**De-legitimising complementary medicine: Framings of the
Friends of Science in Medicine-CAM debate in Australian media
reports.**

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Abstract (193 words)

Complementary and alternative medicine (CAM) has developed into a complex and formidable commercial, sociocultural and political force in Australia, and given its influence, it is a relevant subject for scholars, health practitioners, health communicators, journalists, policy-makers, and consumers of health care products and services. This research will consider a relative newcomer to the claims-making space about CAM in the Australian health media-scape; the Friends of Science in Medicine (FSM), an activist group of medical practitioners, researchers, and scientists, founded in late 2011. Using content analysis supported by NVivo, I searched for articles specifically referring to FSM and measured the patterns and frequencies of media frames, intonation and sources that are featured in Australian mainstream news reports between December 2011 and April 2017. The negative headlining and intonation of reports predominated, along with framing CAM as part of a lucrative, undisciplined and unethical industry as well as an illegitimate health care approach, more broadly. The findings offer insight into how journalists respond, replicate, or reconstruct the framings that are provided by an influential and elite group of medical practitioners and scientists, and readdresses issues surrounding the need for more critical health reporting in Australia.

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Introduction

Contextualising the CAM phenomenon

The prevalence of complementary and alternative medicine usage by Australians is well understood, with the most recent studies showing rates of usage at around 70% for products (Braun et al. 2010; Xue et al. 2007) and 44% for CAM practitioners (Xue et al. 2007). A recent systematic review by Reid and colleagues (2016) profiled the most common CAM users as female, white, and university educated, as well as individuals living with chronic disease, with chiropractic and massage as the most frequently used CAM disciplines. A higher rate of usage amongst rural populations (Reid et al. 2016; Robinson 2008; MacLennan, Myers and Taylor 2006; Adams et al. 2003; Sibbritt, Adams and Young 2004; Wilkinson and Simpson 2001) is also documented. High usage of CAM is also correlated with higher usage of conventional medical care (Reid et al. 2016).

The phenomenal growth of the CAM professions, products and therapies has been associated with a consumer-centric (Sibbritt et al 2016; Brenton and Elliot 2013) and neoliberal shift that has seen many Australians becoming willing and participatory self-regulated, self-governed, and self-disciplined citizens, who have become complicit in the government's subtle strategy of increasingly privatising health care (Baer 2007). Consumer acceptance of this position of

personal responsibility is endorsed and encouraged by governments grappling to reduce expenditure on health (Fries 2008a; Baer 2007; Lupton 2005), embracing an economic rationalist approach to health care (Baer 2007; Petersen 1994). Fries (2008a p. 357) points out the conflict between governments saving money and a range of commercial enterprises that capitalise on the space such neoliberalism creates, such as CAM products and health insurers. It has been argued that this neoliberal shift poses an ongoing threat to biomedical dominance (Willis 2006), as consumers question the biomedical professional's monopoly on knowledge, research their own illnesses, and seek empowerment by being actively engaged in their own healthcare (Willis 2006; Lupton 1997).

'Burgeoning' is a frequent adjective used to describe the growth of CAM products and practices in Western industrialised nations in particular, and in Australia the herbal and nutritional supplements industry is today a \$4.2 billion industry (Gibson 2016)—a far cry from the natural medicine cottage industries of the twentieth century (Baer 2007; Collyer 2004). Given this prevalence of usage and the very mediatised nature of health issues (Briggs & Hallin 2016), CAM products and services understandably demand the attention of journalists for news stories. This article analyses the contribution of one particular interest group, the Friends of Science in Medicine, which is trying to reframe the debate against CAM through journalists and their reports.

Sociocultural context of health reporting

Effective, objective, and independent medical reporting is compromised in contemporary newsroom culture where journalists' numbers are shrinking fast

(Furlan 2009; Jordens et al 2013; Larsson 2003). Access to experts is prime currency and social capital for any medical reporter, with research suggesting they are more open to non-government organisations or health practitioners (Len-Ríos et al 2009) and less favourable towards corporate or private public relations agencies (Furlan 2009). This suggests that although health reporters may be keenly attuned to the potential commercial conflicts of interest that may accompany a media relations pitch from a PR agency for a pharmaceutical company, they may be less attuned to identifying vested interests based on more surreptitious conflicts of interest, such as professional territorial contestations and disputes. Although journalists may have strong respect and reverence for expert and scientific knowledge (Furlan 2017; Lewis, Orrock and Myers 2010; Peters et al. 2008; Weigold 2001), their science training is often limited and may not be adequate to enable rigorous analysis of knowledge-claims by claims-makers (Stocking and Holstein 2009).

Expert sources are particularly appealing to journalists when they are able to provide facts, add credibility and appear to adhere to objectivity requirements in news reports (Boyce 2007), particularly through direct quotes. In her seminal work on the social construction of reality in news-making, Gaye Tuchman (1978 p. 95) critiques this perception of objectivity, arguing that 'the judicious use of quotation marks' function as a 'technical device designed to distance the reporter from phenomena identified as facts'. This offers us a more critical perspective on the use of expert sources in news stories. Journalists must work diligently to cultivate and maintain sustainable relationships with expert sources, who, over time, they may come to depend upon for ready access and

availability, including promptly responding to phone calls, and offering direct, concise quotes or sound bites (Allgaier 2011; Boyce 2007; Manning 2001; Conrad 1999). The inherent subjectivity of the source-journalist interface is by no means diminished in science or medical reporting. As Peters and colleagues (2008) point out, scientists may allow their interests and goals to influence the way they are represented, along with the social problems they portray. In their survey of scientists and press officers of science organisations, these researchers found an ‘astoundingly’ high level of satisfaction with scientific reporting from journalists, with public relations officers from science organisations acknowledging the relatively uncritical receptiveness of media to public relations materials such as media releases (Peters et al. 2008, p. 11). This discussion of expert sources leads us next to an important group being considered in this study; the Friends of Science in Medicine.

