

'ALTERNATIVE THERAPIES': HEALTH CARE, BIOETHICS AND THE LAW

Alberto Campos, M.D.*, Fernando Cano Valle, M.D., M. Sc. (med.)**

Introduction

Fear of the unknown is a natural imperative of the human mind. We cannot live satisfactory lives in foreign environments. "Cognitive vacuity or dissonance is as distressing to us as physical pain. [...] For us, cognition is the most practical of matters: Knowledge itself fulfils an acute practical need".¹ It is interesting to see how some practices are legitimised to avoid the cognitive dissonance resulting from the dichotomies science-magic and natural-artificial, in the face of the need to give meaning to beliefs and practices. In alleviating the fear of the unknown, no argument is better than any other.

Under the influence of healing practices imported from India and China, an increase in the popularity of meditation, alternative medicines and the *New Age* have taken a new *élan* from other ideas, such as karma, reincarnation and ecology.² The *New Age* composed a new paradigm by bringing together such diverse practices as homeopathy, acupuncture, oriental religions, ecology, angels, channelling of enlightened spirits, therapeutic magnetisations, astrology, *I-Ching*, quartz crystals, neuro-linguistic programming and transpersonal psychology.³

Tanya Luhrmann, for exemple, explains in her theory of the 'interpretive drift' what occurs during occultist magical training. According to her, people approach magic with the vague notion of an alternate reality seen from a perspective different from science. From this view, a wide spectrum of emotional and spiritual experiences are involved, to the degree that the base ideas turn to be practiced more as a religion than as a theory-laden science, that is, they are appraised more for the symbolic and spiritual experiences and less for the truth of the theory.⁴ This is an explanation of why intelligent and well-structured individuals can 'live in two worlds' at a time, changing roles as it suits them. The rules that apply for the disenchanted world of the senses simply do not apply in the world of imagination and *vice versa*, thus avoiding the epistemic contradiction, *i.e.*, the cognitive dissonance. If there is no meta-level where rules apply for both 'worlds', then there is no basis to

* Programa de Maestría y Doctorado en Ciencias Médicas, Odontológicas y de la Salud – Bioética, Universidad Nacional Autónoma de México (UNAM) Mexico City (alberto_campos@comunidad.unam.mx)

** Chairperson of the UNESCO Chair in Bioethics and Clinical Medicine, Mexico. Instituto de Investigaciones Jurídicas, UNAM, Mexico City (cavaf@servidor.unam.mx)

¹ N. Rescher, *Epistemology: an introduction to the theory of knowledge*, Albany, N.Y.: State University of New York Press 2003, p.55.

² S. Pike, 'Introduction to the Religious Worlds of Neopagans and New Agers', *New Age and Neopagan Religions in America*. New York: Columbia University Press 2004, pp. 13-38, 60, 101.

³ W.J. Hanegraaff, 'The New Age Movement And Western Esotericism', in: D. Daren & J.R. Lewis (eds.) *Handbook of New Age*, Brill NV, Leiden and Boston MA 2007, p. 28.

⁴ T. Luhrmann, *Persuasions of the Witch's Craft: Ritual Magic in Contemporary England*, Cambridge M.A.: Harvard University Press 1989, pp. 10-11, cited in: W. Hanegraaff, 'How magic survived the disenchantment of the world', *Religion* 2003-33, p. 369.

deny to the world of imagination a reality at least equal to that of the sensible world.⁵

I. Health Care

I.1 From 'Orthodox' to 'Alternative'

Disease and infirmity restrict people by shortening their lives or impeding normal functions through pain, or through the heteronomy entailed by handicaps such as chronic care. Being bio-psycho-social individuals implies not just our physical capabilities, but capabilities for emotional and cognitive functioning. On the one hand, public and private insurance health systems limit themselves to treatments that are 'not experimental', with 'proven effectiveness', 'safe and efficacious' or 'reasonably effective', and a line is drawn between technologies which are legitimate 'treatments' and those which do not meet our health-care needs.⁶ On the other hand, according to some, "[t]o be 'natural' is automatically different from, and better than, orthodox medicine".⁷

The mid-twentieth century was an optimistic age for the medical establishment to which patients entrusted their bodies. At that time most 'alternative therapies' were considered non-scientific, and more of a belief. Recently however, whilst dissatisfaction with orthodox medicine has increased, these therapies have become very popular, and are at the centre of the new concepts of nature, health, the body and the role played by the individual in each of these. Not only it is claimed by proponents of 'alternative therapies' that conventional medicine failed to deliver good health, but also that the dangers presented by side effects of conventional medicine can be avoided by the use of 'alternative' treatments.

