



UNIVERSITÉ DE MONTRÉAL

**The bridging of pluralistic visions of science and ethics for bioethics - Tibetan  
medicine as compared with the Western research on longevity and human genetic  
enhancement**

par

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Cette thèse intitulée:

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## RÉSUMÉ

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La thèse examine les liens entre la vision pluraliste de la science et l'éthique de la médecine tibétaine et les nouvelles pratiques en médecine occidentale, soit la longévité et la recherche sur la génétique amélioratrice. Elle cherche à cerner l'apport que la médecine tibétaine peut apporter aux recherches occidentales sur la longévité et la génétique humaine amélioratrice. Elle traite donc d'un enjeu social clé et du débat qui s'y rattache. La découverte et la description sont centrales à la méthodologie et informent l'analyse.

Nous avons examiné dans un premier temps, les travaux de recherche sur la longévité reliée à la génétique amélioratrice (mémoire et muscles). Nous nous sommes penché également sur les fondements de la médecine tibétaine en tant que système intégré. Pour ce faire, nous avons traité des notions telles que la santé, l'identité, la perfection et l'immortalité. Notre cadre conceptuel repose sur la théorie bouddhiste de l'interdépendance qui se caractérise par la formulation de catégories qui ensuite sont synthétisées dans l'essence; les deux niveaux d'interprétation de la théorie sont décrits en détail avant de passer à une comparaison avec la notion de complexité occidentale.

La médecine tibétaine de fait présente un système où l'éthique et la science sont intégrées et se prête bien à une comparaison avec la vision pluraliste de la science à partir d'une perspective éthique/bioéthique. Les commentaires recueillis auprès des experts nous ont permis de cerner comment la science, l'éthique et l'amélioration de la longévité sont définies au sein des deux paradigmes de l'Est et de l'Ouest.

Nos résultats montrent six points qui se dégagent au terme de cette recherche permettent de jeter un pont sur la vision pluraliste de ces paradigmes. Ceux-ci transcendent les points de vue doctrinaux individuels de religions ainsi que du monde scientifique occidental. Plus que tout, ils laissent entrevoir un cadre de

références novatrices qui contribuera à la prise de décision à l'égard de questionnements bioéthiques.

**Mots-clés** : longévité, génétique humaine amélioratrice, médecine tibétaine, bioéthique, interdépendance des phénomènes, vision pluraliste, recherche qualitative.

## **ABSTRACT**

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This thesis identified and examined the links between the pluralist vision of Western science and the ethical studies of Tibetan medicine, and sought to determine how the bridging of pluralistic visions with Tibetan medicine might contribute to Western research on longevity and human genetic enhancement. The investigation focused on the current debate in these latter two fields. Discovery and description were central to the methodology and informed the analysis.

Initially, we examined the research on longevity related to human genetic enhancement (memory and muscle), which addresses the limitation of the physical body, and explored its ramifications through such concepts as healthism, identity, perfection and immortality. Then examining the foundation of Tibetan medicine as an integrated system, we contrasted contemporary longevity research with the Eastern model, in which individual existence and experience escape limitations. We further addressed brain science research and the Tibetan medicine continuum, the unique quality of the latter being that the mind is used as a tool and is philosophically linked with Buddhism. Finally, utilizing the Buddhist conceptual framework of the interdependent theory, which is characterized by formulating categories of phenomena that are then synthesized into their essence, the theory's two levels of the interpretation of phenomenal reality were described in detail before moving to a comparison with notions of Western complexity.

Tibetan medicine employs an integrated system in which ethics and science are interwoven, providing the base for a comparison with the pluralist vision of science from an ethics/bioethics perspective. The insights gathered from interviews with experts in various fields highlighted how science, ethics and longevity enhancement can be addressed within these two paradigms.

The research findings led to six points that bridge both the Eastern and Western paradigms by transcending the doctrinal standpoints of individual

religions, ethical systems and sciences, and laying the basis for an innovative framework by providing concrete reference elements for decision-making in regard to bioethical questionings.

**Keywords:** bioethics, longevity, human genetic enhancement, Tibetan medicine, interdependent arising, pluralistic visions, qualitative research.

## TABLE OF CONTENTS

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<b>RÉSUMÉ</b> .....	III
<b>ABSTRACT</b> .....	V
<b>LIST OF TABLES</b> .....	X
<b>LIST OF FIGURES</b> .....	XI
<b>ACKNOWLEDGMENTS</b> .....	XIII
<b>INTRODUCTION</b> .....	1
<b>CHAPTER 1: SETTING THE CONTEXT</b> .....	7
Introduction .....	7
1.1 Two theoretical paradigms, object and methods.....	9
1.1.1 A brief history of longevity and genetic enhancement, and the emerging bioethics.....	9
1.2 The Tibetan medical system.....	13
1.2.1 The Tibetan worldview.....	14
1.2.1.1 The historical dimension of Tibetan lineages .....	17
1.2.2 The Tibetan integrated medical system .....	20
1.2.3 Tibetan medical system: the Four Tantras.....	23
1.2.3.1 Characteristics of a Tibetan physician: the ethics of altruism.....	27
1.2.4 What bioethics can learn from the Tibetan medical system .....	31
1.3 Current research in longevity and genetic enhancement.....	39
1.3.1 Musculature and memory .....	39
1.3.2 Longevity and enhancement .....	45
1.4 The research question.....	54
<b>CHAPTER 2: THEORETICAL HORIZONS</b> .....	58
Introduction .....	58
2.1 Interdependent Arising.....	58
2.2 Reason for our theoretical choice.....	66
2.3 Fundamental characteristics and definition.....	67
2.4 Application to our research .....	70



<b>CHAPTER 3: COMPARATIVE BIOETHICS</b> .....	73
Introduction .....	73
3.1 Natural laws: Aquinas, Kant and Rawls.....	74
3.2 First principle: the certainty of suffering.....	77
3.3 Second principle: the origin of suffering.....	82
3.4 Third principle: the cessation of suffering and bioethics principles contrasted	86
3.5 Fourth principle: leading to the cessation of suffering .....	91
3.6 Thoughts on comparison .....	96
<b>CHAPTER 4: METHODOLOGY</b> .....	99
4.1 Research context and concerns .....	99
4.2 Qualitative framework.....	100
4.3 Triangulation pertinence .....	100
4.4 Research frontiers.....	101
4.5 Sampling and respondent selection .....	102
4.6 Research tools development.....	109
4.6.1 Consent form and research outline .....	109
4.7 Data collection .....	110
4.8 Stage of analysis.....	111
4.8.1 Analytical process.....	111
4.8.2 Codification and categorization .....	114
4.8.2.1 Towards the bridging of pluralistic visions.....	116
<b>CHAPTER 5: THE BRIDGING OF PLURALISTIC VISIONS</b> .....	117
Introduction .....	117
5.1 The Tantra of Medicine.....	118
5.1.1 The Tantra of Medicine: an introduction .....	118
5.1.2 The Tantra of Medicine: a spiritual system .....	121
5.1.3 The continuum .....	122
5.1.4 The body-mind connection .....	124
5.1.5 Tantric methods for longevity .....	126
5.1.5.1 Tantra of medicine: the subtle bodies .....	129
5.2 Research and science.....	131
5.2.1 The atomist perspective of science .....	132
5.2.1.1 From integrative medicine to interdependency.....	133

5.2.1.2 A view of contrast.....	135
5.2.2 Converging point .....	136
5.2.2.1 The systematic mind approach.....	138
5.2.2.2 Connecting spirituality and science .....	142
5.2.3 Longevity and enhancement .....	144
5.3 Ethical pluralism .....	149
5.3.1 An integrated bioethics .....	150
5.3.2 Shared ethics and integrating ways of knowing .....	152
5.3.3 Four basic concepts.....	159
5.4 Bridging visions .....	165
5.4.1 Basic insight for a bioethical framework .....	166
5.4.1.1 A wide inclusive perspective and harmless practice.....	167
5.4.1.2 Middle beyond extremes and the unbiased mind.....	169
5.4.1.3 The right mental outlook: love, compassion and responsibility .....	171
<b>CONCLUSION</b> .....	176
<b>BIBLIOGRAPHY</b> .....	193
<b>ANNEX 1: INTERDEPENDENT ARISING PROCESS</b> .....	I
<b>ANNEX 2: ACKNOWLEDGES THE INTERDEPENDENT THEORY AND INCLUDES THE WESTERN TRAITS DISCUSSED IN CHAPTER 2</b> .....	II
<b>ANNEX 3: GLOSSARY</b> .....	III
<b>ANNEX 4: ETHICS CERTIFICATE</b> .....	V
<b>ANNEX 5: CONSENT FORMS</b> .....	VI
<b>ANNEX 6: INTRODUCTION TO PARTICIPANTS</b> .....	VIII
<b>ANNEX 7: INTERVIEW QUESTIONS FOR TIBETAN EXPERTS AND WESTERN BIOETHICISTS</b> .....	IX
<b>ANNEX 8: BASIC SECULAR REFERENCE POINTS</b> .....	X

## LIST OF TABLES

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Table I – Six inner consciousness.....	61
Table II – Participants: general description .....	103
Table III – Themes and concerns identified by experts .....	115
Table IV – Human genetic enhancement and longevity’s interests and concerns .....	175

**LIST OF FIGURES**

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Figure 1 – Overview of recruitment process ..... 108

*With immeasurable gratitude to the late His  
Holiness Penor Rinpoche, who entered his  
final stage of meditation on Friday, March 27,  
2009 – Great Perfection Master, Victorious  
One's essence, may I find the means to  
constantly practice your last word –  
Awareness – your fortunate student!*

Orgyen Dzomkyi

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---

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## INTRODUCTION

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In this era of exceptional technological expansion, bioethics interconnects with several emerging technologies and sciences that, openly seek to alter natural human development, such as in the case of human genetic enhancement, and bioethics further connects with non-scientific disciplines such as ethics, law, philosophy and theology, as well as humanities.<sup>1</sup> Human genetic enhancement is the capacity to modify the essential human being. The need for objectivism and the expression of ethical pluralism in this context is amplified by the prospect of the possible interpretation and reconstruction of beings. This is part of a problem with such interventions that has already created intense debate.

At present, North America is only one venue for the ongoing ethical debate surrounding longevity and genetic enhancement. This debate encompasses evolving, multidimensional levels of analysis as scholars and bioethicists seek to explain the differences between a technological novelty which represents a true medical cure, and a genetic alteration that aims at enhancement. Enhancement is defined as building up what we have on hand and that already exists (Baertschi 2011). The differentiation, however, is between medically legitimate needs and emerging luxury services aimed at physical enhancement and a notional perfect standard. The Western economic benefits derived from enhancement practices are ever more important in the context of broader societal issues. These developments can now be found in applications within numerous sectors and potentially represent very large costs to the health system, challenging healthcare research allocations.

Regarding longevity, the current medical norm would be modified in order to accommodate age and gender, and such modifications would become the new reference point in order to justify new practices as appropriate medical

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1 Hottois (2001), p. 125.



interventions. The medical system would then have to define aging as a pathological problem. This approach relies on a decision-making process based on relative objectivity, a strategy used by for-profit insurance companies when assessing the necessity of a medical treatment.

Currently, longevity and anti-aging practices fall under what is defined as 'mild treatment and products.' In 2005, McConnel mentioned that one needs to proceed with care because the full scope of scenarios related to human genetic enhancement, genomics investigation, and their related methods, instruments and products have not, up to now, emerged.<sup>2</sup> Other enhancement technology scenarios are also an ongoing discussion (Sade 2008). Nonetheless, in light of the products already available and the present demand for them, the public can no longer deny their impact on society and the need for reflection before developing policies.

Some authors suggest that the definition of boundaries might take two forms: 1) in sociological terms, as discussed in this introduction, society would assess the scope of the medical practice and define norms for the individual, and 2) consider an expression from a perception of disease that is contrary to enhancements that do not relate to healing. Neither scenario would likely create a definitive list of acceptable and unacceptable enhancements, leaving many gray zones and setting the stage for future problems (Post 2004b).

In the first scenario, the market for longevity treatments and anti-aging consumer goods is not only developing quickly, its lucrative prospect makes it even more attractive. This clearly is the basis for pushing the limit of what is a norm and, further, distinguishing between higher-income individuals (who can afford the new products and services) and others, calling into question the essence of justice and equality in society. Thus, the societal backdrop for longevity and human genetic enhancement may be different when these technologies become available. In the second scenario, both physician and patient are in agreement that the condition is a

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2 McConnel (2005), pp. 59-62.

disease and see the treatment as a useful and proper option. Enhancement within this definition would be beyond the limit of the practitioner's repertoire. However, patients' value systems about longevity and enhancement have changed the characteristics marking the line between medical and nonmedical services. In an attempt to support the patient's vision of human perfection, many physicians are embracing the 'mild' enhancement line of treatment and services refocusing away from their general practice.

Political discussion with respect to the implications of these new products and future ones in the area of longevity and enhancement has concerned not only our present competitive society and its desire for perfection and control that fosters these technologies, it is also creating the challenge of a critical policy response (President's Council on Bioethics (Bioethics 2003)). The policy challenge partly concerns research and development, but also the use of, and access to, the technology. The long term well-being for humanity and nature are important considerations for all policy and its utilization for societal projects.

Western bioethical approaches to this issue oscillate between two extremes: concrete casuistry and formal universalism (Hottois 2001). In between these two extremes potentially lies a different, integrated approach. An objective methodology provided the motivation for discovery in this research where we wanted to challenge our way of seeing the world and at the same time explore other authentic, complementary methods for arriving at solutions to the ethical challenges inherent in longevity and enhancement. Our interest brought us to investigate another model outside of current Western knowledge, since bioethical questioning concerns conflicting values envisaged from ideological horizons that are not necessarily uniform. Our study investigates the discourse and practice of another paradigm — the one of Tibetan medicine, with its ancient wisdom, science and ethics rooted in Buddhist philosophy — in order to clarify and explain its approach to a Western audience and to expand the options for decision making.

Our aim is to investigate the insightful reasoning methods for health, longevity and medicine, which integrate the physician/individual, the community,

society and the universe, through the lens of a cycle known in Buddhist philosophy as ‘dependent origination,’ which we also refer to in this study as ‘interdependent theory.’ More specifically, what fascinates us is understanding the ultimate nature of mind as it is incorporated into the Tibetan medical framework. We chose the approach of this ultimate non-dual view (otherwise known as the ‘wisdom of emptiness’) in order to see if it can provide an alternative means to facilitate a common bridging element to contribute to Western research on longevity and human genetic enhancement and bioethics.

Bioethics borrows from many conceptual frameworks that question and challenge societal ideas, while searching to better define and refine its approaches. Interdependent theory is characterized by establishing groupings or stages which, when synthesized, blend into their essence to reveal a pervasive, non-dual reality (HH Dungse Thinley Norbu 2006).<sup>3</sup> This ultimate view is of particular interest since it is not currently to be found within science or bioethics. The interdependence model we introduce here describes the different levels of understanding in the Buddhist view of non-duality and explores how they may contribute to shaping an innovative framework for bioethics. The model also lends itself to issues of longevity and increased life span because it describes both the cognitive process of the human mind as it interrelates with longevity, as well as providing a unique view of the different stages of life from birth to old age, sickness and death. Health and longevity are keys in Tibetan medicine as supports to both meditation and abiding in the ultimate state of the mind.

In the Western world view, one finds, among major philosophical categories, ‘eternalism,’ with its related notions of (sometimes transcendent) object and subject, and ‘nihilism,’ here defined as a strictly materialistic view devoid of transcendent reality. The Buddhist concept of emptiness or non-duality is distinct from both of these views. The concept of emptiness—internal wisdom—and compassion as its primary manifest quality, presents a precise view and implies

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3 HH Dungse Thinley Norbu (2006), p. 3.

dependent origination as the system through which all phenomena come into being. Viewing everything in terms of interconnected networks, rather than in terms of autonomous continuum, imparts the characteristics for a robust sense of ethical responsibility since all actions create inevitable and exacting consequences. This will serve as the basis for discovery and inquiry.

Since we are exploring and comparing bioethics/ethics and important medical and scientific understanding related to longevity, enhancement and perfection, our study aims at establishing commonalities with, and an expansion of, the Western body of knowledge. We further explore the ethical landscape around aging, memory loss and personal identity as it relates to the psychological, emotional and spiritual being. This exploration then leads to an engagement with another area of contribution to bioethics through looking at the physician-patient relationship, care ethics and the unique way these are framed in Tibetan medicine. Finally, we investigate the role of compassion and how bioethics can gain from the unique approaches to this central quality found within Tibetan medicine.

Considering these two paradigms together—Tibetan medicine and Western science—will uncover bridges to pluralistic visions. We will begin our investigation by presenting some of the common elements to be found within both paradigms, and show how they lead to broader bioethical horizons.

This thesis is comprised of five chapters. Chapter 1 provides the context for two theoretical paradigms, their objectives and methods. It examines contemporary Western research on longevity, discusses human genetic enhancement, and introduces the traditional Tibetan system of medicine and its fundamental text, the ‘Four Tantras—Essence of Ambrosia Secret-Instruction Tantra on Eight Branches.’ The chapter also addresses research on memory and muscle and concepts such as healthism, identity, perfection and immortality; and questions views about the natural order.

Chapter 2 further develops the theoretical horizons by presenting the interdependent theory (dependent origination), providing an account of this basic

Buddhist philosophy and comparing the system with modern complex system theory in addressing complex realities and definitions. The axiological analysis from our theoretical choice is interesting in itself as it helps operate, without being subordinated to, precise immediate application. The aim is to clarify concepts, expose pre-suppositions and explain values in the presence of supporting arguments and converging methods within the two paradigms.

In Chapter 3, we compare bioethics and insights provided by scholars and experts in order to find additional links and further articulate, on the basis of the Buddhist teaching on the Four Truths, the theory of the Tibetan paradigm. To deepen the Western bioethical context, in this section we compare Kant's subjective certainties, Aquinas's natural laws and Rawls's social contract and set about to discuss them in relation to the Buddhist law of karma, or intercausal action. This will expand the existing body of knowledge by introducing concepts that have not been addressed or may be missing from the ongoing debates in bioethics.

Chapter 4 presents our fieldwork and the steps of our methodological progress. It includes the research context and concerns, the qualitative framework and triangulation pertinence as well as our research frontiers, the sampling and respondent selection, stages of analysis and the analytical processes we used to carry out our research and obtain our results.

Chapter 5 synthesizes the research findings. Here, we further discuss longevity and human genetic enhancement research in relation to the tantra of medicine, Western scientific method and ethical pluralism. In this chapter, we further validate, in the bridging section, the key elements taken from both paradigms to establish guidelines for decision-making in Western research and in the field of bioethics.

## CHAPTER 1: SETTING THE CONTEXT

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### Introduction

This thesis is in the field of bioethics with a specific emphasis on issues raised by the quest for health as they relate to longevity and human genetic enhancement, and with a special focus on muscle and memory. This is an emerging field in bioethics in the wake of recent developments in enhancement medicine. In light of the complexity of the ethical issues raised, a valid question, then, is whether these issues could not in part best be understood through a cross-comparative approach with another body of medical knowledge. We look therefore to Tibetan medicine, and its framework of medical ethics based on a distinct epistemological ground, in order to establish if it can help throw new light on bioethics, especially in relation to longevity and human genetic enhancement. Can a discipline rooted in the Cartesian duality of subject and object, mind and matter, learn from a science characterized by the absence of radical separation among philosophy, ethics and spirituality?

The comparative approach also leads to a discussion of a conceptual bioethics framework with views of universality and relativism, or yet even principlism and interdisciplinarity, in the choice of the concept. The field of bioethics itself is being questioned in what is qualified as a failure to satisfactorily address the plurality of diverse structures for ethical reflection (Turner 2009). The failure of the principlist system of bioethics based on the four moral principles of autonomy (or free will); beneficence (or to do good); non-maleficence; and justice equity in benefits and obligation has nonetheless proved that the lack of a shared mode of normative analysis provided the space for the multitude of bioethics that has taken place (Turner 2009).

It is important to note that while bioethics aims at being empirical, its interdisciplinarity presents a difficult context for empirical and normative legitimacy (Hurst 2009). It also presents a methodological difficulty in understanding cross-cultural ethics while searching for basic rules of procedure (Keown 2001). The hope for a common language has thus far failed in terms of the lack of a widely accepted method, nonpartisan and secular approaches, theory or decision-making framework, or creating a collection of means with diverse but harmonizing tools (Turner 2009).

For Keown (2001), bioethics cannot be based either on comparative ethics supported by personal or cultural preferences.<sup>4</sup> However, for Sommerville (2006), it is the sharing of commonalities and re-instating the historical and cultural dimension of ethical inquiry that will promote shared ethics.<sup>5</sup>

How can interdependency and non-traditional ethics expand bioethics? While Buddhist ethics prioritize compassion as the fundamental principle and all other principles stem from it, bioethics (and its underlying Western ethics) view ethics in a more modular way, wherein no one principle is prioritized. Further than adding more principles such as compassion and recognition of greater interconnectedness of things, the perspective of Tibetan medicine and Buddhist philosophy also presents a case of suggesting more radical changes in its philosophical outlook about reality. This is the question our experts ultimately answer when addressing the pluralistic view in Chapter 5. Can bioethics expand its intellectual and conceptual resources by engaging with a tradition such as the Tibetan medical system? Moreover, what particularly can a system in which mind and matter, philosophy, ethics and spirituality, among which ultimately no distinction is made, offer to the prevalent relativism of much of modern Western thought?

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4 Keown (2001), p. 21.

5 Sommerville (2006), pp. 15-17.

Genetics also allows us the chance to reflect on the drive for improvement and perfection in Western culture. The ethical dilemma here is of greater concern than mere technological innovation.

This chapter is comprised of five sections. In the first section we present the state of longevity and genetic enhancement research, two theoretical paradigms drawn from Tibetan medicine and Western research, the object focus and methods. We present the Tibetan medical system in a second section, and a third section explains the current longevity research which focuses on muscle and memory. Our research question is further developed in a fourth section and we conclude by presenting the point of departure for this research project.

## **1.1 Two theoretical paradigms, object and methods**

### **1.1.1 A brief history of longevity and genetic enhancement, and the emerging bioethics**

Archaeological and historical indications confirm that human longevity has risen substantially over time. The current lifespan in most industrialized societies is clearly a fairly recent phenomenon. Life expectancy in developed nations increased most significantly during the twentieth century following medical discoveries that limited transmittable diseases.

Now, the scientific community of the emerging field known as Anti-Aging Medicine, and the biogerontologists who examine longevity and the science of aging, are gradually making progress in their quest to understand and further advance anti-aging interventions and tools. Research projects based on a number of theories are investigating how to prevent ill health associated with natural aging by intervening in the underlying biological mechanisms of aging with the aim of increasing life expectancy. These prevention-based strategies suggest that many old-age disabilities can be eliminated, such as “memory-concentration, dementia, chronic obstructive pulmonary disease, diabetes, heart disease, hypertension,



osteoporosis, Parkinson's disease, and strokes" (Terry 2008).<sup>6</sup> The elimination of the causes of aging presents opportunities for both extending and improving life and this benefit makes this type of research more possible for some experts. Other approaches within anti-aging research focus on the deceleration of aging with the aim of extending the stage of life when physical and mental capacities are fully present. This in effect means extending the life force before the decline of old age (Kamm 2005). In this scenario, human beings would benefit from the same amount of restraint over aging as is currently available from suppressing the majority of transferable illnesses (De Grey 2004).<sup>7</sup> However, as Newton (2008) noted, the advance in medicine and research involving brain infection and Alzheimer's disease, for example, aims at extending the life force but is merely transforming the course of action of the diseases (degenerative or neurological) from severe illnesses into persistent diseases without in fact providing any cure.<sup>8</sup> This means that instead of dying from these diseases, the elderly now continue to live but with a chronic version that impacts on the quality of life itself. Lastly, 'arrested aging,' the uninterrupted reversal of the aging process, is a more extreme scenario (De Grey 2002) that raises concerns beyond its main purpose.

Longer life among individuals presents society with unique moral dilemmas. The narrative perspective of the life 'process' and longevity raises questions such as the moral responsibility for our choices and actions, ours and others' futures and the impact on society and the environment (Bunn 2009). In Newton (2008) serious societal decisions with regard to quality of life maintenance, longevity and the ability to support people's individual choices are not only arising, they also include the alternative about whether to continue living or not.<sup>9</sup> Some European countries such as Switzerland, a country that permits assisted suicide founded on 'altruistic motives,' have already crossed that final barrier.

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6 Terry (2008), p. 277-283.

7 De Grey (2004), p. 542.

8 Newton (2008), editorial, p. 1.

9 Newton (2008), editorial, p. 2.

This quest for greater longevity is also related to the search for ideals and coincides with renewed interest in the ethical and spiritual dimensions of growing old. Traditionally, the health challenges and insight that come with old age have been viewed as contributing factors to wisdom and altruism, qualities that are held to be more difficult to achieve at earlier stages in life. We will return to the notions of wisdom and altruism when we discuss Tibetan medicine and the interdependent theory.

‘Enhancement’ is the use of medical technology in the field of human genetics. As such, it takes the aging process beyond what is traditionally ‘normal’ and it can also fall outside established medical practice. For example, muscle therapy or enhancement for an elderly person who has a disability might be considered legitimate while the same muscle enhancement for an athlete in a good state of health may be viewed differently. Enhancement and increasing longevity are the objects of much criticism. Basically practices that are non-essential from a medical point of view, they are perceived as luxuries by the societal value system that defines the parameters of the medical profession. Although aging is not a pathology, enhancement practices may be seen as going against the natural order. However, patient-driven demands for these services are bringing about a new discourse whereby pathology and its prevention serve to justify enhancement practices. People’s wish to strengthen their bodies’ ability to prevent old age and the associated degenerative problems long before they are diagnosed is the precursor for enhancement practices (Juengst 2003). Potential answers for the demand for non-medical enhancement cures or products, for non-medical enhancement from individuals seeking relief from normal aging, or just personal improvement have partly arrived. One example could be the future use of the adrenal steroid dehydroepiandrosterone (DHEA), a type of substitute treatment which regularizes a number of the consequences of growing older (Baulieu 2000). Another example is the scenario for changing human memory capacity by inserting a gene-bearing viral vector into carotid arteries.<sup>10</sup> In this therapy scenario, the vector

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10 Sade (2008), p. 8.

would transmit the genes, in a limited way, to the brain's neurons that are in charge of developing and maintaining perceptual sequences as memory (Sade 2008).

Our human character does not want to give in to old age and death. Only a few have emerged as being against anti-aging, guided by the belief that this practice is not in the interests of upcoming generations, nor is it natural or principled to break the natural laws of the cycle of life. McNamee (2006) references those who are generally opposed to the use of technology to modify human nature such as "*George Annas, Francis Fukuyama, Leon Kass, Bill McKibben, Jeremy Rifkin and Wesley Smith Wesley Smith*<sup>11</sup>", all of whom provide a critique of various forms of slippery slope (Bostrom 2005). Others are very supportive of anti-aging, seeing it as a form of transhumanism (Bostrom 2005) or the pursuit of immortality, defined as the unspecified delay of aging or arrested aging (De Grey 2002). However, increasing longevity as we currently know it is in effect synonymous with the preservation of health, as it is unlikely that genetically planned changes will happen in the near future. However, increased longevity may still be desirable as a means to experience more of life as well as a means to contribute longer to humanity.

Certainly, in the pursuit of longevity and anti-aging therapies, there are biomechanical constraints because of the way the human body is constructed and the way in which our cells operate. But for many scientists, retarding the aging process itself is the fundamental goal. Seeking to arrest aging and/or reverse the aging process by continually restoring the main function of the organs is the most radical approach currently discussed (Juengst 2003). (Direct manipulation involves genetic mutations and alteration; however, the presumption of a general organism process for age retardation is not fully understood). To date, scientists have identified an animal gene (in worms, yeast, and mice)<sup>12</sup> that, if altered, does increase life substantially. Several other investigations are also being conducted that tentatively would contribute towards prolonging life: neuroendocrine mechanisms,

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11 McNamee (2006), pp. 513-518.

12 Hekimi (2003), pp. 1351-54.

cellular population dynamics (including stem cells and telomeres), organ-based investigations, process-based investigations, genetic manipulations, chromosome replacement therapy, tissue engineering, nanomedicine, nanorobotics, cellular repair device, caloric restriction, and aging biology.<sup>13</sup>

Although science has studied the effects of aging, its eradication and its effect on the brain still need to be understood as very little is known (Mitchell, Orr et al. 2004). Recent pioneering research in neuroplasticity is investigating the capacity of the brain to transform even into old age, i.e., the ability to modify its structures and generate new neurons (Kandel, Nobel Prize in Medicine, 2000, Memory and neuroplasticity). This suggests that science will eventually show that memory also improves when challenged. New technologies, geared to increasing the strength and vigor of muscles and the function of memory, also aim at slowing down aging. New research also suggests that meditation practices might also hold the key to brain plasticity (Davidson 2008).<sup>14</sup>

## 1.2 The Tibetan medical system

While Western bioethics has concerns with the limitations of the physical body, in the Eastern model the individual's existence and experience escape limitation. This can be understood as the universal and impersonal characteristics of essential ethics which are in agreement with the doctrine of no-self. 'No-self' can be established in a way that universalizes individuals in the pursuit of essential ethics or basic good, transcending the limitations of individualism. Ultimately, in final enlightenment, particularized existence and experience break out from limitation (Keown 2001). In Tibetan medicine, and in the Buddhist philosophy that underpins it, there is no dichotomy between old and new suffering as all experience can be analyzed and addressed by the teaching of eternal ethical laws, and in the case of illnesses, specifically from the text known as the Four Tantras. In this worldview,

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13 Aging biology is retarding aging by the identification of single gene mutations to enhance longevity and increased function.

14 Davidson (2008), p. 171-174.

thus its normative view, there are no fundamental differences from one culture to another with regard to the basic understanding of the two modes of categorizing reality: relative and ultimate. There is also no necessity for any ideological conflict between religion and science as they are two rational structures that search to discover truth about the individual and the universe (Keown 2001). This is the reason that Tibetan medicine's view converges with philosophy, ethics and spirituality rather than being separate. The Tibetan medical system serves as a lens through which current bioethical discourse is examined with a focus on longevity and genetic enhancement.

We begin with the Tibetan worldview and its historical dimension. This will be followed by an overview of the Tibetan integrated medical system as derived from the Four Tantras as well as the characteristics of a Tibetan physician. We also start answering the question of what bioethics can learn from this medical system.

### **1.2.1 The Tibetan worldview**

It is important to understand the premise of the Tibetan intellectual and cultural milieu. What is unique about this system is the particularity that there are no strong distinctions made among science, mind and matter, philosophy, ethics and spirituality.

Kapstein (2002) notes that since the adoption of Buddhism within Tibet (8<sup>th</sup> c. CE), over time, every aspect of Tibetan society and culture—including its medicine—has been permeated by Buddhism's epistemological concerns and unique philosophical outlook.<sup>15</sup> Particularly, the relationship between Buddhism and medicine is inherently linked to the ultimate truth, as the realized state of a Buddha is the final achievement which permanently ends any humor imbalances

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15 Kapstein (2002), p. 65.

and sickness (Gyatso 2010).<sup>16</sup> In terms of a medical correspondence one finds a recurring metaphor within the Four Noble Truths, the foundation of Buddhism and the first teaching the Buddha gave after his enlightenment (Clifford 1990). Fundamental to the Tibetan worldview, the Four Noble Truths describe the nature of suffering and dissatisfaction, the cause of that suffering, the possibility of eradicating the experience of suffering, and the presentation of the path, or actions, that will lead to the achievement of this freedom from suffering (Clifford 1990). In that way, the Truths are sometimes said to be the medicine prescribed by the Buddha, the ultimate doctor; they are the remedy to overcome human suffering, dissatisfaction and illusion. As Tibetan medicine is profoundly interwoven with Buddhist thought, the psychosomatic belief of this medicine is that the mind constructs substance, and as such it also creates sickness and wellness. The pacification of the mind is the way to transform negative emotions, the primary catalyst for unwanted physical outcomes (Clifford 1990).

Whereas Western systems generally explain that the body—and specifically the brain—is the source of mind and consciousness, within Buddhist thought and practice, mind is considered to be the most essential, and it is viewed as the basis of all phenomena, including the body. The teaching on body-mind is divided in three distinct vehicles: the Hinayana (the path towards personal salvation), the Mahayana (the path toward full enlightenment motivated by the compassionate wish to free all others from suffering), and the Vajrayana (which subsumes the compassionate motivation of the Mahayana, while incorporating the view and methods found within esoteric texts known as tantras as the skillful means to radically accelerate the experience of enlightenment). The three approaches, progressive in their subtlety, arose to appeal to the spiritual capacities of particular groups (Powers 1994).

The key philosophical point of the Tibetan Buddhist worldview is the Mahayana doctrine of emptiness that relates to the result expressed in the third

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16 Gyatso (2010), p. 9.

truth—freedom from suffering—defined as the wisdom that transcends all ignorance. This is explained as the teaching on the profound reality beyond all extreme philosophical positions regarding existence and nonexistence (Tsong-Kha-Pa 2002 (1357-1419)).<sup>17</sup> The emptiness doctrine considers two realities which can be understood as the conventional and the absolute. It is said that their distinctiveness is founded only in conceptual thought and not in true essence (Kapstein 2006). They should not be understood as two different realms. From an absolute point of view the Buddha is the result of insight and omniscience, complete compassion and supremacy (Gyatso 2010).<sup>18</sup> Within relative truth, the underlying interconnectedness of what is termed ‘dependent origination’ provides an explanation for an awareness of the infinite complexity of how things and events come to be. According to Buddhist understanding, all phenomena—things, bodies, and minds—are interdependent and interrelated both in terms of their causes as well as their conditions. But the reciprocated dependence that exists between elements and the totality, when examined, is also said to be empty of independent characteristics (Dalai Lama 1999).<sup>19</sup> The techniques and tools, which are part of religious poetry on the path, based in the duality of subject and object, can bring change towards wisdom and compassion that completely goes beyond this duality (Shantideva 1997).

Not experiencing the wisdom of emptiness and the interdependent origination of phenomena defines ignorance in this system. From ignorance come the three poisons: the mental states of desire/attachment, hatred/aversion and obscuration. This last, also synonymous with ignorance, is said to start the full process of the appearance of the consciousness and the physical body through twelve links of dependent origination that explain interdependent cause and effect and are fully discussed in the theoretical framework in Chapter 2

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17 Tsong-Kha-Pa 1357-1419 (2002), vol. 3, p. 143.

18 Gyatso (2010) p. 9.

19 Dalai Lama (1999), p. 37.

Embedded in this outlook, a basic tenet of Tibetan Buddhism is the belief in rebirth (Kapstein 2006).<sup>20</sup> In the view of Buddhism, actions motivated by these afflicted mental states leave imprints in the fundamental substratum of consciousness. Depending on the strength of elements within this complex of imprints, when the right causes and conditions intersect, they can ripen as future rebirths or the experiences and mental habits within those rebirths including, specifically, sickness and old age. The Buddhist way of thinking does not regard the prolonging of such rebirths as desirable in and of itself, but rather aims at breaking the cycle of birth, death and rebirth altogether. The notion of rebirth is a difficult concept which further opens the door for modern scientific research.

If scientific methods were to definitely disprove any central Buddhist tenet, such as the reality of rebirth impelled by ignorance, Buddhists would be compelled to abandon the idea.

Dalai Lama (as quoted in Carl Sagan).<sup>21</sup>

### **1.2.1.1 The historical dimension of Tibetan lineages**

It is said that before his death, the Buddha mentioned that ‘whatever is well-spoken is the word of the Buddha.’ This means that if a particular teaching accords with Buddhist doctrines and norms, and leads to righteous action and decreases suffering, it may safely be accepted and practiced (Powers 1994).<sup>22</sup> This position has led to numerous interpretations and intricacies. However, it allowed the Buddhist canon to stay fluid, adjust and grow, and incorporate spiritual insights from many environments (Powers 1994).

When we survey Tibetan Buddhist history from the twelfth through the seventeenth centuries, various Tibetan Buddhist masters embraced a whole range of philosophical positions which have come to characterize the emergent schools in

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20 Kapstein (2006), p. 215.

21 Sagan (1995), p. 265.

22 Powers (1994), p. 46.



terms of different ideas and visions concerning reality (Kapstein 2006). While there is common agreement about the need to develop compassion and freedom through ultimate wisdom,<sup>23</sup> the existing orders and schools of Tibetan Buddhism—Nyingma, Geluk, Sakya, Kagyü as well as Bon, the pre-Buddhist, indigenous religion of Tibet—distinguish themselves in terms of their spiritual methodology (usually associated with a lineage of original Indian masters), theoretical premises and tantra preferences (specific aspects of meditative practices), and by the different interpretations of the experiences as exposed in the tantras (epistemological and philosophical concerns) (Tucci 1980).<sup>24</sup> For example, unique to the Nyingma tradition are what is called the ‘terma’ or ‘treasure’ texts. These were said to have been composed and concealed by the tradition’s founder, Padmasabhava in the 8<sup>th</sup> c. and have been revealed from the 11<sup>th</sup> c. up to the present day by a succession of ‘tertons’ or masters whose destiny was to be ‘treasure revealers.’ It appears that while some of the treasure texts were genuinely based upon early materials, others were further elaborated by their ‘discoverers’ (Kapstein 2006). This is an important point because as we will see, the Four Tantras that form the basis for the Tibetan medical system is just such a rediscovered ‘treasure text.’

Followers of another of the schools, the Geluk, were known as religious reformers.<sup>25</sup> The Geluk school, with one branch of the Sakya school,<sup>26</sup> sought to gain value by declaring false paths to be false and urged the rejection of any and all questionable works (Kapstein 2006). The Sakya School itself emerged as a distinct tradition in the eleventh century.<sup>27</sup> The Kagyü School is described as having a middle position with the acceptance of some texts among the disputed scriptures while rejecting others (Kapstein 2006).<sup>28</sup>

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23 Overall, Tibetan Buddhist wisdom philosophy derives primarily from the commentaries to the ‘Perfection of Wisdom’ sutras composed by the Indian Buddhist thinker Nagarjuna (2<sup>nd</sup> century CE). Tucci (1980), p. 31.

24 Tucci (1980), p. 43, 69-76.

25 And arguably its greatest philosopher is Tsongkhapa (1357-1419), Kapstein (2006).

26 The Ngorpa branch of the Sakyapa school.

27 Following the founding of the Sakya monastery in 1073.

28 Kagyü’s best known religious poet and meditator is Milarepa (1052-1135), Kapstein (2006), p. 251.

Major differences also exist when the four schools of Tibetan Buddhism are compared to the Theravada Buddhism of south Asia, or Chinese, Japanese or Korean schools (Powers 1994). This is due in part to individual histories, linguistic style or practice, the particular teachings emphasized and the evolving political and spiritual development of each country. However, all schools share the basic outline that the authentic spiritual path is one that leads to one's liberation from cyclic existence.

The term 'lineage,' referred to by the experts in the analysis, pertains to the schools described above especially in terms of the bond between a master and disciple as he/she passes on the teaching and confers power through initiation. Tantra is a system that requires a transmission lineage that can be shown to be unbroken from its original enlightened source. The lineage chain is said to be broken and lose its efficacy if one acquires the knowledge from texts only. It is only through the transmission from a living lineage master that the way is made clear for this practice system. The lineage is also a way to provide assistance for new vivacity and for new authenticity within the spiritual practice system (Tucci 1980). Other valid ways of receiving transmission can occur within the dream state or be introduced directly in the mind stream of the practitioner through a visionary experience of his or her meditative deity (Tucci 1980). Since Tibetan medicine is rooted in this system of tantric lineage transmission, the master/disciple bond is of particular importance.

Most tantras claim to have been spoken by the Buddha. This is accepted by the majority of Tibetan scholars but is generally denied by modern historians because the emergence of tantra was not in evidence for at least a millennium after the Buddha's death (Powers 1994). 'Tantra practices,' discussed in Chapter 5, refers to systems of practice and meditation originating from esoteric scriptures that highlight experiential change through visualization, symbols and ritual (Powers 1994). Different techniques for catalyzing awareness of the nature of reality focus on gaining control of physical and mental energies. These involve bringing all actions, all thought and all emotions onto the path and requires, according to the tantras, a keen intelligence based on a strong desire to help others (Powers 1994).

The Tibetan system, an empirical body of knowledge absorbed from Indian spiritual roots, does not fear a syncretism approach either. There is a distinct component within the current system from earlier Tibetan folk-religious practices, with magical and cosmological concepts inherited or admitted into some of the Buddhist religious practice as a heritage of the past (Tucci 1980).<sup>29</sup> The best example is of the world of spirits that complements the medical practice (Kapstein 2006). Such techniques are not discussed by our Tibetan experts in the analysis section; however, we find components in Tibetan medicine of traditional knowledge such as astrology and the relationships between cosmic influences and the body's vital energies in the practical application.

It is the physician's training that is key for diagnosis in Tibetan medicine (Kapstein 2006). Appearance, odor, pulse and the examination of urine are also part of the techniques employed. This is illustrated by the curriculum of Tibetan state sponsored college, the Men-Tsee-Khang,<sup>30</sup> which promotes the Tibetan systems of medicine, astronomy<sup>31</sup> and astrology. Divinatory methods and medicine belong to the sciences<sup>32</sup> and are not exactly religion (Kapstein 2006). They also play an important part of the Tibetan life as beliefs inherited from the past, be they astrological, predictive, or clairvoyant or mediumistic. The spiritual side brings an authentic spirit to the Tibetan medical system that is somehow more sacred than magical (Kapstein 2006).

### 1.2.2 The Tibetan integrated medical system

From both a cultural and historical dimension, the continental rationalism of the 17<sup>th</sup> century from Descartes acknowledged Cartesian separation of the mind-body. This dichotomy has set the agenda for Western philosophical discussion since

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29 Tucci (1980), p. 182.

