HEC Forum (2006)
DOI 10.1007/s10730-006-9010-5 © Springer 2006

From Rivalry to Rapproachement: Biomedicine, Complementary Alternative Medicine (CAM) at Ethical Crossroads

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Against the backdrop of the political intrigue in biomedicine's ascendancy to orthodoxy, this article examines its contemporary rapprochement with Complementary Alternative Medicine (CAM), in the move toward an integrated medical regime. It also identifies and explores factors underlying the rapprochement, as well as different ethical challenges that face integrated medicine. It argues that a major approach to tackling these challenges hinges on devising just and equitable criteria for evaluating the efficacy of plural therapeutic paradigms inherent in CAM models. This is attainable through a policy that encourages creating public health policy and medical personnel deliberately exposed as part of their curriculum to the philosophical and theoretical features of diverse therapeutic traditions.

Introduction: The Politics of Biomedical Orthodoxy

Biomedicine attained the status of conventional medicine largely as a result of its political victory over other competing epistemologies in medical practice in the nineteenth and early twentieth centuries. Often, the accounts of the rivalry between biomedicine and other competitors emphasize biomedicine's claim to being scientific as the basis of its distinction from other medical practices. The truth, however, is that "science" was used as a major political tool to entrench and consolidate biomedicine's monopoly, and to exclude competitors from institutionalized medicine. Before the middle of the nineteenth century, the practices that have evolved into present day biomedicine were hardly more scientific than their competitors, both in theory and practice. Biomedicine and other non-orthodox medical practices

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applied folk wisdom, intuition, and forms of ancient remedies to healing (Wolpe, 1990, p. 222; Shan and Busia, 2002, p. 195). There was neither a common understanding as to the cause of disease, nor a streamlined mode of treatment (Grmek, 1998, pp. 30-41). There was, indeed, no clear-cut orthodoxy in medicine in relation to which others could be described as alternatives (Wolpe, 1990, p. 221; Grmek, 1998, pp. 30-41).

Biomedicine's ascendance to orthodoxy was perhaps more of a political process than a scientific one. Through propaganda, biomedical practitioners, or 'the regulars', insisted that their practice was scientific. Ironically, most of those practices, which comprised mainly of bleeding, puking, blistering, and prescribing overdoses of substances such as emetics, mercury, and arsenic, were derided by other rivals, especially the homeopaths (Wolpe, 1990, p. 223). There was no discernible sense in which rival healing movements of the time were anti-scientific. Thus, competing claims to scientific legitimacy became mainly political assertions.

Nonetheless, the invention of the stethoscope, the discovery of the germ origin of disease, the emergence of bacteriology and immunology, the science of vaccination, the use of anaesthesia and antisepses, the remarkable progress in surgery (especially successes in the treatment of appendicitis in the nineteenth century), as well as the discovery of penicillin and insulin in the twentieth century (Davidson, 1968, pp. 54-85), were landmark events in biomedicine's claim to being scientific. The first half of the nineteenth century saw greater emphasis on objective features of disease, the art of careful or clinical observation, a general return to Hippocratic ideals, as well as the founding of clinical schools committed to application of the discoveries of science to medicine (Ackerknecht, 1968, p. 146, 148).

Apart from deploying science as their strategic political tool, the regulars' control of the hospital and other concrete symbols of institutional power like clinical schools, gave them an edge over other rivals (Wolpe, 1990, p. 223). Far from the claim to being scientific, organized medicine, as a professional movement, and the hospital, as an exclusive correlating institution for biomedical practice, facilitated biomedicine's assumption of conventional status, and its relegation of rivals to alternatives. In addition, the founding of the American Medical Association (AMA) in 1847 was a political initiative that marked a line of demarcation between, and discrimination against, heterodox healers (Warner, 1990, p. 55). The consolidation of science into a coherent methodology was an event that happened afterward, in the late nineteenth century. However, immediately before this date, biomedicine's scientific status was without much challenge, partly through its allegiance to the Hippocratic heritage, but mainly through a political process and propaganda that entrenched the unsubstantiated notion that other therapeutic

rivals were more dangerous and unscientific.

