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State risk discourse and the regulatory preservation of traditional medicine knowledge: The case of acupuncture in Ontario, Canada

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ABSTRACT

Several United Nations bodies have advised countries to actively preserve Traditional Medicine (TM) knowledge and prevent its misappropriation in regulatory structures. To help advance decision-making around this complex regulatory issue, we examine the relationship between risk discourse, epistemology and policy. This study presents a critical, postcolonial analysis of divergent risk discourses elaborated in two contrasting Ontario (Canada) government reports preceding that jurisdiction's regulation of acupuncture, the world's most widely practised TM therapy. The earlier (1996) report, produced when Ontario's regulatory lobby was largely comprised of Chinese medicine practitioners, presents a risk discourse inclusive of biomedical and TM knowledge claims, emphasizing the principle of regulatory 'equity' as well as historical and sociocultural considerations. Reflecting the interests of an increasingly biomedical practitioner lobby, the later (2001) report uses implicit discursive means to exclusively privilege Western scientific perspectives on risk. This report's policy recommendations, we argue, suggest misappropriation of TM knowledge. We advise regulators to consider equitable adaptations to existing policy structures, and to explicitly include TM evidentiary perspectives in their pre-regulatory assessments.

Traditional medicine (TM) systems, such as Chinese medicine and India's Ayurveda, are based in Indigenous knowledge systems. In 2013, the World Health Organization (WHO) called on nations to regulate TM, with the aim of enhancing "safety, quality and effectiveness" of health care across the many nations where TM remains in widespread usage (WHO, 2014: 7). Policy makers are faced with the unique challenge of incorporating such practices within health professional regulatory models typically designed to govern biomedically-trained occupational groups. In our era of 'evidence-based' decision-making - which typically privileges Western scientific knowledge - how may regulators contend with evidentiary perspectives from within TM systems? This question gains gravity in light of a recent United Nations (UN) recommendation directing nations to implement policies protecting traditional knowledge (WHO et al., 2013).

The significance of Indigenous medical practices (e.g., acupuncture) and remedies (e.g., herbal medicines), go well beyond the technicalities of their performance. These practices carry profound cultural significance within their communities of origin, a point recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO), which in 2010 positioned Chinese medicine's acupuncture on its Representative List of the Intangible Cultural Heritage of Humanity (UNESCO, 2010). Furthermore, as Janes (1999: 1805) asserts, the Indigenous "epistemological tenets" that shape diagnosis and TM therapy usage represent critical alternative models for resolving health crises on a global scale where biomedical and technological solutions fall increasingly short. The preservation of TM products and practices within their Indigenous epistemic frameworks thus carries multilayered significance.

Even within their nations and cultures of origin, Janes (1999:1808) observes that, "indigenous medical systems appear suspended in a web of countervailing powers and influences". Foremost among these, Janes (1999:1808) explains, are Western scientific pressures, compelling "rationalization of traditional medicine along biomedical lines". This is evident, for instance, with

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respect to acupuncture, an Indigenous East Asian medical practice in use today across 80 percent of nations (WHO, 2001) and regulated in 29 countries (WHO, 2014). Traditional acupuncture's "living and social context" (WHO et al., 2013: 92) have long been preserved via family lineages, apprenticeship-style training and study of Chinese medical classics such as the *Huang Di Nei Jing* (Ni, 1995). However, as Flesh (2013) notes, traditional acupuncture training programs have become increasingly institutionalized and biomedical in approach and content.

In recent decades, a subset of practitioners from particular biomedically-trained professions have begun to practice acupuncture as an adjunct therapy to their existing practice scopes (e.g., Janz and Adams, 2011). (In the United States, for example, chiropractic regulatory bodies in thirty-three states have explicitly permitted their members to use the practice (ABCA, 2016)). Over the same period, biomedical researchers have substantiated acupuncture's clinical efficacy for a range of conditions. In 1999, the WHO proposed training guidelines for acupuncture practitioners across professions, recommending that their education include some degree of Chinese medicine content (WHO, 1999). This strategy might, if enforced by regulators, have helped stabilize acupuncture's global position as a health care practice rooted in a TM conceptual model. Instead, across the globe, the practice - and regulation - of acupuncture from within a biomedical epistemic framework is on the rise (Kohut et al., 2011).

Several East Asian nations - including China, Japan, Singapore and Korea - have governed acupuncture within the framework of those nations' respective regulated TM systems (Schroeder, 2002; NZMOH, 2011), legally entrenching the practice in its Indigenous epistemology. However, regulations in several other jurisdictions reflect the globalized trend towards acupuncture's biomedicalization. For example, in Germany (Birch, 2007), France (Ramsey, 1999) and Argentina (Freidin, 2007), it is exclusively medical doctors who may legally perform acupuncture. In several English-language dominant states characterized by considerable ethnocultural diversity, and high levels of immigration (including Canada, the United States and Australia) (Gozdecka et al., 2014) governments have simultaneously regulated acupuncturists working within traditional East Asian frameworks, while permitting a range of biomedical professionals to perform the practice (AAAOM, 2012; Janz and Adams, 2011).