The emergence of Friends of Science in Medicine in Australia

On 6 December 2011, a small group consisting of 34 Australian doctors and scientists disseminated a media release titled ‘Prominent Doctors and Scientists Challenge Altmed in Unis’. This was the first in a series of strategic media relations and lobbying activities undertaken by what became the Friends of Science in Medicine (FSM), a group that was formed to draw attention to and garner memberships and support for its declared concerns about the increasing prevalence and acceptance of complementary medicine in Australia, as well as to influence policy on CAM. The evolution of CAM-based modalities such as acupuncture, naturopathy, chiropractic, and osteopathy into the Australian tertiary system has been discussed extensively by Baer (2007, 2008). The media

release offered journalists ‘staged’ news (Boorstin 1971) as part of the group’s agenda-setting exercise, with the intent of drawing media interest and coverage to highlight the issue of CAM modalities in universities and give prominence to the group’s framing of CAM practices and products. The first media release from FSM (2011) integrated the news values of prominence, impact, conflict and currency, framing its objection to the introduction of a Bachelor of Science (Chiropractic) at Central Queensland University, invoking the credibility and eminence of the signatories behind the challenge, and providing direct quotes from three university-based professors and a well-known science communicator. A subsequent release in January 2012 reinforced the group’s agenda to draw attention to what they argued was the illegitimate presence of complementary and alternative medicine in university education – in particular, in health science courses. This release was accompanied by a copy of the signed letter to vice-chancellors of universities that offered health sciences courses with CAM content. According to the media release, the group had now grown to almost 400 members.

The concerns represented by the group were conveyed via key messages in media release materials, the FSM website, and interviews undertaken by FSM spokespeople. The main initial FSM concerns related to the illegitimate presence of CAM courses in universities. This early concern evolved over the years into a more general argument of CAM illegitimacy by the group, which was a response to the philosophical underpinnings of some CAM professions like chiropractic, acupuncture, and homeopathy, the lack of evidence to support efficacy claims for practices and products, economic impacts on consumers and government, as

well as risks. The illegitimacy arguments are not new criticisms, as Brosnan (2015) and Gale (2014) have each pointed out, and the decrying of ‘quacks’ and ‘quackery’ is an old lamentation from biomedical circles throughout Australia’s post-invasion history (Martyr 1993, 2002).

Previous research into FSM in media

Previous qualitative analyses of FSM-generated articles and lobbying activities have been undertaken by Flatt (2013) and Brosnan (2015). Flatt’s 2013 discourse analysis study considered 13 media stories based on FSM. He analysed the positioning of FSM conveyed in the reports and the mediated rhetoric of FSM in its arguments against the presence of CAM subjects in university degree programs, which he argued revealed an ideologically-driven agenda, reinforcing biomedical dominance and professional boundary-making, in terms of CAM practice as well as CAM patients. Brosnan’s 2015 sociological study focused on the FSM efforts to oust CAM subjects from universities in her analysis of 46 media items, which included news reports, websites, media releases, letters to editor, and medical journal articles. She was particularly interested in the way in which the key arguments raised notions of legitimacy in universities, considering this also in the context of professionalisation and boundary-keeping by FSM, as FSM messages worked to challenge the legitimacy of CAM university degrees.

My research builds on these earlier studies, offering a more media-focussed approach that measures patterns of communication. It is an investigation of how Australian mainstream news outlets have been framing the FSM-CAM debate in

the mediated public sphere and of the primary sources used in these stories. My research design factors in the news construction process as a crucial phenomenon to be considered in the overall FSM-CAM debate, and seeks to measure which frames are being privileged over others. This takes the investigation of media narratives beyond the arguments being put forward by FSM or defenders of CAM, and scrutinises these in their mediatised state at the source-journalist interface (Kitzinger 1999), which has not yet been addressed in the scholarly literature. This research also seeks to expand on Entman's (2007) concerns about framing bias and consequent power to privileged groups in the context of CAM, which relates directly to medical dominance theory, particularly in an Australian context (Willis, 1989, 2006). Gieryn's (1983) study of boundary work is also useful here, as it considers the way ideologies are used by groups in struggles for professional power and advantage.

This study is restricted to articles referring to FSM rather than articles about CAM, more broadly, across the 2011-2017 period. The limitation to articles referring to FSM only is an important initial step to systematically map the framings of the initial debate generated by FSM, rather than measuring the group's broader impact on CAM news reports in Australia. This is intended for a subsequent study.

Methods

The article presents a media content analysis based on a keyword search, a news database search, search of FSM website, and content analysis of news stories using a mixed methods approach.