Biomedicine's commitment to exclude competition in the nineteenth and twentieth centuries required it to assume a monopoly over definitions of science. According to Paul Wolpe, "[a]s the taken-for-granted definer of what is scientific in medicine, biomedicine can dismiss other systems as ipso facto unscientific, *without empirically examining their claims to efficacy*" (1990, p. 224). It was easy for biomedicine to ignore empirical claims to efficacy because ideological conformity to an existing system of heroic therapeutics, as opposed to methodological rigor, was the basis for defining scientific medicine. For instance, it was hardly surprising that in the mid nineteenth century, opposition to and endorsement of the standards of heroic or conventional medicine were the basis for exclusion and inclusion from the professional membership of the AMA (Wolpe, 1990, p. 226; King, 1982; Warner, 1998). To ensure the *purity* of biomedicine, the 1847 AMA Code imposed an anti-consultation clause upon its members that forbade them from consulting with unconventional practitioners (Warner, 1990, pp. 53). Concerning this, Wolpe notes that: "The wholesale resistance to innovation or importation of ideas that came from outside insulated Western medicine from advances it might have made sooner, medicines it might have discovered sooner, and indigenous and foreign healing practices that had things to offer the general welfare of patients" (1990, p. 227; Warner, 1990, pp. 55).

From the late nineteenth century, the denial of the efficacy of alternative therapy was no longer helpful to the cause of biomedicine. Similarly, its refusal to subject rival therapeutics to empirical examination did little to advance its exclusive claim to being scientific. By now, science has achieved a form of coherent methodology and alternative medicine must be subjected to scientific rigor, or otherwise be "scientized" as part of the biomedical process. Thus, biomedical orthodoxy, by insisting on the evidence-based criteria (which it earlier undermined in preference to dogmatic loyalty and has just, of recent, reluctantly and partially embraced), can now appropriate and co-opt alternative therapeutic practices into orthodoxy as a way of consolidating its power. However, to what extent biomedical orthodoxy could willfully, or otherwise, make some concessions in its volte-face to unconventional medicine remains a subject of interest. This background provides the framework in which this article explores the politics of integration and the need for justice and equity as the ethical requirements of the new rapprochement between biomedicine and CAM.

In approaching that task, Part II sketches a conceptual overview of CAM within the discourse of integrative medicine. Part III identifies and explores the factors underlying the current rapprochement between biomedicine and

CAM. Part IV discusses some aspects of the ethical ramifications of an integrated medical regime foreshadowed by the phenomenon of rapprochement. Part V concludes by pointing a searchlight in the direction of raising the right caliber of manpower trained to appreciate the epistemology of CAM therapeutic traditions. This is a crucial first step to encourage fair evaluation of CAM in an integrated medical environment.

CAM and Integrative Medicine

Following the triumph of biomedicine, a number of its rival therapeutic models are now referred to either separately as complementary medicine or alternative medicine, or collectively as complementary and alternative medicine. CAM evokes multiple interpretations as part of inherent conceptual pluralism in relation to its alternative and complementary roles. The notion of complementary medicine refers to the use of clinical approaches or other therapeutic ideas deriving from unorthodox medicine, to facilitate the practice of mainstream or conventional therapeutic procedures. It also refers to the application of ideas or therapies from unorthodox medicinal sources in a complementary manner to, or alongside of, conventional therapeutic interventions or procedures.

In a general sense, CAM refers to therapeutic approaches that are strictly unconventional but are capable of being alternatives to Western biomedicine. It depicts therapeutic approaches that are "complementary to the end-goals of decreasing illness and enhancing wellness, but are alternative to conventional medical treatment" (Giordano et al., 2003, p. 442). Further, CAM is defined in relation to "diagnoses, treatment, and/or prevention which complements mainstream medicine by contributing to a common whole, by satisfying a demand not yet met by orthodoxy, or by diversifying the conceptual frameworks of medicine" (Ernst et al., 1995, p. 506; Barret, 2003, p. 417). It encapsulates "wide spectrum of health and healing strategies that derive from systems of evidence quite distinct from those practices that have emerged from Western biomedical science" (Thorne et al., 2002; Achilles, 2001; Eskinazi, 1998).