The use of non-conventional medicine has increased consistently in the U.K. Rosalind Coward states that "[a]lthough some claim that interest in these therapies has been growing steadily for the last twenty-five years, most practitioners describe an explosion of interest over the last ten years".⁸ As for the situation in the United States, Paul Heelas cites that "a 1994 edition of *Nexus* claims that 'one in three Americans seek alternative health care each year, to the tune of US\$13.7 billion".⁹ Moreover, in a survey published in the *New England Journal of Medicine*, one in three subjects reported having recurred to at least one non-conventional therapy in the previous year. Extrapolating to the total population, in 1990, 61 million Americans used at least one of these non-conventional therapies and 22 million recurred to non-conventional therapy providers.¹⁰ For example, Gerald Weissmann states that "the estimated number of visits to unconventional

⁵ W. Hanegraaff, *Dictionary of Gnosis and Western Esotericism*, Koninklijke Brill NV, Leiden and Boston MA 2006, p. 615.

⁶ N. Daniels, 'Is there a right to health care?' in: H. Kuhse & P. Singer (eds.) *A Companion to Bioethics* (2nd ed.) Chichester, Wiley-Blackwell 2009, p. 368.

⁷ R. Coward, *The Whole Truth. The Myth of Alternative Health*, London: Faber and Faber 1989, p.15

⁸ Coward 1989, *supra*, p. 3.

⁹ P. Heelas, *The New Age Movement. The Celebration of the Self and the Sacralization of Modernity*, Oxford: Blackwell 1996, p.114.

¹⁰ D.M. Eisenberg, 'Unconventional Medicine in the United States - Prevalence, Costs, and Patterns of Use', *NEJM*, 1993-328 (4), pp. 246-252.

medical providers (425 million/annum) exceeded those to all United States primary care physicians (388 million)".¹¹

I.2 'Complementary' and 'Alternative'

The terms 'complementary' and 'alternative' are often used as synonyms, but are not necessarily so. 'Complementary therapies' are those used in conjunction with conventional medical treatment, to make the person feel or cope better with illnesses such as cancer and its concerned treatment. These are directed at providing a sense of well being by relieving anxiety, providing the time, physical contact, and talking-listening, which physicians (lacking time to deal with patients' emotional and psychological needs) do not generally offer.

We will refer to 'alternative therapies' precisely as treatments used 'in place' of conventional medical ones. Currently all conventional treatments must be submitted by law to processes of rigorous testing to prove their effectiveness whereas 'alternative therapies' do not undergo such tests. Some of these 'therapies' are not completely safe and can cause serious side effects. There is no scientific evidence to show that 'alternative therapies' can cure or control cancer, but they can cause serious side effects, and although conventional cancer treatments are not infallible and can also cause serious side effects, to discontinue these could reduce the chances of curing or controlling certain types of cancers. The bioethical problem of whether a person can freely chose between therapies will be approached in section III.3.

I.3 'Natural' and 'Alternative' Attitudes

There is a first frame of mind in the attitudes opposing artificial vs. 'natural' and orthodox vs. 'alternative' as opposing chaos to harmony. Against the inhumanity, invasiveness and unnecessary suffering caused by conventional medicine, the proponents of 'alternative medicines' argue that 'alternative medicines' offer a humane, non-invasive, benevolent good-natured option by means of 'natural' substances. Professionals and institutions of health are seen in the frame of personal interests and academic hierarchy, exerting paternalistic power over the rights of patients to decide, while neglecting human contact and ignoring the individual's feelings and emotions.