Media analysis

The systematic investigation of media stories about health is an important step towards the development of a critical health literacy—not just about health issues themselves, but about how such issues are communicated in society (Lewis, 2015). Media framing analysis identifies how journalists frame an issue, taking into account the articulated problems and solutions, along with the ideas, arguments, and moral judgements that are most strongly evoked in the media narrative (Entman 1993; Entman, Matthes and Pellicano 2009) including the drama and emotion that the framing may elicit (Hilgartner and Bosk 1988; Entman et al 2009). This includes the competing voices or claims-makers vying to have their perspectives dominate the news frame (Johnson-Cartee 2005). Framing is a crucial part of news-making, and by identifying patterns of how it functions in the news construction process over time, we are better able to identify framing bias towards certain groups or individuals (Entman, 2007). The sociopolitical relevance of this is highlighted by Hilgartner and Bosk (1988, p. 71) who argue that social problem definitions that reflect the biases of dominant political and economic groups ‘have a higher probability of success’.

This paper seeks to unravel the most frequent and prominent issues being defined in the FSM-CAM news stories under analysis since the inception of FSM in 2011, and to systematically interrogate the ways in which these stories are being framed, as well as the voices that feature most prominently in the frame (and those that do not). Measuring for tone is a useful variable to consider alongside other variables, such as article framings and primary sources.

Measuring intonation of articles and headlines enriches the framing analysis by drawing attention to specific word choices that create a particular impression about CAM¹. For example, a negative headline draws on manifest elements that denote negativity, such as ‘A wacky waste of our \$75 million’ (Van den Broeke, 2013). This headline associates ‘wacky waste’ with \$75 million of ‘our’ (the taxpayers’) money, applying the plural first person pronoun to evoke an emotional response from the audience (assumably taxpayers), whose money is being wasted. Alternatively, a headline like ‘Complementary medicines fail tests’ (Corderoy, 2015) carries less emotional baggage and drama, but is fairly pointed in the denotation of ‘failure’ associated with CAM products, therefore it is classified as a negative headline.

Data collection

A Factiva search of all Australian newspapers dated 2011 to 2017 was conducted, using the search term “Friends of Science in Medicine” which yielded 144 articles. The FSM website content including media archives were also used to source articles (radio, television, newspapers and their online versions) that were influenced by FSM media releases or that used an FSM spokesperson or member. Inclusion criteria for this study were mainstream news reports, feature stories, or editorials that referred to FSM or that featured a known FSM advocate member as a primary or secondary ‘voice’ to address a CAM issue. After excluding articles that were not from major metropolitan or national news

¹ See Hart, Childers & Lind (2013) for elaboration on defining and measuring intonation in content analysis.

sources, and that did not refer to FSM (or anyone connected with FSM) or CAM, the search was reduced to 76 articles and broadcasts from television and radio.

Data coding and analysis: A mixed methods approach

A codebook was prepared, with a list of 67 codes that were then entered into the NVivo database. Four main codes headings were developed for the codebook: headline intonation; article intonation; framing; and sources. Articles were coded for headline and article tone, the way the report was framed and the source or spokesperson that were employed in the article (both as primary and secondary voices). Twenty-six different framing codes were developed, based on: my previous research of herbal medicine media representations in Australian newspapers (Lewis, 2011a; Lewis, 2011b); the findings from other research that analysed the FSM debate in Australia (Brosnan, 2015; Flatt, 2013); frames that were added after initial scrutiny of the data; and new frames that emerged during the coding process.

The mixed methods research design used qualitative analysis to break down the text and identify various a priori and emergent frames, and was employed to gauge the overall intonation of the headline as well as article content. A quantitative assessment was also made based on the frequency of certain framings, intonation and primary sources in all news stories under investigation. The results from the quantitative analysis have been rounded off to the nearest percentage in the results section below.

Two coders were used to establish intercoder reliability, with coders meeting to discuss the codebook and categories. Ten articles were then independently coded by the second coder, and resulted in a high level of intercoder agreement (unweighted kappa=0.89).

Results

A total of 76 news stories were sourced in mainstream national and metropolitan newspaper, radio and television outlets between December 2011 and April 2017.

Headline and article tone

Overwhelmingly, the headline and overall tone of articles were negative. Fifty-two articles (68%) carried a negative headline with 18 articles (23%) coded as neutral and seven articles (9%) featuring a positive headline. Forty-two articles (55%) were coded as carrying a negative intonation towards CAM, and 21 articles (28%) contained a mixed tone about CAM. Eight articles (11%) were neutral and three (4%) were coded as positive in tone. The strongest apparent relationship between primary sources and tone was that between negativity towards CAM or a mixed tone about CAM, with those articles using an FSM spokesperson as a primary source.

Article framing

The full results for all framings can be viewed in Figure 2.

Lucrative-unethical industry or profession (42%, n=32)

The most common framing that occurred throughout the reports associated CAM as part of a 'lucrative industry' (n=32), highlighting concerns about profit-driven companies and unethical conduct, as well as university-industry research collaborations and the risk this poses regarding bias towards positive findings that favour the industry's agenda. Most frequently, this 'lucrative industry' framing included stories conveying more general concern about regulation of supplements and 'dodgy' company claims of efficacy (n=10), regulation of products or professions (n=13) and integrated a more general framing of CAM risk (n=7). The most common spokesperson or 'voice' in these articles was an FSM spokesperson (n=15) and university-based biomedical sources (n=11).