30 The Men-Tsee-Khang is the official institute that sponsors Tibetan medicine, astronomy and astrology and is situated in Dharamsala, India.

31 As referred in the Kalachakra tantras Gyatso, D. S. (2010). *Mirror of Beryl, A historical Introduction to Tibetan Medicine*. Ed. Wisdom Publications. p. 549.

32 Science is understood here within the context of cultural categories.

his death. While Descartes was searching for truth in the sciences, philosophers such as Hume, Marx, and Husserl followed the trend by claiming that they were making philosophy ‘scientific.’ The scientific method of Bacon from the same epoch created the inductive methodology for discovery where Descartes used pure logic of fact interpretation (Castillo 2010).

While Western scientists may have been split into either Cartesians (using pure logic) or Baconians (using discovery and experimentation), both helped direct and organize the transformation of the sciences. Both also formulated the modern scientific techniques while carrying the same dualistic view of Western thinking guided from ancient times as it relates to subjectivity, which can be categorized into good and bad according to the Christian model (theologic), and objectivity from factual analysis (scientific) (Castillo 2010).<sup>33</sup> This dichotomy usually does not exist within Eastern religions or in Tibetan medicine.

Tibetan sciences cannot really be said to be using tools—unless one would consider mind to be a tool. They are philosophically minded and this makes them idea-driven as such. The holistic idea of Tibetan medicine offers rational healing procedures where sickness is used to develop insight. This world of Tibet’s millennium-old sacred tradition (Clifford 1990) may well be a translational way that not only goes beyond the Cartesians’ and Baconians’ human constructions, its medicine system provides a serious effort to bridge the scientific, ethical and spiritual divide. As described in Pigliucci (2010), since Western science generally tries to understand natural phenomena and is concerned with empirical and evidence-based hypotheses to account for those phenomena, then the way to investigate spiritual assertions is to combine both science and philosophy.<sup>34</sup> In the Eastern religious paradigm, science is not the ultimate form of knowledge; its spirituality proposes unshakeable pillars in every domain, including science (Kukreja 2009).

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33 Castillo (2010), p. 9.

34 Pigliucci (2010), opinion, p. 326.

The body-mind is fundamental in Tibetan medicine. In fact, thought experiments and analysis for finding the mind's location is one approach for the advanced practitioner's meditative insights stage (Tsong-Kha-Pa 2002 (1357-1419)).<sup>35</sup> Mind might be thought to be in the head or that it links from the experiences communicated from our senses by the nervous system to the brain. Others might think it is in the heart or the throat. Indeed, it seems to be somewhat variable (Dorjee 2005). In Tibetan medicine, the mind is located in the heart area, at the nexus of many subtle energy channels that are not considered to be physical. They might be referred to as channels of light and are said to be extremely fine (Dorjee 2005). It is said that the nature of the mind, referring to pure consciousness which is by nature unstained, is clear and understanding (Dorjee 2005). According to the Tibetan medical system, the way to healing and longevity involves raising our consciousness and lifting our minds above a limited perception that can lead to illness if they are unstable (Dorjee 2005). Therefore, the Tibetan claim is that controlling the mind, or our thought patterns, and the powerful influence it has on our vision, influences health and explains the importance placed on meditation.

Interestingly, some Western scientists (including Einstein) have also used thought experimentation when particular physical experiments were impossible to conduct. Referred to as 'theoretical experiments-in-imagination', an example is the investigation of the thought experiment of chasing a light beam (Brown 2005). References can be made again to Einstein's (1922) theory of relativity where time and the universe are explained as mind creations which are ultimately relative.<sup>36</sup> And as the general goal of a thought experiment is to explore the potential consequences of the principle in question, we follow the analogy with the ancient discipline and spiritual medical system.

The Tibetan medical system also uses psychological therapies, specific ethics for the physician, and a model for using illness to develop wisdom (Clifford

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35 Tsong-Kha-Pa 1357-1419 (2002), vol. 3, p. 342-343.

36 Einstein (1922), p. 2.

1990). This means looking from inside and also checking our behaviour. In Dorjee (2005),<sup>37</sup> modern psychology is also referred to as considering the inner psyche as a determinant for the pattern of our behavior and experiences, suggesting that the pattern or atmosphere of our inner world is what we are actually experiencing and we may not be experiencing the outer world at all (Dorjee 2005). Here, the split between the head and the heart is said to be the ground for the widespread loss of a sense of meaning in life. Thus, the theoretical experiments-in-imagination is the mind. The Buddhist medical philosophy is one of the ancient medical systems that deals with the mind and, as documented in early manuscripts, is traced back to the Buddha Shakyamuni himself (Dhonden 2000).<sup>38</sup>

Spirituality and religiously derived truths of the universe as outlined in Buddhist teachings reflect the functioning of nature which applies to one and all. They are part of the Tibetan integrated medical system and emphasize the indivisible interdependence of mind, body and energy (Dorjee 2005).

### **1.2.3 Tibetan medical system: the Four Tantras**

The basic principles of Tibetan medicine relate to conditioned existence where disease is the product of causes and conditions. In this context, living in peace, not perturbed by emotional afflictions, and loosening the grip of the “self” are the ultimate causes for mental and physical health, as well as longevity. As we have seen, according to this view, Tibetan medicine derives from Buddhist ideas a rationally ordered system of thought that accounts for a broad diversity of phenomena—astronomical, physiological and pathological—within a unified conceptual framework based on the notion of emptiness.

Tibetan medicine’s integrative theory finds its inspiration from the “Glorious Four Tantras of Medical Sciences,” otherwise known as the “Essence of Ambrosia Secret-Instruction Tantra on Eight Branches” or simply as “Gyud Zhi” —

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37 Dorjee (2005), p. 135.

38 Dhonden (2000), p. 140.

the Four Tantras—in Tibetan. The Four Tantras address the full life-span as well as issues of longevity and enhancement through equilibrium, and have a pharmacological method that is not a series of independent treatments such as can be found in Western medicine. Instead, they function as a part of a general belief in preventative medicine.

In general, once the physician identifies the nature of a patient's condition, a variety of cures are available. These include modifying behavior and eating habits, and treatments from an array of medicinal compounds which are most commonly produced by the Tibetan medical doctor himself. The efficacy of Tibetan medicine has acquired a reputation in India and China, resulting in attempts to regulate the herbal science and the uses of basic Tibetan formulas for the manufacturing of novel patent medicines (Kapstein 2006).<sup>39</sup>

Lifestyle changes are the primary level of therapies taught in the tantra of medicine. Such changes include diet, exercise, relaxation and rest, as well as hygiene. Detoxification and rejuvenation are outlined in the second level. The third level addresses emergency medicine and radical intervention, including surgery, acupuncture and moxibustion.<sup>40</sup> And as it is linked to Buddhist thought, the fourth level presents spiritual practice as medicine. As part of the oral transmission, the meditative practice of the Medicine Buddha is imparted throughout the tantra, although it is not physically written in the text itself (Gyatso 2010). It is this integrated approach that is the focus of our theoretical framework. The nature of the tantra practice, the spiritual aspect that is also part of the medical framework, will be covered in our analysis section where the experts have shared their views about its significance.

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39 Kapstein (2006), p. 263.

40 Moxibustion (there are three types in Tibetan medicine) is a heat form of acupuncture also used in Chinese medicine. Dhonden (2000). *Healing from the Source – The science and lore of Tibetan medicine*, p. 59, 190.

The origin of the Tibetan medical system itself can be traced to the mid- to late seventh century (Tibet's Empire Age) and documents found in the Buddhist cave temples in Dunhuang, China, show that this system was well developed by the ninth century. Other sources refer to the Four Tantras' translation by Chandranandana and Vairochana into Tibetan dating back to the eighth century (Clifford 1990, Clark 1995).<sup>41</sup> To guarantee continuity, it is said that the Four Tantras were hidden as a 'treasure text' and were inserted into a pillar in Samye Monastery until a suitable time arrived to disclose and disseminate them (Clark 1995).<sup>42</sup> The Four Tantras are said to have been lost, and recovered by a treasure-revealer—'tertön' in Tibetan—in the eleventh century. Many treatises are also attributed to the Yutok family of doctors considered as fundamentally important among the authors of Tibetan medicine (the first Yutok doctor appeared in the eighth century and the second one in the twelfth century) (Kapstein 2006).<sup>43</sup> The second Yutok compiled earlier teachings and revelations jointly as four medical texts or tantras (Dorjee 2005). Independently, the Four Tantras have been the fundamental classics and backbone of the Tibetan medical system, building up an impressive commentarial literature, including a major 17<sup>th</sup> century commentary by the regent of the Fifth Dalai Lama, Sangye Gyatso (Clifford 1990). Tibetan medicine also assimilated elements of other systems, such as the Greek and Chinese medicine, which brought an added dimension (Clifford 1990).<sup>44</sup>

The interest of Tibetan medicine for the well-being of an individual rests on the universal concept of balance in existence. The science of equilibrium explains the natural forms of internal geometry which, multiplied across the universe, form the outline of our microcosm and macrocosm, including the qualities of both the anatomical level and the astronomical level. The perfection of forms is in everything that exists. Obscuration from this interdependent, perfect geometry happens when interactions with our environment create pain and discord. Our

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41 Clifford (1990), p. xvi, Clark (2007), p. 10.

42 Clark (2007), p. 10.

43 Kapstein (2006), p. 262.

44 Clifford (1990), p. 52; Clark (1995), p. 31.



perceptions are then said to be trapped and become limited and the results develop in a variety of illnesses (Dorjee 2005).<sup>45</sup>

The teaching of the Four Tantras is not only practical in nature, it retains a sacred quality throughout because it is said to come originally from the transmission of the Buddha as well as from the revelations of certain enlightened deities (Dorjee 2005). The entire syllabus of the Four Tantras consists of 156 chapters: the root tantra (six chapters), the explanatory tantra (thirty-one chapters), the oral transmission tantra (ninety-two chapters) and the final tantra (twenty-seven chapters) (Clifford 1990, Clark 1995).<sup>46</sup>

The first tantra presents the outline of the whole medical system as detailed in the other three tantras. In Dorjee (2005) it is said that a gifted apprentice would comprehend the heart of Tibetan medicine through the second tantra, a very good apprentice during the third tantra while a regular one would comprehend the medical system through the fourth tantra.<sup>47</sup> The meaning is that the Four Tantras altogether are to be regarded as one distinct work, with each of the tantras corresponding to a section of the whole (Gyatso 2010). In the first tantra, the six chapters explain the healthy body and how the three humors support the healthy body. The three humors are wind (related to desire), bile (related to hatred/anger) and phlegm (related to obscuration). When the humors are in a state of disharmony they drive the body, conditioning disease that manifests as any of a host of mental and physical disorders and disturbances (Dorjee 2005).

The second tantra, or the explanatory tantra, starts with embryo formation—comprehension of embryology study and development was quite developed in some pre-contemporary medicinal classifications (Kapstein 2006)<sup>48</sup>—through all its phases up to birth and then continues its explanation of physical

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45 Dorjee (2005), p. 275.

46 Clifford (1990), p. 99.

47 Dorjee (2005), p. 228.

48 Kapstein (2006), p. 264.

processes to the point of death. The text also describes in detail the causes of disease always in accordance with the three humors. It not only looks at treatment and medicinal ingredients but also at lifestyle and diet, emphasizing how these can facilitate enhanced health and longer life. The last section of the second tantra presents the characteristics of a Tibetan physician with an emphasis on ethical conduct and commitments (Dorjee 2005). We will come back to these characteristics in our next section.

The third tantra, the longest one, addresses the treatment of specific disorders and includes therapeutic methods for the elderly through rejuvenation processes. According to this body of medical knowledge, ‘essence derivation’ is the longevity therapy against aging, taught in chapter 90 of the third tantra. The expression ‘rejuvenation’ is utilized in Tibetan medicine for every purification process that plays a role in the intensification of the energy force as well as fertility (Dunkenberger 2000). Further details about the three humors are also provided.

The fourth tantra presents a detailed account of diagnosis through the methods of the various pulses and examination of urine. The fourth tantra also includes somatic medicine and its preparation<sup>49</sup> as well as therapies<sup>50</sup> (Gyatso 2010).

### **1.2.3.1 Characteristics of a Tibetan physician: the ethics of altruism**

The philosophical tradition of Tibetan Buddhism has imbued medicine with ethics, philosophy and metaphysics. The law of karma, which relates to the quality of the ethical aspect of actions and their consequences, is predominant in this paradigm. It is within this comprehensive framework that the ethics, virtuous motivation and the physician’s desire for the spiritual awakening are understood

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49 These include: pills, pastes, decoctions, powders and mineral medicine. *Mirror of Beryl – A Historical Introduction to Tibetan Medicine* Desi Sangyé Gyatso (2010), p. 17.

50 Five cleansing therapies (such as purgatives and emetics); and the five external therapies (such as blood-letting and cauterization), *ibid*, p. 17.

and applied. In this tradition the individual is constantly sent back to take responsibility for their actions (Hottois 2001).

There is no agreement among those studying Tibetan medicine as to its real potential and restrictions. Numerous scholars praise the possibilities of a system for new treatments for our contemporary world, but some are skeptical. However, they concur on the attribute of communication that connects Tibetan doctors and their patients. Some see this as a remedial approach to the impersonal relationship adopted by many Western doctors (Kapstein 2006).<sup>51</sup>

At the core of Tibetan medicine and the Tibetan spiritual tradition lies the ideal of the supreme altruism of the awakening mind, also known as ‘bodhichitta.’ The mind of an accomplished practitioner, the bodhisattva, is said to be inclined towards and filled with enlightenment (Shantideva 1997). In other words, a bodhisattva views all phenomena as interdependent and recognizes that all things are the result of causes and conditions (Powers 1994) and are therefore empty. The compassion that is the natural expression of enlightened awareness is such that the bodhisattva has the constant desire to alleviate others’ suffering, the root of which is non-recognition of the empty state. The generation of compassion is said to remove rapidly mental obstructions (Gyatso 2010) and there are two stages: relative bodhichitta and fully realized compassion. Relative bodhichitta itself is categorized as having two stages, aspirational and practical. Aspirational bodhichitta is the wish to alleviate the suffering of others and establish them in happiness and well-being, both temporarily and ultimately. The practical aspect means actual effort made according to ‘six perfections’: generosity, ethical discipline, patience, enthusiastic perseverance, and methods of concentration and insight meditation, the goal of which is perfect wisdom (Shantideva 1997). That said, according to Shantideva (1997), it would be an error to postulate different types of compassion because they

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51 Kapstein (2006), p. 264.

are said to be interdependent facets of the same pure awareness in the doctrine of emptiness.<sup>52</sup>

In the context of Tibetan medicine, to practice with bodhichitta means using the medicine tantra in order to cure living beings of their various illnesses and to benefit larger communities (Gyatso 2010). At the core of the Tibetan physician's profession is the fostering of compassion and the obligation to serve others. According to the Dalai Lama (1999),<sup>53</sup> it would be considered a negative action in itself not to act when it is clear that it is needed. With altruism comes a sense of responsibility.

The Tibetan doctor-patient relationship falls within a broader ethical context which consists of “*considering the teacher as a doctor; to consider oneself as sick; to consider the teaching as medicine; and to consider practice of the teaching as treatment*” (Clifford 1990).<sup>54</sup> The second tantra describes in detail the norms, precepts and ethical values that underlie the quality of the human interaction between the Tibetan physician and his or her patients. They are summarised below.

*The requirements for becoming a physician:* The physician should have an understanding of the five fields of knowledge, or five inner sciences, including spiritual knowledge (of Buddhist philosophy), medicine, arts and crafts, linguistics and logic (Gyatso 2010). A virtuous motivation is a must and refers to a mind that wishes to help every living being equally. The further desire for the ultimate benefit of liberation (bodhichitta) is also considered to be part of the requirement as it encompasses the supreme benefit for others. According to this view, the physician must keep his/her promise with regard to pure perception towards their own teacher and regard the medical text as the words of the Buddha. In the same way compassion is crucial so is equanimity towards anything that may be disagreeable, e.g., patients' emissions, etc. (Dhonden 2000). The final vows are to regard the

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52 Shantideva (1997), p. 3.

53 Dalai Lama (1999), p. 118.

54 Clifford (1990), p. 23.

profession, the medical instruments and all medicine as precious, empowered with rituals, meditation, and devotion. The method is to perform consecration prayers to augment the potency of the medicine. Tibetan medicine is now also being used by non-Buddhist Chinese doctors, without the religious elements; this is an interesting point of consideration as Tibetan medicine is receiving fresh interest from outside its traditional borders.

*The Nature of a Physician:* The physician must have an understanding of all possible body imbalances.<sup>55</sup> He must also have competency in the ways of talking to patients such as those that bring joy and reassurance. It is the Tibetan physician's task to remain mentally clear and unconfused in the ability to discern symptoms and prescribe remedies and treatments for individuals when there is a diagnosed condition of imbalance. Also, being manually adept with instrument and techniques is important (Gyatso 2010).<sup>56</sup>

*The Designation of a Physician:* There are three classifications of a physician in the Tibetan system: the Buddhist categories of unsurpassed, expert, and ordinary. It is believed that the unsurpassed physician is the Buddha, who dispels all afflictions. As it is understood, this would be the human physician's aspiration. Clairvoyance—knowing the mind of the patient directly—is mentioned as an element that the expert physician should possess. The ordinary physician is one who would be judged as self-centred if the field is approached for lucrative means or sought out of the wish for the profession's high reputation. The claim that this kind of motivation is comparable to being a murderer obviously would not be a good motive for practicing. When medicine is unrelated to spiritual practice, then it is said that it becomes the 'cause for pain' (Dhonden 2000).<sup>57</sup>

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55 'Including the ten afflicted elements of the body and the fifteen subclassifications of the three humors'. Dhonden (2000). *Healing from the Source – The Science and Lore of Tibetan Medicine*. Snow Lion Publications, p. 116.

56 Gyatso (2010), p. 20.

57 Dhonden (2000), p. 116.

*The results of being a physician:* In essence, the qualities a well-trained Tibetan physician would seek to possess—altruism and generosity, without deviousness, hypocrisy or sensual cravings—bring both temporary and ultimate benefits, and they open the path for attaining the state of perfect spiritual awakening (Dhonden 2000).<sup>58</sup> As part of the conventional level of understanding reality, the

relationship of ethics to the ultimate benefit of all is similar to the tri-council norms that set the frontier for research with regard to human genetic enhancement:

Research may help us better understand the human genome, and genetic contributions to health and disease. It may lead to new approaches to preventing and treating disease. Individuals may benefit from learning about their genetic predispositions, if intervention strategies are available to prevent or minimize disease onset and mitigate symptoms, or to otherwise promote health. Genetic research also has the potential, however, to stigmatize individuals, communities or groups, who may experience discrimination or other harms because of their genetic status, or may be treated unfairly or inequitably. *Tri-council policy statement 2.*

It is difficult to bring spirituality together with Western medicine but a medicine without spirituality is more worrying (Frank 2005). The focus in Western medicine remains on evidence-based research and the patient as an individual but it may well be possible to bridge bioethics and the Tibetan medical ethics, as discussed below.

#### **1.2.4 What bioethics can learn from the Tibetan medical system**

There are different precursors that predate ‘bioethics’ but the term itself was first coined in a 1970 article from Van Rensselaer. Hailed as the creation of a new science, a vast global application was provided bridging population control, peace, poverty, ecology, animal life, human welfare and the survival of the human species and the global planet. Bioethics is characterized by principlism, initially

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58 Dhonden (2000), p. 126.

conceived from impulses provided by the *Kennedy Institute of Ethics* in the early 70's (Durand 1999). From that inspiration, The National Commission for the Protection of Human Subjects of Biomedicine and Behavioral Research published the 'Belmont Report' (1978) providing broader ethical principles. As ethical rules were seen as inadequate to cover complex situations, broader ethical principles relating to the respect for persons, beneficence and justice were formulated (Marcum 2008). Within beneficence ethicists added two complementary general rules (1) do no harm and (2) maximize possible benefits and minimize possible harms. Despite this vast original vision, however, bioethics has rapidly become limited to questions raised by developments within biology science and their application to medicine.

In our second paradigm of Tibetan medicine, there is also a discourse on benefit and harms. However, it is integrated as part of ethical and spiritual actions which are formulated differently. Ethical action in this case considers refraining from causing harm to others and enhancing their experience or belief of happiness while spiritual action is imbued with the qualities of compassion, patience, pardon, humility and tolerance. It is out of this concern for others that such actions actually benefit oneself as well (Dalai Lama 1999).<sup>59</sup> These two concerns—refraining from causing harm to any sentient being and compassion—can encompass the whole meaning of bioethics and the potential long term consequences in human genetic enhancement.

Western bioethics' principlism model has had several critics over the years, and its reinterpretation took two streams. The reinterpretation of the model itself which was done by Beauchamp and Childress (2008)<sup>60</sup> listed four principles of autonomy, nonmaleficence, beneficence and justice. The second stream of reinterpretation reviewed the professional /patient relationship (Marcum 2008). The ethical interests motivated by that relationship are in turn described as the aspects

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59 Dalai Lama (1999), p. 130.

60 Four principles of autonomy, nonmaleficence, beneficence and justice are found in Beauchamp & Childress (2008), p. 57-272.

which take into account individuals' benefit and interest from 'metaphysical and epistemological' impulses (Marcum 2008).<sup>61</sup>

On this last point, we also saw that the quality of the physician/patient relationship of the Tibetan medical system succeeded by addressing the preservation or reestablishment of well-being which is embedded as a way of life. The satisfaction of both physician and patient is thus found to be in harmony in this system (Kapstein 2006).<sup>62</sup>

Another reinterpretation of the principlism model included the dimension attributed to justice while, as a parallel path, it also explored new routes such as the ethic of virtue, casuistry and the ethics of responsibility, as well as feminism and narrative ethics. On this last point, medical ethics and the respect for the patient's narrative work by shaping solutions for ethical issues. This approach is often advocated as a substitution for the principlist approach (Marcum 2008).<sup>63</sup>

Modern bioethics is said to be at the intersection of numerous disciplines<sup>64</sup> and characteristics which are considered for ethical norms and contribute to elucidating the methodology. Herein constitutes an original and new approach. We will briefly introduce five facets of the bioethics approaches—interdisciplinary, secular, prospective, global and systemic—in order to explore how bioethics can expand its intellectual and conceptual resources by engaging with a tradition such as the Tibetan medical system.

In bioethics, the often criticized *interdisciplinary* approach is also one of its main characteristics.<sup>65</sup> The integrative method is also part of its methodology. By definition, interdisciplinarity uses combinations of different types of available

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61 Marcum (2008), p. 256.

62 Kapstein (2006), p. 266.

63 Marcum (2008), p. 257.

64 Such as medicine, biology, nursing, philosophical ethics, theology and law but also sociology, psychology Durand, G. (1999). *Introduction générale à la bioéthique, Histoire, Concepts et Outils*. Éd. Fides, p. 56-59.

65 Durand (1999), p. 414.



disciplinary knowledge. The effect is that it transforms these disciplines, the techniques, laws and notions (Durand 1999). Integrating them into a coherent whole, interdisciplinarity requires mixing and coordination among points of view. The integrative process also has its limitations. These come from varied experiences and behaviors as well as a diverse leadership, and they represent only of the few of the communication problems that have been identified within the bioethics discipline (Durand 1999).<sup>66</sup> Similarly, this discipline has freely linked an assemblage of representative groups:

libertarians, communitarians, deontologists, neo-Kantians, utilitarian, neo-Aristotelians, virtue theorists, feminists, Rawlsians, Habermasians, narrative theorists, interpretivists, principlists, casuists, civic republicans, liberal egalitarians and religious ethicists of every persuasion (Turner 2009).<sup>67</sup>

The Tibetan medical system can represent another facet of the interdisciplinary group. Yet critics such as Sommerville (2006) believe that within bioethics other ways of knowing will have to maneuver away from the metaphysical component in order to discover a shared ethics.<sup>68</sup> Given the Western idea of synthesis and harmonization among points of views needing to be integrated within a coherent whole, we can consider that the Tibetan system's idea of interdependency is present amid elements and the whole. This 'whole' is signified within the elements. There cannot be a whole without elements but these themselves have their specific elements which are designated as 'whole' (Dalai Lama 1999).<sup>69</sup> What this means for bioethics is the acknowledgement that the interdisciplinarity of all our actions, our speech and our thoughts has consequences for ourselves and others. By recognizing the complex interlinking of relationships among things and events, we find a way to challenge our standard predisposition to observe these as solid, autonomous, separate entities. This inclination produces the amplification of our experiences and makes them symbolic of the whole

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66 Durand (1999), p. 417.

67 Turner (2009), p. 778-780.

68 Sommerville (2006), pp. 36.

69 Dalai Lama (1999), p. 37.

authenticity from known circumstances while disregarding its wider complexities (Dalai Lama 1999).

By analyzing the interdependency and all phenomena, either mental phenomena or the spectrum of consciousness, both are said to lack independent identity (Dalai Lama 1999).<sup>70</sup> This understanding of emptiness is important to further guide bioethics as we understand that conviction about independent reality is incompatible with causation with which it is in active relation. The fundamental truth of ‘the aspect of things as they are in reality’ cannot escape from the metaphysical truth. Otherwise, our interaction with the world and human beings is the basis for attachments which leads to grasping and the occurrence of several prejudices (Dalai Lama 1999). We come back to interdependency and its meaning for bioethics in both our theoretical framework in Chapter 2 and in Chapter 3 on comparative bioethics.

Another important approach within bioethics concerns the *secular* approach. Bioethicists wanted to designate an ethical method that would not be related to any religious aspect but instead be more pluralist (Durand 1999).<sup>71</sup> Within this framework, bioethical exchanges avoid any consideration on the religious level in order to foster a common approach that stays clear of personal ideologies and beliefs which are temporarily put aside (Durand 1999). However, as noted by Swidler (1984):

Each participant eventually must attempt to experience the partner's religion or ideology “from within”; for a religion or ideology is not merely something of the head, but also of the spirit, heart, and “whole being”.<sup>72</sup>

While the Tibetan medicine system could be considered a spiritual system, its ways of examining or analyzing can also be considered from a secular approach.

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70 Dalai Lama (1999), p. 38.

71 Durand (1999), p. 116.

72 Swidler (1984), p. 1.

Scientific inquiry may never reach end results as scientific hypotheses are always provisional. The aim is to enhance or discard them and when a new hypothesis has been found the cycle continues (Pigliucci 2010). Confusing the means with the end, the reductionist approach, particularly when describing highly successful scientific techniques, creates difficulty, most often when the approach becomes itself a metaphysical position. The premise of Tibetan medicine can be understood as considering the validity of science and recognizing the strength of its own discoveries, while excluding scientific materialism. The suggestion is that we can be part of a worldview which is based in science but that also acknowledges the value of human nature and the strength of methods of knowing that are distinct from the scientific. This further suggests the close relationship between the individual's theoretical understanding of humankind, the individual idea of life and its possibilities, and the principles that support conduct (Dalai Lama 2005).<sup>73</sup>

If we include a religious dimension as considered in the Western religious-ideological sphere of Swidler then it defies what secular bioethics is trying to avoid. However, bringing spirituality into the co-creation of meaning and understanding for longevity and human genetics considers the extensive wealth and integrity of our fundamental human values as applied to the scientific possibilities and the course of technology in our society. The Tibetan spiritual outlook of the oneness of the entire human species reintegrates a larger view of world citizenship (Dalai Lama 1999) and may engage the ethical aspect of genetic enhancement in a way that goes beyond particular religious standpoints.

The *prospective* discussion for longevity and human genetic enhancement offers no normative consideration about the development of life-extension or anti-aging technologies (Partridge 2009c). Bioethics' prospective approach has mainly been debating technologies' ethical and social ramifications. Many of the speculative future technological advances may not, in fact, address the limitations of the current technologies (Jones 2009). Since 2003, Juengst has called for "public

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73 Dalai Lama (2005), p. 207.

deliberations”<sup>74</sup> about the implications of research on human life extension (Juengst 2003). The enhancement divide has not been a clear-cut one in bioethics either (Jones 2009). The perceived conflict between science and our philosophical-spiritual heritage needs a vision that can facilitate the marriage of both (Sommerville 2006). In Chapter 5, the respondents in our study are providing the building blocks for bridging our understanding.

Modern technological discovery has further brought about the physician’s specialization. Herein, we find examples where the disconnection and dehumanization of healthcare has come into view. As part of the medical practice, the hospital setting and multidisciplinary team interventions more and more have become substitutes for individual health care. The global person approach has been replaced by techniques where physicians focus on specific organs (Durand 1999). This underlines the importance of finding *global* approaches to healthcare that consider ‘bio-psycho-social methods and psychosomatic medicine’ (Durand 1999).<sup>75</sup> Whereas we touched on the interdisciplinary aspect of bioethics, the field is also searching for a global perspective, which considers social values, a legal constitution and further considers equity and justice (Durand 1999).

The globalization of the field of bioethics also creates an East/West challenge in regard to human genetic enhancement. Ramussen (2010) describes the Eastern Confucianism challenge to Western bioethics where the former emphasizes tradition, virtue and a hierarchy of individual values.<sup>76</sup> These relate to continuity, the preservation of integrity and prosperity rather than those values provided by unfounded external experts (Rasmussen 2010). As we have seen in our introduction, for Keown (2001) bioethics cannot be based on comparative ethics supported by personal or cultural preferences.<sup>77</sup> Tibetan medicine is part of a tradition which not only offers a window through which the principles of natural

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74 Juengst (2003), p. 52.

75 Durand (1999), p. 118.

76 Ramussen (2010), p. 73.

77 Keown (2001), p. 21.

law are discerned but also contains neither a separation between mind and matter, nor a radical separation among philosophy, ethics or spirituality.

The bioethical *systemic* method proceeds from logical and ordered plans that follow steps that link to one another using a rigorous ethical analysis (Durand 1999).<sup>78</sup> This analysis also entails making reference to basic principles or the same criteria as a process where various ethical dilemmas will find consistent resolution. Including the casuistic and paternalistic aspects while exceeding them, the systemic method searches for consistency of analysis (Durand 1999).<sup>79</sup> What this means is that while bioethics is interested in society as a whole, one of its goals is also to analyze and resolve concrete cases. The casuistic aspect is based on the study of actual cases or case histories. The systemic multi-level approach of the Tibetan system contains these but also includes the universal element of the altruistic ideal while looking at the interdependency of phenomena. More importantly, the understanding of cause and effect relates to the quality of the ethical aspect of action, and its consequences or results. Therefore, it is a case of more radical change in philosophical outlook about reality as well.

The paternalistic character of medical ethics, where the physician was the one deciding what was good for the patient, was replaced during radical Western cultural shifts in the middle of the 20<sup>th</sup> century. There is now much more emphasis on individual autonomy and auto determination (Durand 1999). As we have seen in Tibetan medicine, it is the attribute of the communication between doctor and patient that makes this approach distinctive from the sometimes distant nature of Western medicine (Kapstein 2006).<sup>80</sup>

This analysis opens the way in Chapter 3 for an exploration of the comparative definition proposed for bioethics. Our third section below explains the current longevity research focusing on muscle and memory.

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78 Durand (1999), p. 118.

79 Durand (1999), p. 119.

80 Kapstein (2006), p. 266.

### 1.3 Current research in longevity and genetic enhancement

Evolution teaches us that there is no option but to age. This conclusion may be liberating for some but for others human beings are not required to age, almost as if death were not genetically programmed (De Grey 2002). When we look at the mechanistic process and the state of research into human genetic enhancement and longevity, we soon discover that muscle and memory enhancement are where most research is focused.

#### 1.3.1 Musculature and memory

Loss of muscle strength is prevalent in old age. Decreased agility and the tendency for accident, injury and breaking bones are also related to morbidity in older persons. Muscle enhancement and the use of human growth hormones have the potential to significantly increase strength and muscle mass. Current research into alleviating muscular dystrophy and the muscle loss that comes with old age seems harmless, useful even, when practiced as a means to stop aging. However, were muscle enhancement to become widely available, the norm, this could lead to unintended negative social and cultural consequences. For example, muscle-enhancing gene therapy aimed at the elderly is also appealing to athletes always on the lookout for a competitive advantage.

While interest in muscle enhancement is a recent phenomenon, the topic of memory loss has long been the object of human fascination. Platonic and Aristotelian dialogues touch on this issue. However, leading contemporary researchers (McGaugh 2002; Schacter 2002) are now questioning the assumptions underlying the value added by enhanced memory.<sup>81</sup> One of the concerns is that memories are valuable only if they can be sorted. The short-term, or working memory is distinct from long-term memory. Both are the focuses of research on memory improvement, but they refer to fundamentally different memory systems

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81 McGaugh (2002), p. 236; Schacter (2002), p. 355.

with their a priori assumptions and tolerate different types of memory imperfections.

Memory enhancement is different from memory alteration which is used to selectively block memory formation or to erase memories. Current research in the memory enhancement area is called 'indirect handling' and pertains to memory drug enhancement. It is useful to note that 'direct handling' implies the alteration of a person's genes; this technique is still at the research stage. Also, analysis of the brain from a molecular angle rests on new ways of approaching cognitive performance with superior accuracy (Almond 2003).

The availability of memory-enhancing medicines, or cognition supplements, would eventually lead to people being divided into two groups: the more fortunate or wealthy ones who would be able to benefit from enhancement technologies and the people who would be obliged to do with their own normal abilities (Sandel 2004).<sup>82</sup> Research on drug enhancement that would initiate a recabling of memory performance in a fashion similar to what happens at the gene level is currently being undertaken. This research represents an important attempt to reduce the speed of memory loss in older individuals (Kandel 2007).

In Tibetan medicine, the decline of memory while getting older is not believed to be inevitable (Badmaev 1997e).<sup>83</sup> The Four Tantras contain a complex system for achieving balance within the body and the corresponding outer world. Within this system, memory can be restored to benefit the mind and body, helping maintain good health until the end of life. Memory also has different dimensions in the Tibetan tradition, which go beyond Western knowledge. Although this is more a religious belief, one need only think of lamas (Buddhist priests or monks) who are able to remember past lives as a result of their meditation practices. Presently, existing scientific tools do not permit us to verify these statements, but past life stories of the Buddha are recorded in the Sutrapiṭaka (the collection of Buddha's

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82 Sandel (2004), p. 3.

83 Badmaev (1997b), p. 30.

own words), in which the Buddha identified his as well as other individuals' past lives (Warder 1972); such anecdotal evidence is widely found throughout the entire corpus of Buddhist literature. The notion of past life experiences, although it is not supported by empirical-based facts, can certainly contribute to our thinking on the subject of memory. Also in Tibetan medicine, it is said that in a fetus in its twenty-sixth week the mind is already precise and clear with memories of its past life. At that time, there would also be a clear understanding of its presence in the womb (Nyinda 2010).

According to Tibetan Buddhism, not being able to remember certain actions and situations causes harm and leads to ignorant behaviors, which are the cause of suffering; the impairment of memory demonstrates how ignorance brings the individual to constantly repeat the hurtful past. Ignorant behaviors, caused by weak memory, intensify the three basic energies of wind, bile and phlegm<sup>84</sup> and eventually cause illness (Badmaev 1997e).<sup>85</sup> The three humors, described previously as wind, bile and phlegm, are based on the notion of vital energy. These energies are in balance in a healthy body. However, the increase of unappeasable desire will give rise to imbalanced wind energy. The expansion of bile energy and over-expansion in the body will take place when anger cannot be calmed down. The phlegm energy overdevelops when a closed-minded attitude towards life becomes prevalent. Therefore, in Tibetan medicine, as in Buddhist philosophy, both point to the source of all suffering and disease as ignorance and its dwelling place as the mind. It is fundamental to address the root of ignorance in order to prevent disease by disciplining the mind and its negative emotions which affect the three energies (Dorjee 2005).<sup>86</sup> A serene mind enhances learning and can maintain functional memory throughout our life span and also helps in finding inner peace (Badmaev 1997e).

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84 (wind: exhalation and inhalation, articulates the body, execute actions, ejects mucus and wastes, gives clarity and sustains the body; bile: increases hunger and thirst, digests food and gives bodily heat, clear skin texture, courage and brainpower; phlegm: supplies firmness to body and mind, bring about sleep, connects the joints, bring patience and lubricates the body) Clark, B. (1995). *The Quintessence Tantras of Tibetan Medicine*. Snow Lion Publications.

85 Badmaev (1997e), p. 32.

86 Dorjee (2005), p. 140.



Tibetan medicinal herbs are known to restore energy balance. Vitalizing formulas including Ledretan, as well as multicomponent prescriptions developed from an Indo-Tibetan medicine known as ‘*Gabyr Nirynga*’<sup>87</sup> or ‘*Srogzyn*,’<sup>88</sup> aid in good memory. Another aid for good memory is improved nutrient delivery<sup>89</sup> to the organs and systems derived from specific food groups such as okra and fish, for example (Badmaev 1997e).<sup>90</sup>

A second element to improve mental energy levels is the highly specialized breathing, visualization and yogic exercise technique called *tumo*,<sup>91</sup> which translates as ‘living warmth’ or ‘energy balance’. This is an important concept in the practice of Tibetan medicine, and connects to the sacred, the mind and bodily energy and adaptability. It is possible to preserve and increase *tumo* with spiritual practice and compassion but this could additionally demand changing one’s way of life, diet and taking the proper medication as needed (Badmaev 1997c). In regard to certain physical yogas the *tumo* practice is a process which also pacifies the three humors of wind, phlegm and bile (Gyatso 2010).<sup>92</sup> It also enhances flexibility and muscle.

Furthermore, according to recent studies at the Waisman Centre in the United States, their research shows that meditation, which results in a peaceful mind, can also improve the individual’s basic level of happiness. It seems the brain system associated with happiness is variable. The brain can be altered as a consequence of individuals’ active participation and is malleable (Davidson 2003; Davidson 2008).

If high-quality memory in any culture is considered an advantage, according to Tibetan medicine it pervades all functions that provide a sense of identity and shape conventional reality. Memory is not an addition to life but a very

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87 Designation no. 28. (Badmaev 28). Badmaev (1997e), p. 32.

88 Designation no. 151. Badmaev (1997e), p. 33.

89 Tibetan traditions identify specific foods and food groups that are recommended to improve memory (food is the medicine).

90 Badmaev (1997e), p. 33.

91 Badmaev (1997c), p. 14. Also in Kapstein (2006), p. 227.

92 Gyatso (2010), p. 95.

basic contributor to mental and physical health. Poor memory is often associated with aging and the overall decline in mental and physical abilities in both systems as well. Nevertheless, according to the Tibetan system the memory should be seen more as as part of a group of functions synchronizing with a comfortably integrated character, instead of considering memory as an independent operator (Badmaev 1997e).<sup>93</sup>

The preservation of personal identity is another important aspect being considered by bioethicists in connection with increased memory and life expectancy. For many Western critics,<sup>94</sup> psychological continuity or the preservation of personal identity should be synchronous with our biology. An extended future would certainly bring the need to preserve memories of the different stages of life and a need to connect to earlier mental states. A stronger relation to connectedness and to what is important for individuals in the future is, in essence, different than transitive continuity. Persisting awareness through time would be to remember earlier desires and intentions. Long-term memory would foster our sense of identity through time. Failure in the ability to anticipate the future and the persisting awareness of our past would undermine the connectedness of individuals and would in turn have an impact on the self. However, as noted by Glannon (2002):

Given that psychological connectedness weakens over time, a substantial extension of biological life would not be desirable because it would preclude the continued existence of the person.<sup>95</sup>

For Glannon, an extended life would erode the psychological connections necessary for identity. The distinction can be drawn from the alteration of individuals themselves more than restoring their capacities (Clark 2007). We have noted that the distinction presented by science is one in which the psychological

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93 Badmaev (1997e), p. 29.

94 The President's Council on Bioethics, (2003). "Beyond Therapy: Biotechnology and the pursuit of happiness", Ch 4, Ageless Bodies, p. 23.

95 Glannon (2002), p. 282.

relationship between the biological and the psychological meaning of life stems from a neurological approach whereby the interrelated functioning of the body is controlled by the relevant parts of the brain.

On the same subject of personal identity, other paradigms are emerging, such as the self determination described by Parfit (1984) “*which rejects the existence of continuous selves.*”<sup>96</sup> His conclusion is that an identity is discontinuous over time and from other individuals. In this theory what matters when it comes to striving for the future is that the welfare of all is equivalent to one’s own future welfare; there is no connection of a self or “I” to benefitting the future. This notion of personal identity is a reductionist view. In this context, personal identity relates to connectedness and is reduced to a psychological continuity. Personal identity according to this view is explained as individuals not being separate from the physical and psychological occurrences that distinguish them. A reductionist view portrays mental or physical states where an individual is nothing more than these states and their diverse relations. His point is that consciousness is a thing, a state of being that some have and other do not. As Parfit maintains:

...on the reductionist view, each person’s existence just involves the existence of brain and body, the doing of certain deeds, the thinking of certain thoughts, the occurrence of certain experiences, and so on. (Parfit 1984).<sup>97</sup>

His view has only recently been incorporated into bioethics. Into this cross-disciplinary debate of identity and personhood and the continued conscious life of a person over the biological functioning of a human organism comes the comparative style of the Buddhist/Parfit outlook.

From a Buddhist perspective, there is no stable, permanent, independent individual identity or soul beyond the mere concept of such. It is very much an ever-arising construction much like the view of reality. Non-self or non-identity

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96 Parfit (1984), pp. 302-303.

97 Parfit (1984), p. 211.

also supports the theory of emptiness discussed above. Intrinsic existence of self and reality is nonexistent (Dalai Lama 2005).<sup>98</sup>

A different issue of the Buddhist/Parfit outlook would promote a unique way for individuals to go further than mere personal preferences, in order to live their lives according to an altruistic view that impartially focuses on the needs of other living beings and society as a whole.