The case of Ontario, Canada presents a striking example of such a regulatory model. There, Chinese medicine practitioners and nine biomedically-trained professions, were authorized in 2013 to perform acupuncture within their scopes of practice. Ontario's provincial acupuncture regulations are unusual both inter- and intra-jurisdictionally. Within the province of Ontario, Traditional Chinese Medicine (TCM) is the first TM profession to have been granted statutory regulation; although the province has also regulated other 'complementary' therapy professions (including chiropractic, naturopathy and homeopathy). Acupuncture moreover represents the only TM therapy to have been explicitly included under the province's list of restricted health care acts. Globally speaking, Ontario's acupuncture regulations are distinct in their explicit inclusion of acupuncture within the practice scopes of such a large number of professions. Further at odds with other jurisdictions using hybrid regulatory models to regulate TM practices, Ontario's regulations explicitly divorce acupuncture from its Indigenous epistemic framework. These distinct features of Ontario's acupuncture regulatory structure capture the current tensions regarding regulation and the protection of traditional knowledge.

As Hollenberg and Muzzin (2010) have noted, the regulatory separation of acupuncture from its Chinese medicine roots exemplifies cultural misappropriation (a postcolonial theoretical concept). 'Misappropriation' occurs when particular cultural components are extracted and decontextualized from their broader cultural frameworks, typically by cultural outsiders, unsanctioned by the source community, thus causing harm (Brown, 2005). Prevention of misappropriation is a key component of UN recommendations surrounding traditional knowledge protection (WHO et al., 2013); and represents an equity-driven regulatory approach within the increasingly pluralistic context of health care worldwide.

Equity, a principle concerned with producing *fair* outcomes for diverse parties (Arnaud, 2001; Stone, 2012), has been increasingly characterized as an important driving principle in producing socially-just state policies around non-biomedical healing systems and practices (Baer, 1989; Khan, 2006; Marian, 2007; Prasad, 2007). Equity as a policy-driving principle contrasts starkly with the notion of 'equality', the premise that distinct groups should be treated equivalently, that is, in the *same* way. Equity-informed approaches, by contrast, permit flexibility, non-equivalence and innovation in crafting regulatory approaches to redress injustices arising from broader contextual conditions (Arnaud, 2001; Stone, 2012).

With the aim of exploring equity-informed policy approaches that actively prevent misappropriation of TM knowledges, we report on a critical discourse analysis of two Ontario government reports, completed in 1996 and 2001 respectively, on the subject of acupuncture regulation. The 2001 report's recommendations provided the key conceptual parameters around which Ontario's acupuncture regulations were ultimately crafted. The recommendations in the 1996 report, whose conceptual approach we find more protective of TM knowledge - were largely discarded by regulators. Critically engaging the notion of risk discourse within a postcolonial theoretical framework, we illustrate how each report engages with distinct evidence types, producing contrasting risk discourses — and in turn, divergent policy recommendations. Our findings thus draw attention to the mechanics by which state actors may deploy risk discourses in ways that either protect, or may lead to policies that create the possibility for misappropriation of TM knowledge in a regulatory process.

1. Epistemology, risk discourse and TM regulation

Regulators across the globe commonly justify policy decisions with reference to the 'public interest' principle (Baggott, 2002; Saks, 1995). As regards health professional regulation, public safety — along with the principle of health care quality - is widely characterized as an important public interest consideration (Baggott, 2002). It is uncontestable that some degree of potential risk (e.g., lung puncture) will accompany delivery of acupuncture (Janz and Adams, 2011). However, governments in different jurisdictions have produced distinct risk characterizations for the practice, resulting in divergent policy approaches.

The Danish government, for example, deregulated acupuncture (previously authorized exclusively to medical doctors) in 2007 on the basis that it "was considered non-harmful" (Rittig-Rasmussen, 2011: 114). 2001 regulations restricting use of the term 'acupuncture' to Chinese medicine practitioners in the Australian state of Victoria, were by contrast, justified on 'safety' grounds. Notably, the *practice* of acupuncture remained in the public domain under this regulatory scheme, enabling a range of providers with little training to continue performing it using alternate terminology (e.g., dry needling). (Janz and Adams, 2011).

Risk, as these examples suggest, is not a politically neutral concept. Risk assessment may be undertaken from various epistemic stances, taking into consideration distinct types of 'evidence' (Gostin, 2008; Wilson and Keelan, 2013). Two primary

epistemic approaches to policy-related risk assessment have been characterized (using various terminology) in the literature. We propose use of the terms 'technical' and 'contextual' to characterize these two approaches. What we term 'technical' risk assessments are those underpinned by a view of "scientific knowledge as composed of objective facts" (Bradbury, 1989: 381), primarily employing quantitative risk evaluation measures (Weinberg, 1972). 'Contextual' risk assessments, by contrast, incorporate a broad range of quantitative and qualitative, as well as sociocultural and ethical factors; and frequently make explicit the underlying values engaged in the use of various evidence types (Bradbury, 1989; Dake, 1992; Lupton, 1993).