CAM as illegitimate (32%, n=24)

The next most frequent frame conveyed CAM products or services as illegitimate, pseudo-scientific, and aligned with quackery or 'nonsense' (n=24).

Understandably, articles with this frame tended to have negative headlines (n=19) and carry an overall negative tone about CAM (n=16). Articles with the illegitimacy frame tended to relate to stories that also had framings suggesting that CAM modalities should not be taught in university programs or that the state should not support CAM in the health care system (n=16). These articles had strong representation from FSM overall as a primary voice (n=13). Sources from CAM professional bodies were the next highest primary source (n=9), with biomedical professional bodies being portrayed in only four of these articles framing illegitimacy. University-based sources (independent of FSM) were rare in stories framing CAM as illegitimate.

Evidence for CAM is poor (21%, n=16)

Sixteen articles framed CAM as having poor or no evidence for its use in terms of efficacy or safety. Article headlines were both negative about CAM (n=7) and neutral about it (n=6), with overall tone being predominantly negative about CAM (n=8) or mixed (n=5). [The other framings that occurred within articles with the poor evidence frame were a mix of both negative and positive approaches to CAM issues.] Whilst CAM was occasionally depicted as illegitimate within this poor evidence frame (n=5) and associated with a lucrative-unethical industry (n=5), the popularity and relevance of CAM appeared in six articles with the poor evidence frame, along with the frame acknowledging CAM's efficacy or potential efficacy (n=6). Supplements and herbs (n=6) and homeopathy (n=3) were occasionally a focus in articles with the 'poor evidence' frame, with two articles focusing on chiropractic. Nine of these stories featured an FSM primary source and seven featured a spokesperson from a CAM professional body.

CAM is popular and relevant (20%, n=15)

Fifteen articles framed CAM as being popular and relevant. The headline tone of these articles was quite evenly spread (see Figure 1), with more articles tending towards a mixed tone about CAM (n=5), and a balance between articles using a negative or neutral tone about CAM (n=2 each). Biomedicine also came under scrutiny in stories using this frame, with two of these articles carrying a negative tone towards biomedicine; a tone exclusive to articles with this frame. Stories that acknowledged and addressed biomedical dominance were also exclusive to this popularity frame. Efficacy framings most commonly appeared with the CAM

popularity frame, with a balance between framings emphasising poor evidence for CAM and potential efficacy (n=6 each). Acknowledgement of an existing or potential role for CAM in the healthcare system was also emphasised in four articles with the popularity frame and four articles also featured framing that made prominent the FSM-CAM debate. Three articles with this frame focused on supplements, and three also integrated the 'lucrative industry' frame. A small number of these articles (n=3) emphasised that CAM had a place in tertiary education, and that CAM research was valued (n=3). The only framing about the relative safety of CAM that occurred in this study occurred in an article with the 'CAM popularity' frame.

Sources used were most frequently from FSM in articles with this frame (n=6), followed by a spokesperson from a professional CAM body (n=5). Four articles featured a 'biomedical combined' voice – which indicates the spokesperson is a biomedical insider who may be from a combination of university, hospital, or professional body. Three articles included biomedical sources from universities, and two were from a CAM-oriented university source, and two from university management. The rarer 'lay' voice occurred as a primary source in two stories with the CAM popularity frame.

Primacy of biomedical knowledge (20%, n=15)

Stories framing biomedical knowledge as definitive and at the pinnacle of the knowledge hierarchy occurred in 15 articles, with negative headlining (n=11) and negative intonation towards CAM (n=10) being prevalent. Framings about the illegitimacy of CAM were very high in this category also (n=11), followed by

framings that carried an emphasis that CAM subjects should not be taught in health sciences programs at universities (n=8). More than half of these articles used an FSM spokesperson as a primary source (n=8), and fewer from a professional CAM body (n=5), or a professional biomedical body (n=3). A layperson as a primary source featured in two articles with the 'biomedical primacy' frame.

Risk of CAM products or services (18%, n=14)

Framing CAM as risky occurred in 14 articles. A high proportion of these articles carried negative headlines (n=9) and overall negative tone about CAM (n=11). Those stories using the risk frame tended to include framings of CAM as a lucrative and unethical industry or profession (n=7), framed CAM as illegitimate (n=5), and emphasised the need for CAM regulation (n=4), and framed consumers as vulnerable and in need of protection or education (n=4). Half of these articles also focused on chiropractors, and five articles focused on herbal medicine or supplements. The most frequent sources used in stories with this frame were FSM (n=7). Professional biomedical bodies (n=5) and professional CAM bodies (n=5) were also associated as a primary voice with stories using this frame.

Regulation of CAM professions (14%, n=11)

The need for stricter regulation of CAM professions occurred in 11 articles, with seven of these stories carrying a negative headline and nine having a tone that was negative towards CAM. The lucrative industry frame occurred in four of these articles as well as the framing of consumer vulnerability (n=4) and CAM

risk (n=4). Chiropractic was a typical focus in these regulation stories (n=6). The main source occurring in these articles came from FSM, followed by professional CAM bodies (n=6) and professional biomedical bodies (n=4).

CAM discipline or product

Supplements (n=15) and chiropractic (n=13) were the main focus in these stories, with homeopathy playing a smaller role as a primary focus (n=5), although it was referred to in 31 of the 76 articles.