All the above perspectives on CAM are tenable. However, CAM's warrant for its complementary and alternative roles issues from the deliberate policy shift and rapprochement in the twentieth century between conventional medicine and its rivals. It is based on the concession that categories hitherto dismissed as within the purview of charlatans and their gullible patrons, are sometimes credible alternatives to, and capable of complementing medical orthodoxy. In part, it reflects ongoing transition in biomedicine, which has occasioned the broadening of established concepts

of healthcare to include perspectives hitherto within the domain of alternative therapeutic interventions. For instance, this trend is manifest in the parallels between concepts of health promotion and alternative therapies, like diet regimen or natural health products, exercise, prayer, environmental accountability, and so forth.

The earlier reference to the AMA exemplifies the local dimension of the politics of exclusion, as well as the subtle rapprochement in the medical professions. This trend has an international dimension as well. In the late twentieth century, the World Health Organization (WHO) endorsed the new era of rapprochement between conventional medicine and its unorthodox rivals by sanctioning the use of traditional medical resources, methods, and personnel, including traditional birth attendants for the enhancement of primary health care, especially in developing countries (World Health Assembly Resolutions, 1972; 1977; 1978).

In a nutshell, the WHO's (traditional medicine) TM/CAM policy aims at the integration of TM/CAM into mainstream national health care regimes in its member states, especially developing countries, for the purpose of achieving optimal coverage of health care needs. This involves the development of cooperative training programs and treatment strategies that incorporate multiple therapeutic experiences. Presently, the WHO has an elaborate TM/CAM program which aims at "[f]acilitating integration of TM/CAM into national health care systems" (2002). In its integrative paradigm, CAM encapsulates the "the thoughtful [deliberate] incorporation of concepts, values, and practices from alternative, complementary, and conventional medicines" (Barrett et al., 2003, p. 947). Before the ethical challenges of the integration phenomenon are explored, the discussion considers first the factors that underlie the new rapprochement between conventional and unconventional medicine.

CAM: Evaluating the Rapprochement

Since the middle of the twentieth century, there has been a rise in global patronage of CAM, especially in the developed countries of Europe and North America, the bastions of modern scientific medicine (Ernst, 2001b; Good, 1987). This has led to a remarkable flexibility regarding the boundaries of what is considered "legitimate health practice." For instance, acupuncture is currently on the borderline between biomedicine and CAM, and homeopathy is not far behind (Rhead, 2003, p. 455). Osteopathy, anthroposocial and herbal healing, naturopathy, chiropractics, massage therapy, *t'ai chi*, hypnotherapy, visualization, *Reiki,* among several other non-conventional therapeutic forms, continue to be increasingly visible in

the arenas of conventional medical establishments and practice.

Nonetheless, echoes of the traditional hostility between regular medicine and irregular medicine continue to resonate. Some favor biomedicine's rapprochement with CAM; others question the reputation of CAM describing it as "all-time high quackery", "a national scandal" (Jarvis, 1992; Barret and Jarvis, 1993), "arm-chair amusement" (De Smet, 1999, p. 11), "beyond the conventional bounds of science and logic" (Ziment, 2000), "excusable pastime" (Ackerknecht, 1968, p. 13), and such like (Guinn, 2001; Fontanarosa and Lundberg, 1998; Angell and Kassirer, 1998). Such extreme views held sway in the nineteenth century. In the present era of medical orthodoxy's rapprochement with CAM, they continue to resonate. However, they are no longer the general rule insofar as they do not accurately or wholly reflect mainstream medicine's current attitude of rapprochement toward CAM.

A number of policy and practical initiatives, especially since the 1990s in both developed and developing countries, now symbolize the concrete steps in the rapprochement between official and unofficial medicine (Oguamanam, 2003). For instance, since the 1990s, through the issuance of regulatory guidelines relating to TM/CAM (WHO, 2000), the WHO continues to promote global integration of TM/CAM into the mainstream medical system in its member states. The WHO insists upon using scientific criteria to validate TM/CAM practices so as to obviate the specter of "uncritical enthusiasm and uninformed skepticism" (WHO, 2002, p. 5).