Also in Tibetan medicine, as referenced earlier, mind itself is not created by the brain; it is situated in the heart (Dorjee 2005).<sup>99</sup> A mind unobstructed by limited conceptual habits is said to be able to manifest anything. The brain originates as a creation of the mind and is not liberated as it had the habitual tendency of a mind merging with a physical body (HH Dugse Thinley Norbu 2006).<sup>100</sup> In dreams, for example, the mind can travel without the physical brain or the body while entire worlds of experience are created. These assumptions explain the conditioned world in which we live, composed of matter or physical objects, and mind or individual occurrences as nonfigurative amalgams from mental constructions (Dalai Lama 2005).<sup>101</sup> This is far from the physical process through the dynamics of the brain determining personal identity, as outlined in Western science.

### **1.3.2 Longevity and enhancement**

Western research on longevity has enhanced our capacity to alter aging. Longevity can be stimulated by the hereditary and dependent causes that work together giving strength to older individuals or countering the unsteadiness in situations of the early death of their senescence-associated alteration in gene demonstration (or “senescence-associated gene expression (SAGE)”).<sup>102</sup> These

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98 Dalai Lama (2005), p. 47.

99 Dorjee (2005), p. 128.

100 HH Dugse Thinley Norbu (2006), p. 107.

101 Dalai Lama (2005), p. 126.

102 Post (2004a), p. 90 – url: <http://www.encyclopedia.com/article-1G2-3402500032/aging-and-aged-theories.html>

patterns are impartial pointers of changes in tissue that are different from those of a regular (young) cell. It would also be reasonable to say that an organism has a partial amount of existing vitality available to it. Current efforts at improving our knowledge of the biological means that bring about aging have been directed at examining how best to allocate the limited metabolic vigor to augment both the cell's reproductive capacity and its restoration function. In this assumption the share of the body's vitality is such that the insufficiency of restoration guarantees that there are no grounds not to age (Post 2004a).<sup>103</sup> Another assumption is the position that there should be a discussion on the timescale for slowing and halting aging by focusing on reversing it instead (De Grey 2004).

As discussed previously, Tibetan medicine incorporates lifestyle changes and nutrition into its system. Western research also suggests that techniques such as caloric restriction (CR) could reduce the risk of age-related disorders (for example arthritis). This would be achieved by absorbing smaller amount of calories (approximately 30% less), but within conditions that maintain good diet (Bourzac 2006). This has been shown to extend the lifespan of mice as well as to prevent the deterioration of their learning and memory. The treatment also includes chemical compounds (insulin-type chemicals research) that may function to extend life span as it relates to imitating caloric constraint (Humphries 2006).

Some indications suggest that a carefully managed diet can prevent loss of muscle mass and other signs of aging. Resistance to oxidative stress, which is a process whereby the cell is undergoing self-perpetuating rusting, is also being sought in longevity treatments. Another way to help foster longevity is through the intake of natural and artificial antioxidants. Longevity appears to be empirically related to diet restriction, stress and the way our metabolisms function.<sup>104</sup> Another approach involves an insulin-like indication method as a building block that can modify the energy's distribution (Braeckman 2001).

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103 Post (2004a), p. 89-91 – url: <http://www.encyclopedia.com/article-1G2-3402500032/aging-and-aged-theories.html>.

104 Post (2004a), p. 92-101.

Increased longevity with regard to the actual research is much more related to an increase in health, which by default enhances life expectancy. On the other hand, we see no evidence at this time that the life span of humans can be genetically modified. Current research on retarded aging, which basically is the delay in the arrival and development of a multitude of deadly and incapacitating diseases, advocates for growing old ‘gracefully’ and thereby being able to capitalize on the improved understanding, judgment, and wisdom that should come with age (Post 2004).<sup>105</sup>

In addition, the ethical and social issues of an increase within an aging population are significant. For example, the shared effects of increased longevity—where even a 15-year variation in the forecast of life expectancy represents a major change—would have a significant social impact on entitlement programs such as social security and health care; increased longevity becomes a challenge when considering the same availability of resources for additional people over an extended period. This outcome would possibly reduce the quality of assistance services and affect family and social structures (Glannon 2002<sup>106</sup>; Olshansky 2002). Social security programs and workforce adjustment would need to be considered if life expectancy continues to increase. Societies would be pressed to examine how they choose to assign resources in responding to both the elderly and other individuals’ needs (especially youth). As a consequence of genetic enhancement availability to all, would it prompt a different standard of living?

As we have seen, Tibetan medicine views the welfare of the individual as a broadening into the collective idea of equilibrium as a way of life. The challenge is to see how Tibetan medicine can provide an answer for the moral randomness problem, as applied to genetic enhancement. To do so we will need to understand the concept that actively takes into consideration the body, mind and spirit as an inclusive strategy for longevity. Tibetan medicine is based on the interdependence

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105 Post (2004a), p. 113.

106 Glannon (2002), p. 274.

and emptiness of phenomena ruled by the laws of causality. This links to the spiritual aim of this tradition of attaining ultimate or innate perfection by depending on a sophisticated approach to mind and body.

In the Buddhist tradition, the intention or motivation—the ethical consideration—that underlies every human action has an impact; even the body each individual is born with is said to be the direct result of past action or karma. In this tradition, the goal is not to enhance the shape of the body as an object of beauty or the means to a long life, but to employ it as the means to achieve the path to spiritual perfection. In Buddhist terms, the aim is to cut the root of all suffering by fostering the development of wisdom.

In order to discern what is a true and legitimate enhancement Baertschi (2011) proposes six criteria.<sup>107</sup> We map these with six criteria from our second paradigm and we will return to these notions as our experts discuss them further in Chapter 5. Overall, the enhancement dilemma in the Western setting is to wrongfully inflict views of what a faulty enhancement is or is not (Hurst 2011).

Baertschi proposes as a first criterion that true enhancement is “*merited*”.<sup>108</sup> This means that true enhancement is good or allowed and is supported by an ethical evaluation that aims to legitimize it. For example, having a good memory means enhancing the qualitative elements involved in remembering important events in one’s life, but that would include certain difficult events as well. Therefore, enhanced memory can also be a disadvantage to the person or act to the detriment of other capacities. Enhancing memory does not mean more capacity for something else. A real, legitimate memory enhancement would be sought as a benefit and not out of consideration of an apparent advantage such as remembering more events. Tibetan medicine would consider an assessment or understanding of the innermost details of one’s actions.

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107 Baertschi (2011), p. 6.

108 Baertschi (2011), p. 6.

Another criterion for true enhancement is that it needs to be “*obtained by natural means*”.<sup>109</sup> For example, the research on the concept of transhumanism—coupling a machine to the human brain—would be considered an augmentation that the individual does not possess. This is different than enhancing something that already exists. Another example of this would be a transitory performance that does not change the individual; this is also different than enhancing capacity or the persons themselves. Transhumanism is viewed as a modern concept of past research that aimed at enhancing the human species and society. Tibetan medicine would look at pure intentions and positive actions. Appearance and reality have to be consistent with non-vested interest.

The third criterion defines enhancement as valid only if it “*does not violate equity or justice*”.<sup>110</sup> For example, one individual’s enhanced memory should not have an influence on others or affect the collective memory available. However, if it is used in a competitive manner that affects the outcomes for others (there is only one diploma and that person gets it) this would be different. In Tibetan medicine the approach might include openness which has qualities of discovery and inquiry.

The fourth criterion looks at enhancement that “*does not present negative consequences for society*”.<sup>111</sup> Within hypothetical negative consequences for society, theoretical a priori are important as they highlight potential risks and their management. Tibetan medicine might consider in its assessment the benefit to the patient but also consider all sentient beings, environmental consciousness and ecologically responsible individuals, community and society, and/or evaluating the long term consequences.

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109 *Ibid.*

110 *Ibid.*

111 *Ibid.*



The fifth criterion for enhancement is to “*respect the authenticity of the person*”.<sup>112</sup> The ‘authentic person’ refers to individual values which are debatable in the enhancement scenario and processes that support the quest for an ‘authentic’ liberated self. Another religious-based definition of authenticity looks at ethical perfection and the fulfillment of a ‘good life’. Knowing if the enhancement is an error from the object of the individual’s desire is secondary when looking at enhancement from the materialistic angle. Ideals for authenticity propose different approaches that highlight autonomy as the supporting principle for the freedom of choice. Tibetan medicine addresses behavior that considers the law of causality and interdependency, in between extremes of believing that nothing exists, that everything is eternal or that both or neither exist.

The last criterion for true enhancement considers the “*respect for human dignity or human nature*”.<sup>113</sup> Tibetan medicine and the physician always consider linking with essential internal qualities to develop and generate, which include care and safety, and also incorporate responsibility.

Social and ethical considerations are part of a pluralistic society where it is difficult to draw a definitive inventory of tolerable and undesirable enhancements (Post 2004a).<sup>114</sup> In this context, the Tibetan medical theoretical approach is part of an ideal to cultivate compassion for all sentient beings and to work for their welfare to the greatest possible extent. Therein lies a possible connection for the actual research and our understanding of the world, and our place in it links to altruistic and compassionate service for the needs of humanity and the other sentient beings. It is the state of intention that determines research-ends. Tibetan medicine is a science that, as one of the inner sciences of Buddhism,<sup>115</sup> connects to a basic human feeling of empathy for other beings. According to this view, science is vitally important, approached within a framework where the motivation of the heart and

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112 *Ibid.*

113 *Ibid.*

114 Post (2004a), p. 756.

115 The others being logic, language, and arts and crafts. Gyatso, D. S. (2010). *Mirror of Beryl, A historical Introduction to Tibetan Medicine*. Ed. Wisdom Publications. p. 42.

mind are presented together with proper conduct, right diet and lifestyle, and include treatments described by Clark, using:

medicinal herbs, plants, spices, minerals, gems; the psychological techniques of therapeutics; and the standard of ethics and conduct required of a Tibetan physician (Clark 1995).<sup>116</sup>

While expanding the boundary of life and old age has fascinated people of all cultural traditions for ages, the modern quest to determine the ways and means to achieve longevity utilizes science, philosophy and theology and occupies the minds of many thinkers. As longevity is increasingly understood in the West within a human gene manipulation framework, and as new pharmaceuticals that enhance immunity and prolong life are introduced, new questions come to mind. Among them is the ambiguity associated with the seeking out of perfection through genetic manipulation that is pushing the intrinsic limits of what it is to be human, alive and faced with mortality. Current research and available technologies can be seen as forms of empowerment that provide greater control over individual lives. A concept such as perfection and immortality and how our human experience might be different in a world of substantially extended life span poses an ethical challenge as enhancement may well change our lives and those of future generations as well as society as we know it. The transhumanism envisaged by certain authors (Bostrom 2005), and its technology, provide the canvas for deeper thinking on the drive for perfection and immortality in Western culture. This post-humanism debate is susceptible to hiding the more pertinent question of human genetic enhancement (Goffi 2011).

As our knowledge regarding the biology of aging grows, it appears that ageless bodies are unrelated to curing or preventing disease, or repairing injury. Age retardation holds the prospect of perfecting some human imperfections, pushing the intrinsic limits of what we are toward what we want. Sandel (2004) notes that human genetic enhancement, in a similar way as cosmetic surgery, uses

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116 Clark (1995), back cover.

medical measures. However, the purpose is of a non-medical nature and, when looked at more closely, there seems to be no single meaning to form a normative concept.<sup>117</sup> The main issue with longevity enhancement is an ethical one as it proposes the capacity for changing who we are.

As one article announced, “Immortality is coming soon to a pharmacy near you.” (Lustig 2004)<sup>118</sup> There are those who claim<sup>119</sup> that human immortality is possible since it is seen in species of plants and simple animals such as sea anemones which reproduce without sex. According to this view aging is not universal as there are sentient beings that are biologically immortal.

In many Asian cultures, Buddhism plays a key role in matters pertaining to death and its connection to rebirth, through rituals and ceremonies. In fact, “affliction” is defined as the experience of birth, growing old, illnesses, and death. This acknowledges the reality of mortality and the complexity of illness and aging. The themes of death and transitory existence are ubiquitous in Buddhist literature as they highlight the value of encountering death with serenity and awareness, as well as using one’s life in a virtuous way in the face of the inevitability and unpredictability of our mortality. The latter is paramount in life’s last moments by recognizing our own true nature, and thus providing the chance for liberation from endless rebirths (Hughes et al 1995).

The concept of enlightenment is not a desire for immortality and should not be sought for that sole reason (De Silva 2002).<sup>120</sup> In fact, the cycle of life as explained in the law of dependent origination does not refer to the idea of a personality that would transcend the mental and physical processes or, on the other hand, the obliteration of physical and mental processes at death, as they are still involved in craving. The understanding of the nature of suffering develops from

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117 Sandel (2004), p. 32.

118 Lustig (2004), p. 1.

119 The scientific conquest of death – essay on infinite lifespan, Libros Red, <http://www.imminst.org/SCOD/index/html/index.html>.

120 De Silva (2002), p. 139.

endurance and control of the sense organs. The suppression of desires and greed, and the training in wisdom, are similar to restoring one's health as suffering in human beings is compared to a basic malady which is eradicated when attaining liberation. The wish for enlightenment is neither fed by fearing death nor craving immortality but relates to the very understanding of suffering (De Silva 2002).

The quest to retard aging is further supported by a passion for being healthy.<sup>121</sup> Furthermore, this quest for absolute perfection and immortality finds its way into the concept of "healthism." In Tibetan medicine "healthism" in relation to the body is expressed through diet, exercise, quality relaxation and rest, hygiene, detoxification and rejuvenation. However, the Tibetan approach to "healthism" is also directed at helping the mind.

The growing obsession with the human body and health, where the inner-body (which can be defined here as anatomy and physiology maintenance) aims at enhancing the outer body, is a relatively new phenomenon in the West (Chrysanthou 2002). Perfection in that sense is where the main efforts of keeping a healthy inner body is geared toward enhancing the outer body by conjoining the two for ultimate results (Chrysanthou 2002). This narcissistic individualism approach translates into preventative medicine, annual check-ups, a seemingly endless array of expensive supplements and the constant vigilance over of a healthy lifestyle. Genetically healthy individuals have better chances to pursue life projects, be involved in activities and contribute to society (Smith 2000). In a way, even by recognizing old age, sickness and death as a process, those seeking good health and who derive satisfaction from their interests and meaningful pursuits are likely candidates for the use of life extension technologies.

One of the differences in Tibetan medicine is that where lifespan is concerned, it is regarded as just as important to look after the mind as the body. In Turner (2004c) an analogy is made wherein religious martyrs would be unlikely to

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121 Ortoresxia can fall into this category and is a pathological obsession to only consume health food.

find value in increased longevity by using anti-aging medicine that aims to imitate caloric ingestion reduction and contribute to slow down the aging process.<sup>122</sup> It is also discussed as part of *The Yogis of Tibet; A film for prosperity* documentary, (directed by Phil and Jo Borack) that advanced practitioners, in order to be able to sit in meditation posture, ration the intake of water and barley flour to only once a week when they have the smallest possible amount of food for the system. Some use precious metals or specially prepared essence pills. This caloric restriction regimen not only prolongs the life of advanced meditation practitioners (for whom the goal of the retreat is not life extension) but it is also said to be a means to help control the mind to rise above the physical plane of existence. Proficient and meticulous practices are said to lead to higher spiritual attainment but this requires an assiduous practice over many years. For example, in one scene in *The Yogis of Tibet* a young yogi demonstrates a demanding breathing exercise which, he says, took him two years to learn and required two-hour sessions a day. In the Buddhist tradition longevity is praised as a longer life provides more time to settle the mind. In other words, time is considered precious because it allows meditators the time to cut through usual conceptual and emotional tendencies.

#### **1.4 The research question**

Although human genetics enhancement ethics is still new, certain issues and influences are beginning to take shape. As we have seen, with few exceptions, the current preoccupation of Western research regarding human genetic enhancement is with the extension of the quality of life.

In the current debate the prolongevist agrees that life-extension is an unavoidable byproduct of the research on the incapacitating conditions of aging. The question of the principle of justice as defined in bioethical terms, which is discussed in our third chapter on comparative bioethics, nonetheless becomes irrelevant for some experts as they see research pursuing its course for curing age-

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122 Turner (2004c), p. 124.

related disease even if the by-products cannot be provided to everyone (Davis 2004). Other critics are taking a firm stand against the research that they define as an offense to the natural order and a way to avoid the blessings of mortality. We have also seen that many prolongevists (Davis 2004), although no clinical evidence of this exists, see the issue of personal identity as a central concern in a life-extension scenario, as the possibility of forgetting one's earlier life intention over time is a troubling prospect.

The right to conquer disease and the suffering of the aging, as well as to offer them higher-quality physical lives instead of the conquest of death, is present in both systems discussed here. However, the 'natural order' proponents in this debate, who decline support for age-related research, view enhancement or biomedical therapy as frail methods. Enhancement in that context is not of humans' own making which brings an attitude of mastery. Furthermore, it is said to raise other issues of conformity from peer pressure to genetically enhance human functions. Natural order would support living well and accepting the limits of our body by trying to stay alive naturally (Kass 2001). While the Western 'natural order' argument has similarities with the Tibetan medical perspective that model does also addresses age-related healing and longevity therapies which are recommended to preserve health and prolong life.

In addition to social factors that promote a relatively long period of life, there also exist definite methods of influencing various systems of the human organism. The most fundamental type of treatment in Tibetan medicine is the modification of conduct and regime. Tibetan pharmaceuticals and longevity therapy are also recommended. The use of medicine for a longer, healthier life is in no way seen as incompatible with spiritual practice; rather it is viewed as an aid. With Tibetan medicine one can enhance the strength and regeneration of the constituents of the body. In essence these enhancements have no exorbitant cost. Other essential elements to prolong life relate to reducing the wind energy of the body by taming the mind, and as we have mentioned earlier, establishing a pleasant and serene environment, modifying behavior, forming good relationships and tending to nutrition are also important.

As noted, on-going research also indicates that ‘brain plasticity’ can be affected by its environment, which support the reinforcement of the right behavior that can, in turn, affect moods, disposition and personality. The mind in relation to the body distinguishes itself in this way from the Western view that human longevity is related to exercise, antioxidants, low-fat diets, medical exams and an array of prescribed and over-the-counter products for brain, sleep and body dysfunctions, all joining forces with a battery of new techniques to extend the lives of seniors and improve their quality of life. The distinction is that in one system techniques such as surgery and therapies are being used to act on the body whereas in the Tibetan medicine both the body and the mind—and the behavioral patterns of both—are taken into account.

Therefore in response to our research question—can bioethics expand its intellectual and conceptual resources by engaging with a tradition such as the Tibetan medical system, which emerged within an intellectual and cultural milieu where no Cartesian separations between mind and matter as well as the radical separation between philosophy, ethics and spirituality have occurred—we are exploring different points of view from complementary sources of data and experts in the field. We also propose in our next chapters to follow a structure that links the ideas involved with the interconnection of medicine and our theoretical framework within a broader ethical context.

As we study the structure of the Tibetan medicine continuum we have asked ourselves if the natural order is morally preferable simply because it is natural. In the Western approach, proponents of natural order assume that what is natural is better. However, this is only a minority view as research into enhancement continues in which the body becomes the ‘object’ of sociological and economic stakes. Human genetic enhancement can offer the possibility of prolonged life but is simultaneously seen as contributing to the collapse of the distinction between maintaining a body and being a body, for the body that we have is the body that we give ourselves in a convergence of intention and product.

As we look to current research in enhancement and memory, we realize that brain science may be compatible with Buddhist psychology. And as bioethics is beginning to understand the implications of this compatibility, the emerging field of neurotheology is starting to explore the neurophysiology of the meditative experience and conduct reviews of brain activities and different states of consciousness. We will come back to this in our analysis section in Chapter 5.

As noted by Parens (2005), there are two different frameworks that deal with the ethical considerations related to research on longevity and human genetic enhancement<sup>123</sup>: the proponents of enhancement promote becoming who we potentially can be, which in a Buddhist framework would be to become who we truly are as enlightened beings, and their opponents' refutation of these statements. What we see in the Tibetan medical framework is that the impulse to be creative and transform ourselves and the world is directed at the mind. The value of a person is not derived from physical appearance, nor intellectual or athletic achievement, but rather his or her capacity for compassion and wisdom. And ethical considerations regarding the scientific development and responsibility of longevity and genetic enhancement would define themselves within a holistic and integrated outlook or interdependency. What 'can the bridging of pluralistic vision of Tibetan medicine contribute to Western research on longevity and human genetic enhancement'? One of the important contributions that the Tibetan culture has to offer the world is its traditional medical system preserved through the ages. Its unique approach is what makes this research original and facilitates common bridging elements that would contribute to bioethical questionings.

By analyzing the principle of dependent origination (which, in this study, we mainly refer to as 'interdependent theory') in our Chapter 2, we further present a powerful case from which we can underpin a more robust sense of ethical responsibility by viewing everything in terms of interconnected networks, rather than in terms of an autonomous reality.

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123 Parens (2005), p. 36.



## CHAPTER 2: THEORETICAL HORIZONS

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*When something is dependently arisen, it means that it is not really arisen.*

Nagarjuna's *Fundamental Wisdom of the Middle Way*

### Introduction

This chapter presents the theoretical horizons towards which we have chosen to orient our research. It is comprised of four sections. In the first section we examine the interdependent arising process within Buddhist philosophy and two levels of interpretation in which this theory is situated. In the second section, we do an inventory of concerns with respect to our theoretical choice and discuss its pertinence to inscribing our object in the interdependent theory. The third section presents fundamental characteristics and definitions that will help us in our research. The different methods of interdependency and complexity will help us construct the comparative work and study that the actors have towards the object: the method that can address complex reality and the definition of realities. Finally, in the fourth section, we show the application to our research.

### 2.1 Interdependent Arising

There is a growing consensus in Western science and thought that we may understand individuals and their environments more profoundly if we start working with paradox, uncertainties and chaos (Cleret de Langavant 2001).<sup>124</sup> We must think in terms of patterns or associations rather than separate entities (Waldron 2002). As one deals with individuals and environments, these idea trends propose

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124 Cleret de Langavant (2001), p. 128.

compositional activities that Waldron (2002) expressed in terms of patterns.<sup>125</sup> This is also the basis of the interdependent arising theory and the twelve links of existence. The interdependent arising theory is a reflexive method which uses a system in which interdependent arising accounts for the projecting causes for individual existence (ignorance, compositional activity and consciousness) that necessitate actualizing causes (craving, grasping and existence). It is the actualization of the projected cause that assigns being born, aging and dying (Tsong-Kha-Pa 2002 (1357-1419)). Everything in the universe is interconnected through the web of cause and effect such that the whole and the parts are jointly interdependent. On the surface, beings seem unrelated but the very nature of being forms our close relationship with all other beings.

The interdependent theory finds its fullest expression in the Buddhist Madhyamika—the doctrine of the middle way—and emptiness, distinguishing the relative and absolute reality of the universe. Both representations are at the heart of traditional Tibetan medicine; it cannot be dissociated from the Buddhist system. The Madhyamika differentiates relative phenomena as part of the twelve links of an interdependent arising process that illustrates how things arise and cease to be by integrating strict logic. The absolute representation concerns the primary angle of this thesis which is the validating paradigm for addressing the idea of science and spirituality.

‘Interdependent arising’ has many other names that all have the same meaning. It is often called dependent co-origination, conditioned co-production, interdependent or dependent origination, conditioned genesis, or the twelve links. However, for the purpose of this chapter we will refer to the interdependent theory. The interdependent theory or web of cause and effect will be briefly described below.

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125 Waldron (2002), p. 142.

The first level of explanation of the interdependent theory articulates how suffering arises and ceases. It describes how all causes and conditions result in specific outcomes. This process, called *karma*, originates from Sanskrit and means ‘action’; karma is the law of causative action.

The twelve links in the interdependent theory on one level can be understood as the never-ending wandering processes of sentient beings. The common Sanskrit term utilized to describe this is *samsara*, which also means a conditioned cycle. It refers to the succession process through endless lives in six broad realms of existence.<sup>126</sup> Rebirth and karma have no real beginning in this theory and the cycle of death and rebirth is eventually and inevitably not a pleasant one. The wandering process is not seen as haphazard but is strictly governed by actions or the law of karma. The quality of a being’s actions and their consequences determine the quality of rebirth (Harvey 2000). The first level in understanding the interdependent theory, described in greater detail below, explains the reverse progression through the links or the stages, as a means to show how to move out of the cycle of painful existences.<sup>127</sup>

As part of the interdependent arising process, the first of the twelve links is the lack of knowledge of the fundamental character of reality, defined as ‘ignorance.’ Gyamtso (2003) explains<sup>128</sup> how ignorance (1) leads to belief in an independent self, which is the basic misunderstanding that obscures the mind. It is this belief in self existence that sets the interdependent arising process into motion, impelling karmic actions (2). Actions are either positive, non-virtuous or unbiased and become the causes and conditions for the third link which is called consciousness (3). Karmic actions lead to rebirth in *samsara* at the time when consciousness locates its next life. Rebirth in the human realm will happen within a

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126 There are six realms of existence in Buddhism: god, demi-god, human, animal, hungry ghost and hell realms.

127 Also called ‘nirvana’ and is the extinction of desire and individual self-consciousness (Merriam-Webster).

128 Gyamtso (2003), pp. 173-174.

womb<sup>129</sup> where the consciousness unites with the substantial body. This sets in motion the causes and conditions for the stage of ‘name and form’. These are described in (Clifford 1990)<sup>130</sup> as the six sense fields which make reference to the first mental stage of “feelings, discriminations, formations, consciousness and form”,<sup>131</sup> (4) this last of which referring to the physical body (but also relevant to any form, such as the fertilized ovum which is appropriate to any circumstance other than the formless domain (Tsong-Kha-Pa 2002 (1357-1419)).<sup>132</sup> Both the sense and mental faculties become the sources of the six inner consciousnesses (5).

The table below is an elaboration of the fifth link which is called consciousness:

**TABLE I – SIX INNER CONSCIOUSNESS**

Five inner consciousnesses, the mind and their objects
Eye sense (outer consciousness: visible form)
Ear sense (outer consciousness: sound)
Nose sense (outer consciousness: odor)
Tongue sense (outer consciousness: taste)
Body sense (outer consciousness: tactile sensations)

Source (Dalai Lama 2000)

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129 There are four places of conception for sentient beings: they are the womb, heat and moisture, the egg and miraculous birth, cited in Abidharmakosa by Gyatso, K. N. (2004). *Ornament of Stainless Light - An exposition of the Kalacakra Tantra*. Ed. The Library of Tibetan Classics, Wisdom Publications, p. 164.

130 Clifford (1990), p. 18.

131 Gyamtso (2003), p. 173-174.

132 Tsong-Kha-Pa 1357-1419 (2002), vol. 1, p. 317.

The six inner sources of consciousness<sup>133</sup> enable the stage of contact (6) with the six objects (sights, sounds, odours, tastes, tactile sensations and mental phenomena). The contacts with these objects emerge as feelings (7). These feelings can be pleasant, unpleasant or neutral and come into view as craving (8) which is the desire for pleasant contacts to take place and for unpleasant ones to stay away. The intensification of the craving is grasping (9) which is comprised of four categories: grasping at sense pleasures, wrong views, at one's own conduct as great and at the belief in a self. As grasping builds up it causes one to create karma through actions. This is termed 'existence' (10). One is then conditioned back again to birth (11)<sup>134</sup> in samsara, followed by aging and death (12). The process then starts all over again. In summary, the links that are 'causes' are ignorance, karma creation and grasping. The links that are 'effects' are consciousness, name and form, the six sources, contact, feeling, birth, and aging and death (Gyatso 2004).

Human life itself is considered a precious and rare opportunity in the Buddhist view. Since at least five other realms are also posited to exist in which spiritual development is nearly impossible, in this theory human life is considered to be of the greatest value (Gyatso 2003) and very difficult to create the causes for. Human beings have the capacity to change or shape their destiny as humans possess the physical and psychological ability to attain higher states of development. However, the human being as 'just another being' is bound to the same cyclic existence. Therefore, human intention and thought have primary importance, especially in light of the interconnectedness that rules all things, since it is these mental states that are responsible for the positive or negative character of life and its development. This realization induces the aspiration for change. The 'cause and effects understanding' is a solid premise for a bioethical framework. As described by Gethin (1998) interdependency relates to previous lives. Until the

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133 These include the five physical senses and the mind.

134 The interdependent theory claims that no one exists prior to birth. The actualizing factors (from 1 to 10) are metaphysical categories, not actual actions and they lead to birth. Therefore the process leading to birth is the 11<sup>th</sup> stage right before death. (des Jardins, M.).

cycle is broken through progress along the spiritual path, each fruition of karma leads to another karmic action.<sup>135</sup> (Annex 1)

The second level of the interdependent theory is described as the reverse progression through the twelve links and this process looks at the basic insight of the nature of genuine reality in which there is no object, subject or action. In Gyamtso (2003) it is revealed that the Buddha did not teach anything concerning the twelve links as they do not ultimately exist and are considered mere appearances.<sup>136</sup> The characteristics of existence are the same for all beings and relate to impermanence, which means conditioned by the ever-present nature of change. Phenomena or observable facts are said to appear in time and place as mere appearance wherever individual experience happens, not fixed by conceptualization. As stated in the sutras, the scriptural narrative of texts traditionally regarded as preserving the discourses of the Buddha (Gyamtso 2003):

That which is dependently arisen does not arise, and therefore it is dependently arisen. (as quoted by the Buddha in Khenpo Tsultrim Gyamtso).<sup>137</sup>

This statement means that the interdependent theory expressed as the twelve links stems from causes and conditions dependently as they have no basic imputation. It also makes clear that experience is without an ‘experiencer’<sup>138</sup> as no fixed, unconditioned existence of ‘I’ can ultimately be found. According to the philosophy of emptiness, which challenges human knowledge and its limits, there is a way of perceiving reality that is non-essentialist (Dalai Lama 2005).<sup>139</sup> Beane (1974) asks how we could talk about causes and conditions, or even compassionate intention, if there is impermanence and no self.<sup>140</sup> According to Nargarjuna’s middle way approach, there are two ways of explaining conventional reality which

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135 Gethin (1998), p. 152.

136 Gyamtso (2003), p. 172.

137 Gyamtso (2003), p. 171.

138 The experiencer makes reference to an individual having the experience. Gyamtso, T. K. (2003). *The Sun of Wisdom*. Shambhala, Boston & London.

139 Dalai Lama (2005), p. 69.

140 Beane (1974), pp. 441-456.

in the Madhyamika include personal declaration of external things as real or the opposite (Tsong-Kha-Pa 2002 (1357-1419)).<sup>141</sup> However for simplification we will use Tsong-Kha-Pa's commentary which says when you know that the person lacks intrinsic existence, you also know that the collective lacks intrinsic existence (Tsong-Kha-Pa 2002 (1357-1419)). With the exception of the Madhyamikas who explain that the two realities are non-contradictory, it is difficult to understand this process. The distinguishing feature of the Madhyamikas' texts is the explanation that the significance of emptiness—emptiness of intrinsic reality—as the corollary of recognizing interdependence does not mean that things do not exist, nor that they are empty of the capacity to perform. The interdependent theory aims at providing the admissibility for a process of cyclic existence and for absolute truth, the causes and objects of creation, elimination and evidence within the nonexistence of intrinsic reality (Tsong-Kha-Pa 2002 (1357-1419)).<sup>142</sup>

In summary, in Dalai Lama (1999) the first expression relates to the interaction of causes and conditions that gives rise to events and results. The second clarifies that there exists a reciprocal reliance between the parts and the whole such that one cannot exist without the other, and the third expression relates to occurrences that exist only in relation with the total network as no independent identity exists.<sup>143</sup>

The understanding of interdependent theory is also a way to avoid the two philosophical extremes of eternalism and nihilism. In eternalist theory, the view is that humans have permanent essence. The view of the interdependent theory is beyond time and space but that does not mean that there are no phenomena (observable facts) that exist; it's specifically because of phenomena being empty of inherent reality that they can unobstructedly arise according to relative time and space. Conversely, because they are not fixed in time and place as eternal, they are always empty space. The interdependent theory does not fall into nihilism either,

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141 Tsong-Kha-Pa 1357-1419 (2002), vol. 3, p. 116.

142 Tsong-Kha-Pa 1357-1419 (2002), vol. 3, p. 132.

143 Dalai Lama (1999), pp. 36-37.

avoiding the belief that there is nothing and that there is no aspect to human life that survives death, just annihilation. In HH Dungse Thinley Norbu (2006) openness is the quality of the mind that can reflect everywhere and it is the ongoing nature of (unborn) open awareness that obviates against nihilism.<sup>144</sup>

Consideration of the phenomenon of time is another means to comprehend the interdependent theory. Generally, there is a belief that time is autonomous and a real thing expressed as past, present and future. Buddhists see the present as a description that indicates a mere conceptual boundary between past and future. It is said that when examining the knowledge of time, the past vanishes and the future is still to happen. Only the present is experienced. The idea of 'present' exists only in reliance on the ideas of past and future (Dalai Lama 2000).

In essence, everything is held to be interdependent unless there is confidence attained in wisdom (Tsong-Kha-Pa 2002 (1357-1419)). By referring to the nature of reality one can be in the awareness of the empty nature of things and at the same time be aware of all the phenomena that are occurring. The view of awareness simplifies decision making as many of the false fixations or conceptualizations of the material world can be seen for what they are. There is no grasping to obscuring concepts such as subjects, objects or actions nor are there afflicted emotions. This in turn helps one assess experience with the right angle in terms of fostering an intention to benefit all sentient beings: an ambitious yet fruitful choice for a theoretical framework in a thesis on Western bioethics. However, the interdependent arising process at its first level is also a method that explains the complex interrelation with the environment, other observable facts, concepts and principles.

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144 HH Dungse Thinley Norbu (2006), p. 107.



## 2.2 Reason for our theoretical choice

The interests that guide our theoretical choice start from the knowledge of the interdependent theory and its mode of analysis. The compelling aspect of this theory is that it breaks the traditional patterns of substantive, unchanging being to take at its core the view of impermanence and ‘beginningless wisdom.’

Our theoretical choice also implies that although there is no observer (in absolute terms) the observation (in relative terms) is at the core of the interdependent arising process. One can see parallels with the bioethical exercise which calls for what Cleret de Langavant (2001) describes as autonomous individual thinking. This demands that the observer be implicated in what needs to be examined and can be further understood within the two levels of Edgar Morin’s complexity principle: 1) identifying the efficiency level of an action when it is situated at the beginning of its development and 2) that the ultimate consequence of an action is uncertain. Therefore, an action defines itself more in terms of its derivative rather than the intention of its initiator. One of the objectives of complexity ethics is to make visible, as they evolve, the many interactions in play as part of the ecology of action (notably some of the scientific discoveries). In order to correct this, Morin proposed to reintegrate the observer as part of what needs to be examined.<sup>145</sup>

Another element that captures our attention in regard to the interdependent theory is the alternative it offers to Western differentiation and individualism. This differentiation reveals itself in private versus public ethics with principles such as autonomy and legal language and this framework is presently defining the language of bioethics (Cleret de Langavant 2001).<sup>146</sup> Although the interdependent theory has at its core the individual, the dependent arising process is not an individual process. The theory abolishes the distinction between private and shared ethics and therefore

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145 Cleret de Langavant (2001), p. 136.

146 Cleret de Langavant (2001), p. 31, 308.

offers a different basis for assessing correct actions: a reflexive framework that can integrate Western concerns such as the inclusion of the observer<sup>147</sup> and what is being examined, emergent consequence of actions and critical analysis. This can support what Roy (1994), as cited in Cleret de Langavant (2001), identifies as the creation of common language in bioethics, one that would unite science and humanism.<sup>148</sup>

The present theoretical framework contains elements to raise the scientist's awareness that would, as cited in Cleret de Langavant (2001),<sup>149</sup> "recognize its own subjectivity to better detach from it".<sup>150</sup> This implies co-dependent interrelations but also approaches that acknowledge contradictions and multiplicity. Our choice towards the interdependent theoretical framework aims at addressing these Western concerns. In the next section we will look at Western complexity and establish how it relates to the interdependent theory.

### 2.3 Fundamental characteristics and definition

To present the different aspects of complexity in an exhaustive fashion is not our objective here; rather, we wish to focus on distinctions in the utilization of the theory of complex interaction/interdependency that take place at the theoretical, epistemological and methodological levels. The diversity of approaches and methods are correlated to place the accent on the support for complex bioethical questioning.

Other studies focus on the various causes and conditions of dependent arising (Waldron 2002). Waldron for example proposes two concepts that explore

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147 Observer (in relative terms) refers to the cyclic process individuals go through as described as part of the twelve links.

148 Cleret de Langavant (2001), p. 142.

149 *Idem*.

150 As interdependent theory is based on no self, subject, object or action it contrasts with the Western thought which maintains the duality of subject and object. Although both posit causality and knowledge, Western thought considers either eternalism or nihilism. Both, however, posit service to others, e.g., Hippocrates and compassion.

common ground for general system theory, evolutionary biology and cognitive science with 1) dependent relationships and 2) circular causality.<sup>151</sup>

In looking at patterns of dependent relationships rather than actions of independent subjects, modern science looks at the cognitive domain to draw correlations rather than at objects within a relative reality. The cognitive domain is part of a circular causality or feedback system described by Waldron (2002) as it brings the understanding of differences.<sup>152</sup> This unconscious understanding is said to be performed by a linguistic rather than a conscious process and gives rise to the representational self. By understanding the cause and effect, the method of dependent arising is able to explain causality (Waldron 2002). As we interrelate with and modify one another, we must presuppose that we are not autonomous although we may believe that we are. For the author this is an understanding at the first level of the twelve links of existence where all phenomena are composed of constant dependent relationships in continually transforming dynamic relations.

In Dalai Lama (2005) the notion of inherent, autonomous reality is taken to another level that is seen as unsuited to causation. This is due to the fact that causation implies reliance and unforeseen events, while everything that holds an independent reality would be unchallengeable and attached to identity.<sup>153</sup>

Waldron (2002) also questions the various complex interaction conditions of the Buddhist framework<sup>154</sup> which prompted us to look into the Western concepts and application of the theory on complexity. Complexity in the sense of the original Latin word, *complexus*, means ‘twisted together, entwined, which suggests two or more elements that are closely connected in such a way that it is not possible to separate them.’<sup>155</sup> As no unified theory of Western complexity seems to exist, the concept itself is presently used in disciplines such as economics, informatics and

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151 Waldron (2002), p. 141.

152 Waldron (2002), p. 141.

153 Dalai Lama (2005), pp. 47-48.

154 Waldron (2002), p. 142.

155 Definition from Principia Cynbernetica Web.

biology where specific models or methodological tools have been assigned to the concept.

According to complexity approaches it is the simplification paradigm that reduces the knowledge of phenomena and their separate components. Cleret de Langavant (2001), echoing Edgar Morin's methodology, proposes to re-learn how to think and to reorganize the mental system's training to accomplish that learning.<sup>156</sup>

Our way of thinking is said to prevent us from knowing and recognizing complexity. Contrary to scientific complex thinking approaches, complexity suggests working with '*paradox, uncertainty and confusion*'. The proposed method also includes elements such as '*antagonism, disorderliness and systemic organization*' all of which aim to be brought within a cycle approach (Cleret de Langavant 2001).<sup>157</sup>

Other complex methodological approaches use transcendental visions of complexity that suggest discovering the truth about the world around us through the infinite repetition of '*experience, comprehension and judgment*.' This approach suggests adding control and responsibility to the value of decision. The individual acts in regard to his or her own experience and understanding as the guides for decision making (Cleret de Langavant 2001).<sup>158</sup>

Transdisciplinary science is also examined in Cleret de Langavant (2001) as a means to break away from traditional models by entrenching physical and biological knowledge in culture, society and human history. Within this approach, complex thinking would offer a passage from science to philosophy and not be reduced to one or the other.<sup>159</sup>

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156 Cleret de Langavant (2001), p. 127.

157 Cleret de Langavant (2001), p. 128, 305.

158 Cleret de Langavant (2001), p. 104.

159 Cleret de Langavant (2001), p. 87.

In searching for a methodological approach that can link complex spheres to knowledge, Cleret de Langavant (2001) discusses the aspiration of Edgar Morin and Bernard Lonergan to find a technique that can observe all the elements within their totality and thus offers a superior comprehension.<sup>160</sup> He also states the need to include the observer as part of what is being examined as well as the phenomena to be studied. In essence that is what the interdependent theory offers.

The notion of interconnectedness is at the heart of Buddhist philosophy, and by extension the Tibetan worldview and medical system, and explains the passage from science to philosophy as discussed in Cleret de Langavant (2001).<sup>161</sup> The interdependent theory or circular causality also explains that the parts are in an inherent recursive loop or cycle in the twelve links process. It involves what Waldron (2002) describes as patterns of conditions that continuously respond upon themselves, strengthening their development process. It is within this systemic relation that involves patterns of dependence upon which they arise that we can understand the first level of the interdependent theory.<sup>162</sup>

Drawing a quick portrait of the existing approaches will allow us to further identify the position that we wish to take throughout this research. We hope to go beyond a description of the complex interdependency of actions, but also to take away a few explanatory elements. We had to answer our very first question, the one concerning the pertinence of our object to be studied so much as a rational object via the existing understanding. In the next section we examine gaps and the relevance of our research to bioethical concerns.

## **2.4 Application to our research**

After presenting the twelve links of existence, we looked to a new paradigm such as complexity theory thinking that would foster links and advance knowledge.

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160 Cleret de Langavant (2001), p. 305.

161 Cleret de Langavant (2001), p. 87.

162 Waldron (2002), p. 142.

We have evaluated new perspectives and approaches, methodological ideas and possibilities which situated our object in the problematic area of complexity that can carry over to our theoretical framework.

Kant also introduced the idea that a unified mind is necessary because he felt that some of the things required for being a unified mind are of direct interest to the objective deduction, and he could not see any other way to demonstrate that these things are required for experience. The most important of these additional things are certain relational concepts and specifically the concept of causality. The inquiry produced a number of remarkable insights, both into how the mind functions and into its awareness of itself (Brook 1994).