Primary Sources

Figure 3 lists the results for frequency of all sources. The predominant primary sources in news articles across this time period were FSM representatives (n=41). Sources from professional CAM bodies were the next most frequent voice across all articles (n=20), and 18 articles included university-based biomedical sources (in the cases where it was not stated that the speaker was from FSM, but instead from a university, this source was coded as 'university biomedical science'). In contrast, only six university-based CAM researchers were heard across the 76 articles as one of the primary voices. Professional biomedical bodies were used as a source in 13 articles and 11 voices were from university management. Voices from government and hospitals were also infrequent across all articles (n=5 each). Voices from industry e.g. dietary and herbal supplement companies (n=5) and lay people (n=3) were not common across these articles.

Consideration of FSM Position Statement

The FSM 'position statement'² that appears on the organisation's website should be considered in the context of the above data from news reports, as it clearly articulates the organisation's attitude towards CAM therapies and products. This position statement offers triangulation with the news report data from this study and highlights the particularities of the FSM contestation of CAM products and practices.

The main framings that were found throughout the media reports are consistent with the framing of CAM in the FSM position statement, where notions of illegitimacy of CAM and the lucrative industry frames appear frequently. Some quotes from the position statement offer salient examples of how FSM constructs CAM as part of its information sharing work about – or against – CAM:

Most, if not all, CAM disciplines are founded in fixed systems of false beliefs. This adherence to dogma, which prevents them from assimilating new information as it is discovered, is the antithesis of science.

... no matter how appealing magical interventions and miracle cures might appear, accepting them as being credible is dangerous, often denying or delaying patients' access to effective treatment.

FSM believes that it is not acceptable for tertiary institutions to teach 'complementary or alternative' interventions as if they were valid and scientifically based, thus perpetuating pre-scientific or frankly non-scientific practices. This multiplies bad practice and 'qualifies' graduates

² <http://www.scienceinmedicine.org.au/what-do-we-stand-for/position-document/>

of non-scientifically based courses to offer unproven and potentially dangerous interventions to the public without supervision or auditing of the consequences of their interventions.

The main framing that arises from the FSM position statement on its website is consistent with the high frequency of illegitimacy framings in my data. CAM modalities are lumped together, indistinguishable from each other, and framed as a quagmire of 'pseudoscience', akin to 'magical and miracle cures' and ultimately lacking a scientific basis or credibility.

Also consistent with the high frequency of 'lucrative industry' framings in the study, messages aligning CAM with corruption and the unethical forces of commercial practice are conveyed by these sentences from the FSM position statement:

Scientific medicine is sometimes belittled and misrepresented to promote the purchase of the alternative remedies.

This deception [the use of the term 'complementary medicine' rather than 'complementary and alternative medicine'] is part of a strategy aiming at giving the impression that patients could be successfully treated by Medicine assisted by complementary interventions.

The FSM position statement offers some important insights into the way in which the group's key messages and framings of CAM are being effectively

carried through into mainstream news stories, which is a consequence that has been a motivation for Entman's research (1993, 2007) into slant and bias in media reports. A key concern articulated by Entman (2007) refers to the media's role in helping to distribute political power to particular holders or seekers of that power.

Discussion

The prevalence of negative framing of CAM in these stories is indicative of the public relations success that FSM has achieved in terms of gaining and maintaining the attention of journalists, and achieving substantial media coverage reflecting its own framings about CAM across many mainstream Australian news outlets. This has seen over half of all news stories privileging the FSM positioning of negativity towards CAM (their position is made clear in the organisation's media releases, website materials, and quotes from FSM spokespersons) as the dominant frame in the news reports and often providing a space for FSM as a primary voice in the story. While this is unsurprising, given the clear agenda of FSM initially as a lobby group and then, over time, as a 'watchdog' of CAM issues that readily engages with media, it does point towards the ready adoption by journalists of the ideological framings of an elite and privileged social group like FSM. This is very relevant to Entman's (2007) concerns about the consequences of framing slant and bias, and the consequential power it may accord to interest groups and individuals.

Primary sources: Biomedical insiders and the voice of expertise

FSM offers journalists a voice of expertise that is rich in cultural capital (Brosnan 2015), along with direct access to those ‘insiders’ of biomedical institutions (Hallin et al. 2013), who are doctors with university and/or hospital affiliations: ‘high profile scientists’ (Medew 2012, *The Age*), ‘leading scientists and medical researchers’ (Arndt 2012, *The Australian*), ‘the most senior scientists’ (Colvin 2012, ABC Radio) and ‘Australia’s most prominent doctors, medical researchers and scientists’ (Houghton 2012, *The Courier Mail*). From this expert position as biomedical insiders, along with the additional ‘weight’ of credibility carried by some of their prominent members such as the country’s eminent and much-lauded biologist, Sir Gustav Nossal, FSM has been able to stake its claim as ‘guardians of scientific rationality’ (Scheid 1993), which is an important asset in the professional work to maintain or restore biomedical dominance.

University-based biomedical researchers were also used as a primary voice in reports. The presence of voices from CAM professional bodies in these articles suggests that journalists have attempted to offer a degree of balance in their reporting and to offer space for an alternative perspective or counter-claim to those of FSM. However, as the framing analysis reveals, the most prevalent frames that arise are those more closely aligned with the FSM agenda (gauged from direct quotes in articles, media releases by FSM, and information on the organisation’s website), not those arising from CAM professional bodies or other CAM groups.