In the U.S. and Canada, the National Institutes of Health and the Canadian Institute of Health Research have under their respective umbrella a research center and an institute dedicated to CAM and aboriginal peoples health. Health Canada has an Advisory Group on Complementary and Alternative Health Care. Bill Clinton's presidency set up a commission on CAM (Barrett et al., 2003, p. 420; Veenstra, 2000, p. 22). These and other related bodies assist the governments of both countries in policy matters relating to CAM. In both countries, there are several specialist professional institutions for the training of manpower for some established CAM models, including chiropractics, acupuncture, and massage therapy. In the U.S. alone, more than fifty major medical schools, including Harvard, Stanford, UCLA, the University of Massachusetts and the University of Arizona, teach some forms of CAM. The teaching of CAM is fast becoming a norm in North American medical school curriculum.

In the U.K., the Prince of Wales is associated with sponsoring an initiative on integrated medicine. In 2000, the House of Lord's select committee on science and technology turned in a favorable report at the conclusion of its almost one half year investigation on complementary and alternative and

integrative medicine in Britain (Ernst, 2001a; Shan and Busia, 2002, p. 193).

Segments of urban practitioners of general medicine in the U.S., U.K. and Europe have been proactive in the integration project, even to the point of self-funding research on CAM. Consumer reports have continued to affirm CAM as a source of health care for a majority of the citizens and inhabitants of the developed world, of every gender, ethnicity, socio-economic and academic background, and age group. Consequently, the integration of CAM into major research, medical professional and allied institutions, and conventional medical practice, continues to gain momentum.

A number of reasons are adduced for the new rapprochement toward CAM and its increasing profile. According to Wolpe, the victory of regular medicine over the irregulars in the mid nineteenth century loosened the former's appeal to ideological purity. Instead of sacrificing the empirical potentials of irregular medicine at the altar of ideological purity, physicians of the late nineteenth century "refuted the idea that there were any important differences between ideological camps arguing that empirical science was the only needed adjudicator" (Wolpe, 1990, p. 233; Warner, 1990, p. 55). This approach signaled a subtle transformation in medical orthodoxy, especially at the AMA. The 1903 revisions of its code of ethics lifted the consultation prohibition and thus de-emphasized the ideological brick wall between orthodox medicine and its rivals (Warner, 1990, p. 65). Since the twentieth century, there is a willingness to discuss alternative medicine in North America and Europe from an integration perspective.

There are several other reasons for the rapprochement with CAM. Some of them nuance the appreciation that the inadequacies of the ideological purity and politicized orthodoxy of biomedicine required the reorientation of medicine towards a paradigm shift (Barrett, 2003, p. 420). The limitations of mainstream medicine in a number of respects, including but not limited to the following—its inability to accommodate a biopsychosocial approach to illness; its parochial rigidity; its insensitivity to the patient's subjective world; its failure in chronic disease management; its excessive medicalization procedures; and the fundamental power imbalance between physicians and patients—are cited as the trigger buttons for public frustration with conventional medicine. The logic of this public frustration over the "reductionist and mechanistic model of biomedicine" (Thorne et al., 2002, p. 908) is the increase in consumer demand for CAM.

Socioeconomic and cultural factors, such as age, ethnicity, education, income, gender, and a combination of a number of social forces are features that, in a number of ways, have played a role in influencing the demand for CAM, and, thereby, have forced a rapprochement toward it. However, the extent to which these factors promote public patronage of CAM is

inconclusive. This is seen in a number of studies that have addressed the factors as theoretical models for explaining the rising profile of CAM as a social phenomenon (Astin, 1998; Bausell et al., 2001; Druss and Rosenheck, 1999; Eisenberg et al., 1993; Barret, 2003, p. 418). In a sense, the role of socioeconomic and cultural factors has not been rigorously or exhaustively argued in CAM literature. This is so, notwithstanding that available empirical studies have helped to advance an understanding of the function of those factors. Regrettably, most, if not all, of the studies that have generated available data have narrow, as opposed to global, appeal.

The cultural, political, and socioeconomic transformations of the global order in the twentieth century following the end of the Cold War, which is often summed up in the sexy cliché of globalization, is a little mentioned factor in the literature to support CAM's rising profile. It is not suggested here that there is a ready and conclusive view regarding the impact of globalization on CAM. The truth is that if anything is certain about the globalization discourse, it is its capacity to yield, in the words of one writer, "the crucial interpretive dilemmas of our time" (Sousa, 1995, p. 253).