As many authors are suggesting the need to perceive the parts within the whole, we have rearticulated the two processes explained in this section of relative and absolute reality. The latter we will call 'inner sense' (between belief and experience) as referred by Kant because some of its elements cannot be considered absolute from a Madhyamika perspective. (Annex 2)

Many researchers are interested in exposing the characteristics and behaviors of complex system, so our theoretical choice implies a rigorous method but also caution as to interpretative perspectives towards complex system. The interdependent theory offers the methods to understand what can be consider a complex and intertwined system but which is, in its fundamental understanding, simple systemic action that explains patterns of interaction through which phenomena arise within 'dependent arising'. That system is part of a whole that suggests an entirely different way of understanding the world. The world then finds itself under a new lens of examination. The logic of emptiness and awareness, or the scientific method or experimentation including meditation analysis and

reflection, are critical in order to build on wisdom and discover subtler elements that contradict our ordinary rationalist view of the world (Dalai Lama 2005).<sup>163</sup>

Our approach is inscribed in the quest for a point of view to help the emergence of concepts, categories and classifications that we collectively produce. As these matter for answering bioethical questioning, the elements of openness and a non-dualistic way of thinking, being referred to by authors from both paradigms, are necessary in a meaningful method.

As our next chapter searches for elements of comparative bioethics, in Cleret de Langavant (2001) new perspectives<sup>164</sup> for resolving ethical problems such as recent interest in action ecology (intensified complexification related to environmental crises, e.g., genetic organisms dissemination), recursive loop (which has a similarity with the circular connections of the interdependent theory), emergent qualities as well as the role of chaos and genetics as prospective elements. By understanding how things come to be, this contributes to understanding the systemic relations in which they are involved and the relationship of interdependent theory and the multidimensional possibility of impermanent phenomena. This view can assist with bioethical dilemmas and their resolution that would benefit all beings as we are collectively responsible for the world we construct together. As we tried to provide a vision of the interdependency of phenomena we will proceed with different steps as part of our third chapter in comparing the ethics of our two paradigms.

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163 Dalai Lama (2005), p. 135-136.

164 Cleret de Langavant (2001), p. 145.

## CHAPTER 3: COMPARATIVE BIOETHICS

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*'It is believed that the science and not the religion will be the best tool for teaching in the world beyond the Buddhist monastery.'*

Dalai Lama

### **Introduction**

This chapter is presented in six sections. The first section looks at natural science and its different theories. A second section compares Kant with the Madhyamika text of the Middle Way approach in order to further build on Kant's articulation of inner sense (between belief and experience) and subjectivism. The third section links the law of karma to the virtues of Thomas Aquinas. In the fourth section, the ethics is contrasted with bioethics principles using Rawls's social contract concepts to further elaborate on his inspiration of the Kantian theory and actualize it within the current bioethical application. A fifth section defines the application of principles through the availability of norms, precepts and ethical values. The sixth section provides comparative reflections referring back to Kant, Aquinas and Rawls.

One of the elements of comparative bioethics that we question is the general agreement of modern science about the improbability of apprehending an objective cosmic order, as cosmic synthesis is no longer taken seriously. This is one of the basic elements of the Tibetan medicine system that connects with interdependent theory. It is the reason why we linked our research subject with a broader range of contrasting elements that may contribute to Western research on longevity and human genetic enhancement by investigating the logic of emptiness and its ethical base, which includes scientific methods and experimentation.



### 3.1 Natural laws: Aquinas, Kant and Rawls

Our intention is to refer to Kant, whose transcendental approach included the consideration of a multiplicity of factors that can affect and permeate human experience. The historical, social, cultural, linguistic, existential and psychological dimensions of human life were all considered in Kant's attempt to reconcile the claim of science on our knowledge of the world and experience which cannot materialize to such knowledge (Tarnas 1993).<sup>165</sup> Similarly, Tibetan science<sup>166</sup> considers a multiplicity of factors and its ethical studies and logical conclusions highlight personal, first-person examinations of the nature and meaning of consciousness (Dalai Lama 2005).<sup>167</sup>

Although we do not want to open the debate to a critique of post-Kantian philosophy, in order to distinguish it from Western bioethics it seems to us important to understand this topic through Kant's and also through Aquinas's perspectives. Both have served to shape the Western world view and consequently we wish to offer a comparative base.

There has been a shift in modern science and bioethics, from the medieval to the early modern period, away from cosmological themes to political and legal questions of natural laws. We will use this as part of the comparative base for both Western and Eastern traditions. It is clear that the more modern meaning of natural law is either open to interpretation and description or is prescriptive in defining freedom as a norm (Post 2004a;<sup>168</sup> Hankey 2006). Both meanings present difficulties in regard to this theory which we hope can be clarified through other interpretations of natural law founded in Tibetan science and its ethical system.

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165 Tarnas (1993), p. 341.

166 The Stages of the Yogacharya, second chapter on the words of the Buddha, identify the five sciences. They are the inner science (i.e. Buddhism), medicine, logic, language and arts and crafts, p. 42 in *Mirror of Beryl* (Gyatso 2010).

167 Dalai Lama (2005), p. 135.

168 Post (2004a), p. 1889.

In Western thought, natural law is used as an objective, unwritten moral ground that is governed by nature and has, therefore, universal validity when supported by what is reasoned to be right in the legislation and arbitration of human law. This ethical theory puts forward the existence and validity of a law which is set by nature and can be used for disagreement in the bioethics area. However, the concept of natural law itself is subject to debate. The many different theories and theorists diverge in regard to the role that ethical value performs in determining legal norms' certainty. This interrelation of the moral and physical meanings of natural law as either an agreeable description or prediction of nature, and as a regulatory norm of freedom, poses difficulty.

However, the junction between natural law and natural rights that is derived from the nature of human beings is for us one of the links to other intellectual views, because it questions 'the action' in a given situation. By putting the emphasis on the action and its intention, such a notion changes the usual order of questioning of who we are, what we ought to become, and what role biomedicine should play in the process. Bioethics' task of safeguarding individual autonomy, calculating risks and harms, and resolving justice and distribution issues uses common morality theories that in turn draw heavily from the modern conception of deontological and utilitarian ethical theories. Postmodern bioethics, on the other hand, tries to standardize principles regardless of the community and holds that discovering an objective basis for our beliefs is impossible (Engelhardt 1996).

We propose that it is pluralism, which proposes to be in agreement with differing ethical and political conceptions by sharing sets of norms and principles to assure the viability of similar societies composed of individuals and free groups (Hottois 2001),<sup>169</sup> and interdependent causality that are necessary for the prospective emergence of a new intellectual vision—one that might both preserve and transcend the current state of bioethical questioning. As bioethics evolves to incorporate world views, critical insights from the Eastern outlook and the law of

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169 Hottois (2001), p. 649.

karma seem appropriate comparative means in support of natural law as the ground that transcends cultures. The law of karma, and also the interdependent theory, were both formulated before the Madhyamika texts that incorporated teachings from the sutras (“perfection of wisdom” teachings) and reintegrated karma and interdependency to the Mahayanist views.

In order to investigate the Madhyamika and the law of karma we have used Tsong-Kha-Pa’s commentaries as well as contemporary commentaries. The Madhyamika, a philosophical critique, examines phenomena as they really are and tries to demonstrate their lack of essence. By no means will we attempt to resume the historical debate between the two sub schools of Prasangika (Chandrakirti’s view explained as a consequential method, (Jamgon 2004 1846-1912) and Svatantrika (the use of independent syllogism and a gradual approach, (Jamgon 2005 1846-1912)). From the latter, the Geluk school further classified Indian authors as Yogachara Svatantrika (who state that outer objects do not exist conventionally) or Sautrantika Svatantrika (who state that outer objects exist conventionally) (Tsong-Kha-Pa 2002 (1357-1419)).<sup>170</sup> Our intent is not to refute the philosophical systematization of Buddhist ontology; it is rather to find links and further articulate from the ‘Four Truths’ the structure of Buddhist view and practice. Of these, the first truth explains that experience is ephemeral, has no stable identity or essence, and is therefore dissatisfactory and of the nature of suffering. It is on this basis that we will distinguish Kant’s knowledge of the world and his concept of eternalism. The second principle of the Four Truths explains the cause of suffering as holding on to ignorance or deluded ideas and feelings. This form of ignorance underpins the law of karma and its causes and conditions. We will compare this to the views of Thomas Aquinas on cardinal virtues and natural laws. Both comparisons aim to support how the Western bioethical framework may be expanded. In order to do so we will also use the Madhyamika’s deconstructive analytical framework. We propose an ethical reflection that can be transposed to

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170 Tsong-Kha-Pa 1357-1419 (2002), vol. 3, p. 129.

longevity and human genetic enhancement, its related causes and conditions and point the way to a new applied ethical framework.

### **3.2 First principle – the certainty of suffering**

It is said that Shakyamuni Buddha, the sage from India, explained three phases with reference to the nature of reality (Gyamtso 2003).<sup>171</sup> First, he explained both positive and harmful actions and how one becomes subjected to the consequences of these actions. The results are a constant drifting back from lifetime to lifetime without being liberated from this cycle (Gyamtso 2003).<sup>172</sup> Once the student has acquired an understanding of the law of cause and result, the determination to change will manifest. This prompts recognition that there is a necessity to reverse the habit of clinging to phenomena as if they were existent, thus the teaching on emptiness. The third stage is to further deepen with thorough analysis in order to understand the simplicity of the nature of mind which is free from the production of conceptualization (Gyamtso 2003).<sup>173</sup>

His thinking leads us to question the common-sense notions we hold about the nature of the world. The first of the Four Noble Truths states the impermanent nature of experiences. As we have seen in the interdependent theory, the ignorance of our true nature results in grasping to outer reality and inner concepts and reactions, and to consequently experience a seemingly endless cycle of suffering because we are unable to see the false construct of our perceptions: the self and the world we perceive as a solid world that arises from physical and mental forces.

Kant's natural science, in which he proposed that the world can be explained by science and is ordered by the mind's cognitive process, puts forward a metaphysical view in understanding the world. A saturation of empirical data, causality and the resulting scientific laws based on generalizations are the

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171 Gyamtso (2003), p. XII.

172 *Idem.*

173 Gyamtso (2003), p. XIII.

framework for the Western body of knowledge. Yet, according to Kant, the mind creates its own reality—its own representation of the material world. Kant came to this conclusion by using fundamental a priori such as space, time, substance and causality. He said space and time cannot be independent of the mind; they are based in the nature of the mind, not in the character of things (Tarnas 1993).<sup>174</sup>

Kant's 'Critique of Pure Reason' can be compared to Madhyamika when he demonstrates the failure of reason alone in understanding the way things are, and that it is not through words and concepts that the nature of reality can be expressed. In conformity with the Madhyamika, our fixation with rationalist composition from epistemological and ontological proposals is an indication of what contaminates our understanding of life. Absolute reality can be known only through direct experience, by learning to deconstruct and then renounce the unceasing flow of thoughts, concepts and perceptions (Huntington 1989).<sup>175</sup> As we have seen earlier, there are other ways to explain the understanding of time. In the Buddhist view, as an example, time does not truly exist; it is a mere concept. Furthermore, the development of the cosmos according to Buddhism can be justified by the characteristics of the principle of dependent origination. The starting point and reality of everything has to be understood in terms of the complex interaction of interconnected causes and conditions and be relevant to consciousness as well as substance (Dalai Lama 2005).<sup>176</sup> As we have seen in the interdependent theory, emptiness is without beginning and leads us beyond the two extremes of eternalism or nihilism (HH Dungse Thinley Norbu 2006).<sup>177</sup>

The Buddhist theory of impermanence also leads to an understanding that current knowledge will not remain valid forever. In other words, the logical, dualistic assessments such as subject/object, cause/effect, fact/error, etc., of daily experience concerning feelings and the material, physical world of science and

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174 Tarnas (1993), p. 343-344.

175 Huntington (1989), p. 108, 116.

176 Dalai Lama (2005), p. 46-47.

177 HH Dungse Thinley Norbu (2006), p. 18.

objects have no real distinctions and no longer intrude upon the experience of one who abides in ultimate understanding. This deconstruction is supposed to reveal incorrect development which for science and the individual is reflected in theories of phenomena (Huntington 1989).<sup>178</sup> In the Buddhist view, science can be found to be important and be taken seriously through acknowledging the strength of its experiential conclusions without agreeing to the ultimate validity of scientific materialism (Dalai Lama 2005).<sup>179</sup>

One of the premises for this study, which Tibetan experts respond to in Chapter 5, is the comment from Tibetan scholar Dungse Thinley Norbu Rinpoche arguing that there cannot be a comparison between scientific explanations and metaphysics; science can be contained within Tibetan Buddhist theory but not the opposite.<sup>180</sup> This consideration asserts that any attempt to express the transcendent impermanence in empirical terms or thought and words cannot but fail. So why do we attempt to reconcile metaphysics with Western science? The difficulty takes place when the reductionist technique uses the metaphysical perspective (Dalai Lama 2005).<sup>181</sup> This is viewed as a general propensity to be at variance with the means and the end, particularly when a specific method is favorably effective.

We also find that Kant inquires about the possibility or impossibility of a metaphysical claim:

...the world could not be said to exist complete in itself with intelligible forms that beings could empirically reveal if only they would clear their mind of preconceptions and improve their senses of experiment. (Tarnas 1993)

He is thus saying that philosophy, in essence, is the questioning of the mind to find the foundation of facts. The a priori internal principle does not possess ultimate significance to this world, or any absolute reality or being outside the

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178 Huntington (1989), p. 132-133.

179 Dalai Lama (2005), p. 12, 207.

180 HH Dungse Thinley Norbu (2006), p. 133.

181 Dalai Lama (2005), p. 12, 207.

human mind. This subjectivism is said to limit the phenomenal world as the individual has no necessary internal transcendent insight; individuals can only know things for what they are and as they appear to them.

To recapitulate Kant's main points:

- 1) The mind: structured to find the foundation of facts.
- 2) Inner sense (between belief and experience): has no ultimate significance and no absolute reality.
- 3) Subjectivism: limits the phenomenal world and provides no transcendental insight.

By placing the individual at the centre of the cosmos by virtue of the human mind, Kant defined the mind as central to establishing the world order. Relatively, the mind for the Tibetan Buddhist is the basis of all, distinct from the body. Kant's distinction between objectivity and occurrence seems to be close to the distinction between the unconditionally achieved nature and the conceived nature (Huntington 1989).<sup>182</sup> However, Kant's mode of perceiving refers to the subjective, compelled way in which individuals project onto the object (Huntington 1989).<sup>183</sup> In Buddhism, although several explanations exist, the aim is to realize the absolutely accomplished nature in the state of enlightenment which discards illustration referring to 'mental image'<sup>184</sup> when mentioning emptiness (Huntington 1989).

Impermanence is one of the 'three marks of existence' in Buddhist teaching; the other two are suffering and 'identitylessness' or no separate, autonomous, eternal self. The transitive property of all existing things is that they come into being,

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182 Huntington (1989), p. 63.

183 *Idem*.

184 As referred by Chandrakirti in Huntington (1989), p. 64.

persist for a while and fade. According to this view, without such impermanence no change would be possible.

In order to explain the impermanent view, Madhyamika presents verses written according to a strict structure in traditional Sanskrit, the aim of which is to provoke the questioning of conceptual limitations which in turn is a means for advocating the appeasement of conceptualization. As these concepts are difficult to understand, the practical relevance is in the actual implications of cause and effect, which demonstrate that the difficulty comes from an over-analysis, since cause and condition only arise in mutual dependence. By trying to grasp onto things and ideas as if they could offer a lasting harbor, such an approach simply has for a consequence more pain; the avid desire to search for security in one's valued possessions is the basis of all unhappiness (Huntington 1989).<sup>185</sup>

This brings us back to the distinction between the relative and absolute made in the Buddhist Mahayana philosophy. The variable element encompassing the development of truth is different than the truth process. When impermanence is perceived as the flow of becoming, it is said to naturally be without static objects such as physical phenomena or the individual self. Emptiness is a means to stop holding onto false concepts. The aim of meditation is to let go of any conceptualization and the grasping to ideas; by settling the mind, it has nowhere to go. The understanding of this view is said to offer assurance and is also a means for dealing with doubts and difficulties (Jamgon 2005 (1846-1912)).

In essence, the first principle provides a reference application for a solution to the problem of suffering. To recognize the source is the view which is said to go beyond change (HH Dungsé Thinley Norbu 2006).<sup>186</sup> That leads us to the second principle of the origin of suffering.

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185 Huntington (1989), p. 106.

186 HH Dungsé Thinley Norbu (2006), p. 18.



### 3.3 Second principle – the origin of suffering

From another level of contrast, Kant’s affirmation regarding autonomy as a natural right allows for further comparison with the Tibetan philosophical, ethical and scientific approach wherein the respect for all sentient beings is an imperative. Western theories, such as Darwin’s ‘evolutionary view’ or biology, according to Buddhism, do not explicitly address the conceptual question of what life is. The basic distinction between Buddhism and Western modern science comes down to the way each regards consciousness. This can further be illustrated by the different way by which Tibetan science investigates sentience and non-sentience, or living organisms and inanimate substance. This is because the Tibetan Buddhist designation of living refers to all sentient beings and in this tradition consciousness is the principal characteristic of ‘life’. Therefore, there is no fundamental distinction between humans and animals since both want to break away from suffering. Humans are searching for happiness, and animals also want to avoid suffering as they also feel pain and enjoyment (Dalai Lama 2005).<sup>187</sup>

Within autonomy as a natural right and the respect for all sentient beings we begin to make the connection with the law of karma and to the second principle, which refers to the mind’s tendency for craving, as described as part of interdependent arising (outlined in Annex 2 —relative reality and inner sense—).

In order to appreciate and understand the contrast with the Eastern pluralistic view of the natural law of karma, we will look at the work of Thomas Aquinas.

To understand Aquinas in this light is to recognize that his ethical approach is also based on the principle of action. These actions define themselves within “*four cardinal virtues of prudence, temperance, justice and fortitude*”, and “*three theological virtues of faith, hope and charity*”. He further distinguishes four laws:

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187 Dalai Lama (2005), p. 106.

eternal, natural, human and divine. *Eternal law* is the rule of God concerning creations and nature, and the individual's participation in the rules of morality which he relates to good action. For Aquinas, *natural law* has to conform to eternal law; it is said to be the last analysis to solve all objective ethical questions (Canto-Sperber 1996).<sup>188</sup>

Aquinas's distinction between natural and mystical sources of morality and law is guided by inherent human values that relate to free choice or rationality. For Aquinas:

The rule and measure of human acts is reason, which is the first principle of human acts. (Aquinas, ST I-II, Q.90, A.I).<sup>189</sup>

According to this view human beings are by nature rational and they should therefore behave in a rational way. Moral law starts from the disposition of human beings (thus, 'natural law'). The term natural also stands for the basis for action. It is not learned or presumed but rather known naturally. Natural law is a form of universal ecosystem which requires some basic elements such as a framework of positive law that has right conduct and acquired virtues and by which the laws are followed externally as well as from the interior act of motivation.<sup>190</sup> In essence, Aquinas outlines the specific ends which amount to humans doing good (Keown 2001).<sup>191</sup>

Aquinas's view is that the association among the rules of morality is what makes an object either good or bad and has nothing to do with physical integrity. A corrupted action can be seen as a perfectly good one if based only on appearances. It is the human outlook—the rule of reason—that can emerge around the person and become the measure of morality. "*Reason is measured by its relation to its object*"

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188 Canto-Sperber (1996), p. 1615-1618.

189 *The Internet Encyclopedia of Philosophy* (2006). <http://www.iep.utm.edu/n/natlaw.htm>.

190 Post (2004a), p. 1888.

191 Keown (2001), p. 19-20.

Canto-Sperber 1996).<sup>192</sup> From the time of Aquinas's rule of morality to the contemporary definitions of natural law, there have been many blind alleys that led the change from judgments concerning human good to judgments concerning the correct action from a 'here and now' perspective. Although the natural law's principle takes place within a specific social context, its credibility is not the role of that context either (Keown 2001).<sup>193</sup>

Tibetan Buddhist ethics also focus on the intentionality of action, whether negative actions that stem from hatred, greed and ignorance, or positive ones from insight and empathy. There are three recognized modes of good and bad action: physical, verbal or mental (Tsong-Kha-Pa 2002 (1357-1419)). In the law of karma, actions are understood as generating 'seeds' that will bear results when they meet with the appropriate conditions. Karma can be as subtle as our sense perceptions<sup>194</sup> (Jetsün Khandro Rinpoche 2003). Karma is also said to be collectively created by a lack of awareness within collective action and would be the Buddhist explanation for war, diseases and other occurrences that may be experienced by large groups. Similarly, we can be as affected by the karma of others as that which we create.

We have presented a description, based on interdependent theory, of how perceived reality arises out of ignorance. In Chapter 2, we saw how in this theory phenomena arise together in a mutually interdependent web of cause and effect and are a means to solve metaphysical and philosophical questions.

It is interesting to link Aquinas's interdependent idea of intention as moral action to the law of karma since the psychological intent motivating the action is also part of the process of karma. The moral and physical aspects of nature as viewed by Aquinas, however, are seen by contemporaries as confusing or outdated (Canto-Sperber 1996). As we have seen, for Aquinas, a good or bad action relates to the law of morality or intention which can be mistaken from physical integrity

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192 Canto-Sperber (1996), p. 1615.

193 Keown (2001), p. 20.

194 Sights, sounds, smells, tactile sensations, tastes and thoughts.

(Canto-Sperber 1996).<sup>195</sup> In Buddhism, if the intent is absent from action, the fault committed is then said to not have the same effect. This may appear to be simplistic to some thinkers in bioethics who also debate motivation as a means to advance science or knowledge. However, the emphasis here is clearly on the ethical aspect of the action as the relevant factor that engenders karmic results. An understanding of this not only explains some situations as karmic results from the actions of past lives, it also illustrates how a moral and disciplined individual can change the effect of the past and make it lighter in this present life. Karmic results are not necessarily immediate and can manifest far in the future: the next rebirth or in future lives. Whether good or bad, the ripening of results of karma are said to be unavoidable and precise.

Why must we presuppose that causation is predicated upon an a priori abstract correlation between a cause and its effect? Within Madhyamika it is important to understand causation that, contrasted with the rationalism and conventional everyday experience as expressed by Kant's epistemological presuppositions and by Aquinas's notion of inherent human value, recognizes a number of remarkable insights. For Kant the approach to wisdom was to examine what a mind should be like for one who experiences it. In his inquiry into what he also described as pure understanding one comes across both the mind functioning and its awareness of itself (Brook 1994). Given the same dilemma of causality, comparing the response of Kant and Aquinas, the Madhyamika's magical illusion metaphor provides no attempt to identify a transcendental substratum. From Chandrakirti, the Madhyamika makes no effort to deny or avoid daily occurrence by translating it onto transcendental notions (Huntington 1989).<sup>196</sup> It is an unsighted investigative for validation of the unacknowledged belief that reality links in pairs such as cause and effect, examiner and examined, subject and object. This assumption conserves at its core the essence of defilement, in the sense that spiritual ignorance is personified in the mind's intrinsic propensity to reify every

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195 Canto-Sperber (1996), p. 1615.

196 Huntington (1989), p. 45.

occurrence into ideas that can be understood as, and taken over by, an ‘I’ concept that is itself simply another sectioned, essentially non-existent point (Huntington 1989).<sup>197</sup>

The Madhyamika addresses the cause and its effect with no obligation to go past a direct functional explanation (Huntington 1989)<sup>198</sup> by an understanding of the faults of clinging, aversion and delusion which leads to non-violence and striving for the happiness for all beings. The altruistic conduct for scientific research on genetic enhancement and the interdependent theory are both equally significant in the conventional or material as well as the absolute or spiritual sphere. It is only by addressing both levels of reality that a meaningful explanation can be achieved.

### **3.4 Third principle – the cessation of suffering and bioethics principles contrasted**

Having discussed the environment (the first principle) and the causative verbal and mental good and bad actions and ignorance (the second principle), we can now turn to the third principle, the cessation of suffering as the end of craving, and address contrasting ethical views with the objective of creating a contribution to debates on human genetic enhancement. With this in mind, we turn to Rawls who further develops the principles of justice within free and rational individuals. If we look back to the discussion of bioethics, the issue of universal access to human genetics was raised. Rawls’s theory of social justice addresses social institutions as a necessary structure and looks at the way fundamental entitlement and responsibility are distributed as part of social cooperation as they relate to the division of advantage and benefits (Farrelly 2002). In this approach, a primary good such as anti-aging therapy, if aging is defined as a pathology, would be desired by all. This model would then call for the free distribution of enhancement subsidized with public funds. This scenario of distributive justice for all endorses the view that

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197 Huntington (1989), p. 45.

198 Huntington (1989), p. 42.

genetic enhancement should be permitted. Thus free access to anti-aging enhancement becomes a primary good and the need to regulate or restrict access does not prevail.

Rawls's basic rights and freedoms of social primary goods<sup>199</sup> helps in the consideration of how technological advances in human genetic enhancement revolutionize social justice (Farrelly 2002). It shifts the focus to natural primary goods<sup>200</sup> that require only self-authorization to proceed to preferential transformation; no limitations or restrictions need be set as no social principles govern their distribution. This would imply rethinking the value of traditional rights. Distributive justice in this regard does not necessarily mean giving the same good or service to all. Rather, it means to distribute it to the ones who most need it before others.

The importance of life-years and an equal chance for a long life are also equally precious. Seeking to maximize someone's life at the expense of denying the chance of living to another needs an ethical approach based on "equal opportunity, natural life span, and prudence"<sup>201</sup> (Mitchell, Orr et al. 2004).<sup>202</sup> New possibilities for enhancement touch upon justice and equity but also upon ontology, anthropology, philosophy and policy. The idea that consensus could be reached on desirable ends such as health, energy and improved capacity for the elderly has links to domestic, social and political life that would be less frivolous and more prudent. These links between ethics and society and ethics and politics—and even ethics and medicine—are in accord with Buddhist principles. In Buddhism, the term 'righteousness' relates to the Western principle of justice but within a socio-political outlook and connects to the idea of equality (De Silva 2002). In this tradition, social change cannot be achieved solely by restructuring social organization. The basic transformation of the individual is also necessary.

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199 Rawls's Social Primary Goods: rights and liberties, powers and opportunity, income and wealth, and self-respect. Farrelly (2002), p. 78.

200 Rawls's Natural Primary Goods: health and vigour, intelligence, and imagination.

201 Mitchell (2004), p. 68-69.

202 *Ibid.*, p. 68-69.

Furthermore, the understanding of the Buddhist concept of ‘dharma’ (which relates to the teaching of the doctrine) again overlays socio-political life, providing a distinctive sense to the concept of justice (righteousness) and equality (De Silva 2002). This reciprocity of goals is more a concept of obligations than rights.

Justice rejects artificial distinctions among human beings. The belief in a “*common potential for spiritual and moral transformation, rationality, ability to feel for others’ suffering, free will and secular skills*” relates to a wide reflexive equilibrium (De Silva 2002).<sup>203</sup> The expression of ethics is not accepted solely as a consensus of social rules; it comes from the experience of the law of cause and effect that underlies ethical rules. The law of karma can thus be viewed as a way of having natural justice according to the causality of actions. The social contract in this regard is an expression of compassion and equality, which is fed by a humanistic rather than a legalistic conscience. The law of karma can easily be misunderstood as fatalistic but humans retain their freedom of choice. The self-determination that comes from the understanding of causality provides the means to manage the dynamic influences of the past and the present by creating a different future. Furthermore, not everything that occurs or is experienced is due to past karmic action. Unpleasant feelings and illnesses may have a variety of causes, but again a person has the ability to control the dynamic and not be passive about it.

Under the law of karma, the benefit to self and others is intertwined; the concern to lessen our own suffering would help in lessening that of others. Helping others helps oneself not only in developing a good quality of mind, but also in generating good karmic results. On the other hand, helping oneself purifies one’s character and better enables helping others (Harvey 2000). This brings a broader notion or experience of compassion based on the understanding of the equivalence of oneself and others (Goleman 2003).<sup>204</sup>

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203 De Silva (2002), p. 81-84.

204 Goleman (2003), p. 23.

Rawls's social contract, in essence, supports social cooperation and has common ground with different comprehensive paradigms. This breaks away from a closed system and exposes the way to a cross-cultural study of worldviews. It encourages probing diverse systems and intellectual perspectives and helps isolate and preserve what is of lasting value. In a cross-cultural perspective, flexibility, conceptuality, understanding and compassion become the resources and the means for problem solving in the area of ethics/bioethics.

According to the Rawlsian perspective, individuals would not be compelled to accept more than they want and, based on reason, they should be offered as much of any primary good as possible. In essence, this relates to the ethical conduct contained in the Tibetan medicine idea; the two points of view are compatible. In fact, perspective is contained in the four principles (or Four Truths), in terms of the recognition that existence is painful while the cause relates to craving and self-interest (Clifford 1990). The cessation of craving and the means to end suffering find another level of explanation, which is the end of craving itself. Both Rawls's theory and the understanding of karma formation are relevant in decision making.

To further explain this position, all three stances of Western ethics—its “*individualism, rationalism, and perfectionism*”<sup>205</sup>—have legitimacy. Individualism looks at self-fulfillment and benefit, as well as personal aspirations, as all being legitimate; rationalism brings the ability to see what is positive and negative from a ‘right or wrong’ perspective; and perfectionism refers to spiritual liberation or enlightenment that is in all three cases constructive. In Buddhism, all are interdependent and compassion is important as it links with the motivation (Goleman 2003).<sup>206</sup> The perfect state of existence in a Buddhist context can further be described as the wisdom that recognizes the ultimate state and knows the actuality of selflessness in a direct manner (Tsong-Kha-Pa 2002 (1357-1419)).<sup>207</sup> This selflessness can also be understood by means of a concept that is also

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205 Goleman (2003), p. 24.

206 *Ibid.*, p. 24.

207 Tsong-Kha-Pa 1357-1419 (2002), vol. 1, p. 316.



constructive. Mahayana Buddhism extols the interdisciplinary nature of ‘four boundless qualities’: impartiality, which means having an uniform-minded approach towards all life forms; love, which is to devote every idea, expression or action for the wellbeing and happiness of all in existence; compassion, which focuses on eradicating the pain and hardships of individuals and of all living beings; and sympathetic joy for the good fortune of others in the training of the mind in these four vast qualities (Patrul 1998 (1808-1887)).

With universal ethical attitudes such as the acknowledgment of the value of life and the need for equilibrium in nature, we use this need as a measure for the course of our consideration and our accomplishments. Holding compassion as the basic inspiration for all undertakings, joined with a clear alertness concerning the broad viewpoint and sustainable outcome, are the contributors to a flexible and contextual ethics framework (Dalai Lama 2005).<sup>208</sup>

Another contrasting element connects to the historic experiences of liberal eugenics. This element is closely related and broadly similar to enhancement in the sense that it aims at improving our genetic constitution. Human genetic enhancement is said to be different from eugenics, however, because it is not coerced and does not involve forced sterilization. Although Tibetan Buddhism has developed ethical philosophies it does not have set positions on contemporary issues such as eugenics. The actual term ‘eugenics’ does not exist in the Tibetan tradition. In fact, the only analogy that we see is the reflection on the circumstantial advantages and disadvantages related to the practice of Buddhism.

The President’s Council Report (Bioethics 2003) argued that the development of technologies such as human genetic enhancement is supported by a modern society that values achievement, perfection and the need for competitive edge. Modern society is also said to foster the kind of eugenics ventures and consumer products that may come from human genetic enhancement. From a

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208 Dalai Lama (2005), p. 199.

generational perspective, because genetic enhancement would leave imprints, two divisions would then be created: an enhanced and a non-enhanced one. This would bring back eugenics prospects due to anticipating human genetic enhancement technologies.

Wealth-based access to human genetic enhancement in an unregulated system would likely deviate from a social justice model if the challenges are not attended to in a timely manner. Farrelly (2002) notes, “*almost every medical advancement at its beginning was available only to the rich. By refining these advancements and techniques prices dropped which opened up new markets for those less financially fortunate.*”<sup>209</sup> In other words, genetic enhancement could result in social stratification founded on the rewards of lengthened life, if these lifespan-extending technologies are very expensive and available only to the privileged few, as they might be initially. The establishment of surveillance mechanisms and vigilance could help being proactive (Mehlman 1999). Consideration must also be given to changes that would be needed in existing laws, regulations and institutions.

Another consideration discussed throughout this chapter is that even though ‘individualism, rationalism and perfectionism’<sup>210</sup> have valuable grounds in a human genetic enhancement scenario, it is their interdependency and the contrasted understanding of the intention of Aquinas, actions and consequences of the law of karma, and the rational individual of Rawls that differentiate the anticipated possibilities.

### **3.5 Fourth principle – leading to the cessation of suffering**

So far the problem of suffering has been exposed and contrasted in three analyses of the nature of the problem, its cause, its contrasting elements and elaboration of the way towards transcending the problem. In the way leading to the

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209 Farrelly (2004), p. 74.

210 Goleman (2003), p. 24.

cessation of suffering within Buddhism, which is its fourth principle, the application usually begins through the availability of norms, precepts and ethical values or, in our Western world, the professional and ethical guidelines to guarantee the observance of high standards in the research (Canada: the Tri-Council Policy Statement) and the delivery of medical genetic services (Canadian College of Medical Geneticists).

Norms and principles aim at addressing the challenges that can arise from human participation by developing safe and effective health-related interventions, technologies and products. An ethical, value-based approach considers integrity and ethical individuality to foster value as a first level strategy before considering deontology or the universal consideration of validating norms. Within such positions, the anticipation of human genetic enhancement technologies still finds adherence to regulation and principles.

In Buddhism, there is no theoretical conversation on how life forms appear from inanimate matter (Dalai Lama 2005).<sup>211</sup> The key divide concerns non-conscious material and the appearance of conscious life forms. In this tradition, the development of the cosmos and the appearance of the conscious life forms contained by it (physical and life sciences) fit within the sphere of The Four Noble Truths as we have seen in this chapter. The Four Noble Truths state that suffering has a source, the ending of suffering is achievable, and there is a path to end suffering. Research science stops within the reach of the first truth in researching the material support of suffering. It envelops the entire range of the physical surroundings, as well as the life forms. We discovered in the second truth or principle, relationships to Kant's 'Critique of Pure Reason,' karma and the origin of suffering. The "*third and fourth truths, cessation and the path*"<sup>212</sup>, are external to scientific investigation as they relate principally to philosophical and religious disciplines (Dalai Lama 2005)<sup>213</sup> that contrast with bioethics principles. We can

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211 Dalai Lama (2005), p. 106.

212 Dalai Lama (2005), p. 106.

213 *Ibid.*, p. 106.

therefore appreciate that a broadened policy on human research can benefit by including an understanding of philosophy and religion that includes the cause and condition of the law of karma.

From a deontological and policy perspective, ethical considerations would include the full range of measures used by professions to affect the behavior of their members. These measures include professional self-regulation and professional standards, as well as the setting of more informal professional norms. For example, The Canadian College of Medical Geneticists (CCMG) addresses three areas of concern.<sup>214</sup> Within these areas, one pertains to the responsibilities to patients, one to society and one to the profession itself.

Within the responsibility to patients:

genetic services are to be provided to all individuals. The professional standards broadly cover the measures to establish and interpret results and risks in a patient's best interest by information sharing. It maintains that information should be given in a supportive, unbiased, and non-directive way; to provide referrals when special support is needed; to keep information in confidence unless otherwise written; and to inform the patient that it is their responsibility to stay informed about the status of their disorder.

The responsibility to society pertains more to the cooperation with the family and encourages the establishment of screening programs as well as equal access to genetic services. It further encourages public education.

Within the responsibility to the profession:

it encourages seeking opinions from the profession and cooperation with fellow professionals who assist in the care of a patient. There is an emphasis on providing written reports and making them available to colleagues, avoiding a personal profit motive, and on

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214 CCMG Professional and ethical guidelines : <http://www.ccmg-ccgm.org/ethics.php>.

following conduct beyond reproach within the professional's area of competency.<sup>215</sup>

Tibetan medical principles (Tantra of Medicine – part 2, chapter 31) also include specific information for harmless practice and the generation of compassion. In order to apply them to the human genetic enhancement discourse, one needs to understand these principles with creativity and open-mindedness. The link is more an inductive one, as very little literature exists on human genetics and Buddhist ethics. In the metaphor mentioned previously in Chapter 1, the interconnection of medicine to the physician's relationship with a patient falls within a broader ethical context where the Buddha becomes the physician, the teaching the medicine and the practice of the instructions as treatment.

The physician's virtuous motivation is considered essential as well as a desire for awakening (referred to as *bodhicitta* in Sanskrit: the thought of awakening for the benefit of others). According to this view, the physician must keep his/her vow with regard to pure perception towards the teacher and consider their medical texts as sacred. Compassion towards patients is seen as a crucial element, as well as equanimity (Dhonden 2000).<sup>216</sup>

In essence, altruism and generosity, as well as the abandonment of hypocrisy and sensual cravings, bring fundamental benefits and link with the way to the cessation of suffering which is, for the Eastern paradigm, attaining the state of perfect spiritual awakening (Dhonden 2000). In fact, the relation of ethics to the fundamental benefit of all is similar to the Canadian Tri-Council norms that prescribe the frontier of research with regard to human genetic enhancement. The added dimension of Buddhism to Tibetan medicine is the cognizance that the ultimate beneficial action will undoubtedly lead to the benefit of all. The cultivation of beneficial action, altruism and generosity is a way for excellence.

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215 CCMG Professional and ethical guidelines : <http://www.ccmg-cegm.org/ethics.php>.

216 Dhonden (2000), p. 1111-13.

In our Western world, and more particularly in Canada, our public policy includes efforts by governmental as well as non-governmental agencies (other than professional associations) to manage human genetic research. Chapter Thirteen of the Tri-Council Statement<sup>217</sup> on human genetic research contains seven sub-sections that look at the application of core principles to genetic research; plans for managing information revealed through genetic research which also looks at clinical consequence, risks and possible benefits for applicants and others who may be concerned; genetic counseling such as its access; genetic research involving families; genetic research involving communities and groups; and genetic material banks and gene transfer. However, the use of animals is described as acceptable, within respectable means.

The policy further considers that:

Genetic research also has the potential, however, to stigmatize individuals, communities or groups, who may experience discrimination or other harms because of their genetic status, or may be treated unfairly or inequitably.

When looking at compassion and harmless practices we find a different take than that found in Western autonomy, the former providing a wider perspective. Both are interdependent and present the means for greater considerations.

In that regard the personal policy, to use a very Western term, would be to foster dialogue in order to encourage ethical reflections that go beyond personal values. By looking more broadly at compassionate and harmless practices, human genetic enhancement technologies would benefit from true individual and social dialogue. By understanding the law of cause and effect, such that an action is the acknowledgement of an a priori planned act by a person, such an act can be physical, verbal or intellectual. Just thoughts or emotions are said to have

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217 Tri-council 2<sup>nd</sup> edition. [http://www.pre.ethics.gc.ca/pdf/eng/tcps2/TCPS\\_2\\_FINAL\\_Web.pdf](http://www.pre.ethics.gc.ca/pdf/eng/tcps2/TCPS_2_FINAL_Web.pdf).

influences upon the consciousness of a person, even minuscule ones. The outcome of actions results in effects that prepare one mentally toward certain characteristics and propensities, all of which possibly will augment supplementary plans and actions. This procedure is seen as a continuous, self-perpetuating cycle. The succession response of interlinking cause and effect works not simply with particulars, but is also reflected upon groups and societies. This is said to cross this life and numerous lifetimes as well (Dalai Lama 2000). The law of karma brings a more self-consciously normative analysis which is more inductive than prescriptive normative reasoning. In some ways it could also be linked to the history of religions, an analysis that interplays between past and present and incorporates and continually transforms and renews all that we know and all that we are.

### **3.6 Thoughts on comparison**

In trying to compare the idea of natural laws to address bioethical issues as they relate to human genetics, we found that Aquinas linked the human act as the first principle of reason, distinguishing between action and intention and the eternal law as the last objective ethical measure. He further defined the principle of the human act— which Kant also described within a scientific context as phenomena being subject to natural law— and then explained the inner experience of selfless moral duty as being subject to eternal law. By this he released science from scientific determinism but made his theory a subjective certainty.

The decline of metaphysics following the rise of science and reason practically eliminated the grounds for Kant's subjective certainties. Scientific knowledge dismisses any external, mind-independent necessity (Tarnas 1993). It is within this context that Rawls took the Kantian ideal of morality and continued the development of the moral agents in support of the principle of autonomy, leaving any a priori claim to the universe's intrinsic nature.

So how could the law of karma expand our knowledge and understanding in a way that has not been addressed by Aquinas and Kant and may be missing from the actual debates in regards to bioethics?

If we look at Kuhn (1996), where he proposed recognition of the self-validating paradigm of scientific practice,<sup>218</sup> which in our paradigm is regarded as a relative matter, we can understand where the interdependent theory fits in explaining the relativity. However, the logical finding originates in the relative and absolute nature of the universe; this was differently termed by Kant as inner belief or experience. Therefore, principle and the harmless practice of non-violence become the causes and conditions which are part of a larger perspective on benefiting other sentient beings based on the interconnected reality described by Buddhist philosophy as emptiness. This rational process delves down to the mental stage. According to Vajrayana Buddhism, an unconditional division cannot be made between mind and matter. The subtlest vital energy is matter, a very important energy indivisible from consciousness. This energy has the features of mobility, vitality, and unity, whereas consciousness is the feature of cognition and the aptitude for discriminative thinking. In Buddhism, when the world structure arises to be what it is, we are actually examining the participation of this energy and consciousness (Dalai Lama 2000).