In contrast, 'alternative medicines' offer not only personal contact, but also a consciousness of autonomy and a sense of control over the body. There is also a commitment to pursuing a harmonious lifestyle and to finding 'natural' ways of attaining health. So, for the public 'alternative' has become mainstream, and there is an almost complete dissociation between science, medicine and 'nature'. 'Alternative' and 'natural' have become interchangeable, and if it is natural, then by definition it must be good.

Despite morbidity and mortality due to acupuncture "[a]cupuncturists are now petitioning the FDA to remove the 'investigational device' classification from acupuncture needles".¹² Some institutions in science and medicine

¹¹ G. Weissmann, 'Sucking with Vampires', in: P.R. Gross, N. Levitt & M.W. Lewis (eds.), *The Flight from Science and Reason*, New York, New York Academy of Sciences 1996-775, pp. 179-187.

¹² W. Sampson, 'Anti science Trends in the Rise of the 'Alternative Medicine' Movement', in: P. Gross, N. Levitt & M.W. Lewis (eds.) *The Flight from Science and Reason*, New York: New York Academy of Sciences 1996-775, pp. 188-197 (p. 193).

have even begun to accept non-critical postulations towards 'alternative medicines'. The National Center for Complementary and Alternative Medicine, which depends on the National Institutes of Health states that "Acupuncture is considered to be a part of mind-body medicine, but it is also a component of energy medicine, manipulative and body-based practices, and traditional Chinese medicine".¹³ In the publication the terms 'mind-body' and 'energy medicine' are not defined. Moreover, by pointing on the term 'acupuncture' in the sentence "such as using acupuncture in addition to..." a java window opens to explain that acupuncture is "[a] family of procedures that originated in traditional Chinese medicine. [...] It is intended to remove blockages in the flow of qi and restore and maintain health." Again, no definition of the terms 'blockages' and 'qi', and neither explication about the 'flow of qi' nor the mechanisms by which the removal of this blockage restores and maintains health. Some lines below in the same document it is stated that "[o]ther examples of mind-body practices include deep-breathing exercises, guided imagery, hypnotherapy, progressive relaxation, qi gong, and tai chi".¹⁴ This is an example of accepted non-critical postulations which lack a proper definition of terms. No mention is made of the potentially dangerous side-effects of acupuncture.¹⁵

'Natural' has come to be laden with meaning, *i.e.* the absence of evil and the presence of virtue, regeneration as opposed to degeneration, and it has become synonymous with non-technological, not drug-based, non-invasive, non-hostile. 'Natural' is friendly. Now, in this harmonious bias, the notion of healing is very selective, since "[n]o one suggests eating a fresh killed young rabbit on the grounds that its life forces would greatly benefit the consumer. Plants and plants alone embody these mysterious attributes of nature. Gone is any talk of 'nature, red in tooth and claw'".¹⁶ Or for that matter, few would suggest eating a fresh killed chicken on the same grounds, which might be more attainable nowadays. But what about the hot chicken soup with plenty of 'veggies' prescribed by mothers and grandmothers? Is it not an oxymoron? This takes us to another mindset: is it a 'tradition'?

A second frame of mind is the association of nature with tradition. In this frame there is no reference to science, let alone to empirical observations or stochastic events. There is no reference to wildlife, no reference to nature in all things. References are directed inwards, where universal truths can be known by introspection alone, where 'old' becomes 'ancient', thereafter 'traditional' and 'benign'. But do we have evidence of the friendliness of nature, namely, that it is safer and gentler than anything and everything that technology can provide? Then there is a bias within the bias, because ancient, traditional techniques, are not natural but a product of man. There is, for instance, an absence of appropriate controls for acupuncture in clinical trials. There are placebo effects in which several types of fraudulent acupunctures by untrained practitioners have been as effective as traditional acupunctures for the relief of pain. "There is no conclusive scientific basis for the concept of meridians and no high-quality evidence testifying to the

¹³ National Institutes of Health. Bethesda, Maryland, USA. National Center for Complementary and Alternative Medicine 'What Is Complementary and Alternative Medicine?' D347 Updated April 2010. <http://nccam.nih.gov/health/whatiscam/#note1>. Date of access: January 19, 2011.