However, too often, globalization discourse is skewed in the direction of the phenomenon's homogenizing influence on the world's socioeconomic, political and cultural landscape. The popular view is that globalization is synonymous with Westernization, or even Americanization. In relation to the integrative paradigm of biomedicine's rapprochement with CAM, globalization is seen as a factor in the Westernization of unorthodox medicine through its transformation of the latter onto Western scientific and legal bases (Fidler, 1999, p. 220). It is perfectly tenable that the integration paradigm, in which CAM is associated with conventional medicine, has a potential to result in the latter's co-optation of CAM. Indeed, co-optation is orthodoxy's strategy for dealing with rivals.

Nonetheless, the above perspective on the role of globalization does not account for the way in which the phenomenon is a factor in the global visibility of CAM. A balanced view of globalization goes beyond the Westernization hypothesis. Apart from economic, political, and legal regulatory harmonization, as part of its conceptual contradiction, globalization also fuels extraordinary migration patterns that in turn generate multiculturalism. Unprecedented levels of technology exchange, simplified transnational or global communication patterns via the precision-guided information network of the digital era, are all products of globalization, and signposts of an amalgamating medical culture. Globalization accounts for unprecedented movement of peoples and cultures from hitherto unreachable borders to the centers of global finance capital.

Medicine, whether orthodox or unconventional, in its history and

evolution, is a cultural enterprise and phenomenon (Airhihenbuwa, 1995; Good, 1987; Helman, 2000; Kleinman, 1980). When people move, they move with their cultures, including their philosophies of health and health care. According to Leigh Turner, "ethnic traditions and religious practices are commonly transformed in the new setting, just as the new locale is shaped by cultural traditions and mores of its immigrant communities" (2001, p. 594). As CAM models and practices confront biomedicine in global finance capitals and elsewhere, "[t]here is a process of mutual influence and transformation" (Turner, 2001, p. 594). Diverse forms of unorthodox medicinal cultures and practices now expressed as CAM are components of a new multiculturalism.

The rise in the patronage and dissemination of CAM is a consequence of the rise in cultural diversity and cosmopolitanism. The reality of cultural diversity is one of the major challenges of globalization for biomedicine, and has compelled the latter to reconsider its once unmitigated arrogance toward CAM. By facilitating multiculturalism and diversity, through an unprecedented movement of peoples and cultures across the centers of global capital, globalization is an unnoticed factor in the promotion of CAM and its new engagement with biomedicine. The latter has been a 'deterritorialized' domain (Good, 1995, p. 463) long before globalization.

Although not exhaustive, the aforementioned factors, including the brief perspective on globalization, are factors which, in one way or another, drive the movement toward an integrated medical regime. This wave of integration has ethical ramifications.

Ethical Challenges of the New Rapprochement

Rising patient demand has made CAM regimen a component of contemporary health care. Already, there are implementation and policy initiatives to entrench CAM. However, because of its 19th century victory over unorthodox medicine, biomedicine has reserved to itself the prerogative to set the terms of its engagement with CAM. In its rapprochement with CAM, biomedicine is reluctant to compromise its hegemony of health care. As part of its new understanding with CAM, biomedicine requires the latter to satisfy scientific or evidence-based criteria and to be integrated or co-opted into conventional health care.[1] For full acceptance, CAM must be willing to make itself subservient to biomedicine and be prepared to be absorbed by biomedicine if need be. How much of its conceptual framework conventional medicine is willing to concede in exchange remains uncertain. Accordingly, the terms of biomedicine's rapprochement with CAM raises ethical considerations, especially in regard to the need for just and equitable

criteria for determining the efficacy of CAM models.

Insisting that CAM models must be evidence-based (even where such a standard does not apply to all of biomedicine), presents a considerable ethical dilemma for biomedicine, particularly with regard to the nature of the acceptable evidence required of CAM. Such information will be useful for *regulatory bioethics.* According to Callahan, regulatory bioethics refers to that aspect of bioethics that helps in fashioning "laws and regulations for public-policy purposes" (1999; p. 279). A society's health care policy is a reflection of its cultural, historical, political and socioeconomic experiences. The resurgence of CAM and the resilience of biomedicine as the dominant force in the conventional discourse of health, especially in the West, are indicative of a global society in transition. A major implication of this is that neither biomedicine nor CAM forms can claim to be exclusive arbiters of the constituents of health, illness, and intervention options. Thus, the challenge to biomedicine lies in whether it is able to accommodate therapeutic philosophical paradigms different from its own conventional logic (Guinn, 2001).