In bioethics, appearance and reality have to be consistent; in a facade there could seem to be an act of compassion but in reality the person could have a negative mind, with a profane or vested interest. In Western bioethics, where we find pluralistic speech and practices whose object is to resolve or clarify ethical questioning, consideration of a sound mental state and motivation all need to be taken into account analytically.

In essence, the contrasted ethical system is not a series of 'dos and don'ts,' as one has to understand the innermost details of their actions with non-harmful

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218 Kuhn (1996), p. 111.



intention. As the contrasted approaches not only discuss the interpretation of the cosmic universe, they are also based on this physical phenomenon, one that takes into account the benefit for oneself and others as well as the society in which we live.

The objective of this research project is to arrive at the bridging of pluralistic visions which aim at contributing to the Western research on longevity and human genetic enhancement. It requires recomposing ideas and concepts through questions and discussions that will help not only the understanding of Tibetan medicine and ethics, but also pluralist visions and their places within Western bioethics. In order to do this we will proceed according to different steps. We then come to present our Chapter 4 and our methodological choices.

## CHAPTER 4: METHODOLOGY

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### 4.1 Research context and concerns

The systems being studied are the research/medical methods and ethical systems related to human genetics enhancement and Tibetan medicine. These straddle three disciplines: science, philosophy and metaphysics.

As modest methodical consideration has yet been directed to this subject from a Buddhist perspective, the research was intended to identify the commonalities that are emerging in both the Western and Tibetan ethics perspectives. This identification further assisted our broad objective of the bridging of pluralistic visions. Our specific reference framework examined the predominately close-knit Buddhist philosophical system from the angle of our Western influences.

Using a qualitative approach was the most appropriate rationale for addressing our research question and was the most likely method to produce useful findings for understanding longevity within the Western human genetic enhancement research and concerns, as they relate to the Tibetan medical system. As we embarked on our qualitative research we utilized a naturalistic approach (not a naturalistic inquiry) which included naturalistic paradigms concerning Western bioethics and those of the science and ethics of Tibetan medicine. It further addressed basic issues in moral philosophy and included the following areas: the different frameworks that surround the ethical consideration concerning research on longevity and human genetic enhancement; the value of a philosophy/metaphysics centered on a holistic and integrated outlook and the questioning of interdependence; and the mapping out of paths of converging ethics.

## **4.2 Qualitative Framework**

Qualitative research is a dynamic and interactive approach that cannot be considered linearly; the focus on the ‘quality’ of the methodology refers to the essence of the views being provided (Berg 1989). This is the reason why we opted for a qualitative paradigm and methodology that clearly delineate the rationale for using such an approach. This allowed us to focus on the views of the experts that investigate how the bridging of pluralistic visions of Tibetan medicine may contribute to Western research on longevity and human genetic enhancement.

Qualitative research is of a discovery and description type. In our case, the objective has been to identify links between the pluralist vision of science and the ethical elements of Tibetan medicine, as well as those of longevity and Western human genetic enhancement research. More specifically, it examines the issues and perceptions in ethics and longevity and the insight experts can bring into the scientific discourse surrounding these issues.

Our questioning is provided within a specific time frame, one that frames the actual context of the debate on longevity and human genetic enhancement for which discovery and description has been used to support our purpose.

## **4.3 Triangulation pertinence**

Within an investigator triangulation approach (Mitchel 1986; Tobin 2004), combining rationalistic and naturalistic paradigms, and referring to the use of multiple observers, we targeted insiders such as Tibetan scientific researchers and spiritual leaders as well as Western bioethicists and longevity/human genetic enhancement experts. Particularly, the investigator triangulation provided the means for a discussion on the various theoretical perspectives introduced by the participants. This holistic method aimed at capturing the contextual rendering and revealed multi-dimensional aspects of the observable fact. Each source contributed to completing the picture in a very complementary way. With the triangulation

method the validity of the findings were enhanced to achieve high value research findings. It also provided for a 'triangulation state of mind' which Tobin (2004) describes as the concepts that enable the flexibility that allows multi-dimensionality and angles of approach.

#### **4.4 Research frontiers**

The research frontier that we encountered was one where the site would allow the recruitment of Tibetan scientific and spiritual leaders. As only a few Tibetan scientists or physicians (called 'emchi' in Tibetan) had been identified in North America, our site had to be expanded to an area where multiple interviews could be conducted.

After careful research, we identified the Central Institute of Higher Tibetan Studies<sup>219</sup> (CIHTS) and its Faculty of Tibetan Medicine in northern India as a unique place to connect with the Tibetan scientists and spiritual leaders we wanted to interview. CIHTS is a premier research institute with a substantial staff of research scholars and visitors from other academic institutions around the world. It identifies itself as a platform for interaction between Buddhist and non-Buddhist Indian philosophical schools, between Buddhist and Western philosophers, and between Buddhist scholars and scientists. These indications were important for our research project as we wanted to engage in a discussion on bioethical terminologies that are current in Western genetic enhancement research on longevity. The Institute also provided library facilities and expert guidance to affiliated scholars.

Furthermore, we identified the Men-Tsee-Khang which is another official institute in north India that promotes and practices the Tibetan systems of medicine, astronomy and astrology. Both institutes have a Tibetan health care clinic on their premises.

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219 Since January 2009 the Institute is referred as the Central University for Tibetan Studies (CUTS).

In order to be admitted as a foreign student and non-degree, casual researcher to CIHTS to do our field work, the research project had to be approved by the Government of India. With the help of officials from the Department of Foreign Affairs and International Trade Canada, contacts in the Indian Government were identified. A full year passed before all the obligatory requirements were in place. We secured a grant from the International Institute of Research in Ethics and Biomedicine (IIREB) in order to apply to CIHTS as an affiliated researcher and to undertake our field work in Varanasi and Dharamsala (both in northern India). This took place from March 21 through April 20, 2007.

#### **4.5 Sampling and respondent selection**

In Romney (1986) it was found that a small number of experts (as few as four individuals) can provide complete and accurate information within a specific cultural competence.<sup>220</sup> The issues of sampling within this qualitative research meant that the potential characteristics of similar groups of experts from two different cultures needed to be addressed.

In total our sampling was characterized by three types of experts—Western bioethicists, Tibetan scientists and Tibetan spiritual leaders—with a total of sixteen individuals. We also met one additional expert during our observation visit to the CIHTS Medical and Pharmacology Center who was not formally interviewed. Spiritual leaders were deemed essential to this study because Tibetan medicine is also a spiritual discipline. Two series of interviews were done in India which increased the number of Tibetan participants to eleven experts. The two interview series provided a reliable sense of thematics and permitted the discussion on pluralist visions of ethics. Our sampling of Western bioethicists was also based on a small number of five experts who provided complete and accurate information within their specific area of research.

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220 Romney (1986), pp. 313-338.

The variability within our data set was provided by three groups of sixteen experts that we sub-divided (see Table II below) based on their expertise. We also added the Medical/Pharmacological Centre where we did participant observation, bringing the total to seventeen experts.

**TABLE II – PARTICIPANTS: GENERAL DESCRIPTION**

Tibetan medicine physicians and scientists (who teach at the Medicine Faculty and are experts on longevity)	3	India
Researchers (Pharmaceutical, Herbal products, Clinical Research, Literary)	2	India
Below - Ordained Tibetan Buddhist monk (Venerable Geshe & Rinpoche)		India
Tibetan spiritual leader and scientific advisor to H.H. the Dalai Lama	2	
Physician/researcher/scientist (longevity)	3	
Western physician/researcher in Tibetan medicine/scientist	1	India
Medical and Pharmacology Centre – participant/observation	1	India
Bioethicists with expertise in non-traditional medicine	2	North America
Bioethicists with expertise in longevity and human genetic enhancement	2	North America
Bioethicist with expertise in geriatric neurology, cognitive neuroscience	1	North America

As we sought to recruit experts, we proceeded in two parts. The first one will describe how we prepared our field recruitment and interview setting in India as well as the process we followed to recruit bioethics experts and interview participants in North America.

During our residence at the CIHTS as an affiliate researcher we had access to a faculty member who was a fully trilingual Tibetan Doctor and scientist, and who had been assigned to assist us during our stay. This greatly helped not only in scheduling the appropriate interviews in a timely fashion (a ‘tour de force’ in India), but also in facilitating translation as some experts were not fully fluent in English. This also demanded on our part a rigorous adaptation and time trial flexibility for interviews which sometimes came rapidly and required our immediate availability.

In preparing our data for interviews,<sup>221</sup> we adapted shorter questions and familiar terminology for Tibetan scientists and spiritual leaders but which retained the same meanings in connection with the questions used for bioethicists. At our first series of interviews at the CIHTS we were able to meet and interview six experts, including the Dean of the Medicine Faculty, the Director of the Institute, the Director of Research, one Emeritus Professor (in Western terminology), one Emeritus Professor and scientific advisor to H.H. the Dalai Lama and one physician/scientist. Four were ordained monks (one Rinpoche and three Venerable Geshes).<sup>222</sup> We also visited the Institute Medical Center which provided the applied context of the practice of the Tibetan medicine for which we qualified as participant-observer.

A second series of interviews was carried out at the Men-Tsee-Khang, the official Tibetan medicine centre of H.H. the Dalai Lama in Dharamsala. Owing in part to letters of introduction from experts at the CHITS, we received a remarkable reception from the second group of interviewees and Tibetan experts. As the CHITS is within an enclosed area, interviews were physically located around the Institute circumference. We resided at the Institute guest house, greatly facilitating rapid scheduling and our interviews there were completed within a week and a half. However, the landscape of Dharamsala, very hilly and including several plateaus,

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221 An ethics certificate was granted as the project was approved by the Comité plurifacultaire d'éthique de la recherche (CÉPR) from the University of Montreal.

222 Respondents agreed to be named according to their position.

proved to be more challenging from a research perspective. Although the Institute's Medical Faculty is located in what is called the 'library area' or plateau, other experts were located in a monastery on an upper plateau as well as some at experts' houses and offices.

At the Men-Tsee-Khang Tibetan medicine center, we were able to interview five experts in a second series: one director and scientific advisor to HH the Dalai Lama (Venerable Geshe), one Emeritus Professor, one Director of Research, one spiritual leader/physician (Rinpoche) and one Canadian citizen studying the Tibetan Medicine system there. In all, we were able to interview eleven experts in India.

As for Western bioethicists, we prepared a list of carefully selected experts and sent an individual letter to each specialist. We completed a follow-up telephone call with each one, but only one expert responded favorably. The main reason cited for not participating was the lack of knowledge of non-traditional ethics and non-traditional medicine such as Tibetan medicine. There were also skeptical points of view with regard to the very enterprise of comparative ethics itself. One respondent held a perception of the lack of a profound reflexion on the part of Western bioethics. Others mentioned the lack of bioethicists' pluralist view in general, citing this as a challenge not just for this study but for the discipline itself. The one willing respondent, an expert in the longevity and enhancement field, was able to provide us with a list of potential contacts who were either versed or interested in the non-traditional medicine research field and bioethics.

As we had experienced only sympathetic responses from the Tibetans, we were very surprised when the first series of Western experts did not respond favorably to our request. In the Tibetan system, when we asked Tibetan experts if they were interested in participating, they would respond that it was not a question of personal interest or not. The interview was rather seen as an important way to help research and an understanding of Tibetan medicine.

In contacting the second series of experts, we were very careful in our choice of wording and simplified our request. The short introductory e-mail saved the



details for a later telephone conversation. When we contacted the recommended experts as well as others on our list, we concentrated more on their Western comparative view than the previous elaboration we had done of the Tibetan medicine, realizing that most Western experts have no knowledge of Tibetan medicine. Also the use of e-mail proved to be a faster means of reaching experts and obtaining confirmation than we experienced from the formal letter writing. In all, five Western bioethics experts were recruited who were all cognizant of nontraditional ethics.

In selecting our sample, we were aware of the challenges in addressing three different groups of experts. As referred to previously, these were comprised of Tibetan physician/researchers and scientists, Tibetan spiritual leaders and Western bioethicists. Among those in Tibetan medicine many experts are ordained and/or monastic. Our understanding is that in this tradition, we can find Rinpoches (this title applies to reincarnated lamas, currently, as well as outstanding teachers—referred to in this study as spiritual leaders) who have taken special vows and are married and thus not living in a monastery. Physicians are also researchers, as part of their work is to investigate new components/herbal mixtures. As explained to us by these experts, clinical trials in that culture are performed on the physicians themselves first. Tibetan medical thinking is strongly rooted in Buddhist principles and all the Tibetan experts had received detailed teaching in Buddhist philosophy. The quality of the experts provided the research with the added value of a profound knowledge of the subject of Tibetan science, of medicine and of its integrated ethical system.

The Western bioethicist group also offered various combinations of expertise. A number of experts are bioethicists who have developed a specific expertise in longevity and human genetic enhancement; the others are a geriatric neurologist and cognitive neuroscientist, and ‘global bioethicists’ who have studied non-traditional ethics.

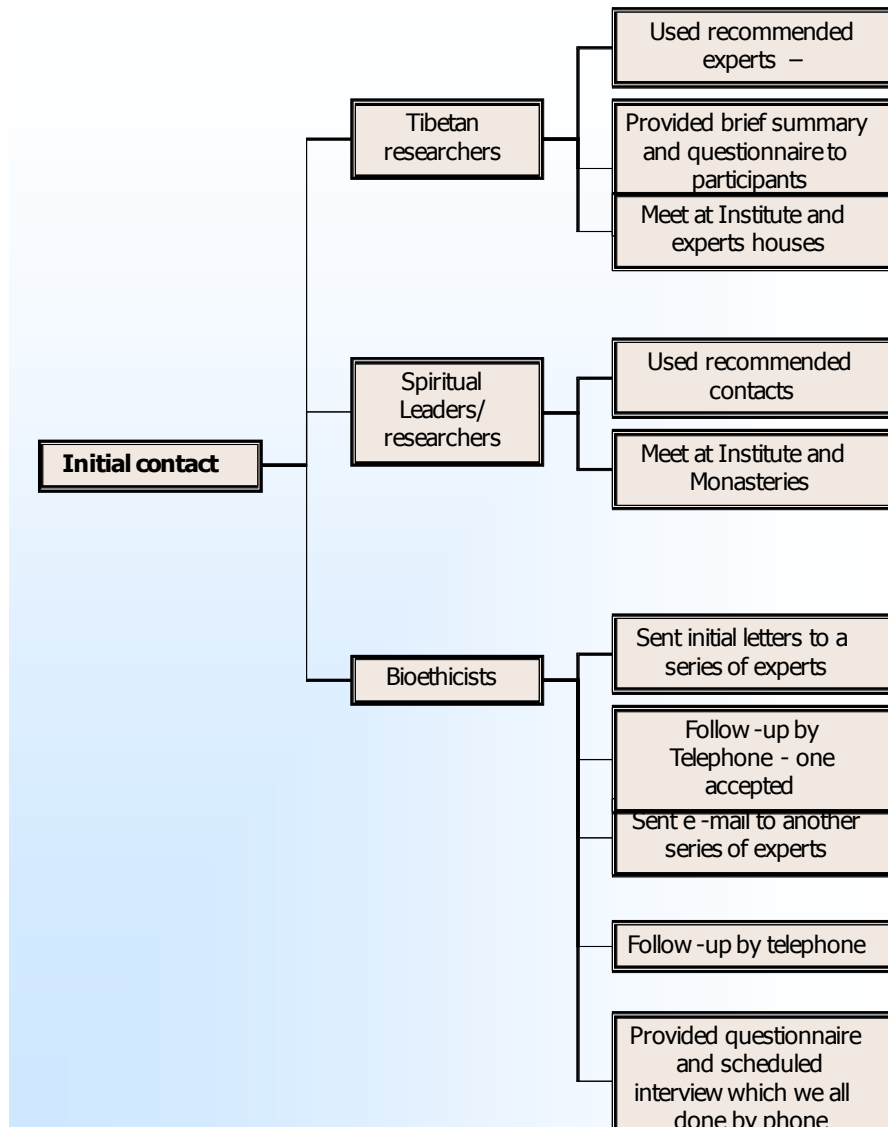
The respondents are identified by the letter “T” for Tibetan and “W” for Westerner. These are in parentheses and include a second letter which is their

denomination; “p” is for physician and “e” is for expert, which in the case of the Tibetans means a director of research or scientific advisor to the Dalai Lama. In the case of the Westerners we used the letter “e” only for one respondent, a researcher/Tibetan medicine expert at the Men-Tsee-Khang; all others are bioethicists, except for one who is both a physician and a bioethicist. The letter “m” is for monastics who in all cases were also fully knowledgeable in Tibetan medicine or are teaching Tibetan medicine. The respondents were numbered in the order in which they were interviewed: for the Tibetans (Tp1, Te2, Tp3, Tm4, Tm5, Tm6, Tm7, Tp8, Te9 and Tm10) and for the Westerners (W1, Wp2, W3, W4, W5, and We11).

In summary, we interviewed ten Tibetan experts and six Western specialists (including one Westerner temporarily residing in India which was calculated earlier as part of our first series of interviews with Tibetan medicine experts) for a total sampling of sixteen experts. We were able to conduct all Tibetan interviews within a three week period. The progression of the recruitment and interview setting for the Western experts was accomplished over a five month period. The bioethicists in our second outreach who granted interviews all had good knowledge of the subject at hand. We present below in Figure 1 an overview of our recruitment process.

Figure 1 – Overview of recruitment process

## Overview of recruitment process



Spiritual leaders were deemed important for this research as Tibetan medicine is closely connected to Buddhism. Five of our interviewees was ordained, religious leaders as well as experts in Tibetan medicine.

## **4.6 Research Tools Development**

### **4.6.1 Consent form and research outline**

We understood the need to take the necessary measures for the protection of human subjects in qualitative research. In order to address this measure, we developed a general consent form which was provided to each participant. Although we used a slightly different version of the questionnaire for the Tibetan and Westerner groups, only one consent form was developed. In India, the consent form was distributed before the interview with a questionnaire and a brief research outline (see Annex 4-6 for consent form, questionnaire and research outline). As we were not the immediate first point of contact in India, the research outline provided a communication support to the interview scheduling which was done by the faculty assistant/doctor who was assigned to help us with this task. It also served as a reminder of the subject to be discussed. At our first meeting we took the time to explain the reason for a consent form, the aim of the research and asked for a signature.

When we did our second series of interview in Dharamsala, we continued to utilize the same method. We provided at our initial contact (either with the Men-Tsee-Khan office, the monastery or the person himself) a copy of the consent form, research outline and the questionnaire which provided an opportunity to schedule the interview. We then followed with the consent signature and interview.

In the case of the Western experts, the first round of letters included a consent form as well. Our second round of experts recruitment proceeded differently as we sent the consent form either by fax or mail after the candidate had been contacted and accepted to participate. No question on the consent form was asked as all the bioethicists were fully cognizant of this procedure.

One respondent, a monastic participant (Rinpoche/spiritual leader – head of a monastery) refused to sign any consent form, even though we explained the

reasons before and after the interview, as he felt it was unnecessary to formalize his participation with signatures.

#### **4.7 Data collection**

The main method used for data collection was the individual interview. The data collected were essential in order to bring out and capture experts' views on the ethics concerning scientific research related to longevity and enhancement. This process allowed the comparison of perceptions as well as revealing some of the essential ethical commonalities in order to start bridging visions.

For each interview, we explained the aim of the study and asked for consent form signatures. Individual interviews then had a fluid format. We would not intervene unless there was a need to clarify the comprehension of our questions. We left space for the experts' representation. Although specific questions were asked, experts freely expressed their own perceptions in their own words, independently from cultural conventions or hierarchies, touching upon a larger number of topics. This approach respected the discovery and descriptive character of the study. Although we mentioned the expected duration of the interview, the fluidity format was the one required in the kind of research environment that exists in India. On the other hand, for the Western experts most interviews were done over the phone and the duration discussed with the respondent was respected.

Most interviews were completed within the planned sixty minute format. Some interviews, though, were much longer and demanded two separate phases as the translator's time had to be taken into account. One Tibetan expert provided us with a written report (in English) that he discussed with us and asked not to be recorded.

## 4.8 Stage of Analysis

### 4.8.1 Analytical process

In total, sixteen experts were individually interviewed with six open questions formulated for Tibetan experts and five for Western bioethicists. The extra question for Tibetan experts was intended to elicit an explanation of the tantra of medicine for someone who has no fundamental knowledge of Buddhism. This is congruent with the purpose of our study because Tibetan medicine and Buddhism serve as lenses through which this issue and the current bioethical discourse are examined. It also supports the research question: can bioethics expand its intellectual and conceptual resources by engaging with a tradition such as the Tibetan medical system, within the chosen qualitative method selected. Interviews were done in two phases: one series was done in India and the other one in North America. The individual interviews constituted the heart of our empirical work. Overall, the questionnaire examined scientific research, ethics, longevity, the notion of perfection and enhancement of human beings, and how the pluralist vision of ethics can contribute to contemporary research.

By applying the triangulation (Miles 2003) to our data source, each respondent's interviews were compared with those of other respondents with similar expertise. In essence, the reiteration of interview questions to other actors such as spiritual leaders also helped to complete and verify the information. As discussed by Romney (1986) we used consensus theory as our comparative data source.<sup>223</sup> Since experts tend to agree with each other the consensus theory validated data and provided saturation in many of our themes.

As part of the interview we asked all Tibetan experts to offer Buddhist text references. We felt this provided additional support for the authority of the information provided. The triangulation of sources increased our reach with expert

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223 Romney (1986), pp. 313-338.

participants and provided a reliable sense of thematic exhaustion and variability within our data set. Thematic analysis permitted us to draw a more conclusive picture as to the scientific-ethical implications of the social and cultural representations of genetic enhancement and longevity research.

The triangulation of methods also brought into use complementary sources of data. We drew on participant-observation as we visited the CIHTS medical centre; this provided useful applied medical research information. At the CIHTS Faculty of Medicine we were also invited, as a participant, to join early morning class rituals on specific days related to the Medicine Buddha. This provided a fuller appreciation of this practice in a medical context. At both sites we joined informal gatherings with experts and students that enriched, and provided the cultural context for, a further understanding of Tibetan medicine. These strategies were congruent with the purpose of the study in developing the ability to understand complex concepts such as what a Tibetan integrated system is, not only from a conceptual perspective, but also through direct experimentation.

Our particular qualitative discovery and descriptive method did not call for a literature review. We had already performed such a review before initiating our fieldwork, but we took the opportunity while in India to verify experts' literature references at the Shantarakshita Library which has one of the richest collections of ancient Indian literature in original Sanskrit manuscripts and Tibetan translations. Unfortunately, most of the references provided were not yet translated into English. Thus we feel that this cannot be considered as a sufficiently comprehensive literature field review.

Prior to initiating fieldwork we also had a reference framework for the Tibetan interdependent system. As Western medicine finds itself within a context where religion, philosophy and indeed politics exist as separate entities, our methods aimed at exploring the essential and interdependent parts of the closely-knit Tibetan hierarchical system in which the spiritual and temporal organizations of society are one. Tibetan medical principles claim to interconnect within an understanding of ethics and rituals that animate the practice, and where these same

ethics and rituals also animate the whole of Tibetan society. Our triangulation methods provided the means for applied comparative perspectives to further our research in regard to this interconnection within a refugee population where Buddhism predominates as a closely-knit philosophical system but where Western influence is starting to penetrate.

Manual interview notes were taken as well as audio recordings. The audiotaped integral interviews were used as our main descriptive source. Each interviewee's illustrative quotes were set point-by-point and cover the topics raised. These chosen topics were intended to extract consistent themes. Although the four main themes were more obvious from our questionnaire, in-depth reviews of each interview were done several times to confirm them. This also meant identifying key words, intuitive groupings, similarities, images and metaphors as well as links among commentaries and in between concepts for all respondents. This first step allowed the validation of the science and the ethics of enhancement, with sub-themes related to perfection and longevity, by classifying the interests, values and concerns within each cultural community. This led to the subsequent step of the analysis where six main points emerged from the participants and were grouped together to form a comprehensive picture of the collective understanding. This process allowed for the contrasting, comparing and identification of pluralistic visions, values and concerns that were revealed according to their subjective importance.

We have not used software such as N Vivo for the analysis of our data corpus. Because different terminologies were used by the two paradigms, and because the experts provided profound and complex explanations, we felt that a manual approach composed of in-depth reviews was important to uncover commonalities and address our main question: can bioethics expand its intellectual and conceptual resources by engaging with a tradition such as the Tibetan medical system, which emerged within an intellectual and cultural milieu where no Cartesian separation between mind and matter, nor a radical separation between philosophy, ethics and spirituality, have occurred. As mentioned earlier, questions were formulated distinctly for Tibetan respondents and Western respondents which also added



complexity. We also had one respondent who answered in French (which we translated into English).

The importance of faithful rendering seemed of primary importance as many specialized terminologies existed. We thus introduced different themes to provide internal coherence but left ample space for the original verbatim reproduction of each expert's responses, in Chapter 5, in order to keep the essence of the meaning.

#### **4.8.2 Codification and categorization**

In order to keep data organized and retrievable, thematic analysis was used to put together patterns and common themes, atypical responses and deviations from these patterns as well as interesting facts emerging from the interview transcripts. These views allowed us to present options from the discussion of applied bioethical integrated views to address longevity and genetic enhancement.

As discussed earlier, we cut out the text in codes. Because we did this by hand we colored each citation that pertained to themes and sub themes. We extracted four main themes (see table III): 1) the tantra of medicine (yellow); 2) scientific research & science (pink); 3) ethical pluralism in which we addressed both bioethics and the ethics of Tibetan medicine (green) as well as the sub theme of enhancement (green with "e" for enhancement), perfection (green with "p" for perfection) and longevity (green with "l" for longevity); and 4) the bridging of pluralist visions (blue). From these themes we then looked at the transcripts for recurrent ideas from both sets of experts as well as new ideas that added dimensions to the same theme. This meant building a narrative that incorporated similarities from both cultures as well as individual visions that were not congruent with one another.

Each interview transcript had to be read several times to make sure that every theme had been exhausted and that significant extracts were retained within all the interview sets (Huberman 1991). This procedure, although very time consuming, appeared to be the best approach in order to capture all subtleties that had been discussed by each participant, which were essential for linking ideas.

**TABLE III – THEMES AND CONCERNS IDENTIFIED BY EXPERTS**

<b>Themes</b>	<b>Concerns</b>
<b>Tantra of Medicine</b>	Spiritual system—principles of health and disease
Tibetan & Westerner	The idea of a continuum
Tibetan	Addresses mind and body
Westerner & Tibetan	Links with insights
Westerner & Tibetan	Includes specific techniques
<b>Scientific Research and Science</b>	
Westerner	Anthropological perspective
Westerner & Tibetan	Interdisciplinarity to interdependency
Tibetan	Explains a contrasting view
Tibetan & Westerner	Systematic mind approaches
Tibetan	The good heart
Westerner & Tibetan	Spirituality and science
Tibetan	Vision of Science
<b>Ethical pluralism</b>	
Westerner & Tibetan	Integrated bioethics
Tibetan & Westerner	Other ethical considerations
Westerner & Tibetan	Perfection
Westerner & Tibetan	Enhancement
Westerner & Tibetan	Longevity
<b>Bridging visions</b>	
Westerner & Tibetan	Ancient wisdom
Tibetan & Westerner	A wide inclusive perspective & harmless practice
Tibetan	Unbiased mind
Tibetan & Westerner	Positive outlook – environmentally consciousness & ecologically responsible
Tibetan	Love and compassion

#### 4.8.2.1 Towards the bridging of pluralistic visions

As mentioned previously, within the adopted natural approach our reference framework was our support to further investigate the interdependency system. We wanted to validate the potentiality of this wide inclusive perspective, which can be qualified as ancient wisdom, to see how it resonates and can be used within a Western bioethics framework. Thus, the discovery and descriptive nature<sup>224</sup> of our methodology and the ‘confirmability description’ (Lincoln 1985) meant to demonstrate the neutrality of the research interpretations through a ‘confirmability audit’<sup>225</sup> and further the quality of qualitative research concerns.

The complexity of the philosophical nature of what was provided by two different cultures proved to be a challenge from a qualitative perspective. But as we moved along using our triangulation as ‘structural corroboration’ where consensus<sup>226</sup> concerns got boiled down to a few guiding concepts, this called our attention to commonalities between the two cultures and offered a bridge.

As we aim to facilitate common bridging elements that would contribute to bioethical questionings and Western research on longevity and human genetic enhancement, our next section presents the results of our analysis.

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224 Which means incorporating expressive language and the "presence of voice in the text" Eisner, E. W. (1991). *The enlightened eye: Qualitative inquiry and the enhancement of educational practice*. New York, Macmillan Publishing Company. 36.

225 Lincoln and Guba confirmability audit consists of: 1) raw data; 2) analysis notes; 3) reconstruction and synthesis products; 4) process notes; 5) personal notes; and 6) preliminary developmental information. <http://scholar.lib.vt.edu/ejournals/JTE/v9n1/hoepfl.html>.

226 Consensus is the condition in which the readers of a work concur that the findings and/or interpretations reported by the investigator are consistent with their own experience or with the evidence presented. Eisner, E. W. (1991). *The enlightened eye: Qualitative inquiry and the enhancement of educational practice*. New York, Macmillan Publishing Company. 36.

## **CHAPTER 5: THE BRIDGING OF PLURALISTIC VISIONS**

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### **Introduction**

This chapter presents the whole of our results. As we have addressed longevity and human genetic enhancement in Chapter 1 and contrasted natural sciences and applied ethics with bioethics principles in Chapter 3, this ‘bridging of pluralistic visions’ chapter puts forward once more the convergence of the science and the ethics of both paradigms, Eastern and Western, but from the experts’ point of view, vision and understanding. It is to be noted that we have inserted several citations instead of text in order to comprehend the richness of the explanations. The aim is to render as accurately as possible the source of the reference—the respondents’ explanations that are the results of our interviews—and our analysis of these comments. We have included when needed additional formal references that either support, provide further context for, or elucidate an inquiry from an expert’s comments. As explained in our methodology it is important to re-state that the respondents are identified by a letter T for Tibetan and W for Westerner with a second letter appended as their denomination and a digit to signify the numbers of respondents.

The experts’ comments address more specifically how the pluralistic vision of Tibetan medicine may contribute to Western research on longevity and human genetic enhancement while addressing bridging elements that can contribute to bioethical questionings.

This chapter is divided into four main themes reflecting the viewpoints of the experts. The themes have not been categorized in terms of priority as this would have been difficult to assess. As the interviewees expressed themselves on the pluralistic visions of non-traditional medicine, they answered a series of questions and the reflections are presented in similitude to the order of the question that was being asked.

The reflections start with Tibetan experts explaining the tantra of medicine and the interdependency of the body with the mind as part of Tibetan medicine's holistic medical and ethical perspective. The second theme discusses and defines ongoing research and science with a reflection on longevity, perfection and enhancement, and connects with our third theme, the ethical considerations related to biological discoveries and biomedical advances on living beings such as human genetic enhancement research. Our last theme is central to our research question and considers the bridging of pluralistic visions.

## **5.1 The Tantra of Medicine**

For many generations, Tibetan medicine and its interconnection to culture have been protected from Western influence, which imposed itself elsewhere in Asia by colonialists. The current Westernization of the Tibetan elite includes two aspects: contact with a globalized world and competition with modern biomedicine. Thus, it is going through profound changes similar to other traditional Asian systems—becoming secular, institutional and reinterpreting itself within the professional character of modern sciences. It is also expanding its borders through discovering new outlets from outside interests. Not solely in India but also in the West, Tibetan medicine, which did not previously dissociate itself from Buddhism, is entering a new era (Gyamtso 1992; Paintings 1992).

### **5.1.1 The Tantra of Medicine: an introduction**

In approximately the seventh century CE the Indian Ayurvedic medical system was imported to Tibet. While the medical tradition was in part lost in its original land during the century that followed the exportation of the traditional Ayurveda, Tibetans were able to preserve it (Clifford 1990). (Tp3, Tp1) explained that the traditional medical system is called *Ayurved*; they described that *Ayur* means 'life,' and *ved* means 'science.' The Tibetan system of medicine originating from the ancient Indian Ayurveda was further supplemented with traditional Chinese and ancient Greek-Persian medicine. It also added the indigenous

knowledge of ancient Tibet's Bon shamanism. The Tibetan system merged the spiritual principles of the Buddhist tradition (based primarily on the Four Tantras medical text) with other traditional ancient medicines and developed into an impressive new medicine (Dunkenberger 2000).

The Four Tantras is quite central to this research project as it refers to the holistic system of medicine and Buddhist philosophy in the Tibetan tradition that serves as the lens through which the current bioethical discourse is examined. In order to understand the complex, intertwined relationship between the core of this body of knowledge and its related parts, we asked Tibetan experts to provide an overview of the Four Tantras for the lay Westerner. Tibetan experts (Tp3, Te9, Te2, Tm5, Tm4, Tp1, Tm6, Tm7, Tp8) and one Westerner (We11) described the integrative theory, explained in a medical context as continuity or continuum. Furthermore, (Tp3, Tp1) presented the origin of the Tibetan tantra of medicine in early Indian medical history, adding new information from a reference to the actual text of the Baisajya. In Gyatso (2010) a reference is also made to the transmission tradition of a hidden enlightened-mind treasure text revealed as Medicine Buddha Lord of Beryl Light, for which the Caraka Astavarga great tantra was a part.<sup>227</sup> As explained by (Tp3, Tp1), this early text deals with the illnesses of a patient, the longevity or the rejuvenation therapies, and the treatments for each ailment. (Tp3) explained the dependency as well as inter-link between the former text (Baisajya and the treatise of Caraka) and the new Tibetan text entitled "The Quintessence Tantra, the Secret Oral Tradition of the Eight Branches."

The Baisajya came to be modified and known under its new title: the Caraka Samhita, or the treatise of Caraka. So in that sense when we are talking about this word tantra, it is not something that is meant in the tantrayana ["vehicle of tantra"], but it has something to do with longevity and the precautions that have to be taken in due consideration. (Tp3)

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227 As part of the early Indian medical traditions, revealed by Guru Chökyi Wangchuk, from the old translation school (Nyingma). The other texts are the Tantra of Eight Branches, the eighteen Ambrosia Drop Tantras, and others which were compiled and widely disseminated before being hidden as treasure. *Mirror of Beryl*, Gyatso (2010).

In his own words, (Tp3) explained that the Tibetan text was modified in order to add the tantra (a traditionally esoteric work) which brought differences to the medicine. The content of the Tibetan tantra of medicine is thus original in this context. It also defines the characteristics of health and diseased bodies and includes the techniques together with the principles of right diet, right lifestyle and behavioral factors. Chapter 90 of the third part of the tantra of medicine also includes therapies against aging.

In the Tibetan context when we translate the word ‘medicine’ it can mean to heal, heal the illnesses, and healer is called a physician, and what he uses is the drugs or the treatment, these things are the antidotes which he gives the patient. What are the techniques applied for the healing processes? These are the major topics which are taken into consideration regarding the tantra of medicine. (Tp3)

All Tibetan respondents provided the same etymology for the Sanskrit word *tantra* as combining *tan*, ‘the physical body’ and *tra*, ‘to save’; when combined, it means ‘to save the body’. In (Dorjee 2005) the meaning of tantra is also referred to as ‘protecting the body’.<sup>228</sup>

To ‘save the body’ means not from the actual suffering, the physical suffering, as in that sense the saving of the body, as common people would understand as the visual thing, or the phenomenon that one sees, and also the attachment or the worldly attachment that one has. It means not saving the body from physical illness. When you are talking from the advanced level culture of tantra, it directly refers to saving the ultimate body. It can mean the subtle body which has to be saved from the common delusions. (Tp3)

As we see, when Tibetan experts talk about the tantra of medicine, they refer to two levels. It is what we discovered when questioning them on how to explain the effectiveness of the tantra of medicine on the physical or somatic level. These explanations refer to a detailed and systematic system outlined in Tibetan medicine. However, (Te2) pointed out the second level of ‘tantra as medicine,’

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228 Dorjee (2005), p. 226.

understood more in terms of Buddhist psychology and spirituality. In the next section we report the meaning of this distinctive association to medicine.

### 5.1.2 The Tantra of Medicine: a spiritual system

The tantra of medicine certainly contains somatic elements such as medication, as well as recommendations for diet and behavior modification, for longevity and healing. But (Tm6) explains the distinction between the tantra of medicine and the tantra *as* medicine; the latter is considered to be a sophisticated spiritual system.

Tantra in itself is a more sophisticated spiritual system which requires sound foundation of Buddhist practice in general. As discussed above the rejuvenation which are more common includes tantra's open perspective and a mind body interrelation. Tantra is a spiritual system which is to be practiced, and which is to be inculcated within the person's mind; within the person's psycho-physical realm. There arises no question of the practice of tantra to those who do not have the notion of Buddhism. Because as I was trying to say, tantra is very highly sophisticated, this demands a very sound ground of spiritual practice of Buddhism. (Tm6)

As further discussed by (Tp3), the tantra can also be understood on the spiritual level of atiyoga, referring to the teachings and practices of the highest level of spiritual achievement in Tibetan Buddhism's Nyingma lineage. In Tucci (1980) the technique is described as one of meditation and yoga using a person's psycho-physical activity.<sup>229</sup> (Tp1, Tp3) further discussed how some tantric practitioners can use this advanced technique to prolong their lives and to heal others.

So when you take the tantra of medicine in its actual context then it refers to the Yutok main formulation. Yutok is a scholar. In that case these tantras of medicine are concerned with talking about – this can be classified into talking about two things, like formulations of the medications, against the psychological disorders, and this can mean internal, and secondly, the physical level, or externally, or physically, the formulation against the

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229 Tucci (1980), p. 85.



disorders or the imbalances of elements at the somatic or physical level. When you take the tantra in that medical context, then it can have the same meaning that is more noticeable in other advanced tantras like atiyoga. In that case in both contexts the meaning is the same; otherwise when you are dealing only with the physical context, then you can have the meaning of continuum, or 'saving the body.' (Tp3)

For the patient, spiritual practices include the visualization of deities, which is said to heal and treat psychological diseases (Clifford 1990). For the physician, the meditation upon and visualization of the Medicine Buddha is also said to be useful while treating patients. (Tp1, Tp3) also described rituals such as blessing the medicine that are said to have the ability to transmute certain elements in medicine and to empower it with particular potency.<sup>230</sup> Dunkenberger (2000) explains that the Tibetan physician who mixes the medication should try to preserve pure thoughts and visualize the Medicine Buddha while reciting his mantra<sup>231</sup> (a special method of reciting sacred syllables that use the spiritual strength of sound vibration). While some praise the potential of the Tibetan medicine as a new agent of healing in our contemporary world, other express uncertainty (Kapstein 2006).<sup>232</sup> The Chinese have been using Tibetan medicine without the ritual aspect. As every ingredient has its own property, consecration according to the Tibetan medicine point of view seems non-essential to the efficacy of the ingredients.

### 5.1.3 The continuum

In a medical or physical context the meaning of the tantra of medicine is one which consists of a variety of connections. Teachings of the tantra and the transmission of the tantra have been referred to as the 'continuum,' or the continuity of the teaching up to this day. The notion of continuum is unanimously and consistently referred to by all Tibetan respondents, not only because it is

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230 As referenced in the tantric text of Nagarjuna and also referenced in Chapter 77, 78 and 79 of the third tantra in the Four Tantras of Medicine.

231 Dunkenberger (2000), p. 214.

232 Kapstein (2006), p. 264.

thoroughly used in the medical texts but also because it refers to the philosophy of interconnected reality as described by (Tm6).

It is a very, very wide inclusive holistic perspective. And then this large perspective is focused towards benefiting everybody because all want happiness and do not want suffering. That is the greatness of Buddhism. And the way of benefiting other sentient beings is based on the philosophy of interconnected reality, which is known as *zhunje* or emptiness. Interconnected reality, everything is interconnected in one or the other form. There is no way we can say OK. I'm Buddhist, my religion is the best, let the Muslims go to hell, or the Hindus go to hell. I cannot say this because we are all basically the same, and these different diverse religions solve the needs of different people with different mental dispositions. And we should therefore be able to live as a whole human family, diverse human community as one big human family. (Tm6)

Sommerville (2006) also touches on the idea of continuum, which is seen as a common area that has the capacity to assist in attaining some consensus on ethics rather than a dualistic, oppositional approach.<sup>233</sup> Western expert (Wp2) also expressed the idea of continuum as a distinct categorization of reality. He further reached the similar conclusion as Tibetan experts in regard to the need to pursue a scientific understanding of the meditation and mindfulness approaches of the Tibetan medicine while at the same time understanding more of the enhancement functions as described earlier from blessing of the medicine.

We are trying to divide the continuum in distinct category. We can all develop drug and win Nobel prize. The Western framework is the enlightened framework of labeling and category; that is why the Buddhist framework is richer because it is more aware of the limitation of human being have at imposing their linguistic structure on the world. I would say that science suggests we might be able to do a few more things. I am as interested in what we can do in meditation and mindfulness approaches as I am in medication labeling and enhancement function of Western confusion of categorization of reality. (Wp2)

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233 Somerville (2006), p. 31.

Since the themes of longevity and the science of enhancement are the main ones in our study, they reflect the continuum from the research discussed in our Chapter 1 which concentrated on memory and muscle and the possibility to significantly extend life, augmented by the Tibetan medicine description. (Wp2) discussed brain aging, relating it to an assessment of the Western efforts at labeling and categorization in regard to longevity medication. Tibetan medicine proposes, in contrast to its Western counterpart, a simpler integrated framework which encompasses a holistic view of the person.

When addressing longevity, the Tibetan holistic approach differs in its methods from Western research on human genetic enhancement. While addressing longevity and enhancement, Western experts (Wp2 and W5), as well as (Tp1), expressed uneasiness with the subject of enhancement and genetics, pointing to the fact that there is still a lack of a more holistic integrated perspective in the field of research. All three mentioned that genes should be considered more of an ecosystem so as to be a subordinate category to a more ecological, holistic perspective in which (Wp2) would include the environmental, ecological and narrative perspectives.

