&lang=en.

59. ^{a, b}Professor Dave Newell. AECC University College. October 2022. URL <https://www.aecc.ac.uk/about/who-we-are/academic-staff/dave-newell/>.
60. ^{a, b}Ebrall PS. Antagonists, Protagonists, and the General Chiropractic Council: A Pragmatic Narrative of Eminence-Based Chiropractic, *J. Philosophy, Principles & Practice of Chiropractic*. 2020;July 27: Pages 37-48.
61. [^]AECC Lecturer David Newell States There is "Zero" Evidence for Subluxation. [News]. *The Chronicle of Chiropractic*./ 29 March 2017. URL <http://chiropractic.prosepoint.net/147665>.
62. [^]Ebrall PS. Commentary: Subluxation: Whats in a Name? *Chiropr J Aust*. 2011;41(3):110-2/
63. [^]*Guidelines for Chiropractic Quality Assurance and Practice Parameters. Report of the Mercy Conference. Aspen Publishers. 1993.*
64. [^]*The Guidelines for Chiropractic Quality Assurance and Practice Parameters (Mercy Guidelines) [Commentary]. World Chiropractic Alliance. Accessed October 2022. URL <https://worldchiropracticalliance.org/mission-of-the-world-chiropractic-alliance/position-paper/the-guidelines-for-chiropractic-quality-assurance-and-practice-parameters-mercy-guidelines/>.*
65. [^]Newell D, Lothe LR, & Raven TJL. Contextually Aided Recovery (CARE): a scientific theory for innate healing. *Chiropr Man Therap*. 2017;6. URL. <https://doi.org/10.1186/s12998-017-0137-z>.
66. [^]Palmer DD. *The chiropractor*. Los Angeles: Press of Beacon Light Printing Company. 1914.
67. [^]McDowall D, Chaseling M, Emmanuel E, et al. Daniel David Palmer, the Father of Chiropractic: His heritage revisited. A story of enlightenment, spiritualism and innovation. *Chiropr Hist*. 2019;39(1):25-40.
68. ^{a, b}McDowall DA. Daniel David Palmer's heritage and his legacy of tone to chiropractic [Thesis]. Southern Cross University. 2021. URL 2021. URL <https://doi.org/10.25918/thesis.121>
69. [^]Faulkner TJ. *The chiropractor's Protégé*. American School of Chiropractic. Rock Island IL: Association for the History of Chiropractic. 2017.
70. [^]Zarback, M.V. (1986). A profession for 'Bohemian Chiropractic': Oakley Smith and the evolution of naprapathy. *Chiropr Hist*. 6:76-82. URL <http://www.ncbi.nlm.nih.gov/pubmed/?term=11621192>.
71. [^]Beiderman RP. Oakley Smith's schism of 1908: the rise and decline of naprapathy. *Chiropr Hist*. 1994;14(2):44-50.
72. [^]Ebrall PS. Finding the professional identity of chiropractic in Australasia: A pragmatic narrative of the Formative Period to 1960. *Chiropr Hist*. 2020;40(1):49-71.
73. [^]Ebrall P. Finding the professional identity of chiropractic in Australasia that shaped education: A pragmatic narrative of the Inquiry Period from 1960 to 1979. *Asia-Pac Chiropr J*. 2022;3.1. URL apcj.net/papers-issue-3-1/#InquiryPeriod.
74. [^]Ebrall P. The establishment of the International College of Chiropractic (ICC) Melbourne. *Asia-Pac Chiropr J*. 2022;3.2. URL apcj.net/Papers-Issue-3-2/#ICC
75. [^]Gibbons, R.W. (1985). Chiropractic's Abraham Flexner: The lonely journey of John J. Nugent, 1935-1963. *Chiropr Hist*. 5:45-51.
76. [^]Gibbons, R.W. (1997). Historical perspective: John J. Nugent, DC (1891-1979). *Journal of the American Chiropractic Association*. January:33-5.
77. [^]Keating Jr JC. Before Nugent took charge: early efforts to reform chiropractic education, 1919-1941. *J Can Chiropr Assoc*. (3):180-216.

78. [^] Nugent JJ. (1947). *California school merger completed*. *J Nat Chiropr Assoc*. May. pp 11,63.