Various actors engaged in policy processes may construct strategic, risk-informed discourses to substantiate particular political and market-related aims (Dake, 1992; Lupton, 1993; Wynne, 1980). O'Neill (1994) has pointed to biomedical professionals' strategic risk discourse construction surrounding once-marginal health care practices (such as acupuncture), as they increasingly seek regulatory jurisdiction over such practices. Such strategic discourses, O'Neill notes, gain in political strength as biomedical evidence surrounding these practices progressively emerges. However, we are unaware of studies to date that engage either with the question of risk discourse construction or traditional knowledge preservation through a TM professional regulatory process. These are the primary objectives of this paper. This work is also a contextual precursor to our broader study of Ontario's implemented acupuncture regulations (forthcoming), a core portion of which involves development of a normative, TM-specific 'public interest' conceptualization.

2. Methods

We undertake a critical analysis of 'risk'-informed discourses in two contrasting Ontario government reports preceding implementation of the Province's 2006 acupuncture regulations. Examining these risk discourses within a postcolonial framework (detailed below), our analysis exposes, contrasts and unpacks the two reports' risk discourses and their broader implications for TM regulation across jurisdictions.

Analysis of the two reports was performed primarily by the first author as part of a larger PhD study of Ontario's acupuncture regulations, informed by her training in East Asian medical theory as well as critical qualitative methodologies. It was reviewed and corroborated by the other authors, long-standing scholars in the field of traditional and complementary health professional regulation. The third author, whose postcolonial theoretical work in this field informs the current analysis, provided key insights to deepen our comparative analysis.

Methodologically, we situate this work within the parameters of critical discourse analysis (CDA), examining the content and form of texts to expose the broader sociopolitical context and implications of specific linguistic usage (Fairclough, 1992; Bacchi, 2009). An 'intertextual' approach to CDA —which we engage in this study - may draw upon external 'texts' to better contextualize particular discourses (Fairclough, 1992).

More specifically, we engage Bacchi's CDA approach (2009), which aims to illuminate the epistemic underpinnings, origins, and benefactors of particular policy-related discourses. Bacchi's analytic method interrogates: a) the representation of a particular 'problem' in a specific policy approach; b) the assumptions and historical origins underlying this representation; c) silences and gaps implicit in the representation; d) the representation's potential sociopolitical impacts; and e) ways in which the representation may be secured, reproduced, contested or replaced (Bacchi, 2009; Pereira, 2014).

Our analysis of the two reports unfolded in several phases. First, we coded the text of each report systematically, searching for passages pertaining to acupuncture's risk profile. Then, using Bacchi's approach as a guide, and in line with our articulated theoretical parameters (elaborated below), we used an intertextual and comparative approach to examine the identified report excerpts in relation to the preservation of traditional knowledge and the concept of misappropriation.

2.1. Postcolonial theory

Aimed at transforming inequities arising from European colonialism, postcolonial theoretical approaches contest the 'superiority' of Eurocentric worldviews in relation to those of historically colonized peoples, and centralize the voices, histories and knowledge systems of the colonized (Battiste, 2005; Loomba, 1998). In light of TM's historical subordination to biomedicine worldwide as an integral component of European colonization (Harding, 1998), postcolonial theoretical models provide a suitable, equity-informed lens for the study of TM systems and practices. Postcolonial theories have been previously applied to studies of TM occupational groups (see Gale, 2014); and aligns well with United Nations directives (WHO et al., 2013) to prevent further misappropriation of TM knowledge. Our analysis relies specifically on Hollenberg and Muzzin (2010: 48) theoretical concept of "paradigm appropriation", in which:

> biomedicine appropriates certain aspects from other healing systems or traditions without fully acknowledging the paradigmatic worldview from which the particular treatment aspect was taken.

For clarity's sake, we note that hybridity, characterized by cultural 'integration' between colonizer and colonized, may represent another important postcolonial theoretical concept (Loomba, 1998) relevant to TM-related policy issues (Gale, 2014). As we intend to discuss elsewhere, we recognize that not all hybrid 'mixings' of biomedical and TM knowledge, are equally problematic from an equity-informed perspective. It is misappropriated TM knowledges, as conceptualized by Hollenberg and Muzzin's theorizing, that are a particular focus in this work.

3. Context

The province of Ontario, Canada is characterized by considerable ethno-cultural diversity. Twelve percent of the population in Toronto, Ontario's primary urban centre, report Chinese as their ethnicity (City of Toronto (2013)), which rises to 38% in some suburban areas surrounding the city (City of Markham (2011)). In addition, a recent population-based survey reported 12% of Canada's general population to have consulted a 'complementary and alternative medicine' practitioner in the twelve months prior, 18% of whom claimed to have received acupuncture (Metcalfe et al., 2010). It is in this broad context that Ontario recently regulated acupuncture and the profession of Chinese medicine. In what follows, we provide relevant background about the pre-regulatory reports under study, as well as the evidentiary and political climates of the time.