To confirm the scientific truth of therapeutic claims, biomedicine generally prefers to subject such claims to clinical trial procedures, like randomization and the use of placebos. The scientific process, as part of rationalist and modernist phenomena, has been instrumental for many technical accomplishments in biomedicine. Even though scientific procedures may satisfy ethical concerns, they are not necessarily adequate for verifying the truth of contextual variables of individual therapeutic experience (Thorne et al., 2002, p. 910) which various CAM models largely tend to address.

Healing systems are enormously complex experiences, composed of diverse phenomena. Hence, the quantitative method of isolation and testing of limited hypotheses cannot, in all cases, satisfactorily account for such complex human endeavors (Barrett et al., 2003, p. 938). Thorne et al. have argued that the "philosophical origins of CAM practices often make them inappropriate for simple RCT [randomized control trial] … and if such trials are conducted, can render the results meaningless" (2002, p. 910). The ethical dilemma that arises here is that the use of similar standards and criteria to determine efficacy may be inappropriate for health care practices that are based on diverse healing paradigms.

RCTs, as the gold standard for research methodology, are most suited for the biomedical therapeutic logic in the latter's appeal to a mechanistic and reductionist platform that equates health with the absence of measurable disease. This doctrinaire approach may not be appropriate in all circumstances and indeed does not apply to *all* of biomedical practices.[2]

According to the WHO, "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (1996; Locke, 1998, p. 49; see also Barrett et al., 2003, p. 943). This definition is in tune with the holistic spectrum in which health is conceptualized under CAM. The therapeutic paradigm of most CAM models is one that takes account of the essence of biopsychosocial factors in health. One of the major gaps in the biomedical model that reinforces the imperative for rapprochement with CAM is regular medicine's failure to take into account the role of biopsychosocial factors as health indicators. In CAM, perhaps more than in biomedicine, factors such as the contextual nature of diagnostic processes, the patient's belief system and lived experiences, relationships, trust, comfort measures, negotiations around options, including the degree of active involvement of each party, play significant roles in therapeutic intervention (Kelner and Wellman, 2000; Glik, 2000; Wolpe, 1990, p. 233).

A framework for evaluating the efficacy of therapeutic options that derive from a diverse range of therapeutic paradigms is essential in the rapprochement between biomedicine and CAM. Such a framework must be based on acknowledging the role of subjectivity in treatment procedure and outcome. CAM's significance lies partly in its challenge to biomedicine's near exclusive use of objective factors to determine efficacy of treatments. Because subjective factors are known to feature significantly in treatment outcome, a point perhaps more pronounced in CAM therapeutic models, it is unethical, if not irresponsible, to ignore them. According to John Rhead, "the significance of subjectivity as a fundamental factor in any treatment procedure is the foundation" of what is truly revolutionary about CAM and its primary strength as a therapeutic philosophy (2003, p. 456). It is suggested also that an equitable ethical framework for evaluating the efficacy of CAM must be one that takes into account CAM's underlying epistemologies. The exploration of subjective experience, Rhead rightly argues, "may constitute the greatest adventure—and most profound science—of them all" (2003, p. 456).

What is persuasive about the notion of subjectivity is that even the current standard of science-based evidence is, to a large degree, a social construct, and in extreme cases, a rationalization of popular beliefs (Lloyd, 1983, p. 202). Within the paradigm of scientific or objective evidence, "those questions that have been asked and advances that have been pursued have been dramatically skewed by various interests rather than reflecting an objective neutral progression of knowledge" (Lloyd, 1983, p. 202; Thorne et al., 2002, p. 909). Lippman and Morgan ably argue that biomedical ideology is under the bondage of influential markets, political and power structures (Lippman, 1998; Morgan, 1998). Scientific theories and information are in a

state of flux, and with every change, they continue to impact on how disease is framed as well as how we construct our experience of illness (Murray, 2004).