Boundary work

In their separate analyses of the FSM-CAM media debate, Brosnan (2015) and Flatt (2013) have discussed how the FSM voice demonstrates boundary work in action, making clear the demarcation between evidence-based science that is represented as integral to biomedical philosophy and practice (Gieryn, 1983), and the alternative, ‘pseudoscientific’, non-biomedical realm of CAM. As Gieryn has theorised, ‘Boundary-work is also a useful ideological style when monopolising professional authority and resources in the hands of *some* scientists by excluding others as “pseudo-scientists”’ (1983, p. 787-788).

This boundary work becomes particularly clear in the FSM attacks on health sciences courses that offer CAM subjects and courses in specific universities, their concerns about specific CAM professions, for example: ‘It’s the move into paediatrics, and the enormous number of chiropractors who are trying to set up paediatric clinics and claiming that they can cure a range of paediatric conditions, that is really troublesome.’ (Demasi 2013, Catalyst). In alignment with Gieryn’s (1983) arguments, the consistent invocation of scientific legitimacy by FSM spokespeople plays a crucial role in reinforcing their professional dominance and validity, as well as ousting professions whose clinical work encroaches upon the biomedical domain. Historically, boundary work in science and medicine is too important to ignore when considering the media framings of an interest group like FSM, for whom biomedical hegemony offers professional benefits and cultural capital.

CAM as lucrative and unethical

The portrayal of CAM as a lucrative and unethical industry, product, or profession was a frame that I found to be rare in my previous analysis of news reports about herbal medicine in Australia from 2005 to 2010 (Lewis 2015, 2011a). However, for the current study this was the most prominent frame. Attention to the issue of corruption – linked with commercialisation of CAM products and services - addresses concerns that may be relevant to audiences at risk financially and physically, and constructs CAM as the suspect neoliberal product of an under-regulated industry that may mislead consumers and even corrupt universities at the level of education and research:

‘Big Wellness, like Big Tobacco, is big business’ (Leggatt 2017).

“The end result is a market flooded with shonky products, making it very difficult for consumers, and health professionals, to pick the small amount of evidence-based wheat from the voluminous, hyped driven chaff”
(Corderoy 2013 May 12).

"There would be pressure on the [university] researchers (with) \$15 million at stake. We wouldn't really want to produce negative results."
(Anonymous 2014).

This ‘lucrative industry’ frame creates a strong sense of consumer advocacy – a stance that holds appeal from a public interest journalism perspective. The FSM voice in these stories appears credible to journalists – not only because of the expert status of its spokespeople, but also enhanced by the fact that FSM is a

non-government organisation (Len-Ríos et al. 2009). Given the prominence of this frame, it appears that mainstream news media reporters have trusted FSM as holding an official ‘CAM watchdog’ role in the public interest, suggesting that FSM is attempting to reassume a more traditional role of the doctor in Australian history; ‘protectors’ of the public (Martyr 1993).

This framing is consistent throughout the FSM Position Statement document that appears on the FSM website.

CAM as illegitimate

The high frequency of news stories framing CAM as illegitimate is perhaps the most telling indicator of the influence of FSM’s ideological and political positioning in the news construction process. It is also consistent with Gieryn’s (1983, p. 791) theory of a common rhetorical style in boundary work “that distinguishes ‘non-scientific’ intellectual or professional activities”. This challenge to CAM legitimacy by FSM has been critiqued by both biomedical and complementary medicine practitioners (Flatt 2013; Komesaroff 2012; Komesaroff, et al 2012; Myers et al 2012), and extensively by sociologist Caragh Brosnan (2015, 2017). In contrast, very few articles raised the issue of biomedical hegemony, which goes largely unquestioned and unexamined in the framings of this debate, with the exception of an ABC World Today report by Hall (2012) and opinion pieces by Phelps (2012) and Schwager (2012).

Some headlines associated with stories featuring the illegitimacy frame carried words like ‘quackery’, ‘shonky’, and ‘bogus’. ‘Pseudoscience’ and ‘nonsense’ were

other common terms used in reports discussing specific modalities of CAM, as well as referring to CAM as the umbrella term for a whole swathe of undesirable practices and products. Because CAM therapies and products are so diverse, it is problematic to use this umbrella term to make generalisations about the legitimacy or efficacy of such a vast range of often paradigmatically different therapies (Brosnan 2016; Wardle 2016; Gale 2014; Derkatch 2012; Lewis 2011a; Fries 2008b, 2009; Broom & Tovey 2007; Coulter and Willis 2007; Willis and White 2004; Doel & Segrott 2003a, 2003b). This ambiguity in what Fries (2008b) has referred to as the homogenisation of CAM enables the story to carry wider appeal to news audiences (Johnson-Cartee 2005) and, as Wardle (2016, p. 77) argues, constructs CAM as 'a dumping ground for therapies and practices that have little in common, meaning that well-established therapies with good evidence of efficacy and safety are lumped in with whatever newly developed alternative health fad is being promoted on the internet'. This positioning also avoids framing the complexity of CAM (an approach that is counter to the news production process), and functions more effectively to polarise the biomedicine-CAM debate (Nisbet & Fahy 2015), which in turn satisfies news values of conflict and negativity:

"Taxpayers' money should not be wasted on funding [these courses] ... nor should government health insurance rebates be wasted on this nonsense." (Burke 2012)