79. [^] *Outcomes for Chiropractic Graduates: Consultation on draft document – now closed*. 25 March 2022. URL <https://rcc-uk.org/news/outcomes-for-chiropractic-graduates/>.
80. [^] *Outcomes for Chiropractic Graduates*. ©The Royal College of Chiropractors. 2022. URL https://rcc-uk.org/wp-content/uploads/2022/03/Graduate-Outcomes_Consultation-Document.pdf.
81. [^] *GCC Education Standards Consultation draft*. Accessed October 2022. p. 6. URL [https://www.gcc-uk.org/assets/downloads/GCC_Education_Standards_\(Consultation_draft_-_July_2022\).pdf](https://www.gcc-uk.org/assets/downloads/GCC_Education_Standards_(Consultation_draft_-_July_2022).pdf).
82. ^{a, b} Funk MF, Frisina-Deyo AJ, Mirtz TA. et al. *The prevalence of the term subluxation in chiropractic degree program curricula throughout the world*. *Chiropr Man Therap* 2018;26,24. URL <https://doi.org/10.1186/s12998-018-0191-1>.
83. ^{a, b} Timothy Mirtz. *Researchgate*. Profile. URL <https://www.researchgate.net/profile/Timothy-Mirtz>.
84. [^] *David Chapman-Smith*. WFC. URL https://www.wfc.org/website/index.php?option=com_content&view=article&id=164:bio-of-david-chapman-smith&catid=73:executive&lang=en.
85. [^] *Chapman-Smith D*. *Legislative approaches to the regulation of the chiropractic profession*. *J Can Chiropr Assoc* 1996;40(2):108-120 NLM UID: 8009545.
86. [^] *Keating Jr. JC*. *Toward a philosophy of the science of chiropractic. A primer for clinicians*. Stockton CA. Stockton Foundation for Chiropractic Research. 1992.
87. [^] *Wardwell WE*. *Chiropractic, history and Evolution of a new profession*. St. Louis: Mosby 1992.
88. [^] *Rosner AL*. *Chiropractic identity: A neurological, professional, and political assessment*. *J Chiropr Humanit*. 2016;23(1). URL [http://www.journalchirohumanities.com/article/S1556-3499\(16\)30002-X/fulltext](http://www.journalchirohumanities.com/article/S1556-3499(16)30002-X/fulltext).
89. [^] *Jamison JR*. *Chiropractic education: reflecting the paradigm dilemma of chiropractic practice*. *J Manipulative Physiol Ther*. 1994;17(3):186-93.
90. [^] *Jamison JR*. *The chiropractic adjustment: The patients' perception [case report]*. *Chiropr J Aust* 2005;35(1):4-8.
91. [^] *Jamison JR*. *Health promotion: Exploring the behaviour of chiropractic patients*. *Chiropr J Aust*. 2000;30(3):96-101.
92. [^] *Kawchuk G, Goertz C, Axén I, Descarreaux M, French S, et al*. *Letter to the Editor Re: Oakley PA, Cuttler JM, Harrison DE. X-Ray Imaging is essential for contemporary chiropractic and manual therapy spinal rehabilitation: Radiography increases benefits and reduces risks*. *Dose Response*. 2018 Jun 19;16(2). *Dose Response*. 2018;16(4). DOI 10.1177/1559325818811521.
93. [^] *'Its Absolutely Rubbish' Claims WFC Researcher Jan Hartvigsen on Use of X-rays to Identify Subluxation (News)*. *The Chronicle of Chiropractic*. 21 April 2019 13:55 <http://chiropractic.prosepoint.net/163926>.
94. [^] *Taking X-Rays for Subluxation Management is 'Careless & Unsupported by Evidence' Says World Federation of Chiropractic (News)*. 12 January 2019. *The Chronicle of Chiropractic*. URL <http://chiropractic.prosepoint.net/161664>.
95. [^] *WFC Researchers Resign Abruptly From Troubled Research Committee Claiming They Can No Longer Function as Independent Academics. [News]*. *The Chronicle of Chiropractic*. 12 September 2020. URL <http://chiropractic.prosepoint.net/172624>.