3.1. Background on the reports under study

In 2013, after years of lobbying from several practitioner groups, Ontario's provincial government restricted acupuncture practice to a newly-regulated profession of Chinese medicine, and nine additional (biomedically-trained) health care professions. These

regulatory changes were preceded by two formal government studies, published in report form in 1996 and 2001 respectively. These two reports, whose risk-informed discourses we analyse in this work, were prepared by Ontario's Health Professions Regulatory Advisory Council (HPRAC), a government agency at arms length with Ontario (Canada)'s provincial Ministry of Health. Guided by a set of 'public interest' principles – foremost among which is 'protection of the public from harm' – HPRAC's mandate is to guide Ontario's Health Minister on matters related to the provincial regulation of health professions (HPRAC, 2014). Made public in reports, HPRAC's studies typically include a period of stakeholder consultation.

In 1984, during a health professions regulatory review that informed HPRAC's formation, dozens of occupational groups – including Chinese medicine practitioners - petitioned Ontario's provincial government for self-regulatory status. At the time, the Province determined that acupuncture did not warrant regulation; the practice remained unregulated for another two decades. Ontario's Health Minister's 1994 request that HPRAC study the issue of acupuncture regulation followed formal requests for regulation from three acupuncture practitioner organizations in the Province. The resulting 1996 report recommended that Ontario formally define acupuncture as a Chinese medicine-based health care act; and that it also restrict its practice – on safety grounds – to regulated professionals. While the 1996 report recommended future regulation of Chinese medicine practitioners in the Province, it did not address this issue in detail. The report did, however, propose that the term acupuncture not be permitted to describe non-Chinese medicine based therapeutic 'needling'; rather, biomedical professionals seeking to perform such 'needling' should be authorized to do so under a separate regulatory stipulation.

In 1997–98, HPRAC's membership underwent a "complete turnover" (HPRAC, 2001a: i). Under the same elected government, a new provincial Health Minister requested in 1999 that HPRAC study the issue of Chinese medicine professional regulation. The Minister also requested additional advice from HPRAC on the issues surrounding *acupuncture* regulation, which the 1996 report had previously addressed. As in 1996, HPRAC's 2001 report advised that acupuncture (and Chinese medicine) be regulated. However, in contrast to the 1996 report's proposal, HPRAC recommended in 2001 that acupuncture's regulatory definition be strictly physical (i.e. as a 'procedure beneath the dermis') rather than epistemic (i.e., as a Chinese medicine based practice). Following the 2001 report's recommendations, the Ontario government passed legislation in 2006 – implemented in 2013 - to regulate Chinese medicine professionals, and remove acupuncture from the public domain.

3.2. Evidentiary landscape

When the Ontario government first considered acupuncture's regulation in 1983, the body of biomedical evidence supporting the practice was in its infancy. In 1979, the World Health Organization (WHO) had published a 'provisional' list detailing 43 health disorders for which acupuncture *might* prove effective, emphasizing the need for high quality clinical trials (WHO, 1979). By 1999, mid-way between HPRAC's two acupuncture reviews, the WHO had undertaken a new review of this evidence, finally published in 2003, detailing the results of 255 relevant trials (WHO, 2002). As we detail further on, the progressive emergence of this body of evidence might – in line with O'Neill (1994) theoretical observations - have fuelled biomedical occupational groups' zeal to frame their pursuit of regulatory jurisdiction over acupuncture in Ontario in evidentiary terms. It may, furthermore, have played a role in guiding the political directives issued to HPRAC's 2001 report team, by the province's Minister of Health.

3.3. Political climate

Ontario's Chinese medicine practitioners had begun, in the 1980s, an active political lobby towards acupuncture regulation. By the mid-1990s, they had been joined by a lobby of biomedical professionals performing acupuncture. The key biomedical stakeholders informing the 1996 report process were members of the Acupuncture Foundation of Canada, a group of Ontario acupuncture practitioners formed by a group of medical doctors in the 1970s. These doctors – later joined by a range of biomedical health professionals - had been trained in Chinese medicine based acupuncture; but biomedical theories around the practice's mechanism of action increasingly informed their work. Despite this group's professed practice of 'anatomical' acupuncture, their training programs included both biomedical and Chinese-medicine based courses. Not surprisingly, HPRAC's 1996 report is clear that "there was considerable agreement among respondents that acupuncture is philosophically rooted in TCM." (HPRAC, 1996: 10). It was in this epistemic climate that HPRAC's 1996 report took shape.

By 2001, the body of biomedical evidence surrounding acupuncture had grown considerably. In this light, another subgroup of Ontario's biomedical professionals arguably sought, as O'Neill (1994: 503) has theorized as occurring in similar circumstances, to "confin[e] acupuncture to established medical practitioners… promoting them as a safe alternative to the alternatives". The Ontario Physiotherapy Association's presentation to HPRAC, for instance, has been summarized as follows:

> Acupuncture should be a controlled act because there is a risk of harm. … The [Ontario Physiotherapy Association] questions whether the regulation of TCM [traditional Chinese medicine] and acupuncture … would amount to endorsement of its efficacy. The major deficiency in the [TCM practitioners'] submissions is their failure to demonstrate the efficacy of TCM to the scientific thresholds that are generally accepted in health care. (HPRAC, 2001b: 7).

Such views were echoed by others, such as the Ontario Podiatric Medical Association, whose representatives argued that "a lack of scientific evidence is problematic for TCM and acupuncture", while themselves seeking regulatory jurisdiction over acupuncture (HPRAC, 2001b: 5).