The idea of a standard of evidence suitable to CAM's healing paradigms is a way of securing and legitimizing the significance of CAM in filling some therapeutic vacuums within medical orthodoxy. It also underscores CAM's role in assisting to diversify the conceptual framework of biomedicine (Barrett et al., 2003, p. 417; Guinn, 2001). Both functions are necessary in the systematic entrenchment of CAM as part of the integration project. According to Wolpe, "[w]hile orthodoxy won the political battle, it did so by ceding defeat to some degree, at least, to the claims of the alternatives, incorporating into their systems many of the therapeutic and ideological correctives that the alternatives advocated" (1990, p. 233). Consideration for biopsychosocial factors and subjectivity constitute part of those correctives. An ethically sensitive integrative project is one that incorporates CAM's operative epistemologies and the scientific and evidence-based nature of biomedicine, in order to yield a health care system that can heal illness as well as treat disease (Barrett et al., 2003, p. 945).

The integration of CAM into mainstream medicine raises another form of ethical challenge, this time for biomedical practitioners. As part of the ethical dilemma, patients who consult CAM practitioners and physicians on a concurrent basis tend to either conceal such information, or are reluctant to make relevant disclosure to their physicians. Apart from this, physicians' interest in a credible, evidence-based, or scientific method for determining the efficacy of CAM has significant ethical ramifications. For instance, the physician's ethical obligation to provide a patient with sufficient information to enable the patient to exercise informed consent and related rights of decision making may be circumscribed in the context of a CAM patronizing patient. A physician's endorsement or disapproval of CAM ought to be premised on information about CAM that not only satisfies evidence-based criteria but is also cognizant of the subjectivity of CAM to the patient's experience. By their training, physicians are not equipped to acquire such information. Also, biomedicine is yet fully to come to terms with the notion of subjectivity and other nuances of diverse therapeutic philosophies. Hence, the physician's ability to comply with an ethical standard in this context is suspect.

As physicians increasingly engage with both patients and CAM practitioners in a widening door of collaboration, physicians' commitment to basic ethical principles may be at odds with the inherent character of CAM practice and its inchoate *scientific* status. Even though there is no shortage of claims about CAM, such claims do not displace the search for, and the

comfort of evidence-based or scientific affirmation of CAM.[3] In the absence of reliable criteria for determining CAM's efficacy, the physician's inclination to withhold approval for a patient's desire to engage in or to continue with CAM may be founded upon the physician's duty of non-maleficence. However, such conduct may have an *appearance* of paternalism insofar as it circumscribes a patient's right to autonomous choice and decision. However, where the physician strictly offers advice, the potential effect of that advice on a patient's choice may be material for the purpose of informed consent. Physicians' ethical dilemmas would be mitigated if they were exposed to pluralism in therapeutic regimes. Such exposure is a starting point in the quest for acceptable methodology for evaluating the efficacy of CAM.

Fashioning reliable criteria for determining the efficacy of CAM within the integration paradigm is a major public health policy imperative. It is perhaps the surest way to redefine the limits of acceptable health care practices, and to initiate the necessary bioethical regulatory regime for promoting sound public health policy. Credible public heath policy requires commensurate vigilance in the wake of the emerging unprecedented demand for unconventional medicine. Public safety must moderate, and indeed, determine the limits of permissible public demands. This is a task for regulatory bioethics as articulated by Callahan.

Researchers have proposed the development of a uniform code of ethics that applies to both CAM and conventional health practitioners (Thorne et al., 2002, p. 909). As desirable as such a code may be, to be worth its while, it must crystallize after the issue of acceptable criteria for determining the efficacy of CAM is resolved. In the absence of such criteria, there is a limited basis upon which CAM could share a uniform ethical code with conventional medicine. In some sense, the gulf between CAM and biomedicine has continued to deepen in the last few decades, making the desire for a uniform ethical code to seem implausible.

For instance, such aspects of conventional medicine as its sophisticated scientific and technical competence, and its rapid mechanization of medical care, constitute sites of ethical discourses that are seemingly outside the immediate realm of CAM. As well, the gulf between CAM and conventional medicine in relation to the medical revolution in genomics, *in vitro* fertilization (IVF), stem cell therapy, organ transplantation, and so on, is phenomenal. It has provoked hasty questioning in some quarters of the relevance of CAM in the future of medicine (Shan and Busia, 2002, p. 194).