96. [^] *WFC President Laurie Tassal Resigns Amid Scandal at Organization's Berlin Convention. [News]*. *The Chronicle of Chiropractic*. URL <http://chiropractic.prosepoint.net/164441>.
97. ^{a, b, c} *Walker BF*. *The new chiropractic*. *Chiropr Man Ther*.

- 2016;26(26):<http://chiromt.biomedcentral.com/articles/10.1186/s12998-016-0108-9>.
98. [^]Reggars JW. *Chiropractic at the crossroads or are we just going around in circles? Chiropr Man Ther.* 2011;19:<http://chiromt.com/content/19/1/11/abstract>.
99. ^{a, b}Strahinjevich B, Simpson KJ. *The schism in chiropractic through the eyes of a 1st year chiropractic student. Chiropr Man Ther.* 2018;26:2 DOI 10.1186/s12998-017-0171-x.
100. [^]Young KJ. *Gimme that old time religion: The influence of the healthcare belief system of chiropractic's early leaders on the development of x-ray imaging in the profession. Chiropr Manual Ther.* 2014;22(36):
<http://www.chiromt.com/content/22/1/36>.
101. ^{a, b}Perle SM. *The dichotomy in the profession. J Am Chiropr Assoc.* 2000;37(3):49-9.
102. [^]Editors' statements. *Chiropractic and Manual Therapies.* Retrieved 22 August 2020 from
<https://chiromt.biomedcentral.com>
103. [^]Innes S, Beynon A, Hodgetts C, et al. *Predictors of instantaneous relief from spinal manipulation for non-specific low back pain: a delphi study. Chiropr Man Therap.* 2020;28:39. URL <https://doi.org/10.1186/s12998-020-00324-7>.
104. [^]Côté P, Bussi eres A, Cassidy JD, Hartvigsen J, Kawchuk GN, et al, plus >140 signatories. *A united statement of the global chiropractic research community against the pseudoscientific claim that chiropractic care boosts immunity. Chiropr Man Ther.* 2020;28:21. URL <https://doi.org/10.1186/s12998-020-00312-x>.
105. [^]Morgan L. *Innate intelligence : Its origins and problems. J Can Chiropr Assoc.* 1998 Mar;42(1):35-41. URL <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2485333/>.
106. [^]Nelson C. *The subluxation question. J Chiropr Humanit.* 1997 ;7(1):46-55.
107. [^]Beideman RP. *An essay on chiropractic's "institute of qualification". J Chiropr Humanit.* 2000;9. URL <http://archive.journalchirohumanities.com/Vol9/BeidemanEssay.pdf>.
108. [^]Nielsen OL, Kongstead A, Christensen HW. *The chiropractic profession in Denmark 2010–2014: A descriptive report. Chiropr Man Ther.* 2015 ;23(27). URL <http://chiromt.biomedcentral.com/articles/10.1186/s12998-015-0072-9>
109. [^]Myburgh C. *A qualitative exploration of key informant perspectives regarding the nature and impact of contemporary legislation on professional development: A grounded theory study of chiropractic in Denmark. J Manipulative Physiol Ther.* 2014;37(6):383-95. URL <http://www.ncbi.nlm.nih.gov/pubmed/25092554>.
110. [^]Nielsen OL, Konmgsted A, Christensen H. *The chiropractic profession in Denmark 2010–2014: a descriptive report. Chiropr Man Therap.* 2015;23:27 DOI 10.1186/s12998-015-0072-9
111. [^]*Clinical Biomechanics - the chiropractic programme (BA). University of southern Denmark / Programs.* URL https://www.sdu.dk/en/uddannelse/bachelor/klinisk_biomekanik
112. [^]Myburgh C, Multon J. *The development of contemporary chiropractic education in Denmark: An exploratory study. J Manipulative Physiol Ther.* 2008;31(8):583-92. URL http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=pubmed&dopt=Citation&list_uids=18984241.
113. [^]Hartvigsen J, Sorensen LP, Grunnet-Nilsson N, et al. *Chiropractic patients in Denmark 2002: an expanded description and comparison with 1999 survey. J Manipulative Physiol Ther.* 2006;29(6):419-24. URL http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Citation&list_uids=16904487.