"Pseudoscientific courses sully the genuinely scientific courses and research conducted at the same institution," say Alastair MacLennan and

Robert Morrison, who co-wrote the editorial in the Medical Journal of Australia. (AAP 2012)

“Much of modern chiropractic, unfortunately, has descended into the realm of quackery.” (Demasi 2013, Catalyst)

Framing the entire miscellaneity of CAM products and practices as illegitimate reveals the ideological platform from which FSM bases its arguments and raises the question of the prominence of this frame in news stories since 2011. Only six articles during the study period included a university-based CAM researcher as a primary source. This highlights a noticeable absence of the CAM researcher’s voice. Instead, journalists appear to have gravitated towards representatives from either the practitioner professions or industry; such as the Chiropractic Board and Complementary Medicines Australia. This could also be due to the fact that CAM researchers are generally not oriented towards or well-resourced regarding media relations activities, which are more typically taken up by professional or industry organisations in debates like the FSM-CAM one. It is also possible that the very mediatised nature of the debate deters university-based CAM research experts and educators from engaging with mainstream news journalists, ‘leaving media debate to be dominated by voices representing the ideological tail ends of opinion’ (Nisbet & Fahy 2015, pp. 224-225). Given CAM researchers are immersed in the scholarly literature regarding the most recent research discoveries, as well as being at the coalface of CAM research activity more generally, it is certainly problematic that their knowledge and expertise remains relatively unmined in these news stories. In particular, this relates to the

framings of poor evidence about CAM, where in most cases the sources are typically from FSM or a CAM professional body.

Regulation of CAM professions was a frame typically suggesting the discipline or 'reining in' of CAM practitioners, such as chiropractors, who were encroaching upon professional biomedical terrain or endorsing 'pseudoscientific' or dangerous approaches to health care. In the case of articles framing some practitioners as 'quacks', there is an underlying implication and acceptance, as Wahlberg (2007) has argued, that there are, in fact, legitimate CAM practitioners who are competent, skilled, and responsible.

CAM as popular, relevant and effective

Some more positive framings about CAM occurred across the period of study that offered a more mixed tone to the overall debate. These were articles in which the enthusiastic uptake and relevance of CAM were emphasised, often alongside framings acknowledging efficacy and the potential role for CAM in the healthcare system. Some of these articles offered a more detailed analysis of the use of CAM (for example, Johnston 2012; Hall 2015); provided the rarer voice of the layperson (Bowden 2015), or were opinion pieces (Phelps 2012). Typically, FSM spokespeople do not acknowledge efficacy of CAM therapies or products, or tend to accede a health benefit of CAM products or practices to the placebo effect: "Alternative therapies may have a placebo effect, but wrapping them up as science and discussing them in the same way as treatments that pass rigorous efficacy and safety tests is harmful for everyone" (Houghton, 2012, Courier-Mail).

The more positive slant of these reports demonstrates a resistance of the illegitimacy framings of CAM, even though they may still convey concern about CAM as a commercialised and under-regulated market that may over-claim benefits. For example, an article in *The Age* (Johnston, 2012) was dominated by comments from biomedical insiders with expertise in cancer care, who advocated the use of some CAM therapies and non-conventional approaches, arguing for the role of CAM in cancer care. These voices also referred to the limitations of a biomedical approach that is reductionist in nature:

... Wellness is about the mind as well as the body and how the two can interact for the better. But cancer is cancer and despite advances in medical science, it is a terrible, insidious disease and, says Professor Jonathan Cebon, medical director of the Austin's cancer services, the prognosis is still grim for many.

"Conventional treatments haven't worked all that well," he says. "So there's a strong attraction for alternatives. A naturopath can say to a patient, 'I can cure you', while the doctor in the hospital says, 'Your hair will fall out, then you will die'. It's obvious why many people stay away from doctors."

The cancer experts quoted in this particular story are not uncritical of CAM – but they do acknowledge it has a role in mainstream health care and speak positively about the need for CAM research. In these stories, the FSM voice is less resonant, and forms a much ‘quieter’ counter-argument to the more positive framings of efficacy and/or popularity.

CAM and the risk frame

Risk framings occurred far less than expected, as the articles were dominated by 'lucrative industry' and 'illegitimacy' framings. Although risks may have been referred to within these articles, the risk issue did not frequently stand out to the extent to which it became an actual frame. This is significant, given my previous research into risk representations of herbal medicine in mainstream newspapers and the Medical Journal of Australia (Lewis 2015, 2011a, 2011b), which found high proportions of risk references and framings. Risk frames in CAM news representations do not necessarily function to de-legitimise the product, as their potential 'dangerousness' or 'potency' in turn can rhetorically refute the very notion of benignity or 'quackery', as I have discussed elsewhere (Lewis 2011a, 2015). At the same time, such frames can be an effective means of 'othering' competing professions with competing modalities like CAM (Carter 1995; Lewis 2011). What is clear in the FSM-CAM news coverage is that FSM does not appear to be attempting to subsume or integrate CAM into its own repertoire of biomedical products and practices – but instead is rejecting CAM outright. Because of this outright rejection, the group is unable to put forward biomedical practitioners as the preferred and expert 'masters' of such substances and therapies (O'Neill 1994). At the same time, such positioning in media representations denigrates any members of its own profession who advocate CAM usage with some (or indeed many) of their patients.