¹⁴ Therefore assimilated to 'alternative medicines'.

¹⁵ Cf. Studd R. C., Stewart P. J. 2004, 'Intraabdominal Abscess after Acupuncture.' *N Engl J Med* 350:1763; Chiu E. S., Austin J. H. M. 1995, 'Acupuncture-Needle Fragments' *N Engl J Med* 332:304; Vittecoq D. *et. al.* 1989, 'Acute HIV Infection after Acupuncture Treatments' *N Engl J Med* 320:250-251; Mazal D. A., *et. al.* 1980, 'Bilateral pneumothorax after acupuncture' *N Engl J Med* 302:1365-1366; Darouiche R. O. 2006, 'Current Concepts: Spinal Epidural Abscess', *N Engl J Med* 355:2012-2020.

¹⁶ Coward 1989 *supra*, p.25.

benefits of acupuncture beyond a placebo effect".¹⁷ Quoting Rosalind Coward, "[a]gain what is at work here is a tautology".¹⁸ 'Natural' is safe, demonstrated by techniques originating hundreds or thousands of years ago which are still being used today. 'Natural' is therefore a metonymy, it is a slipping reference to longevity, 'natural' is a very hidden reference to immortality.

II. Bioethics

II.1 On False Practitioners and Marketing

Since the business world discovered 'natural therapies' in the 1980s, these have been turned into a 'Self'-spirituality. Attention has been directed from patients to 'products' which are supplied precisely because there is a market. Commodities can range from mega-vitamins to books, as well as "tapes, videos, CDs, sophisticated electronic equipment, crystals, healing potions, tarot decks and transformational games".¹⁹

Some firms may very well apply the language of 'nature' for publicity whilst being oriented to the artificial market. They propose, among other 'consumer-friendly' forms of health, yoga without much spirituality to restore harmony and weight-loss herbal extracts without proper dietary counselling. That is to say that the *New Age* and 'alternative therapies' are "no longer a matter of 'cults' as they are of 'culture'".²⁰ 'Alternative therapies', as well as the *New Age*, cannot claim to be extra cultural or independent of the economy, nor can they plead for a universal truth. In fact, they are market-oriented, bent on creating the need to resort to 'light' remedies against everything in an un-critical society, be it disease, suffering, adversity, aging, or matters of real life.²¹

II.2 On the Vision of Science and Non-rational Thought

A case for 'alternative therapies' is that problems, whether biological, psychological or social in nature, are seen as diseases that require therapies so as to harmonise the energies of all things. This cognitive vacuity and contradictions arise from a disenchantment with science. 'Alternative therapies' are an alternative quest for knowledge by means of non-rational thinking. Here resides the bioethical problem, specifically, that the supermarket of values beguiles well-intended people with miraculous therapeutic products and do-it-yourself manuals. In 'alternative therapies' (such as meditation, homeopathy, herbal therapies, chiropractic, aromatherapy, macrobiotics, spiritual healings, etc.) there is a conflation of the physical and the mental, and given that the forces governing the universe are spiritual in the same manner that we are spiritual, it is then worth asking what disease is.²²

¹⁷ D.M. Marcus, 'Trick or Treatment: The Undeniable Facts about Alternative Medicine', *N Engl J Med* 2008-359, pp. 2076-2077. (Review of: S. Singh & E. Ernst, *Trick or Treatment: The Undeniable Facts about Alternative Medicine*, New York: W.W. Norton 2008.)

¹⁸ Coward 1989, *supra*, p. 35

¹⁹ Heelas, *ibid.*

²⁰ *Idem*, p. 128

²¹ R. Wallis, *Shamans/neo-Shamans: contested ecstasies, alternative archaeologies, and contemporary pagans*, New York: Routledge 2003, pp. 29, 228.

²² R.J. Brenneeman, *Deadly Blessings: Faith Healing on Trial*, Buffalo, N.Y.: Prometheus 1999, p. 18.