Even though the ethical challenges posed by these biomedical advances are seemingly outside the grasp of CAM, to run with that and question the future of CAM may oversimplify the issues. According to research

participants in a recent study, the movement of biomedicine "towards genetic and metabolic individuality … will personalize the medicine of the future" compelling the need for the development of new therapeutic models beyond biomedicine's emphasis on evidence-based therapeutic intervention (Zick and Benn, 2004, p. 54). Thus, the outlook of modern medicine promises to blur the traditional divides, whereby "conventional doctors and researchers will be doing personalized and holistic medicine in the future whether they identify themselves as CAM practitioners/researchers or not!" (Zick and Benn, 2004, p. 55).

Conclusion: Toward a Pragmatic Manpower for Integrative Medicine

The integration of CAM into conventional medicine poses ethical challenges at two major levels, namely in regard to equitable criteria to determine CAM's efficiency and paucity of physician's knowledge of CAM's underlying epistemology and methodologies. But sites of ethical quandary are symbiotic, in the sense that physicians' more than passing interest in CAM and its methodologies is the starting point for broaching ethical challenges around the question of fair criteria for evaluating CAM efficacy. Thus, the ethical ramifications of CAM for conventional medicine within the integrative paradigm can perhaps be best tackled through generating a suitable manpower to explore and invigorate research, and other policy considerations, that arise from the integration discourse.

To identify credible criteria for determining the efficacy of CAM, public health policy must support research and the development of suitable manpower committed to enhancing the understanding of the philosophical, theoretical, and clinical foundations of CAM practices. Even though the study of CAM is increasingly entering the curriculum of medical schools, genuine advances in CAM research must be targeted, especially at such CAM models with established practice traditions, in order to bring to the fore and improve upon their underlying philosophy and healing paradigms. Beyond laboratory investigations and clinical trials, research tools such as surveys, systematic reviews, meta-analyses, and other new research methodologies, need to be fashioned, fine-tuned, and deployed to address subjective accounts of therapeutic outcome.

The appropriate manpower should be one capable of exploring the complex mix between the biomedical model of efficacy determination, and the factors of subjectivity or patient-provider interpersonal relationships and other potent contextual variables in treatment outcome. Indeed, within the integrative framework, the significance of CAM to conventional medicine is not merely additive. Rather, CAM's philosophical orientation to health and

illness challenges biomedicine to diversify its narrow conceptual frameworks (Dalen, 2005). To arrive at this point of engagement between CAM and biomedicine, what is needed is a dedicated manpower versed in a research methodology that integrates science with experience, while ensuring heath personnel, especially physicians, optimum exposure to diverse therapeutic traditions. In regard to physicians, it is not suggested that they double as CAM practitioners. Physicians cannot be experts in all fields of biomedicine, let alone experts in diverse CAM models. However, patients' patronage of CAM alongside biomedicine is a warrant for physicians' more than passing interest in CAM that would transcend traditional judgmental approach and equip them with enough insight to discharge the ethical demands of an increasingly integrating medical culture.

The integrated methodology must be one that shares the vision of unifying cross-cultural therapeutic traditions with modern analytic perspectives, in the context of clinical empiricism, multiple interpretations, and plural epistemology. A well thought out curriculum for CAM in medical education is capable of generating the manpower that could pursue this vision. With the right category of manpower, it is possible to generate insights that could mitigate the ethical dilemmas that public health policy faces in the effort to determine equitable criteria for evaluating the efficacy of CAM in the pursuit of its vision to develop comprehensive regulatory bioethical standards.

Acknowledgements

*Funding and training support from Canada Institutes of Health Research (CIHR)'s Training Program in Ethics of Health Research and Policy. Thanks to Professor Susan Sherwin for her mentorship and intellectual guidance. This paper is dedicated to the memory of Professor Stephan Salzberg who before his death on July 15, 2004 was a Professor of Law and Medicine at the University of British Columbia, Vancouver, Canada.

NOTES

[1] In a sense, it supports complementary, but not truly alternative practices of healthcare

[2] For example, rarely would RCT or placebo apply to surgery or organ transplant.

[3] The same could be said of the practices of pharmaceutical companies in their marketing efforts.

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