114. [^]Malmqvist S, Leboeuf-Yde C. *The Nordic Maintenance Care Program: Case management of chiropractic patients with*

- low back pain - defining the patients suitable for various management strategies. *Chiropr & Osteopat.* 2009;17(1): <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2717107/>.
115. [^]Iben A, Lise H, Leboeuf-Yde C. Chiropractic maintenance care - What's new? A systematic review of the literature [systematic review]. *Chiropr & Manual Ther.* 2019 ;27(63). URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-019-0283-6>.
116. [^]Hestbæk L, Jørgensen A, Hartvigsen J. A description of children and adolescents in Danish chiropractic practice: Results from a nationwide survey. *J Manipulative Physiol Ther.* 2009. Oct;32(8):607-15. URL <http://www.ncbi.nlm.nih.gov/pubmed/19836596>.
117. [^]Wiberg KR, Wiberg JMM. Retrospective study of chiropractic treatment of 276 Danish infants with infantile colic. *J Manipulative Physiol Ther.* 2010 Sep;33(7):536-41. URL <http://www.ncbi.nlm.nih.gov/pubmed/20937431>.
118. [^]Evidence-based practice. AHPRA/Chiropractic Board of Australia. Statement by the Chiropractic Board on paediatric care. URL <https://www.chiropracticboard.gov.au/Codes-guidelines/Position-statements/Statement-of-Paediatric-care.aspx>.
119. [^]Statement on Paediatric Care. Australian College of Chiropractic Paediatrics. URL <https://accp.asn.au>.
120. [^]Zaruck MV. A profession for 'bohemian chiropractic': Oakley Smith and the evolution of naprapathy. *Chiropr Hist.* 1986;6():76-82. URL <http://www.ncbi.nlm.nih.gov/pubmed/?term=11621192>.
121. [^]Bovine G. The Bohemian thrust: Frank Dvorsky, the Bohemian "napraviti" bonesetter. *Chiropr Hist.* 2011 Summer;31(1):39-46.
122. [^]McDowall D. Before chiropractors and osteopaths did anything, an English physician did it all: A comparative review of Edward Harrison's tome. *Chiropr Hist.* 2007 Winter;27(2):79-85.
123. [^]Ernst E. Is the BCA a cover organisation of BIG PHARMA for giving chiropractic a bad name? Edzard Ernst. 17 April 2017. URL <https://edzardernst.com/2017/04/is-the-bca-a-cover-organisation-of-big-pharma-for-giving-chiropractic-a-bad-name/>.
124. [^]Cooperstein R, Gleberzon BJ. *Technique systems in Chiropractic.* Edinburgh: Churchill Livingstone 2004.
125. [^]Plaugher G, Hendricks AH. The inter- and intraexaminer reliability of the Gonstead pelvic marking system. *J Manipulative Physiol Ther.* 1991;14(9):503-8. URL <https://www.ncbi.nlm.nih.gov/pubmed/1761961>.
126. [^]Triano JJ, Budgell B, Bagnulo A, et al. Review of methods used by chiropractors to determine the site for applying manipulation [review]. *Chiropr & Manual Ther.* 2013 ;21(36). URL <http://www.chiromt.com/content/21/1/36>.
127. [^]Hariharan KV, Timko MG, Bise CG, et al. Inter-examiner reliability study of physical examination procedures to assess the cervical spine. *Chiropr & Manual Ther.* 2021 ;29(20):1-9. URL <https://chiromt.biomedcentral.com/articles/10.1186/s12998-021-00377-2>.
128. [^]Richards DM. *The meaning and value of vitalism in chiropractic [Thesis].* Southern Cross University. URL https://researchportal.scu.edu.au/esploro/outputs/doctoral/The-meaning-and-value-of-vitalism/991012904700402368?institution=61SCU_INST.
129. [^]Brown RA. Chiropractic as part of the solution to the world crisis in spine-related disability. *J Chiropr Humanit* 2018;25C:6-9. URL <https://pubmed.ncbi.nlm.nih.gov/31019416/>.
130. [^]Brown RA. *Spinal Health: The Backbone of Chiropractic's Identity.* *J Chiropr Humanit.* 2016;23:22-8. URL



<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5127906/pdf/main.pdf>.