We have to be terribly careful in explaining to people and I think that is the mistake that some scientists are making is that all there is, is the genetic phenomenon and I don't think that is true at all.  
(W5)

Tibetan expert (Tp1) is also skeptical about some form of enhancement and future developments such as microchip insertion in the brain and their benefit in enhancing human consciousness.

#### **5.1.4 The body-mind connection**

Tibetan experts also spoke at great length about the interconnectedness of the body-mind and the relative importance of the mind, while acknowledging that the mind needs the support of the body. A healthy body-mind connection depends on how the mind takes care of the body and how the body supports the mind. The

tantra of medicine and its pharmacopeia address the needs of the body as the physical support for the mind, and also works on the level of the mind itself.

Therefore, the first and most important thing is that one should really study his/her mind, that the mind is not commanding too much to the body, which may lead to any of the three faults, of cause or disease. They are overuse, or misuse, or disuse of the body. Overuse can lead to disease. Misuse is like commanding by the mind, and if the body is misused it can get sick. And disuse is if the commanding is not so kind or clever, so the body is extreme to one kind of activity; that is lack of the other, you could say, so that is what we call disuse. If mind is clever it will protect the body through this on the basis of the three faults. And this time we say that definitely it will promote longevity of life. (Tp8)

According to Tibetan medicine pain and sickness are connected to the mind. When the mind is unstable, disorganized or agitated, it affects the vivacity within our subtle channels, injuring our physical composition. Affirmative thoughts nurture health and longevity through cultivating a wider mental horizon rather than a limited perspective (Dorjee 2005).

The power of the mind and the body-mind connection discussed by Tibetan experts are also raised by Westerners (W5, W2) in the context of non-traditional medicine. (W5) further discussed the notion of oblique insight which illustrates the mind consciousness that arises naturally. The tantra of medicine places value on the body to help the consciousness; however, the links to the natural consciousness are now being acknowledged by both Eastern and Western experts.

You have to be a little careful with using the word reason. Some people define it in such a broad way that it would actually encompass a lot of the things that I would call ways of knowing but when I use the word reason I mean largely cognitive (.....), empirical scientific knowledge gate to empirical scientific research. Which is absolutely wonderful and essential but the problem is thinking it is the only way that you can know. That is the problem and so I believe in kind of oblique insight. I don't think you can pursue...there is a lot of things you can't pursue directly. One of them is creative insight. You have to be humble enough to stand back and see if it happens and you can't demand it and you can't make it happen. I just think the same is true of happiness, and so

what I try to do is to set up the circumstances in which you hope that might happen and one of those things that I do in setting up those circumstances. (W5)

What (W5) referred to is the consciousness aspect of mind that arises naturally and the setting of circumstances to foster insights. Although the experiences discussed here relate to creative insight they can link to what (We11) refers to when discussing perceived reality as explained in the theoretical framework of relative reality.

(We11) provides details on perceived reality as described by (Jamgon 2004 (1846-1912)) to be based on ignorance of the nature of things. This in turn gives rise to conceptual duality wherein the mind perceives object-subject and the conflicting emotions brought about by the three ‘poisons’ of desire, attachment and obscuration, as outlined in the theory of interdependent origination. Tantra as medicine, as a spiritual practice, leads eventually to what Tibetan experts refer to as the natural consciousness or emptiness.

### **5.1.5 Tantric methods for longevity**

Other ways to extend life exist in the Tibetan framework. There are many practices based on the transformation of the mind that aim to extend life. For example, (Te9, Tp3) speak about an ancient Tibetan belief that if animals destined to be slaughtered are set free it will improve longevity through the power of deliberately practicing compassion and not harming others. (Tm7) also described popular visualization practices of long life deities such as White Tara, Amitayus and Ushnishavijaya that are said to prolong life. There are also longevity prayers and mantras. Dedication of the merit that comes from good actions to the welfare of others is also said to improve longevity. (Tp1) describes the long life practices in Chapter 90 in the third tantra of medicine which deal especially with the ‘extraction of the essence’ (this will further be explained by (Tp1) below) to attain long life. References were also made to medications that have been specifically blessed and the use of minerals, precious stones, metals and herbs. Also of benefit are oil massage and internal and external oilation. Other beliefs point to geographical

locations that foster long life. However, the main longevity practices as specified by (Tp1, Tp3) use the essences within the body, as well as control over the conceptual mind and the subtle channels. And as (Tp3) specifies these higher practices such as atiyoga are said not only to overcome aging but they can also lead to enlightenment or immortality (an ultimate state of awareness that is ‘immortal’ in the sense that it is said to be unborn, and therefore not subject to death) within one single lifetime.

The procedure can be three months, six months, or even a year it would take. So on the basis of tantrayana [“vehicle of tantra”] only then I don’t think you have to undergo all of these preoperative measures. You can directly have some empowerments, and to let you have to undergo some preliminary measures like ngondro,<sup>234</sup> circumambulations and all that. And after that you have to accumulate your mantras. Until some science comes out, in case you are doing this, in every tantrayana there are various ways of achieving longevity, even from Avalokiteshvara, from Amitabha Buddha, and then White Tara, Medicine Buddha, so many things. So with every deity you can achieve longevity, from the tantrayana point. (Tp1)

But as specified by (Tm6) longevity according to Buddhism is being sought for the betterment of humanity in general and to accomplish one’s spiritual practice in this life. In essence, longevity is about increasing life span and the increase of life span is only recommended by Tibetan Buddhists if it will benefit all sentient beings. Emphasis is placed on balance and harmony.

Otherwise, there is a saying in Tibetan, and also many of the great masters have said that ‘if somebody has lived a life of non-virtuousness, then for that person, a shorter life is more beneficial.’ (Tm6)

Undoubtedly, the contrasting elements of our two paradigms on longevity and enhancement are contending with practices such as Medicine Buddha visualization. As we have seen, tantra includes clear steps to help prolong life such as special deity practice and special long life ‘empowerment’ ceremonies. (We11)

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234 The five accumulation practices that traditionally precede engaging in Tibetan Buddhism’s most subtle meditation techniques.

explained the practice of the ‘deity’. The word itself can be misunderstood and the practice reduced to a mere religious ritual which (We11) said is not similar to the worshiping of some kind of god. One element which respondent (Te2) points out is that basic condition in the tantric technique is faith and belief towards one’s teacher.

First, the practitioner must be guided by a fully qualified master which has also been trained previously by qualified master from a recognized lineage of transmission initiated by the revealing from an enlightened being mostly at a subtle level, or through mind transmission or through hidden treasures (all this process giving one aspect of the meaning of tantra, which is called *gyii* in Tibetan, meaning ‘continuum’ or ‘continuity,’ ultimately referring also to the true nature of the mind which keeps its qualities of emptiness and clarity whatever the obscurations that may veil it.)

When this is considered, the practitioner will try to visualize the ‘deity’ mainly referring to its qualities, the deity being the luminous subtle body (called also body of enjoyment) of an enlightened being (a Buddha has three bodies, the two other ones being the non-manifested and empty ‘body of essence’ and the manifested physical ‘body of transformation’). The pictorial representation of the deities does not account for their actual appearances but are only ‘skillful means’ which help the meditator through many symbols to remember all the qualities of the specific enlightened being. First the visualization is external (corresponding to the dualistic mind) until the practitioner acquires progressively the qualities of the deity which he then will visualize as himself, transmuting his afflictive emotions and bringing him/her closer to the understanding and realization of the nature of mind (various levels of accomplishments will manifest), until any notion of ‘I’ and ‘other’ disappear and the person melts his/her mind in the absolute ‘body essence’. (We11)

Tibetan expert (Tm10) also describes Tibetan medicine visualization:

I will not be able to explain everything but basically what you are doing is—you do certain techniques, sit and visualizations to which you try to extract the essence of the four or five elements, and imagine that you withdraw in white, all the essence of not only the four or five elements, but also all the essence, glory, power of human beings, of celestial beings. Through that way you kind of withdraw inward, left with all this energy within you; and then you imagine that the damages, defects, shortcomings, faults of your

energies got rectified, restored—so that kind of visualization is there. (Tm10)

If we contrast the above with traditional tantric visualization techniques in Powers (1994), deity yoga is a vital practice of tantra and is the characteristic that mainly distinguishes it from the sutra path (the path of the accumulation of virtue).<sup>235</sup> Deity yoga is the concentration aspect of mantra. The unique practices of the tantra course are founded on this technique.

### 5.1.5.1 Tantra of medicine – the subtle bodies

We introduced the tumo practice in Chapter 1. Our Tibetan experts and Badmaev (1997c)<sup>236</sup> described this technique as a means to increase physical and mental well-being as they relate to the ‘subtle body,’ thereby increasing memory. With the elimination of false concepts that contribute to heaviness of mind, Powers (1994) explains how the subtle body can arise as a sensation of great bliss.<sup>237</sup> One’s impression is of the body and mind being as weightless as wind. Our Tibetan experts also discussed the nature of the ‘subtle body’ and medicine. As an example of a practice with subtle energies to enhance longevity, there are two ways of referring to energy practices, according to (Tp1):

In case the student comes for the tantra of Tibetan medicine, in that perspective, the second one, it’s got high objective, then I should say that it is merely a superactivation of the subtle energies; or that the dormant energies, or the recessive energies, that are within oneself are superactivated. That means that it is just sort of a transmission of your present polluted body—you can say that—diseased body, or diseased mental state, into a higher consciousness level. In that sense it can mean the difference. That is how I can give basic background to a person who does not have the fundamentals of the tantra of Tibetans.

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235 Powers (1994), p. 238.

236 Badmaev (1997c), p. 14.

237 Powers (1994), p. 247.



When you are talking about another way of the tantra of medicine, in that case one has to be with the subtle bodies, not the gross or the superficial body, or the physical body that you are touching upon or giving treatments to. In that case it will be like the very subtle body that we have. Like some systems of healing they used to tell me that is the eastern body or the bioplasmic body and so on. So they can say that it is a consciousness body. (Tp1)

Summarizing this section, when contrasting longevity and human genetic enhancement research with the ethics and science of the Tibetan medicine, our expert respondents started by contextualizing that the origin of the tantra of medicine texts builds on the Indian Baisajya text. What distinguishes 'The Quintessence Tantras of Tibetan Medicine' is its emphasis on the body-mind and its spiritual dimension. Its relevance to ongoing research in genetics stems from the treatment for longevity and the categorization of healthy and diseased bodies held to refer to the body-mind continuum. Its emphasis on the relative/absolute nature was further explained as contributing to what the definition of continuum could entail. Furthermore, perceiving the mind as central, the body becomes a means of support for the mind. This interconnectedness is said to lead to enhanced longevity by Tibetan experts.

The role of natural consciousness in a medical context was also raised by Western experts by describing how it can naturally manifest. Tibetan experts put forward specific techniques to foster the naturally arising consciousness and identified deity practice as a means to longevity. The tantric techniques to prolong life were further discussed by Tibetan experts who referred to the subtle body's energies which are, in this tradition, a major element of their scientific research and its application.

In the following two sections experts of both paradigms further reflect on scientific research and ethical pluralism. The comments were chosen because they form the basis for the convergence of two paradigms and contribute to Western research on longevity and human genetic enhancement. They are also the basis for a common bioethical framework.

## 5.2 Research and Science

*The more you go to the subtle level of the material reality, the closer you come to the mind of spirituality. (Tm10)*

In addressing the pluralistic views for longevity, enhancement and medicine, the signification and approach of the tantra of medicine was established, and we discussed the techniques as well as the medication to enhance one's life. In order to further understand within a scientific context, our experts from both traditions now address the integration of a pluralist vision with non-traditional medicine.

It is to be noted that one of our basic premises questioned the Tibetan assertion that the material ideas of science cannot be measured against Buddhist spiritual ideas (HH Dungse Thinley Norbu 2006).<sup>238</sup> We asked Tibetan respondents about this idea of non-comparability and the further statement that the sciences being taught in the Tibetan system are united with spirituality and are therefore implicitly understood to be reflections of the mind. HH Dungse Thinley Norbu (2006) asserts this approach cannot be changed to accommodate scientific ideas as it does not deal exclusively with material existence.<sup>239</sup>

From our theoretical framework, we also came to understand the two levels of distinction as being the material ideas of science and the spiritual ideas that HH Dungse Thinley Norbu is referring to. In our comparative bioethics chapter we also explored and drew parallels from Aquinas, Kant and Rawls which showed the evolution of the Western science paradigm shift towards rationalism. We discussed the cognitive mind and attempted to provide a description of dependent origination as emptiness, and we will see that dependent origination is also compassion.

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238 HH Dungse Thinley Norbu (2006), p. 132.

239 HH Dungse Thinley Norbu (2006), p. 133.

The scientific and research theme provides a roadmap for further understanding scientific research and science within non-traditional medicine and how they can broaden intellectual horizons. Concurrently, experts from both traditions discussed the theme of longevity, the research on enhancement and the notion of perfection which can also be linked to technological science when we talk about enhancement.

### 5.2.1 The atomist perspective of science

There is a back and forth movement in the West in regard to the idea of the human being and of medicine (W3). The dual notion of human being/science, which goes back to Greek natural philosophy (atomist), is also found in the writings of Descartes. His body of work, based on the duality of the subject and the object, is key to the Western scientific view and methodology. It underpins biomedical research and, as such, it is deeply intertwined in Western science. It is distinct from Tibetan medicine, based as that is on more subtle energies. This is what (W3) calls the anthropology<sup>240</sup> where one of the queries relates to what measure research can integrate science and anthropological decisions. The challenge here is to establish a common ground between the anthropology of science and religious anthropology which, according to (W3), rests on the mind-body.

One way is to identify the anthropology behind the actual scientific research. Not from the intellectuals in their offices but from the people in the field. Can they identify this anthropology? The religious anthropology cannot separate the mind-body one from the other. In neuroscience, the mind is a creation from the matter or the mind emanates from matter. Can it be influenced by other anthropology or other medical discourse that needs to be verified? Certain types of parallel views have proven a practical efficacy other than the biomedical research and the technological development (alternative medicine for example) but it will not influence the biomedical research. (W3)

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240 The term anthropology simply refers here to the atomist view of the human body.

The example given by (W3) questions whether in neuroscience, where the mind is said to be created by matter or the brain, the mind can be investigated according to the subtle energies as discussed in Tibetan medicine. Furthermore, anthropocentrism in ancient Western religious and philosophical notions places human beings at the center and at the summit of nature (Hottois 2001). Could it ever investigate another medical discourse such as Tibetan medicine which is closely interconnected with Tibetan Buddhism, placing the Buddha at the summit as the culmination and ultimate accomplishment of Buddhist practice, the product being omniscience, total compassion and unobstructed power? (W3) believes that these paradigms could not influence biomedical research.

### **5.2.1.1 From integrative medicine to interdependency**

Western experts (W2, W5, and W1), however, did discuss an integrated medical approach. Integrative medicine for (W2) also means sharing stories of illness and recovery which patients need to do to tell of their lives and the lives of their families, and recommends that the community needs to hear those. From communication and technology to international travel, (W5) further brings up the idea of a global village where science becomes most easily used to share stories, values and myths.

The way that you will live together and so to find sort of substantively neutral contexts where we could all search for values, I think science is the one that is most easily used. When I say substantively neutral what I mean is that science itself is in a way neutral, you can use it for good, you can use it for evil, you can use it according for one set of values or another set of values. We have to work out then what can we share in terms of what those values will be. (W5)

The First Nations of North America provide another example of an integrated body of knowledge based on shared values. Found in their model is that same stream of ideas, the common language and history being used by (W5) to further explain the structure of integrative knowledge.

I believe that First Nations people...they have a saying that when you have an ethical issue, first of all they engage in ethics talks and corroborate. North American Indians they have a big meeting and they always do it through that. I would call that ethics talk which is a mechanism for eliciting ethics. And I think for Habermas, language is fundamental to finding ethics because of morals games of life. Some of the concept, for example First Nations people always says that you should look back seven generations and over seven generations. Now I would translate that as saying looking back seven generations is looking back into human memory which is the word John Ralston Saul use to look back into history and that brings back the tradition that you have learned. I don't see this knowledge as a pendulum, it is a spiral, so we are going around and we are coming over what we knew in the past. Looking forward seven generations is imagination and creativity about what sort of solution might we fashion here but it also a consciousness of holding and trust for future generation. So we learn from the wisdom of past generation if that we take that and hold it in trust and give it to future generation that is how I see it. (W5)

(W5) doesn't see a back and forth pendulum as described in the anthropological description of (W3), and refers instead to the spiral which can be compared to the Buddhist wheel of life. For (W5) the spiral is coming around to what we knew in the past and also imagining what might be created in the future. In Dorjee (2005) the lack of spiritual knowledge or unawareness is the most significant obstacle to a future outlook encompassing liberation from suffering, obscuring individuals in realizing the truth. Iconographically, the being who clutches the Buddhist wheel of life in a fierce embrace is a representation of this ignorance which confines sentient beings in an apparently nonstop, cyclical tour of meaningless existence.

Continuing with the idea of the spiral, there are two important, dependent elements cited by (Tm7) as the compassionate mind and by (W2, W5) as the need to integrate mindfulness and wisdom as part of an integrative medicine.

The conception of wisdom, i.e., losing memory and still gaining wisdom. We need an integrative thing working around mindfulness and wisdom. (W2)

We need both past, present, imagining the future and we need as many inputs as possible and it is not easy to do. The example I use, is the six year old boy who wants to do a cake without the recipes. What you do with the ingredients, depending on how you do it. The same is true of mixing knowledge. (W5)

Tibetan experts kept coming back to the idea of the interdependent theory where all phenomena depend on one another. Tibetan experts (Tp3, Tm5, and Tm7) explain this interdependency to also include medical science.

### **5.2.1.2 A view of contrast**

As stated by (Tp8) Tibetan medicine cannot narrowly be compared to modern science because while it relies on science, its spiritual dimension does not exist in that science. However, the spiritual tenets are precisely what are worth investigating by Western science. (Te9) goes on to specify that there is no difference whether Tibetan or Western medicine is being administered. The differences arise from the importance given to thoughts and emotions which are said to be the causes of physical and mental illness. In this tradition training the mind, or spiritual practice, is the way to treat illness. However, as (Te9) mentions here, even highly accomplished practitioners can be sick but the mind is not affected.

I think you know medicine as a science does not contradict medicine as a spirituality, because Buddhism, what it tries to say you know—something that should help others. And the main problem is in this case the target is to solve the problem of disease. So when you talk about the disease, of course there are many levels of disease.

One is called physical diseases, another is called mental diseases. Basically Buddhists say that every illness or problem is the outcome of your thoughts, or the so called afflictions. So Buddhists from the spiritual point of view will only fight against those antidotes that will nullify the ill thoughts, whereby one can be liberated from all kinds of suffering. But this is at a high level, you could never contact it. (Te9)

This view of contrast distinguishes thoughts, which is central to the way to address the Tibetan scientific paradigm. It also converges with the Western scientific paradigm through the way in which science takes place as described by Kuhn (1996) in the structure of scientific revolutions, linking with our next point on convergence.

### **5.2.2 Converging point**

The view of (Tm10, Tm7) is that the rational inquiry of the Western scientific method has to include both relative and absolute reality. What is meant by two realities, relative and absolute, is explained by Tsong-Kha-Pa as the unenlightened individual's uncertainty about the significance of reality. Ignorance is a state of mind that cannot discern the real objective which is the selflessness of persons (Tsong-Kha-Pa 2002 (1357-1419)). The remedy is direct cognition and the method as explained by (Tm10, Tm7) is to examine the words and meaning of the teachings or any sciences that have been taught by the Buddha. This is the doorway to his teaching, which emphasizes that no statement is to be accepted without thorough examination. (Tm6) further describes what are the logical systems and the manner of examining which very much relates to Western scientific research.

We should examine with all the logical systems that are advanced, and the systems that is found in Buddha's teachings, and which are further elaborated by the great masters. Most importantly, I think, the science of mind is extremely elaborated in Buddhism, that I don't find would even be elaborated in science also, because science says we should accept the contribution of scientists and modern science. At the same time there are limitations of science, and I think that we can have a sound interaction between the spirituality and modern science, then we can certainly have a good converging point that each can contribute tremendously to the other, and Buddhism's contribution to mind is absolutely very profound. It has not simply given an account of the mind, but also it has worked on it, experienced on it, and developed these things on the ground of the analysis of mind itself, and it has also developed a system to reduce negative mental forces how to develop positive mental forces. (Tm6)

This approach is compatible with the Western view of scientific investigation. Both paradigms rely on logic and investigation. The system of mental investigation is quite elaborate in Buddhism. We have seen recently that some Western scientists have engaged with the Mind and Life Institute, a project dedicated to creating working collaborations and research partnerships between modern science and Buddhism. Together, they are exploring the workings of the mind and brain (including memory functions which relates to longevity as referenced in Chapter 1) with rigorous experimental and experiential science. Tibetan experts are quite open to Western scientific findings regarding memory and the brain. These findings are also starting to guide and inform medicine and other Western sciences. The convergence between spirituality and modern science can be of mutual benefit for both paradigms. Buddhism provides an account of the nature of the mind but also points the way to training from personal experience. This is how to develop an understanding within the ground of the analysis of mind itself, meaning wisdom that recognizes selflessness as the fundamental medicine for ignorance (Tsong-Kha-Pa 2002 (1357-1419)). The Buddhist methodology has also developed a system to reduce negative mental forces and develop positive ones.

(Tm7) provides more information regarding the possible convergence of the two paradigms, as far as the concepts of Tibetan medicine concerning the environment and consciousness.

So then we see the obvious. There are so many like environmental, universal, sentient beings, animals, first explain like that. Then the second step is to research, what are the causes of these things then talk generally about our daily life. Generally or in fundamental ways explain in the life happiness, suffering, there are so many different types of things. Then we can find the causes. Without causes they cannot count that. Then the second step, the third step again research. Now that is the program; whatever in our life. That program is something removable or to abandon or to remove or not. To research that, from that point of view, then they are coming further and further to the noble truth, through true cessation and through the path.

They are talking about this basis path and result. We have introduced three: basis, path and result. So they are coming to the



path. For that reason it is very similar and much related to science, because this world is not going through the belief, this world is going through trying to find some reason for research, and trying to find something like proof, dividends. So in this case, Buddhism is much related to modern science. (Tm7)

When it comes to convergence between the two paradigms, it has been argued that the Tibetan integrated system can indeed contribute to Western research on longevity and human genetic enhancement as well as bioethics by introducing the interdependence of the body-mind into Western medicine all the while retaining its own specificity as a body of knowledge.

### **5.2.2.1 The systematic mind approach**

In Chapter 3 on comparative bioethics we discussed Kant's use of pure reason where the rationalistic structure of epistemological and ontological propositions is said to pervade all aspects of life. Our response was to point to the direct experience of the nature of the mind as a result of sustained meditative practices. Some scientists have now started to address<sup>241</sup> this challenge.

As we have seen from Tibetan experts' explanations, the practice of meditative inquiry can be compared to any scientific experience or logical reasoning. The difficulty is putting into words what is known on the experiential level. The view of contrast places emphasis in our last section on the importance the Tibetan system gives to thought. (We11, Tm6) explain below how the external world is so inextricably intertwined with the internal one. Although thoughts relate to individuals' perceptions, the approach itself is broader and addresses the basis for suffering which is said to result from attachment, aversion and ignorance or mental discontent, all of which originate from the mind. In essence, the systematic approach to mind will bring about changes in perception and in one's life. Mental

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241 The Mind and Life Institute with collaboration from Western scientists and Eastern contemplatives. Advancing research initiatives to establish new fields of science. <http://www.mindandlife.org/>.

stability derived from meditation itself brings benefits such as increasing longevity as described in Dorjee (2005) and by our Tibetan experts.

So these are the sciences. Just as the scientists work on dissecting the chemicals and the atoms and physical objects, and then try to find the ultimate reality of the material world, similarly Buddhism attempts to find out what mind is. What is its reality? What are the qualities? How is it to be discerned? How are they to be identified? What kinds of things are there? How should one work on each of these elements? Great detail—you know! So it is absolutely a science, from my point of view. (Tm6)

In order to have a realistic and genuine perception of the world (Tm6) asserts that science will need to work on the mind. Similarly, expert (Te9) says that through practice on the mind, it is said that the world can be seen as it truly is. Tibetan Buddhists believe that from the spiritual point of view no physical medication can solve problems for good; it is only the training of the mind that will do so. (We11) further explains the logical reasoning and meditative process behind such assertions. However, not many individuals have developed to the level of the advanced meditative practices that were mentioned in the previous section on the tantra of medicine. This poses a difficulty in explaining these mental possibilities. Nevertheless, as (Tm6) declares, one of the advantageous points of science is that it never closes the door. We have seen in Chapter 1 that recently some Western scientists such as Kandel, Davidson and others have been exploring memory, mind and the brain with rigorous experimental scientific research that is starting to guide and inform medicine and other Western sciences.

These experiences which create also the fact that some beings could have access to this true nature of mind, then they could have a very broad understanding of what is the true reality. Then that could infuse the study of science, and always progress in the explanations. The problem is to express it, to express the ultimate reality, which is beyond reality in a dualistic commentary. So that is why, in fact, sometimes even knowledge cannot bring the details of the process of learning how to know. In another way, why a very detailed reasoning has been developed in conjunction with very advanced meditative practice, which is the way to contact the true entity of the mind. Meditative practice could be compared to any

experience which is done in science, to confirm, or not confirm some logical reasoning. (We11)

While a systematic mind approach is discussed, the second key element important to Tibetan medicine science is that it also incorporates compassion—compassion for the patient and the compassion of the physician. Western bioethicist (W5) also referred to the need for having a good heart and the right motivation as a scientist and individual. Similarly, Tibetan experts (Tm7, Tp8) conveyed the importance of a good heart/right intention. This echoes the discussion in Chapter 1 about Aquinas and how right intention is key in a modern scientific context; this is in many ways what bioethics attempts to address in response to controversies brought about by the advances in new medicine.

How much technology has advanced? If the person, who uses this technology, has not a good heart, then it becomes dangerous. Really we cannot decide it, this become positive. For example in a hospital there are so many different instruments. Actually these instruments were made for something healing, or to cure people from sickness.

In this case if the doctor has not a good motivation those instruments cannot function positively for that patient. For example, right now we have so many stories of stealing kidneys, lungs, these are all made from these hospital instruments, because some are used in a negative way. In this case only technology has not advanced enough right now. On top of that we need something—what is this? This compassionate kindness mind. (Tm7)

In relating to the importance of the mind and of the heart in Tibetan medicine we found that these are the two driving themes of Tibetan science. How does this link to Western enhancement and genetics which adhere to the notion of progress? Indeed, ‘progress’ is the drive behind Western technological innovation. According to (W3), this justifies, in the eyes of geneticists, ‘using the human nature as an instrument.’ This instrumentation approach is the same for all discourses on enhancement, be they human, vegetable or animal.

However, another consideration related to new genetics research is found in (W5) reflecting that the human being may be genetically programmed to seek morality. The example provided is the research on baby rats indicating that the development of nurturing behaviour is related to behaviour learning that occurs at a critical stage of development even though the behaviour depends on a gene. This gene is activated shortly after birth when mothers lick their babies. Mothers that do not lick their young are said to shut down the nurturing gene for life; it cannot be reactivated.

...and I think that is the same for us that with this new field of ethics and genetic new genes and environment. I believe we will find that we got genes and I also believe that they need to be turned on at a very young age. That gives us the capacity to know in those other ways what we would not know otherwise be able to know and I actually think that spirituality is one of those capacities. (W5)

Compassionate concerns also relate to the longevity theme. (Tm6) reaffirms that in the Tibetan Buddhist context longevity is sought for the betterment of humanity in general and to develop one's spiritual practice in this life. And because human life is considered exceptional by all Tibetan experts, its importance mainly concerns being able to practice and develop wisdom and create the merit through positive actions whereby one approaches true reality.

In essence, while the systematic mind approach and compassion are integrated as part of Tibetan medicine, using human nature to consider thoughts and intentions, on the other side, Western human genetic enhancement science also focuses on human nature, but as an instrument. However, experts pointed out that instrumentation is only justified when framed by the right intention. The essential point of this section is that thoughts and intentions as the means to benefit all sentient beings is the main premise when contrasting elements that can contribute to the research on longevity and human genetic enhancement. In a scientific context it includes openness which has a quality of discovery and inquiry. Actions and speech should be non-violent. While longevity is about increasing life span for both traditions, the increase of life span is only recommended from the Tibetan tradition if it will benefit all sentient beings; this contrasts to Western bioethical inquiry.

### 5.2.2.2 Connecting spirituality and science

This theme was amply discussed as part of the tantra of medicine section connecting spirituality and science with the natural interlinking of physical and mental reality. (We11 and Tm10) also attempt to explain the natural connections among traditional Tibetan culture, science and spirituality.

In Tibetan Buddhism there are some aspects that are connected to the traditional culture, and these could be included more in the religious aspect. Apart from that, it is difficult to say where the border is between spirituality and science. When studying the mind deeply, the experimental aspect is said to be included in it. Then what would we say is the experimental aspect—is it spiritual, or is it an experiment? (We11)

Fundamentally, many of the remaining themes discussed by Tibetan experts are similar to those found in the tantra of medicine. The conversation taking place mentions subtle energy and inward inquiry. When comparing these two themes with Western scientific inquiry (W5) pointed to the oblique or creative insight which is seen by some Western experts to be an important logic, reason and empirical scientific knowledge. It resonates with most experts who speak about the need, in Western science, to connect.

And that is why even today in science whether it is in the realm of particle physics, or it is in the realm of human mind, we gradually talk about that energy, that particle duality of my mental energy. So we are talking about subtler things. And by speaking about these subtler things we are basically more or less defining the mental reality. So the connection is there, the connection is there. (Tm10)

It is surprising that in science Tibetan experts talk about energy in terms of ‘that particle duality’ or mental energy. Tibetan medicine, as we have seen, sets great store on subtle energy.

Our last two elements of the scientific research and science section focus on what Tibetan experts describe as ‘the third eye’ and meditation. While our ordinary eyes see things at the physical level, what’s called ‘the third eye’ is a deeper

perception that allows for ‘seeing,’ or experiencing directly, the mind’s own true nature. In Buddhism, meditation fosters concentration, the discipline that begins to ‘open’ this third eye, through detailed step-by-step instructions. How can concentration be developed? What are the obstacles? What kind of qualitative elements are required to enforce the elements and what are the experiences at different stages?

Two of our Tibetan experts (Tp1, Tp3) explained the ultimate inward inquiry as compared with the Western scientific investigative research.

When you are dealing with the objective of the object itself, so the subject, the one who understands the object itself, can understand in two ways. Those bearing the third eye can understand at the ultimate level, and those who are at the lower level can understand at the sensory organ level. From that perspective the scientific research using sophisticated instruments can also be classified at the sensory organ level.

This sixth sense, or the third eye; they can see all the arhatic<sup>242</sup> body, arhatic eyes. Then you have these yogic, eyes of the yogi, from that point of view that could be attained not by the material sense; that is attained only through the best or extensive meditations. So there are levels of different meditations, or concentrations that they have attained or realized. (Tp3)

Sustained meditation leads then to increased powers of concentration and the perception of fields of subtle energies. But as (Tm6) confirms, instructions are necessary when dealing with meditation.

There are subtle negative forces which might be misunderstood as a positive mental force, because at the subtle level, it is said to be extremely difficult to differentiate these forces, as these are all dealt with in great detail. (Tm6)

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242 “The Arhat has developed clairvoyance and mental concentration. It has purified emotions and overcome the three poisons of desire, hatred and ignorance.” The Expanded Dictionary of Metaphysical Healthcare, Alternative Medicine. Raso (1998). [http://www.google.ca/search?sourceid=navclient&hl=fr&ie=UTF-8&rlz=1T4ADFA\\_frCA423CA423&q=The+Expanded+Dictionary+of+Metaphysical+Healthcare%2c+Alternative+Medicine](http://www.google.ca/search?sourceid=navclient&hl=fr&ie=UTF-8&rlz=1T4ADFA_frCA423CA423&q=The+Expanded+Dictionary+of+Metaphysical+Healthcare%2c+Alternative+Medicine).

In essence, the differentiating factors that contrast Western research and Tibetan medicine are the importance that Tibetan medicine and science places on thoughts or mind and the reliance on two realms of reality. And while we can think of connections between Tibetan medicine and the field of psychology and psychiatry, this is still far from the Western medical techniques such as gene therapy and other enhancement topics; these will be the subjects of our next section.

### 5.2.3 Longevity and Enhancement

Until now, we have dealt with longevity and human genetic enhancement from the perspective of balance, harmony and mental attitudes. We now situate longevity and enhancement within current debates regarding human life span. The West is currently benefiting from significantly increased longevity; indeed, it has increased, on average, by 25 years over the past century (Fisher 2004). However, there is a space for dialogue on longevity as it is not written anywhere that we should live 120 years, explains (W3). (We11) relates that Buddhist cosmology specifies that previously human beings were said to live much longer [than the current normal maximum life span of about 100 years]. However, Tibetan thinkers such as Patrul Rinpoche (1998 (1808-1887)) state that while humans can live much longer, the accelerated lifestyle we know today will eventually lead to a time where life will be shortened to only ten years.

That is why in the Buddhist texts that we even say that we are in a decadent era and that in some times a being could live 88,000 years, and we will go at the end of this decadence to ten years of lifetimes.<sup>243</sup> (We11)

On the one hand, the texts state that the decadent era will see life decreasing; on the other, (Tm7) gave an example of the well known history among Tibetans that describes the increased life span of Nargajuna, the primary commenter on the middle way ethical precepts. Although the way life span and

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243 In *The Words of my Perfect Teacher*, Patrul Rinpoche, p. 45.

time measurement<sup>244</sup> were calculated in pre-technological days differs from our modern calculation, a variety of similar stories of extreme longevity are still alive in this tradition relating to remedial measures applied to increase life span—prophecies for Nagarjuna when he was born, for example, indicated that he would only live seven years, but he lived much longer than that as explained by (Tm7):

So Nargarjuna when he was born,<sup>245</sup> when people saw him his life span was only seven years. That person through the tantric, according to one history they say he lived 600 years, this is difficult to believe. But definitely he stayed a very long, over 100 years. Actually, his life span is 7 years, so through this one (tantric practice), he lived to over 100. So this one we say according to Buddhism he gained through the power of initiation of the tantra, initiation of long life and the truth of practice. He lives that long life. (Tm7)

In Western modern science it might be theorized that some people live longer because of genetic connections to longevity within their ancestry. While Nagarjuna's story illustrates the possibility of life extension for dedicated Buddhist practitioners, for Tibetan expert (Tp1) the factors to extend one's life are not related to being a certain genetic type as everyone is said to be capable of attaining increased longevity.

Anyone who has the basic things, the wish to have a long life, and ready to undergo such procedure, then in that case where one has these two intentions, everybody is capable of having a long life, longevity. For that matter it is not that one can attain, or achieve these things in a polluted environment, so you need a really sound environment for studying the texts. (Tp1)

Longevity, as we see, is a subject of great interest to Tibetan experts which sometimes seems contradictory; life eventually will be shortened to only ten years according to the texts on the one hand, and that it can be increased from seven years

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244 Time measurement counted by breath. 100 = completed life span in Gyatso, K. N. (2004). *Ornament of Stainless light - An exposition of the Kalacakra Tantra*. Ed. The Library of Tibetan Classics, Wisdom Publications.

245 Nagarjuna was estimated to have been born in the latter half of the 1<sup>st</sup> century CE.



to more than one hundred on the other. However, as related by many of our respondents and by Nargajuna's own life story, spiritual practice is said to not only lead to a longer life, but have positive repercussions within that life.

Technologically-driven enhancement is mostly a Western phenomenon. In the Tibetan framework everyone has the potential for longevity. In the Western framework it is enhancement research that has the potential to increase life span which is seen by (W4) as a way of widening the social gaps in Western society. (W4) uses the example of orthodontistry made available only to upper class American children. The availability of technologically-driven enhancement has raised the norms in Western society but made them available only to the elite. (W1) also discusses the social justice question and the redistribution of findings stemming from research in the new field of anti-aging medicine. A possible new eugenics movement was referenced by (W1) as a risk when labelling such research under the banner of prevention.

For (W1) the research into muscular dystrophy and muscle loss that comes with old age seems useful when practiced for specific reasons. On the other hand it can be questionable when used as a means to cheat in sports performance (Hastings); for (W1) enhancement remains a big issue in sports where muscle enhancement and doping invalidate the achievements of athletes. This is not a new debate within society or those institutions whose mandate it is to safeguard these admirable achievements. Other fields related to the ethics of enhancement indicated by (W1) include neuroenhancement, neurology and the transhumanist research at Oxford University, among others.

Tibetan expert (Tp1) discussed human genetic enhancement in terms that relate to the Dalai Lama's (2005) consideration that if genetics research focuses too much on the achievability of a particular technique, this constricted view needs to be framed within the widest possible context, especially given that the human nature is at stake.

So genetics is acting perhaps a bit more deeply on the karma. The question is to see where it is too deep, and where is it acceptable? We must not transform the person, considering the desire of the person, or etcetera, but more for its giving in the capacity for bringing a good condition to access their true reality. That is the main issue! (We11)

Essentially, our Western and Tibetan experts alike are expressing caution in regard to enhancement research as it is seen to be leaving more imprints. Imprints in both paradigms would mean not only altering the individual person but creating unknown causes and conditions for the whole of the human species.

In summary, in the research and science section Western experts pointed to the need to broaden the horizons of research by including perspectives taken from among other traditions and cultures. However, it was acknowledged by (W3) that scientific anthropology does not change rapidly. (W3) also asked how the role of the individual and his or her body in medicine can change medical anthropology through encountering a non-traditional system such as Tibetan medicine and suggests that it needs to be verified. This is the aspiration of our study.

In order to change medical anthropology and broaden its horizons one of the recommended elements is the sharing of stories and mixing knowledge, thereby contributing to an integrated medicine. This is the application of our study.

Similarities from the example of the First Nations' integrative model were also discussed by (W5). Western experts are adding mindfulness and wisdom as part of the integrative model while Tibetan experts discussed their model of the interdependent theory which questions reality and contrasts with the material approach of science and non-phenomena.

As we have seen, the differentiating factor that contrasts Western research and Tibetan medicine is the importance the Tibetan medicine and science places on thought and compassion. Both Western and Tibetan paradigms use rational inquiry in which the logical systems and the manner of examining are similar. The

contrasting element, however, is in what is being examined. In the Tibetan framework this means the inclusion of both relative and ultimate reality.

We can argue that although the Tibetan integrated system may contribute to Western research on longevity and human genetic enhancement, the examination process of typical evolutionary science cannot yet be compared to the ultimate itself, which is not only incommensurable but represents the essence and finality within our relative understanding. These restrictions, however, do not mean that the ultimate spiritual view cannot be researched as an evolutionary paradigm.

Western human genetic enhancement science focuses on using human nature as an instrument. Within that mode, however, some Western scientists are starting to investigate contemplative techniques, such as meditation from the Tibetan system, that unite science, ethics and spirituality, and are implicitly understood to be reflections of the mind. However, we found that within the current connections between science and spirituality, the latter in the Tibetan context describes subtler phenomena. But by speaking about these subtler things, science itself is beginning to define a more mental reality. Results show that in science, whether in the realm of particle physics, or that of the human mind, we gradually talk about energy, particle duality or mental energy. The experts further talked about the power of concentration and meditation as the methods to develop subtle energy. We also saw in our previous section that the Mind and Life Institute is starting to investigate these areas. Traditional medical knowledge does not necessarily mean certain elements (subtle energy or psychophysical channels) do exist. Some Tibetan lamas have even challenged the Tibetan medical school. However, our Tibetan respondents in this study explained the direct relationship of a profound spiritual practice to longevity. They also responded to our basic question: How is science being taught in the Tibetan Buddhist tradition when one of their respected living masters, HH Dungsé Thinley Norbu, asserts:

Spiritual ideas cannot be compared to the material ideas of science, and Buddhist spiritual ideas cannot be changed to accommodate scientific ideas. In Buddhism, the sciences that are taught are never totally material, because they are connected with spirituality, since

they are understood to be reflections of the mind and do not deal solely with material existence.

When further contrasted to the longevity theme within the science and ethics of Tibetan medicine, the intention takes on an all-encompassing signification. Revealed as longevity being sought for the betterment of humanity in general and to evolve one's spiritual practice in this life, this enlarges the bioethics discussion on the research on longevity and enhancement.

We then presented a case where enhancement in a Western society can be beneficial and used the example of old age and muscle dystrophy. While the results also showed general uneasiness with enhancement and genetic topics, they pointed to the fact that there is still a lack of a more holistic integrated perspective in the field of research. Having looked in this section at longevity and human genetic enhancement from the Western scientific research and Tibetan science aspects, further contrasting elements can be found in our next section on ethical pluralism.

### **5.3 Ethical pluralism**

#### *Non-traditional is contemporary ethics (W5)*

The ethical pluralism theme discusses, within a technological and research development context, Western bioethics and the Tibetan ethical systems. Through juxtaposing our experts' explanations of the two paradigms we discovered what the common elements are, as well as the contrasting views and techniques as they explained them.

The ethical pluralism section starts with the research concerning new technologies such as genetic enhancement. One of the concerns expressed by (W3) regarding bioethics is the way it does not question the need for the technology itself. For (W3) the ethics is fifteen to twenty years behind the technological innovation. Only a few cases exist, like cloning reproductive technology, where there was a consensus opposing the technological development itself.