It was not, however, stakeholder pressures alone – but also political pressures from the government - that shaped HPRAC's later report. These are made evident in the Ontario Health Minister's 1999 letter to HPRAC, leading to the 2001 report. This letter explicitly encouraged HPRAC to reconsider its 1996 recommendations in light of "developments in the research in support of acupuncture"; and "increased interest on the part of some regulated health professionals in using acupuncture as an adjunct to other forms of treatment" (HPRAC, 2001a: 3). The Minister thus appeared to signal that HPRAC should place greater weight than previously on the perspectives of a subgroup of biomedical acupuncturists who, empowered by increasing biomedical evidence of acupuncture's efficacy, had – in an inter-occupational turf battle - expressed increasing hostility towards Chinese medicine knowledge. Each of these power relations appears to have played a key role in shaping the risk discourses and related policy recommendations that appeared in HPRAC's 1996 and 2001 reports.

4. Results

In what follows, we review the linguistic and argumentative strategies engaged by HPRAC in developing its divergent 1996 and 2001 risk discourses surrounding acupuncture. At cursory glance, it

would appear that the 1996 and 2001 HPRAC reports share a common analysis of acupuncture's risk profile (as potentially harmful), and a common policy recommendation (that is, to regulate the practice in the province). However, closer examination of the discursive strategies engaged in each report reveals profoundly distinct epistemic underpinnings in each. These, in turn, give rise to contrasting policy recommendations, each substantiated largely on safety grounds.

4.1. Epistemic foundations: what is acupuncture?

HPRAC's 2001 text accurately notes that "the most fundamental disagreement" between its recommendations and those presented in the 1996 report relate to their respective stances on "the essential nature of acupuncture" (HPRAC, 2001a: 19). Indeed, the two reports' conflicting policy recommendations - informed by distinct risk discourses - are underpinned by a stark epistemic divergence.

Positioning acupuncture securely within its historical context, the 1996 report notes that acupuncture was "developed over thousands of years, in China", and is "rooted in TCM [traditional Chinese medicine]" (HPRAC, 1996: ii-iii). The text further affirms that Chinese medicine's theoretical parameters comprise an essential component of acupuncture:

> [I]n reality, acupuncture is about balancing Qi, or vital energy, i.e. it is not about "inserting acupuncture needles". … acupuncture is much more than an activity or act, it is a whole different way of thinking and approaching health care. (HPRAC, 1996: 26)

Positioning biomedical acupuncture research in historical context, HPRAC's 1996 report further validates Chinese medicine perspectives surrounding acupuncture:

> Western-based research has been conducted on acupuncture. … This research has provided an explanation of how or why acupuncture works only in a small number of cases [and so] …it is possible that acupuncture may never be completely explained in Western terms (HPRAC, 1996: 17–18).

The 2001 report takes a markedly different stance on acupuncture's essential character, framing it as a fundamentally *physical* practice, disassociated from its Chinese medicine roots:

> [R]egardless of its theoretical basis, acupuncture is principally a 'procedure on tissue below the dermis'. (HPRAC, 2001a: 41).

As we now demonstrate, the 2001 definition, which presents itself as theoretically neutral, implicitly privileges a biomedical epistemic stance as to acupuncture's defining attributes.

The 2001 report recognizes that acupuncture performed in a Chinese medicine context relies fundamentally on a Chinese medicine based diagnostic process:

> TCM [traditional Chinese medicine]-based acupuncture does not have a body of knowledge that … can be separated from the TCM body of knowledge (HPRAC, 2001a:10).

As the 2001 report furthermore acknowledges, Chinese medicine diagnosis rests firmly on 'energetic' theoretical principles - that is, on concepts that cannot be described in exclusively physical terms:

> The [Chinese medicine diagnostic] process is a cognitive one, and the theoretical system may be internally consistent, but its components (e.g., meridians and Qi) *are not physically observable* [our emphasis] (HPRAC, 2001a: 39).

It is clear, then, that an exclusively physical definition for acupuncture (as a 'procedure beneath the dermis') neither reflects nor includes Chinese medicine based perspectives surrounding the practice. Rather, this definition implicitly reproduces a biomedical epistemic construct of the human organism as an essentially physical entity (Marcum, 2008). The epistemic divergences underlying HPRAC, 1996 and 2001 acupuncture definitions shape the two reports' contrasting risk discourses.

4.2. Evidence of direct harms

With respect to safety, HPRAC's1996 and 2001 reports both characterize acupuncture as potentially presenting a significant risk of harm to the public, and propose regulation as an appropriate means of mitigating this risk. The reports further concur that the practice of acupuncture may pose a risk of "direct physical harm" (HPRAC, 1996: 20) to patients; and use similar language to describe such risks:

> broken, bent, or stuck needles stuck, broken or bent needles.injuries to internal organs traumatic injury to important organs.risk of infection (HPRAC, 1996: 20) transmitting infection (HPRAC, 2001a:12–13).