II.3 On the Discourse of 'Alternative Therapy' as a Word-Game: the Case of Laetrile

Word-games are another problem for bioethics. Ernst Krebs, Jr. played such a game against the Food and Drug Administration (FDA) with laetrile, a high-toxicity compound containing cyanide, and claimed that it possessed curative properties not only "for all forms of existing cancer, but also for 'preclinical' cancer".²³

After his claim was exposed as scientifically invalid, he renamed laetrile to vitamin B17, in order for it to be considered as a vitamin (which it is not) and fall out of the purview of federal legislation concerning the marketing of drugs.²⁴ In a retrospective study by the National Cancer Institute (NCI) of 93 cases out of the 70,000 in which laetrile was used, after eliminating 26 for lack of documentation, the rest were compared to an equal number of individual cases and analysed by a panel of 12 oncologists who were 'blinded' to the results of the treatments administered. Of the 160 treatments evaluated (68 laetrile, 68 chemotherapy and 24 'no treatment') "[t]he panel judged six laetrile courses to have produced a response (two complete and four partial). These results allow no definite conclusions supporting the anti-cancer activity of laetrile".²⁵

Dr. Krebs had yet another card: the Committee for 'Freedom of Choice'. " 'Freedom of Choice' became a slogan that removed the perception of quackery from ineffective cancer remedies".²⁶ As in the case of laetrile, fraud hides under *ad hoc* redefinitions, which may include wordings such as 'alternative', 'non-orthodox', 'non-conventional', 'complementary', 'holistic', 'organic', 'metabolic therapy', 'homeopathy', 'essence', or even 'change of paradigm'. Some of the so-called 'natural products' border the frontier of illegality and it is here where we must ask whether the State can impose limits on spiritual practices; the border is faint and word-games have side-effects.

Another preferred technique is the image-game, notorious for exhibiting celebrities, show-business people, or 'patients' who give testimonials about how they keep themselves healthy, slim, and young. Some of these image-games can be even more dynamic, as will be discussed in the next section.

III. The Law

III.1 The Law and Real Life

What happens when a personality of the media endorses a guru and people follow the game? Shirley MacLaine describes her transformation from actress to political activist to professional guru. MacLaine narrates how Alex Orbito, whom she met in Las Vegas, extracted 'negative energy clots' from people. Among the spiritual and financial profits from this encounter are several books, of which *Out on a Limb* is the most famous, and a TV show with the

²³ I.J. Lerner, 'Laetrile: A Lesson in Cancer Quackery', *CA Cancer J Clin* 31 1981-31 (2), pp. 91-95. DOI: 10.3322/canjclin.31.2.91

²⁴ *Ibid.*

²⁵ N.M. Ellison, D.P. Byar & G.R. Newell, 'Special Report on laetrile: the NCI laetrile Review. Results of the National Cancer Institutes Retrospective Laetrile Analysis', *N Engl J Med* 1978-229 (10), pp. 549-552.

²⁶ Sampson 1996, *supra*, p. 189.

same name. According to Orbito, westerners feel the need for 'physical' proof, and as it turned out, the 'negative energy clots' were actually pieces of gauze dipped in chicken blood and wrapped in skins.²⁷ And what about those who desperately ill flew to the Philippines seeking treatment?

When show-business celebrities or gurus promote 'alternative therapies', these could well be means to ends other than altruistically promoting health; means to rating, to money from sponsors of miracle products and self-help best-sellers, means to power. If money were not the issue here, let us just remember Bhagwan Shree Rajneesh Osho "who once accumulated 93 Rolls Royces".²⁸ He was "a 'material spiritualist' [...] claiming that 'the materially poor can never become spiritual'".²⁹

III.2 Acts, Facts, Criteria and a Possibility

"There is probably no other field in which law and ethics are so strongly intertwined as in biomedicine [...] [and] every bioethicist must have a basic understanding of law".³⁰ These connections with the law imply authorities, norms and sanctions, connected with different disciplines, in science, psychology and sociology. Law emphasises, partly for reasons of proof, external acts rather than internal intentions, whereas many ethical theories do the opposite.³¹ But the motives and personal intuitions, preferences or intentions approached by ethical theories also have to be taken into account when applying the law. In cases of 'alternative therapies' there can be differences in the criteria when dealing with different bodies of law, *i.e.*, contract or criminal law, partly because attitudes and intentions of the perpetrator(s) can also differ for a given fact.