For example, the opposition done with the cloning reproductive technology, there was consensus in the Western countries that it cannot be done. We did not wait, but this is a very rare aspect where bioethics took the lead. (W3)

In questioning the ethical dimension of research and some of the life-altering influence it may have, Westerners and Tibetans looked at ways to evaluate it. Their responses addressed the possibilities for baneful consequences and the need to consider both temporary and long term impacts. One of the examples given by (W5) concerns the ethics of disposable nuclear waste which takes into account a time span of 150 years:

And what anticipatory consent is that you are going to imagine that you are that person in the future—would that person have consented to what you are doing now. If you say no, that means it is unethical. I also think that we are face with unprecedented decision in that respect because no human before had the life altering power that we have, I mean it is just stunning, it really is. (W5)

With the same concerns (We11 and Te9) further state that what might be good in the immediate might not be good in the long term. This means that if a scientist knows that an action might have negative consequences in the long term that outweigh the benefits in the short term, that individual should refrain from this action or bear the full responsibility. However, bearing the full responsibility for new technology is not really plausible as it may have impact beyond our control or the duration of our own life.

What is good for the moment? What is good for the long run? This is a matter to be researched—meditative thought (Te9).

### **5.3.1 An integrated bioethics**

We asked Western experts to explain the advantage of bioethics in the world to which (W2, W5, W3) responded that it could be more integrated than the current North American bioethics model. This includes environmental and ecological responsibility, meaning that the ecology should not separate living

beings from their context. The ecological and environmental frameworks provide knowledge and an analytical structure which prompts serious thought about the consequences of our human activity (Hottois 2001). For (Wp2) ecological and environmental ideology support an ethico-political conception, which proposes rethinking our ways of life.

My own answer to your question is there is an advantage to a bioethics, but a pluralist environmentally conscious and ecologically responsible integrative ethics. But there is not much advantage of having the bioethics we currently have particularly in the United States is so much focused on the political agenda. (Wp2)

Bioethics can address concerns stemming from science and medicine thereby contributing to a broader horizon of views when assessing, discussing and informing. For (W4), it breaks down the magical wall that surrounds the elite priesthood of science and medicine and invites everyone—citizen, politician, and medical consumer—to see what is going on while encouraging researchers and physicians to be open about what they are doing.

Tibetan experts also refer to immediate ethics and openmindedness. However, Western experts (Wp2, W1, W5, and W3) agreed that bioethics, a sub-discipline of applied ethics, is mainly a Western phenomenon; they also agreed as to the ethical issues at stake. A discourse on ethics will more readily include notions of justice, individual rights and integrity that serve to establish a common ground between the two paradigms.

It can be elaborated like when you are talking about the immediate ethics, it is not necessary to believe in the life after death, as well as the enlightenment, nirvana and realizations and all those abstract things.

When you are taking these immediate ethics in the worldly sense, then it can mean justice, -00-, liberty, sincerity, then the noble-mindedness, or the open mindedness; all of these things which are commonly accepted by the general public, within a family, within a society, within a community, within a state, within a national or an international domain. So these immediate ethics can be dealt with in that sense it can be different. (Tp3)

The difference referred to by (Tp3) is that immediate ethics is different than a discourse that would include spiritual factors such as life after death, enlightenment, nirvana and meditative realization. Only in a worldly sense could the immediate ethics apply.

### **5.3.2 Shared ethics and integrating ways of knowing**

In order to adopt an integrated bioethics, experts explained the need for shared ethics. Shared ethics is not universal ethics for (W5), universal ethics is not neutral and may be harmful, and searching for such may be an impossible goal. Given that we are all not going to agree, not agreeing can actually create a net positive. For (W5), this process can be creative and insight can be gained from it. Integrating other views of knowing such as the one contrasted here, Tibetan medicine, would be regarded quite optimistically in the sharing of established knowledge.

What I see ethics and bioethics as being is the most active arena in which we are searching for this what I call shared ethics, but I will make a very strong explanation that I do not mean universal ethics because that is impossible and I think searching for impossible goals is not neutral and is harmful. In a way the fundamentalist, whether new atheist—Christopher Hitchens, Sam Harris, Michele Aufrey in France—are seeking a universal solution and they see it as atheist and are said to use a reductionist elimination approach. The Christian for example, fundamentalist whether Christian is they seek to impose their religious views who read their holy books completely literally. There are doing exactly the same thing, so what I argue is that we got to have what I called a metaphorical conceptual space which is as large as we can make it that can hold as many as possible in what I call creative tension instead of destructive tension. Because we are not all going to agree, not agreeing is not always a bad thing and can be a good thing and it can be creative and also all of us can gain insight from that. I regard it quite optimistically but I think we have to become much more mature in the way that we receive and integrate all these of what I would call ways of knowing. (W5)

In the Tibetan Buddhist context, a complexity of different ethical interpretations is explained by Tibetan expert (Tp1) as stemming from the

understanding arrived at by each school or lineage. The codes also reflect understandings gained in their meditation practices. Yet the basis for a core ethical framework is shared by all; the differences refer more to discrete examples than key differences in view. (Tp1) gives a metaphysical assertion that even if meditative experiences differ with each individual, the basic nature of mind remains the same. And, as noted in Chapter 3, Tibetan Buddhist teachers rely on Madhyamika, which is the fundamental philosophy explaining that all phenomena are empty of inherent reality. But even then two subtle views of emptiness developed to defend positions concerning ultimate reality. The advocates of coherently established illusion advocate that a combination of appearance and emptiness is an ultimate truth, while the advocates of meticulous non-abiding defend that the simple removal of elaborations in respect to appearances is an ultimate truth (Tsong-Kha-Pa 2002 (1357-1419)).

Independently from the different hypotheses on emptiness, one significant point is that Madhyamika philosophy advocates the elimination of the two extreme positions of eternalism and nihilism and therefore represents the "middle way." The Buddhist middle way transcends the doctrinal standpoints of individual religions and represents a universal way of knowing. And as far as relative ways of knowing, there is an important body of literature on Tibetan ethics. This explicates the ethics of the ordained monk or nun, the lay person, an administrator, a physician and a meditation practitioner. In Dalai Lama (1999), individual ethics also includes the ethics of restraint, virtue and compassion as well as ethics regarding suffering as a consequence of karma. The ultimate positive qualities are wisdom and compassion but complementary qualities of the ethical person include '*patience, generosity and humility*'.<sup>246</sup> The four different lineages within Tibetan Buddhism, each with sub-schools, freely share their different interpretations and ethical norms. Extracted from this is the fundamental aspect concerning behaviour. The terminology being used by (Tp3) is the notion of virtue which needs to be accumulated.

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246 Dalai Lama (1999), Contents II Ethics and the Individual (p. 79), pp. 112-113, 123-124.



Virtuous things can be like the social welfare, as an example, and the people who do social work for a being's welfare, and voluntary works, some missionary works also. These are part of our virtuous accumulations that one has got to undergo, because they are infinite activities of accumulations that one has to accumulate or collect. Perhaps in case one has taken the vow of bodhichitta, or the Bodhisattva Vow, then with that foundation involved, and then putting oneself, or engaging oneself in social activities, I think this can be classed as virtuous accumulation or the accumulation of virtuous merits. (Tp3)

(Tp1) is also saying that the more one contemplates certain texts, such as those on ethics, deeper meanings and applications are revealed each time.

There are so many texts, and when you go through all of these text books, not like the novel that you read on modern points of these songs that they are writing—in one reading you get the meaning, but in those texts when you go on the second reading you get the different meaning, different things. Of course on each reading you get the steps interpretation that you will find in all this ethics. First thing you might think that it is just meant for a lay person; when you read it from the other perspective you are policy maker, you find so many amazing things which are needed with your own careers. It is in a way more flexible, and very pointed in nature. (Tp1)

When one approaches the Tibetan ethical system, Tibetan experts points to two general levels of teaching from sutra and tantra, and then in tantra there are four further levels that are progressively more subtle: action tantra, performance tantra, yoga tantra and highest yoga tantra. Why are there so many levels of views? As indicated by (Tm7) and others:

The answer is easy. He (the Buddha) taught this whole teaching according to the disciples' mental ability. (Tm7)

For (Te2) primary ethics is more or less associated with vocal ethics and physical ethics and a coarser level of mind. The more subtle area of ethics is associated with the mental area. Within tantra, a set of preliminary practices is considered an important ethical exercise for improving and purifying the mind. (Te2) explained that when they are put into practice then automatically all things

will work as medicine. The first basic condition for this distinct ethics is faith and belief towards one's spiritual teacher.

You have to see your teacher as a Buddha, and whatever he says you have to accept it, you never say no. Then the teacher will give you initiation, and then he will start with the preliminary practices, and turn you into a deep practitioner—a controlled mind. Once you control your mind, when you start calm abiding, with the single pointed meditation, it will automatically concentrate your mind. And with the clear (...) practices your physical impurities, your mental impurities, your vocal impurities will be decreased. The preliminary practices are very important. And preliminary practice itself takes time. 100,000 prostrations, 100,000 syllable mantras recitation, 100,000 mandala offerings, and then one enters into the guru yoga. (Te2)

In essence what is being said by our Tibetan respondents is that there have been many different ethical frameworks taught because different individual have different minds. As we have seen in all the previous themes, one of the Tibetan ways of knowing is the view that all phenomena do not exist inherently. They are all related dependently on one another. And the one element integral to the understanding of dependent arising (which includes the appreciation that as human beings we all depend upon one another), discussed by (Tm7, Tp3, Tm5, and Tm10), is a compassionate mind towards those who do not understand this view. In the Tibetan context when ethics is being discussed it is very much related to the good heart, developed furthest as the bodhicitta motivation to achieve enlightenment for the welfare and liberation of all sentient beings.

In this case in the country leader's intelligence is not also not only enough they need compassion everywhere—hospitals, schools, labor, construction, everywhere. Even just an ordinary person needs compassionate mind. So that compassionate mind behaves on the view of dependent arising. (the view of depending on each other). (Tm7)

In contrasting shared ethics and integrated ways of knowing to longevity and human genetic enhancement research, we find that the Tibetan framework values a stable mind as a sign of perfection. The Buddha is said to be perfect because he attained perfect tranquility.

The search for perfection through the use of science is to some extent questionable. Some would consider the use of spirituality as a means to achieve perfection equally questionable. Nonetheless, in the Western world, enhancement underpins the quest for physical perfection. (W5) sees something profoundly imperfect about perfection. The use of eugenics during the Second World War has not been forgotten; the informant points to mentally disabled people and their valid role in society: they are examples of courage, acceptance and joy and often elicit an incredibly deep human response from individuals who meet them.

And I think that the search for perfection and, particularly, the use of science in that search is one of the biggest dangers of dehumanization and one of the really important areas we have to be concerned that we don't do evil. I mean real evil. It is essential to be aware that the use of the new science, new genetics in the search for perfection has certain limits when applied to humans. It is extraordinarily dangerous. Not valuing these differences and seeing that it enriches the human reality but we are seeking to eliminate them. (W5)

On the physical level perfection is described by (Tp8) as the balance of the elements. In Tibetan medicine, as we have seen in Chapter 1, this consists of positive health choices related to diet and behavior. More desirable is mental perfection, a mind that is not distracted by the three mental poisons (attachment, hatred and ignorance), supporting the body without demanding too much from it. (Tm6 and Te9) also describe the importance of mental perfection and clarify the perfection terminology.

When perfection is taken from a Buddhist, unless a person eradicates, not subdues, but eradicates all of the negative mental forces, along with its imprints, a person cannot be perfect. The Buddha is said to be perfect. The perfect person would be someone who had abandoned these negativities, and who has developed the positive aspects, positive activities, and positive qualities to a perfect state. For example, ethics, generosity, patience, love, kindness; if these are developed to an unlimited extent, then the person becomes perfect. (Tm6)

Considering the Western use of science in the search for perfection, we have found that some Western experts are opposed to the research into human

genetic enhancement on these grounds alone. But when contrasting perfection and the present research, our findings show that perfection can be multi-faceted. However, as seen in our first chapter, enhancement is closely linked to identity and market-driven ‘perfection’ and can also feed the need for being perceived as unique. (W5) relates enhancement to a complex web of factors that, were the trend to grow, would undermine democracy and a citizenry made up of free and equal individuals.

So the design person which the enhanced person is, is not free to make themselves and they are not equal to the designer because the designer product is never equal to the person who designed it. You look at what is the basis for democracy is that everybody is free and everybody is equal. So you don’t only own that person and their self identify you undermine the very foundation of that kind of society. (W5)

From a social aspect perfection can mean having a genuinely happy and peaceful life; from a modern point of view, it can mean to value diversity; and from the spiritual aspect it represents the ultimate perfection of mind and action. In Buddhism, true perfection refers only to Buddha; (Tp3) explains that human life is considered to be part of the six imperfect realms of rebirth. The higher realms according to Patrul Rinpoche (1998 (1808-1887)) are comprised of humans, demi-gods and gods. The lower realms are animal, hungry ghost, and hell realms. All these beings have the *potential* to realize perfection as a Buddha, but have not yet undergone the necessary disciplines.

Perfection within ordinary human life is described by (Tp8) as having morality and sufficient occupational income and other wealth—enough to feel successful. Related activities are described by (Tp8) as practicing dharma, enjoying wealth and happiness, and ultimately attaining enlightenment. But dharma can also mean worldly activities such as taking care of others, and being respected by the community for one’s good qualities such as following through with one’s promises. (Tp8) described occupational income or wealth as collecting the wealth of wisdom as well as acquiring material goods for survival through one’s own effort, while ensuring their production has not harmed other people. One’s own happiness can be

gained through developing contentment in others. All of this falls under the umbrella of ‘virtue,’ with the ultimate goal being enlightenment for the sentient beings.

So when you are talking about the higher realms we take the instance of human beings. In that case even (a person’s name here) he has once told that on a human’s life which has got 18 different virtuous qualities, they are very rare. That means that when you are talking about all these things, I mean the action of human beings, the perspective as well as the angle differences through which you can see—I mean there are really spectrums to which you can define the perfection of a human being. When you are talking about these 18 difference qualities the first eight are those potentials qualities, like a human who is born as a human itself. (Tp3)

Other qualities presented by (Tp3) include being born in a central area which is explained as having access to Buddhist teachings; having full cognition, which means possessing all one’s senses; and to believe in the law of causality which takes into account that good actions will have positive consequences with the opposite being true as well.

There are also four other qualities which are to be born in a central area, have full cognition and a belief in the law of causality. (Tp3)

The shared ethics and integrating ways of knowing section contrasted many elements. First it discussed the sharing of established knowledge from a mature and considerate view. In the general ethics of Tibetan Buddhism this is described as having the right view, love and compassion, not harming others and cultivating the motivation to engage in basic positive and negative actions. Secondly, in regard to human genetic enhancement and longevity, we differentiated Western and Tibetan explanations of the desire for perfection. In the following section four basic bioethics concepts are proposed as a basis for bridging the visions in relation with our research subject.

### 5.3.3 Four basic concepts

In the Western tradition a similar differentiation between situational and ultimate is being addressed by (W5) for which four basic concepts are proposed. The Western explanation of metaphysical reality is described differently than the ultimate Tibetan Buddhist moral foundation or view. For (W5) the metaphysical reality needs to be lived through in order to have full human lives and find meaning in life and gives the example that regret for killing is significantly different than killing with no moral framework.

There are two major divisions, in my view, between what I call the situational ethicist—it depends on the context—the moral relativist and consequentialist on one hand and on the other hand the one who believes that there are some moral foundations. I believe there is an ultimate moral foundation, and for me because that has to be granularly secular but able to accommodate people who have religious or spiritual view.

(W5) further elaborated on the Western view of an ultimate moral foundation for which four concepts are being proposed and also pointed to common human traits and that the history of other cultures are all in some ways searching for morality.

Two substantive principles and that was respect for all lives but in particular human life. I don't think we can maintain respect for human life unless we have respect for all life. It does not mean we cannot kill them. There is a difference between killing with respect and moral regret and simply doing it because you think it does not matter, there is a huge difference. And the second principle was respect for human spirit. (W5)

We can regroup Western expert (W5's) view of an ultimate moral foundation in four basic concepts (two substantive principles and two procedural principles). The two substantive principles address respect for life, in particular human life, and respect for the human spirit. In Sommerville (2006) the respect for the natural is our link with the universe and the force of nature. The respect for

human nature is closely associated with the concept of human dignity and to the foundations of ethics.<sup>247</sup>

Likewise, Buddhist ethics emphasizes respect for all living beings. However, the act of killing, without exception, carries negative consequences either in this life or for the next one. The only exception in this tradition regards a small number of examples where a bodhisattva killed out of pure compassion and liberated the consciousness of the individual killed.<sup>248</sup>

For longevity, respect for all living beings starts with the harmony of the five elements (earth, wind, fire, water, space). For example, working with the wind element, the mind can move the related energy (including subtle energy and grosser energy) that can create difficulty if not balanced. But the most important factor is one's personal karma as it accounts for past life actions, such as taking the lives of others, that can shorten the length of this life.

As described in Abhidharma, the cause of death could be many things, not because the span of life has come to an end but one's merit has come to an end. (Tm10)

Meritorious actions also incur karma and their opposite, such as killing, is said to shorten one's lifespan. Sometimes untimely death results from taking unnecessary risks such as engaging in dangerous sports as pointed out by (Tm10).

The second principle presented by (W5) is respect for the human spirit along with two additional procedural principles relating to respect for nature and the secular sacred.

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247 Sommerville (2006), pp. 115-117.

248 As a specific example from Tibetan literature, Padmasambava, considered by Tibetans as the 'Second Buddha,' in a specific situation and in order to fulfill the purpose of sentient beings, performed the mystical act of killing the son of a wicked minister and liberating his consciousness.

And the two principles I suggested in (...) was the procedural principles, were first a basic presumption for respect of nature than natural and life which implement that first principle which again does not mean you can't do things to it which means you got to preview justify to the respect. And the second principle of being secular sacred, something that we hold in trust that should never be damaged or destroyed and that is true of whether you would be religious and not religious. (W5)

The last cited procedure by (W5) is the need for secular sacred convictions. This suggests the need for convictions that are true for everyone. Love and compassion, central to the Tibetan ethics, are explained here as caring for and helping others which are considered basic to all activities and for all living beings. As presented within the Tibetan ethical framework, love and compassion for those within our sphere can gradually lead to universal responsibility.

Of course we can say the West is the paradise of material, but still I think there things are lacking. Definitely you have the super centre of the material, compared to Asia, seeing my condition. There in your kind the worst person lives better than the best, but still we are happy with this. There is little kind of satisfaction with us. And we don't have much kind of expectation. But inside love and compassion care is like love and compassion is to care. It is the universe of responsibility. It is the base of family responsibility. It is the base of community responsibility. And is the base of society. And it is the national base responsibility where it is international responsibility. That is why gradually it leads to the universal responsibility. There is a lot in Buddhism. It is very simple. Buddhism's teaching is love and compassion. So love and compassion: if you are having this love and compassion within you, you will say I'm not a Buddhist, it means I am not a Buddhist, but I have love and compassion. By itself it is great. So even with this responsibility if you check, it is based in love and compassion. This is what entire the great masters in the past including Lord Buddha, teaches the same thing. (Tp8)

As part of the love and compassion theme, the ethics of non-harm to others also addresses respect for all lives and respect for nature. Love and compassion for (W5) is also described as having the energy of the imagined mind towards helping others who are tormented by suffering. The highest ethics is to strive for compassion which translates into practice through thoughts and speech as well as concrete actions. At the relative or conventional level, one practices the first five of



the ‘six transcendental virtues’: generosity, discipline (here the discipline is sometimes translated as ethics, which is considered a somewhat lower aspect of ethics), patience or endurance, courage, and concentration (freeing oneself of mental distractions). The ultimate transcendent virtue is the wisdom of realizing emptiness, and it is the application of this wisdom that is said to ‘perfect’ the other five virtues (Patrul 1998 (1808-1887)).

At the core of Tibetan medicine, one finds the code of ethics of the physician. Adopting personal ethics and preventing them from deteriorating are both important parts of Tibetan Buddhist literature as well as the tantra of medicine (Gyatso 2010).

Then I must say that we have received the same teaching from the Aryas, aryacaryas, panditas (Buddhist scholars), the mandalas from the Buddha himself, also. So these are the basic talismans, of which the Tibetan scholars have given their own thoughts. So concerning that thing, even from the Tibetan medical perspective, you find that there is a separate chapter on the ethics of the physician. So that is in the shedra [school for higher Buddhist studies], the explanation of the tantra, which you find on the 31<sup>st</sup> chapter of the original text. (Tp1)

Taking the Bodhisattva Vow,<sup>249</sup> with its own elaborate ethics, is a prerequisite for being a physician in Tibetan medicine. Integral to that framework is the need to continually recommit to one’s practice of virtue and never let it degenerate. Western physicians, through their professional deontology and policy, also abide by a full range of measures used to positively influence the behavior of their members. These measures include professional self-regulation and professional standards. The Canadian College of Medical Geneticists addresses three areas of concern. Within these areas, one pertains to the responsibilities to patients, one to society and one to the profession itself.

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249 Taking the Bodhisattva Vow is stating that the person will strive to help others for as long as there are beings who need to be liberated, thus leading them to enlightenment. Shantideva (1997), *The Way of the Bodhisattva*.

(Tp1, Tm5) explained what it is to be a Tibetan physician and what would be the conditions or the ultimate qualities that one should have.

The physician should be kind hearted and should have genuine love and compassion towards his patients and other beings. The vow: physician should consider himself as a servant of the patient and the patient as his own brothers and sisters; he should consider himself as a dog and pig when he sees the blood and pus, etc., (bio-waste) of the patients. Teacher as the Buddha and teachings as the Buddha's word, medicine as nectar and precious gems as it fulfils the patient's desires. (Tm5)

A Tibetan physician's ethics, as indicated by (Tp1), can be found in Ch. 31 of the tantra of medicine, and relate to his or her knowledge, compassion, vow, talent, hard work and sound knowledge of worldly morality.

In summary, the ethical pluralism section questioned the ethical dimension and temporal concerns of the scientific research into longevity and human genetic enhancement. In it, we looked at defining an integrated approach for bioethics and further addressed shared ethics and the need for a metaphorical conceptual space for discussion. We once again contrasted the ethics and science of Tibetan medicine with Western technological capability for enhancement as well as the understanding about key motivations such as the desire for perfection. In a Tibetan framework the contrasting view relates to a less distracted mind as being considered the way to perfection. We would like to think that, although it was not mentioned by any of the respondents, this could be a means for self-policing instead of creating mechanisms for policing individuals. Complicity with suspect social norms such as enhancement and perfection is a significant bioethics concern.

When it comes to shared ethics, four basic Western concepts for bioethics application were discussed: two substantive principles—respect for life and for human spirit; and two procedural principles—respect for nature and the secular sacred. We also drew contrasts between respect for human beings and the Tibetan belief that includes all sentient beings, not just humans, and also what that means in the context of longevity, beginning with the harmony of the five elements. The

second principle, respect for human spirit, included two additional procedural principles relating to the respect for nature and the secular sacred. Contrasting these principles with the ethics and science of Tibetan medicine, a definition emerged to further illustrate the theme of love and compassion and the ethics of non-harmfulness towards others to resonate with respect for all living beings and respect for nature. Entwined in our theme of longevity, we amplified the two basic bioethical principles of respect for human life and the human spirit through Tibetan medical experts and medical texts referring to spiritual practices which are said to significantly increase longevity.<sup>250</sup>

We argued that the ethics of the Tibetan physician is a centrally important element of the medicine itself. The unique compassionate approach in this tradition follows from considering one's teacher as the Buddha, his treatment as the Buddha's itself, and the medicine and precious gems (blessed and used in a particular way in the Tibetan medical context) as the immortality nectar in order to fulfil the patient's desires for perfection through a long life of spiritual practice. The key contrasting element in the ethical pluralism section is that ethics is intrinsically included in Tibetan medicine and is further considered as a determining factor to support longevity. This is why, for Tibetan medical experts, since ethics and their application are universally accessible, anyone has the possibility for increasing their life. We also saw the important reference of compassion as an integral part of the framework.

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250 Also including pharmacology and therapies.

## 5.4 Bridging visions

*The separation of the two—matter and spirit—  
is an abstraction. The ground is always one.  
The theory of the ‘ultimate particle’*

David Bohm

This final segment aims at bridging visions as a response to ethical concerns in the field of longevity and genetic enhancement. The visions are based on the two paradigms presented in this study.

I think if you got pluralism you got visions probably in the plural (W5).

Most experts interviewed expressed the need for a framework of shared ethics/bioethics, even if they called it by different names: sacred secular, social space, expression of differences and co-habitation. The terminology chosen by most Western experts allows bioethicists to take into account culture and religion, as well as the individual, values and moral decision-making within a framework that would share visions. In this research project, we deem that a secular framework is the preferred basis for arriving at shared ethics but that it can only benefit from insights provided by different traditions which cannot be captured by a minimalistic concept approach. As pointed out by Western expert (Wp2), there is currently no pluralistic vision in American society that suggests we have to find a social space for the integration to occur. Whichever form it takes, experts suggest that it should avoid the errors of the past.

I think I would have to say that there is not a pluralistic vision. In fact, there are prominent bioethicists, I mentioned Englehardt in Global Bioethics in which he says we are all moral strangers. There is even a voice within the American mainstream movement that says an integrative international bioethics is not possible. (W2)

In uncovering the basic secular insight as put forward by experts from both paradigms, the necessity to take into account traditional wisdom as a starting point was discussed.

#### **5.4.1 Basic insight for a bioethical framework**

As bioethics concerns the study of ethical questions and the applications of new biological discoveries and biomedical advances on living beings, the challenges it brings in a pluralistic society are not easy to answer. Interestingly, in order to help broadening perspectives many Western respondents (W1, W2, W5 and We11) saw the need to consider and learn from ancient wisdom—which in this study means Buddhism and the Tibetan medicine—and underlined open dialogue as an important element.

We have a lot to learn—a huge amount to learn—from ancient wisdom. (W5)

One consideration regarding the ancient wisdom view is that technological advances deeply confront ancient knowledge.

If you research at the present modern time, you see the past at the now 21<sup>st</sup> century, according to technology it becomes like a space and the ground—big gap. But our older century people are more honestly more reliable, more trusted. At the present 21<sup>st</sup> century people, it is very difficult to trust. They do not trust each other; they become more cunning, using more intelligence. Sometimes it happens in this world, happening something bad, even we never imagined, this is impossible, so things come as a shock. What is showing the bad things? Now our internal quality is going down. External quality is going up. (Tm7)

Fundamentally, what we have been made aware of all along in this thesis is how a worldview where interconnectedness as the fundamental underlying principle can provide a more robust basis for bioethics, with which the insights of philosophy and spirituality (in this case Buddhism) are brought into a seamless whole. While the developments of internal qualities were deemed essential within both paradigms to foster interconnectivity and respect for nature and life, it would be difficult to

have internal qualities as universally accepted criteria for bioethics. However, by defining these internal qualities and their applicability, ethics does not remain relative to specific philosophical and cultural perspectives.

The result of our study supports the possibility that a medical system rooted in a philosophy where mind and consciousness are taken to be the primary reality can interweave key ethical values into the very fabric of the medical tradition itself, rather than bringing those values in as extraneous elements necessary to guide the course of the discipline.

Our research reveals some of the basic points that can be applied and comes from the internal wisdom of highly respected Tibetan master teachers (including Rinpoches and Geshes) and experts from the two paradigms studied. Their reflections not only focused on the question of the bioethical issues surrounding longevity and human genetics enhancement and of Tibetan medicine, they essentially bridged the common points of agreement and reflections from the results of our study.

Below are six basic points, offering shared elements beyond the plurality of the formulation of ethical theories which are rooted in an ultimate ethical foundation. They include three main substantive notions (a wide inclusive perspective; a middle beyond extremes; and the right mental outlook) and three applied points (harmless practice; unbiased mind; and love, compassion and responsibility) taken from both Tibetan and Western paradigms.

#### **5.4.1.1 A wide inclusive perspective and harmless practice**

As we have seen, only a wide inclusive perspective will allow for a co-habitation of values that would resonate with all scientists and include the need to consider the welfare of all living beings as outlined by Tibetan experts. Such a plural perspective, then, allows the bioethicist to acknowledge every aspect of nature and life from a secular point of view.

And we consider that not only the living sentient beings, and in fact if you are somebody who wholeheartedly thinks about the well being of all sentient beings, you will naturally think about to take care of their home, which is this globe—this environment—this plain you see. Naturally you have to take care of it, it is their home. It is where they are living. Certain sentient beings live in the rocks. They live in the trees. They live in the mountains. And in fact in your personal case also you get all your needs these natural things in one or the other form. So how can you be like distracted, and mean towards this environment and the sentient beings? It is a very, very wide inclusive holistic perspective. And then this large perspective is focused towards benefiting everybody because all want happiness and do not want suffering. (Tm10)

What this means for bioethics is described as environmentally conscious and ecologically responsible individuals who seriously think of the related consequences of our human activity, communities and society and take responsibility for their actions. The reference to future generations is indicated as part of the ‘environmental rights’ of the 1992 ‘Rio Declaration’ that raises the principle of rational management of our ecology (Hottois 2001).

Buddhist philosophy and the interdependent theory provide an intimate connection between non-harm, non-violence and compassion. However, when Westerners such as (W5) talk about harmless practice it refers not to respect for all lives, but rather particular human lives. For Tibetan experts, non-harmful practices aim to benefit all beings including a seemingly helpless small insect.

For example, like humans are more comfortable than ants, so we should also think about this. Everybody is always opting for a democracy, then in the actualization there should be some democracy that the majority should be kept. It is in the interests of the minority. So we are the minority, we have the interest that we should be happy. For our happiness we should care then, so this equation should be understood, by the modern scientists in everything. And this is what we can contribute, I think. It can bridge the gap: if there are any gaps, I think can (bridge it). (Tp1)

We have presented canonical stories of great Buddhist masters<sup>251</sup> who had clairvoyance and were said to have killed out of compassion with no karmic fault. Echoing that, (Tm6) discussed the current debate on legalized euthanasia and the scenario in which a doctor practices euthanasia. (Tm6) acknowledged there may well be some good intention behind the action but also stated that the action remains grounded in ignorance. The physician is therefore not free of the karma that comes with killing, but will not bear the full brunt of karma because there is still some ethical responsibility attached to the act. Such an approach, based on causing no harm, tries to understand the innermost details of an action when deciding on its ethical implications. The euthanasia example from (Tm6) is brought in to support the broader discussion of harmless practice, illustrating that nothing is ever black or white. However, further exploration by both perspectives, Western and Buddhist, on the particular subject of euthanasia would be necessary elsewhere, as it is not the core subject of our thesis.

For a person who has clairvoyance, which is a mental state, not a common person, and if he sees that he or she is not going to live after providing all this medical treatment, and after six hours they are going to die, then if it is confirmed, then the euthanasia might be helpful. But that is a very subjective issue to take into account. We don't have modern medical practitioners who have this clairvoyance. Even if the person is suffering tremendously with severe pain, we cannot say that he might not come out and live longer and do lots of good things. Therefore the person cannot take the decision without seeing the situations which are ahead of him. If the person has clairvoyance, then of course. There are many cases like that. (Tm6)

#### **5.4.1.2 Middle beyond extremes and the unbiased mind**

When Tibetan experts talk about philosophy and conventional reality they also speak of it in secular terms, although religious concepts are not secular.

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251 Meaning Buddhas.



I want to be very clear about secular society, I do not mean the exclusion of religion, what I mean is that we don't use religion as the primary governing mechanism; the secular society must accommodate religion. (W5)

When Tibetan experts (Tp3, Tp1) and others talk about the philosophy, the essence of the prime philosophy or a team of philosophies their conviction is that all foundations can work in a modern approach. The approach would include the conventional truth that is explained as this relative reality, the one we see and live in, which is comprised of the law of causality and the law of interdependency. The conventional truth is also said to be contained within an ultimate reality (emptiness). However, as most of us are not great meditators with a direct experience of the emptiness of phenomena, we would have difficulty in assessing ethical matters within an ultimate view. The way to apply what Western expert (W5) calls for, basic secular insight, is to consider a middle which would situate itself in between the extreme views of believing that nothing exists, that everything is eternal or that both or neither exists. This is not an indecisive approach or an extreme center. Rather, it is one that uses the qualities of the cognitive and open mind, an approach (Tp3) advised. The coming to the result of the analytic mind in a distillation of non-conceptual wisdom, and the understanding of a wide inclusive perspective for bioethics, can be translated by the related principles of non-harming other beings, the right mental outlook based on positive actions, non-vested interest and the caring for others with love and compassion.

I think that in your discipline, in case you just going to research, conventionally from our tradition, we normally say that not to collect many information, not to collect and pile up information, but mainly what we normally do is look through our cognitive mind, analyze fully on the ultimate level, with the best reasoning and logic that one has. So through these analyses, and analytical methodology, especially at light even the main topic of research, and what is your aim on the hypothesis of the assumption that you have put forward, and all these are in the scientific methodology normally they do this to experimentation, but for us we usually do this in the analysis of an \_\_39:37\_\_ of a cognitive mind, with the use of cognitive reasoning and logic. So through that you come up with a specialty type of theory, which is very true to both the sights, and those who don't believe in the existence, or non-existence. So whatever it is, with thorough research, with the

analytic mind, then coming to a result. That sort of focus is the advice. (Tp3)

In essence this middle beyond extremes can further be explained as an unbiased mind. (Tp3) explains the benefit of the unbiased mind which involves directing the mind. The unbiased mind includes openness which has qualities of discovery and inquiry.

Buddhists say that from actions and speech it should be non-violent, and your thought in a sense, in the present tense, whatever you think should be the middle way approach. It should not be a biased-unbiased thought process. It should be alert, aware of everything, openness; brevity—everything is there attitude of a scientist—alertness, openness. (Tp1)

When we explored earlier, we saw that the mental discipline is based on intention, to which Tibetan experts also added the meditative absorption dimension. It also includes openness, with actions and speech that are non-violent. Thoughts are in the present tense or the middle way approach without a biased-unbiased process. This means the ethical scientist or researcher is alert, self-aware with an open and present attitude.

#### **5.4.1.3 The right mental outlook: love, compassion and responsibility**

Positive actions and a virtuous mind are posited within a secular insight framework. There is no need to become Buddhist to recognize the basis for positive actions. But the deeper root of ethics in Buddhism relates to the true nature of mind. For (Tm6) that means that performing a good action should take into account a variety of factors such as pure intention. Pure intention can be described as the method to engage in virtue and change direction from non-virtue after having reflected on karma's general and detailed consequences (Tsong-Kha-Pa 2002 (1357-1419)). Appearance and reality have to be consistent with non-vested interest. As an example from the virtue of generosity, the object of giving should not be contaminated, otherwise the action becomes negative (Tm7). A positive view and conduct that strives to benefit all are both sound, secular bases for an ethical

framework. For Tibetan experts, generating positive actions is the way of gathering the causes of happiness; for that reason, negative actions and behaviour should be avoided. On the individual level, this also means keeping a positive outlook, being goodhearted and behaving like a decent human being. Applied to bioethical concerns, it is key that the aim of research, the availability of the findings and the research context be free of any vested interests.

You should always have virtues in the mind, always I, I, I is not good. You are nothing, I am nothing. One day when you die, where is the I, but before that if you use your body, mind, spirit in the right way, helping others, serving others at least talking in the right way, with kind of kind words, putting your hand on the shoulders of a crying person, these things you begin to love beautiful things for your body. Without doing these things what is the use of that. If you were to check, what is the final goal of this? (Tp8)

The last application point discussed here, as the basis for a secular framework, is developing loving-kindness and compassion. Responsibility grounded in loving-kindness and compassion lends itself to bioethical considerations. For example, answering the question as to whether muscular dystrophy enhancement developed for research on aging should be made available to athletes can be accomplished more readily when considering loving-kindness, care for the welfare of all beings, and the long-term consequences of decision-making. In this case of dystrophy enhancement for athletes, (Tp8) asks if we really know what responsibility means. This refers to ensuring safety and taking responsibility for one's actions towards others.

Using (W5's) terminology, within a secular sacred framework for decision-making in bioethics, compassion implies respect for life based on the realization of its preciousness, and the need to abide by the laws of nature.

In summary, this final section outlines the proposed secular Western approach and the Buddhist approach based on research findings that transcend the polarization between eternalism and nihilism. The proposed framework resonates with Tibetan experts because of its use of concepts discussed in this study such as a

plural, inclusive, holistic perspective and harmless practice, an unbiased mind, the right mental outlook and compassion. It also appeals to Western experts when referring to plural perspectives and to the human condition. The proposed framework arises out of the common ground that emerges from the comments of the informants. It can serve as the basis for a shared bioethics because it is based on the respect for religious beliefs, secular ethics and cultural values. More importantly, it demonstrates that in the final analysis ethics does not remain relative to specific philosophical and cultural perspectives as it remains universal beyond the plurality of the formulation of ethical theories. And this is only possible from the knowledge translation of what the cognitive analytical mind entails in applicable terms.

Our results showed that Western experts feel there is a lot to learn from ancient wisdom such as our chosen study subject of Tibetan medicine, and we were pleased that our research could contribute to this aspiration. The wide inclusive perspective is a fundamental and universal bioethical principle. A wide perspective also means believing in the basic goodness of human nature, and anchoring that belief in some fundamental principles. Fundamental principles are not new, as Beauchamp and Childress' principle of biomedical ethics is a classic in the field (Hottois 2001). The originality of our research, however, lies in the fact that it specifically engages with longevity and human genetic enhancement in co-creating meaning and understanding between the East and West, aiming at bridging knowledge and acting as a reminder of our shared humanity and the value of all forms of life. This is also what a wide perspective is about. The Eastern definition of non-harm and non-violence, which permeates Buddhist philosophy, refers to all that lives; it does not merely isolate human life. Interdependent theory further shows the way to deconstructing our cognitive processes in order to arrive at just this understanding.

Our six points summarize the applications of the fundamental secular categories in forming the basis of shared bioethics. Among those, compassion is held to be the key universal motivation of all human endeavours. Motivated by compassion, one could use the middle way approach in bioethics, situated between

the extremes of believing that nothing exists, that everything is eternal, or that both or neither exists, and adhere to the definition of a researcher relying on an open mind with clear awareness of the broad perspective, acknowledging and taking responsibility for long-term consequences with the right mental outlook based on positive actions and non-vested interest. The ‘mind that knows’ remains unbiased and has the qualities of discovery and inquiry.

The last two points of the secular framework are engaging in positive actions with a virtuous mind. They refer back to the work of Aquinas, Kant and Rawls outlined in Chapter 3. Aquinas’s focus on virtuous intentions has been critiqued, and rightly so, because of its lack of a theoretical foundation, its intuitive nature and its subjectivity. The Tibetan paradigm has a spiritual dimension but remains anchored in logic and empirical science. Yet it also presents a way to move beyond the subject/object duality that universally pervades human thought including that related to science. It also outlines in great detail that the mandate of research is to be of benefit to all, and not just the few. An understanding of the law of karma, of causes and consequences, within this paradigm leads to a better understanding of the links between the aim of research projects, and the right outlook and decision-making. This is further supported by Kant’s notion of obligation, a moral value that is directly related to the intention that underpins all actions. Awareness of the results of an action is in effect taking responsibility for oneself as an individual and as a citizen in a global society. Kant also emphasizes inner sense and subjectivity. In this light, right outlook points to how to avoid subjectivity and vested interest. Then turning to Rawls and his key notion of distributive justice based on the intrinsic value of all beings, and the respect of individual autonomy, the key comparative elements are right outlook, altruism, compassion and responsibility. Table IV below links current issues in human genetic enhancement and longevity where the six key secular points can bring their relevance to the debate.

**TABLE IV – HUMAN GENETIC ENHANCEMENT AND LONGEVITY’S  
INTERESTS AND CONCERNS**

<b>Interests</b>	<b>Concerns</b>
Improved life expectancy	Re-engineering the foundations of life What other option do we have?
Improved physical aspect—muscle tone	Rapidly changing development What do we do with our new knowledge?
Improved memory	Application of human genetics enhancement What are we developing and why?
The perceived physical, intellectual and spiritual universe	Causes and effects and the cycle of life How do we conceptualize and understand reality?
Medical ethics	Personal identity Should genetically inheriting individuals be informed? Are individuals separate from the physical and psychological occurrences that distinguish them?
Natural order and healthy lifestyles	Socio-economics of access What is the distinction between having a body and being a body? (convergence of intention and product)
Character of classical science	Scientific rationalism Can it be influenced by other anthropological or medical discourses?
Cultural and historical contexts	Justice, eugenics, stigmatization How far can we go?
Pluralistic dialogue	Integration and sharing Can there be a bridging of pluralistic visions?

## CONCLUSION

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As a means of concluding, the key sections of the thesis are re-stated, beginning with the initial research objectives and methodology. We then specify how our research not only contributes to the advancement of knowledge in bioethics concerning longevity and genetic enhancement but raises several questions for those active in these fields. Finally, we present a number of recommendations for decision-making, as well as our final conclusions regarding the ways in which bioethics can be enriched and expanded by opening up to another school of thought.

This thesis investigated the subject of longevity and human genetic enhancement from a research/ethics point of view. Our research question was articulated as follows: “Can bioethics expand its intellectual and conceptual resources by engaging with a tradition such as the Tibetan medical system?” We went about answering this question by comparing two paradigms: Western science and Tibetan medicine. Specifically, we sought to bridge the pluralistic visions of these two paradigms in order to arrive at a common ground that would provide the basis for a response to some of the current concerns in bioethics.

Longevity and human genetic enhancement research have been a source of apprehension among bioethicists for some time now, with the debate on these subjects reaching new heights in 2003 during the American President’s Council on Bioethics. Although longevity has fascinated researchers and society in the highly industrialized West, it appeared to us that the modern quest for longevity and human genetic enhancement was unfolding without the benefit of input from other relevant bodies of knowledge. We therefore chose to explore how the Tibetan medicine system—one that views science, ethics and relative and absolute reality as interconnected—could contribute to Western thinking on this subject. Using Buddhism’s interdependent theory—the underpinning philosophical element of Tibetan medicine—as the theoretical framework for our research, the ‘twelve links

of causes and conditions' explained more completely than the Western models thus far patterns of complex phenomena and their interconnectedness. This theory was in turn contrasted with the characteristics and behaviors of complex system theory and the diversity of approaches and methods correlated, accentuating support for complex bioethical questioning. We found that since complexity methods acknowledged uncertainty they could be conceived within an organized process relating to the definition of the Tibetan model.