Considering the privileging of FSM framings

The privileging of FSM framings may be due to a range of factors. These may include: journalists' perception of and deference to the privileged knowledge-claims and expertise held by FSM claims-makers; the strategic communication

tactics of FSM that result in 'staged news' (Boorstin 1971); the lack of public relations activity, or even reluctance to engage in media debates by other groups equipped with scientific capital that may counter the FSM claims; journalists' positive bias towards the FSM framings on CAM; journalists embracing an audience advocacy position that particularly relates to lay usage of CAM (Len-Rios et al. 2009); and a news culture in Australia that has resulted in time-poor and under-resourced journalists (Jordens et al 2013) who increasingly rely on 'packaged news' provided by groups like FSM (Jackson and Moloney 2016; Moloney et al 2013; Furlan 2009). Another element that is difficult to measure but important to consider includes the potential impact of effective media relations practice, which involves nurturing relationships with journalists over time, showing consideration for journalist's deadlines, and being open and responsive to journalists' queries, as well as providing journalists with access to spokespeople or direct quotes (Johnston 2013; Len-Rios et al. 2009; Cho and Cameron 2007). Entman (2007) highlights the significance this relationship with journalists can have on framings that are favourable to the claims-maker. While it is beyond the scope of this paper to unravel these issues, investigating the mediatised FSM-CAM debate from a more nuanced public relations perspective may yield important findings about the role of media relations and relationship management in the agenda setting process, as Linne (1993) has discussed. More research is needed to validate these suggestions, particularly interviews with the key actors involved, notably journalists and FSM leaders.

Limitations

As indicated earlier in this article, a limitation of this study is the restriction to articles referring to FSM in the context of CAM. The next phase of my research will compare the FSM-CAM stories to all news stories about CAM over the study period, which may offer insight into the influence of FSM on broader media representations about CAM.

The study is also limited to mainstream news reports, and does not map discourses and conversations emerging about FSM in other media outlets, such as biomedical or CAM health practitioner journals, influential platforms like The Conversation, blogs, or social media platforms like Twitter. It is through these outlets beyond the mainstream news genre that a greater variety of voices are more able to emerge.

Conclusion

This content analysis of news reports on FSM and CAM has revealed framings in news stories from 2011 to 2017 that appear consistent with the FSM agenda, particularly as it is articulated on the group's website and in its media releases. The mapping of news stories over the study period has revealed a pattern of frequency towards predominantly negative framings of profit-driven companies and professions that tend to have unethical practices (in particular, misleading claims of efficacy) or that portray CAM as an illegitimate approach to health care, akin to pseudoscience or quackery, which does not belong in universities, lacks evidence to justify its legitimacy, and needs careful regulation and disciplining. I have argued that the illegitimacy framing reflects FSM's ideological boundary work and problematically ignores the extreme diversity of CAM practices and

therapies, instead labelling all broadly as being 'shonky' or 'pseudo-scientific'.

The construction of CAM as illegitimate also conveys it as something to be rejected – not co-opted – by the biomedical profession.

In efforts to construct CAM as illegitimate, the arguments against it have less frequently focused on risk framings that are often associated with CAM news reports in Australia. I have argued that risk framings may function to actually refute illegitimacy claims, particularly in the case of supplements or herbs, as it is difficult for a substance to be accepted as both 'potent' and 'benign'.

The FSM voice clearly dominates as a primary definer across the period of analysis, a voice that carries the credibility and legitimacy of biomedical expertise, apparently trusted by journalists as the new 'CAM watchdog', harking back to their twentieth century role as medical 'protectors' of the lay public. Other voices that are well established in the FSM-CAM debate include CAM professional bodies (suggesting attempts by journalists to offer balance to the debate) and university-based biomedical researchers, typically reinforcing the FSM position.

The history of boundary work in science and the professions, as well as the evolution of medical dominance in Australia, offers valuable insights into the rise of FSM in the public sphere. This boundary work, as Gieryn (1983) suggests, conveys the struggle to monopolise professional authority and resources; as well as to protect the autonomy of biomedicine's own professional activities, whether it be through clinical practice or research. Such boundary work is evolving

within the context of neoliberalist, commoditised approaches to healthcare that places responsibility on individual health consumers who increasingly question biomedical authority amidst a free market economy of health products and therapy choices that include CAM.

I have considered a range of factors to explain the predominance of the FSM voice. These include the group's own carefully directed strategic communication activities that satisfy news values and provide 'packaged news' to time-poor and resource-poor journalists with whom they may nurture relationships more effectively than other claims-makers. This may also be combined with journalists simply trusting the FSM perspective and expertise-claims, particularly given FSM offers biomedical insider expertise, along with what is perceived as a non-commercial, NGO voice that is critical of neoliberal, under-regulated CAM forces and of 'poor science' in general. CAM research experts (and their institutions) may also be reluctant to engage in the debate in mainstream news media, which enables the FSM voice to flourish. A particular concern from these findings is that they indicate an uncritical reverence by journalists towards the voice of a group of biomedical insiders, whose ideological framings have dominated the news stories, resulting in what has been a rather successful PR campaign and rise to prominence for FSM in the public sphere.

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Figures and Tables

Figure 1. Results for headline and article intonation in reports 2011-2017

Figure 2. Results for frames in news reports 2011-2017

Figure 3. Results for primary sources used in news reports 2011-2017