In support of this point, both reports cite English-language, biomedically-informed literature - more specifically, quantitative analyses of both case reports and practitioner surveys The 2001 report, adopting a technical risk assessment approach, does so to the exclusion of other types of evidence (whether qualitative or rooted in TM knowledge). The 1996 report by contrast also cites two Chinese medicine textbooks to support this risk characterization. It thus positions Chinese medicine knowledge alongside biomedical knowledge as a valid form of evidence, signaling adoption of a more contextual approach to risk assessment; and recognizing that acupuncture's direct physical risks have long been understood in Chinese medicine.

4.3. Indirect harm: A Chinese medicine concept

Direct physical harm is not the only risk historically associated with acupuncture in the Chinese medicine tradition. As the two-thousand year old Chinese medicine classic, *Huang Di Nei Jing* (Yellow Emperor's Classic of Medicine, or *Nei Jing)* affirms, skilled application of traditional diagnostic principles is considered critical to safe practice:

> By utilizing incorrect procedures, one can easily exacerbate a problem. If one does not understand these principles, and correctly remedy the cause of disease, the consequences can be devastating (Ni, 1995: 188).

Poorly executed treatments, reflecting poor understanding of Chinese medicine's theoretical principles, are furthermore considered a "violation of practice" (Ni, 1995: 192), potentially causing unnecessary harm to the patient. Notably, HPRAC's 1996 report devotes considerable space to discussing such risks, which it characterizes as "indirect harm". The 1996 report reads:

> Although there is no question that an untrained practitioner can cause direct physical harm while performing acupuncture …, there may be a number of consequences that constitute indirect harm to the patient (HPRAC, 1996: 20–21).

Like the *Nei Jing*, HPRAC's 1996 report characterizes "indirect" harm as "result[ing] largely from lack of adequate training" (HPRAC, 1996: 21). Examples of indirect harm provided in the 1996 report echo those described in the *Nei Jing*. For example, "masking symptoms" (HPRAC, 1996: 21) is traditionally considered to occur when the root cause of a disease, or (to use Chinese medical terminology, *ben*) is not appropriately addressed (Ni, 1995). "Ineffective treatments" (HPRAC, 1996: 21) are seen as resulting from acupuncture in which the body's *qi* is inappropriately directed along the bodily *meridians* (Ni, 1995). "Aggravation of symptoms" is another form of acupuncture-related indirect harm discussed in HPRAC's 1996 report (21), equally discussed in the *Nei Jing* (Ni, 1995).

It is not, however, Chinese medicine texts that HPRAC's 1996 report cites in support of its "indirect harm" assertions. Rather, it indicates that it "learned" about this concept from stakeholder "participants" (HPRAC, 1996: 20). This further signals that HPRAC's contextual risk assessment approach in 1996 not only integrates perspectives gleaned from biomedical and traditional medical texts, but also from stakeholder input. We find in our analysis that the 2001 report's technical risk assessment approach, by contrast, validates stakeholder views only when they correspond with biomedical evidence; and, as shown below, discounts traditional knowledge perspectives, including those underpinning the concept of indirect harm.

4.4. Dismissal of traditional knowledge perspectives

As in 1996, the 2001 report explicitly describes stakeholders as having identified "a wide range of potential reactions and injuries" from acupuncture, including direct physical harms as well as more indirect risks including "aggravated symptoms … and improper technique" (HPRAC, 2001a: 12). Elsewhere, however, the 2001 report discursively invalidates the indirect harm concept. In the first step of a complex linguistic strategy, HPRAC appears to give credence to the principle of 'indirect harm':

> HPRAC does recognize that there is a risk associated with basing acupuncture treatments on an improper assessment and diagnosis resulting in inappropriate treatment (HPRAC, 2001a: 13).

The passage continues by strategically isolating indirect harm as relevant only to Chinese medicine practitioners. (Of note, these are the acupuncturists characterized in the 1996 report as less likely to inflict indirect harm, due to their extensive knowledge of Chinese medicine's theoretical principles.)

> This is, however, a separate issue and discussed in the context of the authorizing TCM practitioners a controlled act related to communicating a diagnosis (HPRAC, 2001a: 13).

This interpretation is consistent with the 2001 report's definition of acupuncture as atheoretical, relativistically characterizing a particular, TCM-rooted concept as relevant only to those practitioners who view TCM theory as instrumental to acupuncture's practice. As the 2001 report proceeds, HPRAC appears to further discount the indirect harm principle, even with respect to its application within a Chinese medicine context. HPRAC writes:

> HPRAC was not provided with evidence documenting the incidence of injury or other mishaps resulting from an inappropriate or incorrect TCM diagnosis [i.e. indirect harm]. A search of English language literature for studies specifically on the validity of TCM diagnostic approaches failed to produce articles (HPRAC, 2001a: 27).

In this 'technical' discourse, HPRAC demonstrates its privileging of English-language, Western scientific 'evidence' over Chinese medicine knowledge; it further exemplifies the postcolonial theoretical concept of 'paradigm appropriation', characterized by:

> knowledge devaluation and notions of superior European scientific knowledge as compared to non-European knowledges, where other knowledges only become acceptable when absorbed and employed by Euroscience (Hollenberg and Muzzin, 2010: 49).