As we have seen in Chapter 1, the continental rationalism from Descartes acknowledged Cartesian separation of the mind-body. Western linear thinking approaches after the 17<sup>th</sup> century were often characterized by exclusive thinking and linear regressive analysis, limiting the variables to only the significant ones in explaining a situation. However, with the advent of the science of complexity, we saw the start of new inclusive thinking which we mapped with the dependent origination framework in which all phenomena is understood to be interdependent. Western complexity thinking is said to form a direction towards a more advanced understanding and new avenues to reflect on the world (Gingrich 1998). Although the interdependent theory illustrates how things arise and cease by applying strict logic, this does not mean that the interdependence of all the variables are to be identified together as one system. As we have seen, the interdependent arising process within Buddhist philosophy presents two levels of interpretation in which this theory situates the projecting causes for individual being (ignorance, compositional activity and consciousness) with necessarily related actualizing causes (craving, grasping and existence). With complexity thinking universal laws are said to be replaced by specificity which would identify all interdependent variables and considerations in order to completely describe specific occurrences (Gingrich 1998).

We found that Tibetan medicine not only addresses and advocates behavior that considers the law of causality and interdependency, it explains how the cognitive domain is part of a circular causality or '*feedback system*' described by



Waldron (2002),<sup>252</sup> as it is the locus of the understanding of differences. This unconscious understanding is said to be performed by a linguistic rather than a conscious process and gives rise to the representational self. By understanding cause and effect, the method of dependent arising is able to explain causality (Waldron 2002).

This involves what Waldron (2002) describes as patterns of conditions that continuously respond upon themselves, strengthening their development.<sup>253</sup> It is within this systemic relation that the cycle in the ‘twelve links’ process involves patterns of dependence upon which phenomena arise and we can further understand within an absolute view that this model supports universalism even though the relative view is composed of specific interdependent variables.

The theoretical examination that deconstructs cognition and the material world as we know it brings to light that the nature of the mind may appear complex at first glance but the actual result is a radical simplification of our worldview; the key elements in understanding the material world are the impermanence of phenomena, the law of causes and conditions, and analytical inquiry uncovering awareness.

We argued earlier in our introduction that Buddhist bioethics cannot be dealt with in singular terms as it is not established by culture (Keown 2001).<sup>254</sup> Thus, we proposed the interdependent arising process model as a shared mode of analysis, one that is not in essence a cultural product and permits a common way of thinking in the exploration of diverse approaches to decision-making among the many bioethical voices and methodologies. This suggests that agreement is possible among differing ethical and political conceptions by sharing sets of norms and principles to assure the viability of similar societies composed of individuals and free groups (Hottois 2001). The Western linear thinking model and the new

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252 Waldron (2002), pp. 147-148.

253 Waldron (2002), p. 146.

254 Keown (2001), p. 20.

complexity thinking both contain limits even though they allow the strengthening of our comprehension and the encouragement of depth by utilizing a multiplicity of interdependent variables. This open system, which also includes a global condition, still can benefit from the understanding of interdependence and causality as necessary elements for the prospective emergence of a new intellectual vision—one that might both preserve and transcend the current state of bioethical questioning.

We then applied the various complex interaction conditions to the bioethics/ethics of the two paradigms. Both paradigms attach importance to the mind, but when Western research and Tibetan medicine are compared, the main differentiating factor that emerges is the unique definition of the mind and thoughts found in Tibetan medicine and science. Our research findings also illustrate how the continuum at the heart of knowledge, as found in the Tibetan tantra of medicine, when related to the nature of the mind and cognition, was also central to the body in scientific research. Tibetan medicine addresses as well the themes of longevity, enhancement and perfection in ways different from its Western counterpart, emphasizing balance, harmony and right motivation.

In seeking a new intellectual vision, we highlighted key aspects of applied science and ethics in Tibetan medicine. The uniqueness of the Tibetan medicine system can be understood by taking into account both the relative and absolute nature of mental and physical phenomena, as outlined in the interdependent theory. This model, central to Buddhism's Middle Way philosophy, illustrates the interconnectedness of relative reality with the absolute view that holds that there is no distinct, permanent or fixed essence to be found anywhere. 'Me/mine' dissolves and gives rise to equanimity and altruism, providing different ways to look at bioethics.

With this reasoning we found that the interdependent model was useful in analyzing some of the proposed concepts presented by Kant and his notions of an

obscured mind<sup>255</sup> and the nature of supreme theoretical authority and subjectivity, and facilitating the understanding of his categorization as part of a wider perspective.

Considered as a side note, Keown's view of applied normative ethics comes from Buddhism's canonical monastic rules.<sup>256</sup> These monastic rules are preserved in one of the three most important forms of Buddhism known as Theravada (the other two are the Mahayana, common throughout China and East Asia, and the Vajrayana, a specialized subset of the Mahayana central as the philosophical and practical lens of Tibetan medicine). Contrary to the canonical, induction-based principles which Keown (2001) establishes for bioethics, Tibetan medicine, drawing from the interdependent theory, further expands the objectivity of ethical possibilities and provides a fruitful dialogue between bioethics and Buddhism.

Adding a further perspective, our results do not only assess the scientific research in light of life as a basic good (Keown 2001)<sup>257</sup> (utilizing biological terminology). Our results and our conclusion regarding the ways in which bioethics can be enriched and expanded by opening up to another school of thought such as Tibetan Buddhist medicine are that they bring ethical orientations beyond exclusive consequentialism by deconstructing cognition and embedding it in networks and interdependence. This opens up a different way to look at bioethical issues while remaining rooted in logic and empirical science. By building upon the issues of intention (Aquinas, Glannon, David, Gethin, Cleret de Langavant), aim (Baertschi, Hurst, Kamm) and belief/motive-distinctions-experience (Kant), we moved the discussion beyond solely addressing the bioethics debate on this linear level of cultural contingency through the engagement of skilful means (Powers and by our experts).

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255 Kant interprets the mind as being obscured when its usage rivals that of God or the nature of supreme theoretical authority.

256 Keown (2001), p. 9.

257 Keown (2001), pp. 43-44.

Other related research elements explored the potential applicable contribution of Tibetan medicine and Buddhist thought to the current bioethical debate around aging, memory loss and personal identity.

For bioethics the theories of aging revolve around our changing knowledge about the biology of aging. Another side note concerns the views of aging as a natural inevitability or as a pathology, raising a host of ethical and social issues concerning life expectancy and life span, societal aging, healthcare and research, and old age and anti-aging medicine.

There are no doubts that Western research on longevity already has increased our ability to alter aging. New technologies for slowing down aging already exist or are in development, equipped towards increasing the strength and vigor of muscles and the function of memory. The quest to retard aging is further supported by a cultural obsession with being healthy. And as we have seen in Chapter 1, the transhumanists' proposal that nothing short of physical immortality is attainable through techno science pushes the boundary in this arena by declaring that aging and death themselves are avoidable (Somerset 2006).<sup>258</sup> This ultimate immortality scenario envisions that technologies will not only reprogram the genes that control aging, it will also replace and repair parts of the body. A pro-technology agenda insists that aging is non-universal, giving examples of biologically eternal organisms such as jellyfish, which can alter themselves by reversing into a cell after adulthood.<sup>259</sup> This search for immortality and market-driven 'perfection' can also feed a narcissistic need for being perceived as unique.

Tibetan medicine approaches the subjects of longevity and immortality via Buddhist soteriological concerns and is philosophically opposed to the domination of natural cycles for its own sake. In an ideal sense, longevity is desirable in order to have more time to deepen one's spiritual understanding and, according to the Tibetan body of medical knowledge, 'essence derivation' is the longevity therapy

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258 Somerset (2006), p. 179.

259 Also see *Turritopsis nutricula and immortality* in Wikipedia.

against aging. And since in the Tibetan system anyone is said to have the potential for longevity and the extension of life, the study of subtle energies which is central to the skillful means of tantra may eventually contribute to research on longevity and enhancement. In relative terms, Buddhists do not question the basic natural law that all phenomena, including our bodies, because they are born from various causes and conditions, must eventually decay and perish; Buddhists therefore would view the pursuit of physical immortality as a serious misuse of energy. In Buddhism, immortality is achieved through the spiritual liberation of the mind, thus cutting off the primary cause for painful cycles of rebirth, aging and death (Hottois 2001).<sup>260</sup> It is only the absolute nature of the mind that is unborn, and therefore not subject to death, and, rather than physical manipulation, meditation is the mechanism for achieving the experience of this.

There is, however, much more to Western scientific research than just the physical; also under examination have been memory loss and identity as they relate to the emotional, psychological and spiritual being. Why would individuals seek longevity if we could not remember who we are? In Chapter 1, we saw that in terms of memory loss, new research has proposed that meditation practices might also hold the key to brain plasticity (memory and neuroplasticity) which can enrich and expand the horizons of current bioethical discourse. In Tibetan medicine, identity and good memory pervade all functions and shape conventional reality. Maintaining balance and a sense of connection to others can also be seen as answers to strong individualism which often explains loneliness, especially among aging individuals (Sommerset, 2006).<sup>261</sup>

Strict individualism is foreign to the Buddhist view of reality; identity or lack of it is often referred to in Buddhism as the concept of agency without an enduring self. We also saw that other paradigms are emerging that echo Buddhist thought, such as the self-determination described by Parfit (1986) which refuses the

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260 Hottois (2001), p. 149.

261 Sommerset (2006), p. 183.

reality of permanent selves.<sup>262</sup> His conclusion is that an identity is discontinuous over time and from other individuals. In this theory what matters when it comes to striving for the future is that the welfare of all is equivalent to one's own future welfare; there is no connection of a self or 'I' as far as benefitting the future.

Buddhism holds respect for the interconnectedness of all life to be a universal moral imperative. Thus, in terms of aging, memory and identity, our results provide creative ideas from a dialogue between the two schools of thought since the Buddhist ideal is to cooperate with nature instead of attempting to dominate it. In some ways, viewing nature as external and attempting therefore to conquer it is an expression of greed and human attachment (Harvey 2000),<sup>263</sup> the very factors identified in Buddhism as the root causes of our suffering. But as Sommerset (2006) mentions, the understanding and profound links associated with old age can themselves bring in a deeper sentiment and respect for nature.<sup>264</sup>

Because it adopts a wider moral horizon, the understanding of Buddhist philosophy can foster opening and tolerance towards other intellectual views and inspire the answers to many pressing ethical questions in our aging society. The outcome of our research, which sets the challenge for the integration into Western bioethical discourse of ancient wisdom such as that found in Buddhist thought and Tibetan medicine, is not necessarily a value proposal for natural limits in the Western sense, one that sees aging as unavoidable and therefore runs counter to the modern value of unlimited individual development. In this light, Buddhism could be seen as an outdated system coming from an alien worldview (Keown, 2001).<sup>265</sup> However, the tantra of medicine's 'skill in means' addresses both the issues of relative healing, aging and memory as well as fostering the spiritual potential for enlightenment. Buddhism's 'skill in means' also has the ability to help individuals with their diverse capacities for comprehension by providing graduated levels of

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262 Parfit (1986), pp. 303-304.

263 Harvey (2000), p. 122.

264 Sommerset (2006), p. 181.

265 Keown (2001), p. 7.

explanation for different needs by successfully communicating and bringing out latent spiritual potentialities.

Another potential area of contribution to bioethics is the Buddhist view of the physician-patient relationship. At the core of the Tibetan physician's profession is the development of unbiased compassion and the obligation to serve others. The patient relationship is deemed successful when it addresses the preservation or reestablishment of well-being not as a discrete phenomenon, but embedded as a way of life. In this tradition the individual is constantly sent back to take responsibility for his or her actions (Hottois 2001).<sup>266</sup> Ideally, the satisfaction of both physician and patient is found to be in harmony in this system.

Similarly, 'care ethics' is founded on human interaction and the physician-patient relationship, with a combination of receptivity, relating to others and the capacity to respond to others' needs.<sup>267</sup> Modern technological discoveries more and more have brought about the physician's specialization where Western physicians' focus is on specific organs rather than the 'global' person.(Durand 1999).<sup>268</sup> Moreover, contemporary medical practice tends to substitute individual health care for that of the hospital where a multidisciplinary team intervenes on behalf of a patient. With such emphasis on narrow technique, the risk of a depersonalization and dehumanization of healthcare has come into view.

In bioethics, care ethics emphasizes a global approach to the patient. Care ethics is also different from classical ethics in the sense that personal identity is created by relationships that the individual builds with others. The basic goal is to foster trust among individuals. The care ethics approach is close to Kant's view where autonomous rational agents are guided by moral action as required from all moral subjects in the same situation. When this is applied to the relationship between the physician and the patient, the latter has to feel an authentic interest is

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266 Hottois (2001), p. 638.

267 Hottois (2001), p. 399.

268 Durand (1999), p. 41.

being shown in his or her health and well-being. Within both Tibetan and Western medicine, the physician should always generate and develop essential internal qualities, to include care and safety, and also incorporate responsibility.

In bioethics the paternalistic concept of the physician-patient relationship has been used within a broad terminology where the character of medical ethics is one in which the physician is held aloft as being the one who must decide what is good for the patient. Hottois (2001) discusses six types of paternalism<sup>269</sup> from taking advantage of individual patients or groups to different types of interference or autonomous actions. Strong paternalism, however, has been largely replaced following radical Western cultural shifts in the middle of the 20<sup>th</sup> century. There is now much more emphasis on individual autonomy and the auto-determination of the patient (Durand 1999).<sup>270</sup> Replacing the strong paternalistic style just defined is a weak one which confines permissible limitations, as well as an antipaternalism which opposes the strong paternalistic approach in the belief that it is never justified. Another paternalistic model replacement, from feminist bioethics, is based on companionship or on contract (Post 2004a)<sup>271</sup> which aligns well with care ethics. However, a fine line remains, as there is always the possibility of oppression taking place and thus creating a negative sense of betrayal within the relationship (Hottois 2001).

Is there a similar paternalist viewpoint situated in Tibetan medicine? If one considers the weak Western paternalist interpretation and the non-directing style that might suggest a Buddhist approach, Tibetan medicine probably falls in between these two. In recent debates among Western Buddhists, some are trying to defend the weak paternalistic mode in Tibetan medicine's own context, while it could be perceived from outside as strongly paternalist. Examples for such a view point to unorthodox approaches used by spiritual leaders in order to bring about students' spiritual understanding from their comprehension of human psychology (Goodman

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269 Hottois (2001), pp. 638-639.

270 Durand (1999), p. 42.

271 Post (2004a), p. 1989.



2011). This further underlines our point that the Buddhist tradition often looks at relationship in ways which may not be obvious by providing an understanding from a different philosophical mindset illuminating situations in previously unforeseen ways.

We would like to argue, however, that a significant amount of patient responsibility is required as part of Tibetan medicine. Using the terminology of bioethics, this refers to the shared responsibility of the patient to process and/or implement the physician's recommendations and the advice being given (Post 2004a).<sup>272</sup> Such advice not only concerns the importance of a balanced diet and somatic medication, but also includes behavior, as supported by the understanding of cause and effect (Dhonden 2000) and the human interaction between doctor and patient.

Tibetan medicine offers a model that defies Western rationalism, in the sense that impartiality must be cultivated and the compassionate view is such that the physician prays to heal the patient and also wishes for the spiritual development to ultimately take place in the patients' psyche (Dhonden 2000).<sup>273</sup> The embedded qualities within the element of compassion in the Tibetan system are that it is ideally observed with intelligence, kindheartedness, considering oneself as a servant of the patients, skill and diligence, with a sound knowledge of the worldly morality, all while striving to view all patients equally. Whereas these qualities are of course present to a greater or lesser degree in the Western medical approach, in the Tibetan system they are enshrined in the Bodhisattva Vow, with its own elaborate ethical adherence, vast knowledge and clairvoyance, which are all prerequisites for being a Tibetan physician. It is within this comprehensive framework that the ethics and virtuous motivation of a physician are understood and applied, in the ultimate service of spiritual awakening.

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272 Post (2004a), p. 1990.

273 Dhonden (2000), p. 111.

At the core of Tibetan medicine we have found compassion held to be the key universal motivation of all positive human endeavors. In Chapter 2 an example was provided, postulating that it would be an error to see different types of compassion because they are interdependent aspects of the same arising within the doctrine of emptiness (Shantideva 1997).<sup>274</sup> The bodhisattva views all phenomena as interdependent, but further recognizes that all things arise as the result of prior causes and conditions (Powers 1994). The Buddhist concept of compassion is a direct product of understanding dependent origination or interdependency. This means that in order to understand compassion, we must revisit how interdependency is related to wisdom, in the sense of becoming free from misleading ideas about the reality of our existence. In Buddhism's theoretical ideas of causality, nothing arises independently, inherently or randomly; all comes into being and passes away dependent on specific causes and conditions. One could say, then, that this entire phenomenal universe continually manifests the principle of dependent origination. If we understand the 2nd c. philosopher Nagarjuna's equation of dependent origination with the concept of emptiness (meaning that all appearances are empty of independent or inherent existence), then we can say that the entire phenomenal universe is continually manifesting emptiness as well. And as we have seen in Mahayana Buddhism, emptiness is the ultimate nature of oneself and all existents, but it is not 'nothingness'; it is described as perfect awareness beyond concept, the Buddhist definition of wisdom. Appearance is the relative or conditioned nature of oneself and all existents, and yet not separate from indivisible awareness/emptiness. Thus, the awakening from ignorance and realization of the ultimate truth of existence is in every part and piece of the phenomenal world as it arises and ceases and is continually revealing its empty nature. However, we tend not to notice it because our minds are said to be absorbed in false concepts that reify the illusory appearance of things.<sup>275</sup>

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274 Shantideva (1997), p. 3.

275 Personal correspondence with Professor Angela Sumegi, Carleton University.

How does this penetrating awareness of dependent origination relate to compassion? Because in this awareness one not only recognizes the profound interconnectedness of all life, but also that all phenomena is ultimately indivisible; whatever the individual does necessarily affects the whole. If the ultimate spiritual goal is to awaken to the truth of existence so that one can be of benefit to others by helping them to realize the same state, then the entire phenomenal universe of dependently originated manifestations shows compassion because it is due to the arising of anger and happiness, mountains and rivers, objects, love and loss that we have the opportunity to realize the truth of their emergence and disappearance. For this reason, the entire matrix of phenomena can be regarded as *nirmanakaya* (the compassionate earthly manifestation of Buddhahood) because every single sound, sight, scent, touch, taste and thought offers the occasion, if we look into it deeply, to realize its true nature: indivisible emptiness, spaciousness and manifestation, like the mirror image of the moon in water at the same time shining and attractive, yet there is no moon at all.<sup>276</sup>

On the relative level, a broader notion or experience of compassion also expresses the equality of self and others and the obligation to serve others, providing a platform for selfless, caring, and impartial assistance to those with whom one comes into contact, while being mindful of all other beings. As discussed in Chapter 3, the social contract in this regard is an expression of compassion and equality, which is fed by a humanistic conscience rather than the legalistic one often referenced in bioethics. For Tibetan medicine, and the physician-patient relationship, compassion and equanimity are seen as crucial elements. Similarly, compassion provides a right motive or basis for ethics, but compassion alone is not wholly adequate as an ethical basis. Mahayana Buddhism extols the interdisciplinary nature of ‘four boundless qualities’: impartiality—having a uniform-minded approach towards all life forms; love—to devote every idea, expression or action for the welfare and happiness of all in existence; compassion—a focus on eradicating the pain and hardships of individuals and of all

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276 Personal correspondence with Professor Angela Sumegi, Carleton University.

living beings; and sympathetic joy—rejoicing without jealousy or partiality on the good fortune of others, as well as in the training of the mind in these four unlimited qualities itself. Responsibility grounded in loving-kindness and compassion lends itself to bioethical considerations. In bioethics, compassion implies respect for life based on the realization of its preciousness, and the need to abide by the laws of nature; Buddhist thought expands and deepens that imperative.

Motivated by compassion, one could use the Middle Way approach in bioethics—a philosophical position situated between what are known as the four extreme views concerning phenomena: believing that nothing exists, that everything is eternal, or that both or neither exist—and adhere to the definition of the researcher relying on an open mind with clear awareness of the broad perspective, acknowledging and taking responsibility for long-term consequences with the right mental outlook based on positive actions and non-vested interest.

Finally, love, compassion and responsibility link with essential internal qualities to be generated and developed. They include care and safety but also incorporate a responsibility for all living beings as the universal, fundamental principle for a shared bioethics.

As we have seen, bioethics deals with ethical challenges emerging from new scientific and technological innovations that have opened up new avenues of knowledge and power for human beings. While looking at longevity and human genetic enhancement research such as the investigation of the brain's malleability and meditation practice, it is paramount for bioethics to have an understanding of the context from which these new technologies are emerging. Bioethics can learn from engaging with an ancient traditional system such as Tibetan medicine and its underlying Buddhist concepts. These mind-focused systems of thought evolved way before modern times and are still relevant to understanding the importance of the mind at the core of this medicine. Understanding the ethical and spiritual context can also provide the necessary basis for widening bioethics visions which is what the bridging of our results are demonstrating. Beyond adding more principles such as compassion and recognition of the greater interconnectedness of things, the

perspective of Tibetan medicine and Buddhist philosophy could also stimulate more radical changes in its philosophical outlook about reality.

Our research findings allowed us to identify six fundamental, secular categories that could form the basis for shared bioethics. Within a secular framework based on ethical pluralism, the emphasis lies in attitude and behavior, and re-introducing by means of ethical consideration the individual or the subject. This notion of the subject is not based on relative values or subjectivity but on the law of nature. It is therefore valid in deontology. The subject, whether a physician or researcher, is defined as manifesting altruism when relating to patients or research participants, but also when arriving at decision-making. This approach, based on taking responsibility for long-term outcomes, is more broadly relevant when deciding on technological applications—what is being developed and why—and how new knowledge is to be used.

As a bridging framework between the Western and Tibetan paradigms, the six basic secular points we recommended start with a broad inclusive perspective and take into account the welfare of all sentient beings through ‘harmless practice’. This brings us to what lies at the core of the proposed framework: the cognitive/analytical mind, or reasoning and logic, that support an unbiased mind. Essentially, the proposed framework considers that the purpose of one’s actions should be to benefit others. Some of the benefits of these guidelines in daily life were also discussed as points of comparison with current research on longevity and enhancement. They suggested that the key element for a health body-mind is altruism—in safely caring for others while taking responsibility for thoughts, feelings and actions.

Overall, Tibetan medicine addresses in an immediate way medical practice and ethics, assisting in the resolution of ethical problems in the West. It does so by having as its basis the generosity of spirit and compassion typically associated with Buddhism. Our research sets the ground for a vision, one which had not yet been truly explored in bioethics, that tries to answer questions related to the goals of longevity and enhancement research and practices. The main contribution of this

thesis is also the advancement of knowledge stemming from the comparison of two paradigms. This comparison allowed us to provide an understanding from a composition that presents different ways at looking at these subjects. By using Tibetan medicine as the ground of inquiry, we not only recognized the diversity of perspectives within the Buddhist tradition itself, we clearly demonstrated how interdependent origination supports the expression of plurality while at the same time offering an expression of universal understanding. We also believe that such recognition goes beyond Keown's teleological virtue and ethics founded on life as a mere basic good. Our research demonstrated how skilful means (the tantra of medicine becomes the tantra *as* medicine) and the Buddhist Mahayana tradition include the application of knowledge and compassion. Finally, our conclusions demonstrate how Buddhist Tibetan medicine and dependent origination can enrich and expand modern bioethics. Furthermore, experts from both paradigms provided their reflections on the bridging of pluralistic visions and we have synthesized these reflections under six points:

*A wide, inclusive perspective:* Our first reference point is the clear awareness of a wider perspective that considers the environmentally conscious and ecologically responsible individual as it evaluates long term consequences. This perspective can benefit all sentient beings as it encompasses the individual, the community and society.

*Harmless practice:* We defined this as an applied point to the wide, inclusive perspective. It supports understanding the need for balance in nature by assessing/understanding the innermost details of one's actions as harmless practice to facilitate the gauging of the direction of our thoughts and actions.

*Middle beyond extremes:* This basic secular point highlights the law of causality and interdependence. It marks a philosophical position in between the extremes of believing that nothing exists, that everything is eternal or that both or neither exists.

*The unbiased mind:* This is the applied point to support the middle beyond extremes principle as it includes an openness that has the qualities of discovery and inquiry. Thoughts function free from limiting biases.

*The right mental outlook:* This encompasses pure intentions and positive action. Appearance and reality have to be consistent with non-vested interest.

*Love, compassion and responsibility:* Here the applied point links with essential internal qualities to be generated and developed. It includes care and safety and also incorporates the responsibility for all living beings.

From these six definitions, we would like to consider that they are the shared elements which remain rooted in an ultimate ethical foundation stemming from a more radical change in philosophical outlook about reality beyond the plurality of the formulation of ethical theories in bridging pluralist visions.

We hope that the research findings may be of benefit to researchers, bioethicists, individuals, thinkers and physicians when debating technological and scientific developments and thereby contribute to both knowledge and, eventually, to public policy.

May it benefit all.

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## ANNEX 1: INTERDEPENDENT ARISING PROCESS

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12 Links	3 transition	4 sections	20 factors		3 times
Ignorance			ignorance	craving	Past
formation	first	Past cause	formations	grasping	
consciousness				becoming	
mind & body			consciousness		
six senses		Present Fruit	mind body		
sense-contact			six senses		
feeling	second		sense-contact		
craving			feeling		
					Present
grasping		Present cause	craving	ignorance	
becoming	third		grasping	formations	
birth			becoming		
old age and		Future Fruit	consciousness		
death			mind & body six senses sense-contact feeling		Future



**ANNEX 2: ACKNOWLEDGES THE INTERDEPENDENT THEORY AND INCLUDES  
THE WESTERN TRAITS DISCUSSED IN CHAPTER 2**

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**RELATIVE REALITY AND INNER SENSE (BETWEEN BELIEF AND EXPERIENCE)**

<b>Relative Reality</b>	<b>Inner Sense (between belief and experience)</b>
<p><b>Systemic relations – Part I</b></p> <ol style="list-style-type: none"> <li>1. Twelve Links: At the core of the understanding of the interdependent theory (arising process or dynamic links) are the twelve links of existence which start from the obscuration of the mind.</li> <li>2. Circular causality: Obscuration causes karmic actions. These can be described by cause and effect which is the law of karma. Causality is complex and includes retroaction from cause and effect. Recursive loops or principles acknowledge the individual as part of the production of the causes and conditions.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inherent autonomous reality.               <ol style="list-style-type: none"> <li>a. The observer and the object of thought are an undivided unity.</li> </ol> </li> <li>2. Multidimensional possibility of impermanent phenomena.               <ol style="list-style-type: none"> <li>a. Beyond eternalism and nihilism</li> </ol> </li> </ol>
<p><b>Systemic relations – Part II</b></p> <ol style="list-style-type: none"> <li>1. Complexity: Acknowledges uncertainty and can conceive organization.</li> <li>2. Order and disorder: Organized universe of phenomenal order is completed with and against disorder.           <ol style="list-style-type: none"> <li>a. Cycle approach: Complex phenomena include a complementary process that is competing within paradox, uncertainty and confusion in tension and is recursive by linking knowledge of the elements with external situations.</li> </ol> </li> <li>3. Co-dependent-interrelations: Acknowledge that phenomena are emergent and organized.</li> <li>4. Infinite repetition: Acknowledges infinite repetition of experience, comprehension and judgment.</li> </ol>	
<p><b>Systemic relations – Part III</b></p> <ol style="list-style-type: none"> <li>1. Reorganize the mental system for learning to learn.</li> <li>2. Common language: Passage from science to humanism, science to philosophy.</li> </ol>	

## ANNEX 3: GLOSSARY

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- 1. Bodhicitta:** Sanskrit for “awakening mind.” It refers to the “thought of enlightenment” in which a spiritual practitioner forms the intention to achieve the enlightenment of a Buddha in order to have the capacity to liberate all sentient beings from suffering and the round of rebirth. Giving rise to this spiritual attitude forms the defining state of mind of a Bodhisattva, one who has entered the Buddhist Mahayana (“Greater Vehicle”). It is usually divided into two terms: “aspirational bodhicitta,” which describes the wish to achieve enlightenment for others’ sake, and “practical bodhicitta,” which describes the actual engagement in the “six perfections” of the Mahayana path: generosity, ethical discipline, patience, enthusiastic effort, concentration, and wisdom. Those two terms are subsumed under the term “relative bodhicitta” in that they are qualities of a pre-enlightened mind. “Ultimate bodhicitta” refers to the pure, non-conceptual awareness of enlightenment itself.
- 2. Bodhisattva:** Sanskrit for “awakening being.” A bodhisattva is one who has formed the intention of *bodhicitta*—aspiring to enlightenment for the benefit and enlightenment of all beings—and is engaged in the six perfections of the Mahayana Buddhist path to bring about that result. A bodhisattva is often characterized as deliberately postponing his or her own final enlightenment in order to reincarnate in various forms to effect the spiritual liberation of all others first.
- 3. Dharma:** Classic Buddhist commentaries list ten distinct definitions of the Sanskrit word “dharma.” In contemporary usage, the most common references are to the words of an enlightened being (i.e. the teachings of the Buddha expressing the true nature of phenomena), and to all specifically characterized phenomena themselves, as in “all dharmas that are created by causes and conditions are subject to dissolution.”
- 4. Karma:** Sanskrit for “action.” In the Buddhist context, it refers to actions of the body, speech, or mind that are classified as positive, negative, or ethically neutral. According to Buddhist teaching, if such actions are impelled by ignorance—defined as clinging to the concept of an independent self, or “I”—they leave impressions in the substrate consciousness (*alayavijñāna*). This complex of karmic impressions forms the basis, when the appropriate cooperating conditions are assembled, for both the form of future rebirths, as well as the positive, negative, or neutral experiences within those rebirths. Once one has attained the state of *nirvana*, realizing the selflessness of one’s psychophysical constituents, the process of karma is no longer operative and one is no longer subject to rebirth.
- 5. Nirvana:** A Sanskrit term literally meaning “to extinguish” or “to blow out.” According to the Mahayana Buddhist formulation, “nirvana” refers to the attainment of the status of an *arhat* (“foe-destroyer”) as the culmination of the Hinayana, or “Lesser Vehicle.” By following the ethical behavior and techniques for meditative concentration and insight outlined in the Buddha’s teaching of “the eightfold path,” the arhat comes to realize that the psychophysical constituents are devoid of self. In this state of nirvana in which the ignorance of clinging to the false concept of an independent self is fully relinquished, all passions are subdued, karma ceases to be created, and one permanently breaks the cycle of rebirth. It is said, however, that this state still contains subtle flaws and is contrasted to the full enlightenment of a Buddha, one who realizes that the self *and* all phenomena are empty of inherent existence, and has exhausted all previously accumulated karma and

afflicted mental habits. In common practice, however, nirvana often refers to the Buddha's enlightenment as well.

**6. Rebirth** (see: Samsara)

**7. Samsara:** From the Sanskrit literally meaning "flowing together," samsara refers to the cycle of birth, suffering, death and rebirth. The Buddha's self-described enlightenment experience consisted of seeing with unimpeded clarity the process of samsara in all its details. Within samsara, beings act from afflicted mental states impelled by the ignorance of regarding the self to be a truly existent entity independent of others, create the causes for rebirth in one of six broad realm categories and experience certain suffering within each of these realms. At the same time, he saw the exact means by which all beings had the potential to break the cycle of samsara, through ethical conduct, and cultivating ever more subtle meditative states of concentration and insight into the true nature of reality, empty of concepts of inherent existence. His teachings on these subjects are now classically formulated as the Four Noble Truths and the Twelve Links of Interdependent Arising. When samsara is discussed in Buddhist literature, a clear distinction is made between "rebirth" and "reincarnation". The former occurs involuntarily to beings still subject to the interdependent arising of their karma. The latter refers to the conscious assumption of form by enlightened beings in order to effect the liberation of those still caught in the cycle of samsara.

**8. Tantra:** Sanskrit, literally meaning "continuity." It refers to the philosophical view that the ultimate state of non-dual wisdom free from conceptual elaboration is continuously present throughout all phenomena. This is sometimes called the "Doctrine of Result," teaching, in contrast to the *sutras*, that the "result" of enlightenment is not a state which needs to be catalyzed through causative action, but is constantly and immediately accessible through skillful methods by which one penetrates mental obscurations and provokes direct recognition of that state. "Tantra" also refers to the texts which present this view, in progressively more subtle ways according to "outer" and "inner" tantras; the Kalachakra Tantra would be an example of the latter. The tantras form a body of spiritual literature unique to the Vajrayana, or "Indestructible Vehicle" of Buddhist thought and practice.

## **ANNEX 4: ETHICS CERTIFICATE**

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Université  
de Montréal

### **COMITÉ PLURIFACULTAIRE D'ÉTHIQUE DE LA RECHERCHE (CPÉR) CERTIFICAT D'ÉTHIQUE**

Le Comité plurifacultaire d'éthique de la recherche a examiné le projet de recherche intitulé :

*« The convergence of Tibetan science and ethical studies by regard to longevity and the perception of human genetic enhancement – vs – Western bioethics perspective »*

soumis par : **Sylvie Houde, étudiante au doctorat, Sciences humaines appliquées, Faculté des études supérieures**

Le Comité a conclu que le projet respecte les normes de déontologie énoncées à la « Politique sur la recherche avec les êtres humains » de l'Université de Montréal.

Tout changement anticipé au protocole de recherche doit être communiqué au CPÉR qui devra en évaluer l'impact au chapitre de l'éthique afin de déterminer si une nouvelle demande de certificat d'éthique est nécessaire.

Toute interruption prématurée du projet ou tout incident grave devra être immédiatement signalé au CPÉR.

[signé] François Bowen  
François Bowen, Président  
Comité plurifacultaire d'éthique de la recherche  
Université de Montréal

29 mars 2007  
Date d'émission

## **ANNEX 5: CONSENT FORMS**

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### **CONSENT FORM**

**Title of research:**

*Longevity and human genetic enhancement: The convergence of Tibetan science and ethical studies contrasted with Western bioethics perspective*

**Researcher:**

Sylvie Houde, doctoral student, Bioethics program at the University of Montreal, Canada

**Research Director:**

Beatrice Godard, Ph.D., Director of the Bioethics program at the University of Montreal, Canada

**A) INFORMATION TO PARTICIPANTS**

**1. Description and research objectives**

The present research aims at better understanding the perception and evaluation in regard to the ethic concerning longevity and human genetic enhancement. The objective of the research will provide an inquiry into how the bridging of pluralistic vision such as Tibetan medicine and ethical framework may contribute to Western research on longevity.

**2. Participation in the research**

In order to know the views, the perceptions and the experiences of the participants in this research on longevity and human genetic enhancement, you will be asked question on how pluralistic vision may connect to those concerning the research on longevity. As a stakeholder, you will be asked to participate in a semi-structured interview. You are totally free to accept or refuse to participate in this research. The interview, of 45 minutes maximum, will take place at the moment and place of your choice. Although this interview will focus on specific topics related to the object of the research, you will be allowed to discuss questions that, in your view, are relevant to the research project.

**3. Confidentiality**

The interview will be audio taped and the information that you will give during the interview will be kept confidential. The collected data will be saved and stored under lock and key in a filing cabinet, located at the Bioethics program of the University of Montreal. The collected data will be destroyed 7 years after the end of the study. Each interview will be identified by a number and only authorized individuals will have access to the list linking the numbers with the name of the participants.

**4. Advantages and inconveniences**

There are no risks associated with participation in this study. You will have the opportunity to express your views, to share your personal and professional experiences and to contribute to the advancement of knowledge. However, the expression of your personal and professional experiences might arouse unpleasant or moving memories or reflections. If that happens, do not hesitate to express your discomfort to the person in the charge of the interview.

On your request, and once a report on the general conclusion will be completed during the next year, it will be possible to get a copy of the general conclusion if you indicate it.

### **5. Freedom of participation**

Your participation is completely voluntary. You are entirely free to accept or refuse to participate to this study. You may withdraw your consent and discontinue your participation without prejudice. In such a case, you will not have to explain or justify your decision. If you decide to withdraw your consent, you can communicate with the researcher at the contact information provided on the last page of the consent form and then the data related to you will be destroyed.

### **6. Compensation**

There is no compensation for the participation in this study.

### **B) CONSENT**

I have carefully read the consent form and I have been given the time and opportunity to ask questions, and satisfactory answers to my questions have been provided.

After reflection, I freely and voluntarily consent to participate in this research. I know that I am free to withdraw from this study at any time and for any reason, without penalty, and I don't have to justify my decision.

I the undersigned accept to participate

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Surname: \_\_\_\_\_ Given name: \_\_\_\_\_

The research project as well as the terms of participation has been explained to the participant. The researcher has answered the participant's questions and has explained that participation in this project is free and voluntary. The researcher undertakes to respect the terms set out in the consent form.

Signature of the researcher: \_\_\_\_\_ Date: \_\_\_\_\_

Surname: \_\_\_\_\_ Given Name: \_\_\_\_\_

\*\*\*\*\*

For further information concerning this research, or withdraw from the study, please contact Sylvie Houde.

For any complaint related to your participation in this project, please contact the ombudsman of the University of Montreal.

**A signed copy of the consent form must be transmitted to the participant.**

## **ANNEX 6: INTRODUCTION TO PARTICIPANTS**

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### **Title: Longevity and human genetic enhancement: the convergence of Tibetan science and ethical studies in contrast to Western bioethics perspective**

#### **Project Objective**

Possibility of expanded longevity using human genetic enhancement is the basis for this inquiry in order to understand better its ethical significance. The current research and available technologies can be seen as a form of empowerment that gives greater control over individual lives. However, gene manipulation often introduces a variety of other impacts, which may expand in any form beyond the intended purpose that may have impacts not limited to medical sciences. This study will address the actual research on longevity and human genetic enhancement and will consider the connections between a Western bioethics perspective and the Eastern understanding through a comprehensive Tibetan medical perspective. An investigation of the literature revealed that ancient Tibetan medicine, which is a confluent meeting and harmonization of Indian, Chinese, Iranian, Mongolian, and indigenous medical traditions of medicine, possibly appeared to reveal new and unexplored possibilities that may well resonate in the Western thought.

To Western scientists and bioethicists of many disciplinary fields concerned with the ethics of underlying new technologies, Tibetan medicine, which is part of an integral ethical system, appears compelling and provides enrichment to our medical practice. In order to address this, we will explore how the bridging of pluralistic visions may contribute to further research. Although it is clear that Tibetan medicine does not concern itself with genetics, it does have an interesting view with regard to its law of karma (what we inherit from past lives and action) and the determinism of genes. According to this view, Tibetan medicine presents a rationally ordered system of thought, which accounts for a broad diversity of phenomena – cosmic, meteorological, physiological, and pathological – within a unified conceptual framework that explains all within a few general natural laws. Its vast medical literature, methods, and ethical and philosophic principles are all integrated within the religious (Dharmic), the Tantric (yogic), and somatic (regular) medicine. As the current preoccupation of Western research on human genetic enhancement (memory and muscle) is on the extension of quality years and “healthism,” this concept is also used in Tibetan medicine

The research objective which will constitute the core of my thesis project will look at Tibetan sciences and ethical studies in regard to longevity and the perception of human genetic enhancement compared with the Western bioethics perspective. While addressing the object, methods and history of longevity, it will provide an inquiry into how the bridging of pluralistic vision of Buddhist Tibetan medicine may contribute to Western research on longevity and human genetic enhancement.

## **ANNEX 7: INTERVIEW QUESTIONS FOR TIBETAN EXPERTS AND WESTERN BIOETHICISTS**

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### **I. Interview questions for Tibetan experts**

- 1) How do you explain the tantra of medicine to someone that has no fundamental notion of Buddhism?
- 2) Trinley Norbu has mentioned that:

Spiritual ideas cannot be compared to the material ideas of science, and Buddhist spiritual ideas cannot be changed to accommodate scientific ideas. In Buddhism, the sciences that are taught are never totally material, because they are connected with spirituality, since they are understood to be reflections of the mind and do not deal solely with material existence.

  - a. How is science being taught in the Tibetan Buddhist tradition?
- 3) How does Tibetan Buddhist perceive ethics? (specific text or example)
- 4) How does Tibetan Buddhists perceive longevity? (specific text e.g. longevity tantra and text or example)
- 5) How does Tibetan Buddhists perceive perfection of human beings? (specific text or example)
- 6) According to Tibetan Buddhist, how does their pluralist vision of ethics can contribute to the present research?

### **II. Interview questions for bioethicists**

- 1) What is the advantage of bioethics in the world?
- 2) Is there a pluralistic vision in Western bioethics?
- 3) How do they perceive the integration of a pluralist vision with non traditional ethics?
- 4) How do they perceive the ethics of enhancement?
- 5) How does the vision of another medicine and its knowledge can contribute to the ethics concerning scientific research?



## ANNEX 8: BASIC SECULAR REFERENCE POINTS

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A wide inclusive perspective	Benefit all sentient beings; consider environmentally consciousness and ecologically responsible individual, community and society; evaluate the long term consequences.
Harmless practice	Assess/understand the innermost details of one's actions.
Middle beyond extreme	Law of causality and interdependency, in-between extremes of believing that nothing exist, that everything is eternal or that both or neither exists.
The unbiased mind	Includes openness which has a quality of discovery and inquiry. Thoughts are present without a bias/unbiased process.
The right mental outlook	Pure intentions and positive actions. Appearance and reality have to be consistent with non-vested interest.
Love, compassion and responsibility	Links with essential internal qualities (to develop or generate); includes care and safety and also incorporates responsibility.