There are two perspectives on law: one views the law as a system, whereby judges decide cases on the basis of their understanding of the legal rules and principles; from the second standpoint, law is a process. Both views are connected in a dialectic interplay where different perspectives can produce misunderstandings.³² And this is particularly so, in our position, when the law meets medicine. As an example, let us consider the healing practices of a medicine-man autochthonous of Mexico, a country where the law states that the free exercise of a profession is permitted, provided it is licit. The law does not make an explicit distinction as to which case a healer, herbalist, or bone-fixer can practice traditional pre-hispanic medicine, and in which case she will be committing 'therapeutic' fraud. Many characteristics of the law, as well as acts and facts, are related to particular cultures or to the development of the legal system in a given framework. The fact that health law pertains to various fields, including medicine and bioethics "creates many internal tensions and inconsistencies".³³ Nevertheless, law has to evolve with medicine and bioethics in order to solve new problems, or the same old problems seen in light of new and not-so-new technologies or world visions. This is no easy task, since legislature depends, among other things, on expert advice, be it *via* expert panels or the consensus of advisory committees, which can take a long time, as the laetrile case attests to. Surely, every effort must be made to meet our current needs, but it would

²⁷ Brenneman 1999, *supra*, note 18, p. 129.

²⁸ Heelas 1996, *supra*, p. 95.

²⁹ *Ibid.*, p. 68.

³⁰ W. Van der Burg, 'Law and Bioethics', in: H. Kuhse & P. Singer (eds.) *A Companion to Bioethics* (2nd ed.) Chichester, Wiley-Blackwell 2009, p. 56.

³¹ *Idem.*, p. 57.

³² *Idem.*, p. 58.

³³ *Ibid.*

be illusory to do so as they arise. Experience is needed, but it is retrospective and requires time.

A possible alternative could well be to go beyond the 'fixed' meaning of the norm, since there is no 'heaven of concepts' for the judges in particular cases, but the question arises "[i]f propositions on meaning in general are not inter-subjectively valid, how could propositions on the meaning of a norm be so? [...] Legal indeterminism can stem from many causes, but among the most prominent is the vagueness of language".³⁴ And this vagueness is taken advantage of by pseudo-'alternative' healers. Now, "interpretation begins with a question and ends with a choice [...] by means of argument".³⁵ But when application of the legal norm can be incompatible with its wording, as might be the case of the Mexican medicine-man, this application of the law ceases to be a straightforward interpretation and could become "a further development of the law" [...] [by means of] analogies which extend the application beyond the scope of the possible meaning, or teleological reductions, which constrict the application to a smaller scope than the meaning allows".³⁶

Now, "interpretations that are impossible on the basis of the wording are not [should not] necessarily [be] ruled out".³⁷ The judge could decide on the basis of good sense and the mores of the community, while at the same time rely on the interpretation of motives and personal intuitions, preferences or intentions of the alleged perpetrator(s), as well as draw conclusions from her experience in former cases involving 'alternative therapies', thus marrying the standpoint of objectivity of acts and facts with the possibility of further development of the law, and these differences in criteria could well make a difference in bioethical judgment.³⁸

Of course, this necessarily presupposes an adequate register of cases, and a double attitude from the judge, epistemic and bioethical. Within time, the proper analogies could be drawn and taken into account by the legislator.

III.3 The Law and Vulnerability

A short word about vulnerability, defined as "a person's susceptibility, whether as a result of internal or external factors, to inducement or coercion [...] or to harm, loss, or indignity".³⁹

Vulnerability is important because it can subject individuals to exploitation, which in turn is a form of maleficence, since it affects people's interests and life projects. Vulnerability, then, is always a bioethical issue when addressing 'alternative therapies' given that a person is not free to choose in a situation of extreme distress when susceptible to added harm or loss, or to indignity when she suffers to get hold of a remedy against a disease, especially when incapacitating, or painful, or when her emotional vulnerability is due to being

³⁴ M. Klatt, *Making the Law Explicit. The Normativity of Legal Argumentation*. Oxford and Portland OR, Hart Publishing 2008, p. 2.