4.5. Acupuncture vs. needle therapy: separate restricted practices?

The two reports deploy their respective, contrasting risk discourses to substantiate divergent acupuncture regulatory proposals for implementation within the parameters of Ontario's Regulated Health Professions Act (RHPA). The RHPA's 'controlled acts' model removes particular health care acts from the public domain, authorizing their performance to specific regulated professions. Unlike regulatory models requiring exclusive practice scopes, Ontario's RHPA permits overlap between different professions' scopes. At the time of the two HPRAC report studies, acupuncture had been explicitly exempted from the RHPA's controlled act #2 ("performing a procedure on tissue below the dermis"), leaving the practice in the public domain.

HPRAC's, 2001 report proposed that acupuncture be restricted under controlled act #2, to a range of regulated professions including Chinese medicine practitioners. Its 1996 report, by contrast, advised that such a model – which it had also considered – was "so attractive that it is deceiving", and had "serious shortcomings" (HPRAC, 1996: 25) (described further on). The 1996 report recommended, instead, that a new controlled act be created to govern acupuncture practiced within a Chinese medicine framework. Professions seeking to practice outside of this framework, it proposed, should be authorized to perform "needling therapy" (but not "acupuncture") under controlled act 2. We review, below, the risk-based argumentation used in each report to substantiate its respective regulatory proposals.

4.6. Risk and regulatory boundaries in HPRAC's 1996 report

In preparing its regulatory argumentation, the 1996 report relies on the paired concepts of direct and indirect harm, but differentiates the regulatory requirements associated with mitigating each. On one hand, it points to similarities between acupuncture and venipuncture (e.g. for drawing blood or administering injections), arguing that the two practice share common risks of direct physical harm. Such risks, it argues, are relatively easy to manage:

> The direct harms [associated with acupuncture] are also harms that are associated with some of the controlled acts currently regulated under the RHPA. For example, venipuncture. … The direct harms are quite straightforward and can be easily understood based on incompetent performance or lack of sterile technique (HPRAC, 1996: 21).

Contending that indirect harm is by contrast "more subtle", HPRAC (1996: 8) emphasizes that acupuncture requires additional regulatory parameters beyond those governing venipuncture, to ensure its safe practice. Such parameters, it argues, should address its assertion that inadequate harm "results largely from lack of adequate training". Having defined acupuncture as essentially Chinese-medicine based, HPRAC (2001:7) proposes that training in

acupuncture sufficient to prevent indirect harms ought to have a basis in Chinese medicine:

> Professions that should be authorized to perform acupuncture [under a new, Chinese medicine based controlled act for acupuncture] … are those that can demonstrate sufficient training in acupuncture which includes a solid understanding of TCM theory (HPRAC, 1996: iv).

Notably, the 1996 report does not suggest that only Chinese medicine professionals should be permitted to perform this new Chinese medicine based controlled act. Rather, it proposes that this jurisdiction be granted to any profession whose members met the World Health Organization's articulated minimum training standards for acupuncture:

> The minimum amount of TCM-based acupuncture training for a regulated health care professional should be at least 220 h (HPRAC, 1996: iii).

However, HPRAC also makes clear that safety, as a public interest principle, is not the only factor informing its 1996 policy proposal, a point we take up next.

4.7. The public interest principle of equity

As noted earlier, public safety is foremost among the public interest principles driving HPRAC's 1996 mandate.[1] Moreover, HPRAC's 1996 report refers at length to the public interest principle of 'equity' to substantiate its proposed policy approach. With respect to the principle of equity, HPRAC (1996: 4) summarizes its position as follows:

> Equity requires that health care service providers be regulated in a manner that recognizes and respects the cultural underpinnings of the services they provide.

At the core of HPRAC's equity-informed comments (1996: 4) are two key points. First is HPRAC's recognition that Ontario's health professional regulatory legislation, the RHPA, was "designed and built on western [biomedical] model of health care". Second is HPRAC's commitment to "accommodating forms of health care practice that are not based on the western medical model" under the RHPA. This, it argues, would permit the Province to "respond fairly and equitably" to residents' diverse health care needs, as well as to benefit from diverse health care practitioner "skills and training". Before discussing these points' broader significance, we return to the 2001 report's use of risk discourse to substantiate its contrasting policy recommendation: one which the 1996 report had argued did not adequately entrench equity-based principles.

4.8. Risk and regulatory boundaries in the 2001 report

On the basis of exclusively biomedical evidence, and a biomedicalized definition of acupuncture as an exclusively physical act, HPRAC's, 2001 report (20) divorces the notion of acupuncture-related risk from the theoretical parameters informing its practice:

> [T]he risk of harm from acupuncture is rooted in it being a "procedure below the dermis" and that the risk is not related to whether acupuncture is TCM-based or anatomically-based.

Based on these assumptions, HPRAC makes its proposal to govern all acupuncture practice under a single regulatory mechanism, in which "acupuncture should be part of the existing controlled act of performing a procedure on tissue below the dermis" (HPRAC, 2001a: 21). We interpret this proposal as paradigm appropriation, distinguished by the "separation of technique from healing paradigm" (Hollenberg and Muzzin, 2010: 49). Our analysis finds that the 2001 recommendations can neither be seen as protective of traditional knowledge, nor as favouring the principle of equity.