³⁵ *Idem.*, p. 4.

³⁶ *Idem.*, p. 5. [words in brackets are mine].

³⁷ *Idem.*, p. 6. Matthias Klatt refers to the German doctrine of the limits of the wording (*Theorie der Wortlautgrenze*) and the German theory of legal 'argumentation' [words in brackets added by AC].

³⁸ Cf. Van der Burg, 2009, *supra* p. 56, 57.

³⁹ T.L. Beauchamp & J. F. Childress, *Principles of Biomedical Ethics* (6th ed.), New York: Oxford University Press 2009, p. 254.

sentenced as incurable, as terminal. When under the vulnerability of distress a person cannot be rational and free to choose.

'Alternative therapies' can harm in active ways, *i.e.* being the cause of unwanted side effects, as in the case of laetrile, and there is no scientific or medical evidence to show that 'alternative therapies' can cure cancer. Some 'alternative therapies' are unsafe and can cause serious side effects or may interfere with conventional medical treatment. For example, the side effects of the laetrile treatment are like the symptoms of cyanide poisoning: "nausea and vomiting, headache, dizziness, blue colour of the skin due to a lack of oxygen in the blood (cyanosis), liver damage, abnormally low blood pressure, trouble walking due to damaged nerves, fever, mental confusion, coma, death".⁴⁰

'Alternative therapies' can harm in passive ways as well, *i.e.* people giving up conventional cancer or AIDS treatments reduce their likelihood of cure or control. Some 'alternative therapies' are very ingeniously promoted to persuade people to think that they work very well, but these claims are not supported by scientific evidence, and they give people false hope.

'Alternative therapies' can become an inducement for undue profit, therefore, in any health-care system, choices will have to be made by fair, publicly accountable, decision-making processes.⁴¹ Bioethics has to be oriented towards the responsibility of the state and social institutions, and their legitimacy for the approval, research, control, criteria of inclusion or prohibition, and standards of quality of health care techniques or products in view of their potential beneficence or maleficence for those who are vulnerable. For instance, "[n]o controlled clinical trial (a trial including a comparison group that receives no additional treatment, a placebo, or another treatment) of laetrile has ever been conducted".⁴²

Conclusion

The term 'alternative therapies' brings about a cognitive vacuity that induces a non-rational mode of thought, rich in symbolic and spiritual experiences. This mode of thought associates life with a meaning of pureness, harmony and health.

Some 'alternative therapies' entail danger to vulnerable people, by inducing an uncritical illusion of harmless remedies against disease. The object of some of these 'alternative therapies' is not always health, rather, undue profit in the face of a need.

It is important not to allow people, the media, or other institutions to use a style of thought as a market niche, where legitimate spiritual needs can be exploited. To take advantage of the ingenuity and vulnerability of people by making promises never attainable, thus never to be kept, is a game of power – it is unethical.

⁴⁰ <http://www.cancer.gov/cancertopics/pdq/cam/laetrile/HealthProfessional> (Date of access: Jan. 22, 2010).

⁴¹ N. Daniels, 'Is there a right to health care?', in: H. Kuhse & P. Singer (eds.) *A Companion to Bioethics* (2nd ed.) Chichester: Wiley-Blackwell 2009, p. 369.

⁴² <http://www.cancer.gov/cancertopics/pdq/cam/laetrile/HealthProfessional/page5> (Date of access: Jan. 22, 2010).

Very clearly stated, we do not want to deny the right to freedom of belief, but it is important not to place medical research (with all of its imperfections) in the same plane of a perspectivism where randomised, controlled, double-blinded studies have no place to evaluate treatments, that is to say, a perspectivism without quantification, controls of variables or comparisons of data, *i.e.*, where researchers, 'eastern' or 'western', cannot speak a common inter-subjective language.

In order to obtain knowledge and evidence of their mechanisms of action, more trials have to be conducted by mainstream science, but also by proponents of 'alternative therapies', who currently seem to be more willing to believe and defend their views on the ground of incommensurability, rather than on facts.

Finally, we cannot claim that everybody must understand scientific knowledge, but we can demand that science be taught, so that it is better understood, and not feared.