The 2001 HPRAC report does not explicitly cite public interest principles beyond safety to justify its policy proposal (as was done in 1996). However, the 2001 report's text appears to implicitly be founded on the principle of regulatory 'equality' in its proposal to treat traditional and biomedical acupuncture as equivalent under the law.

The 2001 report's implicit emphasis on regulatory 'equality' is also evident in its safety-based recommendations around training standards. Alongside its claims that "the relative safety of acupuncture is… linked with having well trained practitioners and promotion of clean needle technique", it proposes that individual regulatory bodies governing acupuncture-practising professions "give due consideration to the competencies and training required for their members to perform acupuncture safely" (2001a: 12, 23). This proposal seems to rely on the implied premise that all professions should be 'equally free' to define standards relevant to their own distinct understanding and usage of acupuncture. From the 1996 report's equity-based vantage point, however, this policy approach would likely fall short with respect to quality assurance and the protection of traditional knowledge:

> There will be no way to ensure that standards of practice or consistent content and depth in education and training programs necessary to safely perform TCM-based acupuncture will be in place or enforced. … [T]here would be no assurance of maintaining or even recognizing the historical and cultural origins of acupuncture. … Any needle insertion under any model could be considered acupuncture (HPRAC, 1996: 25).

5. Discussion

Bacchi's methodological approach, which emphasizes illumination of particular policy problems' discursive representations, has enabled us to draw attention to the central role that risk discourse may play in states' framing of public interest regulatory issues around TM professionalization. As Baggott (2002: 11) has noted, health professional regulatory policy reforms are increasingly "discussed in terms of protecting patients or reducing risks"; and stakeholder discourses are likely to reflect this trend. O'Neill (1994) observation that biomedical health providers increasingly deploy safety-based discourses to support their jurisdictional claims over previously marginal medical practices gains new dimensionality in light of our study's postcolonial lens.

Central to our theoretical framework in this work is contextualization of regulator responses to epistemic turf battles over TM practices within the context of historical colonial relations. This (re) contextualization of policy formulation as a set of epistemological power relations points to the normative position of biomedical knowledge, making invisible traditional knowledge. Our comparative application informed by Bacchi's CDA approach across two contrasting policy texts has made visible important theoretical connections between risk assessment frameworks (contextual vs. technical), health care epistemology (traditional knowledge inclusive vs. exclusively biomedical), public interest conceptions (broad vs. narrow), regulatory parameters (equitable vs. equivalent,

[1] HPRAC's public interest principles were, in 1996: 1. Safety; 2. Quality; 3. Accountability; 4. Access; 5. Equity; and 6. Equality.

innovative vs. fixed) and the protection of traditional knowledge (or not). We suggest that regulators of TM around the world can support the WHO's call to protect traditional knowledge if they position traditional knowledge protection as itself a key component of their public interest imperative.

To this end, regulators will need to explicitly recognize potential systemic barriers in place in their jurisdictions; and show willingness to adapt or innovate upon existing policy structures in order to equitably accommodate TM approaches. This process will furthermore require that regulators become familiar with health care related concepts arising from within traditional knowledge frameworks. A first step would involve recognition that evidentiary perspectives or concepts (e.g., acupuncture as a 'physical' intervention) appearing to be culturally 'neutral' may so appear because they are culturally normative (i.e., rooted in biomedical epistemology). The active inclusion of TM cultural insiders to regulatory processes for governing TM-rooted practices may also mitigate such epistemic myopia to some degree.

In addition, as various health practitioner groups jockey for professional status and power by battling over jurisdiction for TM practices —as is increasingly seen in the case of acupuncture — regulators' increased sensitivity to TM-based perspectives may assist them in differentiating between, and avoiding conflation of, stakeholders' epistemic claims and occupational self-interest. That said, two core points need further theoretical exploration to assist regulators in this regard; these are: a) circumstances under which hybridized (that is, biomedicalized) forms of TM knowledge and practice might *not* be seen as problematic misappropriations; and b) to what extent the public interest advantage of increased public access to beneficial TM-rooted therapies offered by biomedically-trained practitioners within a biomedical framework mitigates considerations around traditional knowledge protection.

Regardless, contending with the challenge of generating regulatory conditions for an equitable medical pluralism, in the public interest, is a question that extends well beyond the issue of risk discourse emphasized in this work. One such issue, which our analysis touched upon briefly, is the development of regulatory practice standards for TM-rooted practices. Other important considerations around TM professional regulation, which have become furthermore apparent in Ontario's context, lie at the clinical/cultural intersect. These include: language of practice; accommodation of informal vs. formal training backgrounds; and the challenge of standardizing an intrinsically diverse body of TM knowledge. We intend, elsewhere, to discuss these issues in greater detail.

That said, the current work's unique contribution lies in its critical illustration of the ways in which regulatory risk discourses surrounding a TM practice may support or counter the principle of misappropriation in policy context. The analysis of this example case may serve as a tool to support policy makers around the world as they seek to construct equitable TM regulatory frameworks. Future critical scholarship will prove vital in further specifying — for regulators' usage - the normative but nebulous 'public interest' concept as it relates to TM practitioners and practices.

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