BUDDHIST DAWN: QUESTIONS AND ANSWERS



Lung, Tin Yick Shi, Ji Chuan

Not for Sale

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Buddhist Dawn: Questions and Answers

First English Edition

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The photos of Dharma Master Chuk Mor's artwork and the portrait of the first author were taken by a professional photographer who has relinquished the copyright to the customer. The portrait of Dharma Master Ji Chuan is provided through the courtesy of the Buddhist Triple Wisdom Hall in Penang, Malaysia. The cover photo, which shows some peonies, was taken by the first author.

The first Chinese edition of this book, titled "*Mu Gu Chen Zhong Wen Dao Ming: A Book of Buddhist Studies*", was published online in September 2014 by posting a PDF on the aforementioned website. Hard copies were printed in Hong Kong, China.

In Memory of Our Buddhist Master Chuk Mor

謹以此紀念先師竺摩(1913-2002)

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This is a photo showing the two poems written by Dharma Master Chuk Mor (竺摩法師) on one side of a handheld foldable fan which he gave to the first author of this book. "文程" is the first author's Chinese Buddhist name.



This is a photo showing the Chinese painting drawn by Dharma Master Chuk Mor on the other side of the abovementioned foldable handheld fan. " \mathcal{R} ," is the first author's Chinese given name.

PREFACE TO THE 2020 ENGLISH EDITION

We as humans live in a world of constant conflict. Our immune systems must kill off intruding viruses and microbes or else they may kill us. We take the lives of plants and animals to feed ourselves but no sentient beings would die willingly to become our meals. We fight between ourselves for fame, power, wealth, influence, and other things we consider valuable. When looking globally, there are natural disasters such as droughts, floods, wildfires, earthquakes, tsunamis, hurricanes, volcanic eruptions, heat waves, and cold waves. There are also human-made disasters such as riots, wars, terrorist attacks, oil spills, nuclear explosions, and groundwater contamination. Some individuals may think that these disasters cannot harm them so long as they remain in the right place at the right time as history has shown that there are always some people who end up dominating and prospering regardless of the pain and suffering of the rest of the world. Thoughts like this may no longer be practical since many of the problems which we are facing today are unprecedented. Human population has grown to a point that our high-consumption lifestyle may no longer be sustainable due to rapid resource depletion. Scientists have warned that human activity is pushing the planet Earth towards another cycle of mass extinction and anthropogenic global warming may soon pass the point of no return if it is allowed to continue at the current pace. Space may be the last frontier but it is not a frontier which is immediately available for migration and development. Some individuals may hope that technological innovation will bail us out but the truth is that technology can potentially create more problems than it can solve as demonstrated by the exponential buildup of atmospheric carbon dioxide since the Industrial Revolution, which is the primary driver of global warming. Some individuals may think that we can clean up the mess by raising our moral standards but morality cannot satisfy our hunger, not to mention the lack of moral universalism in many situations. Some individuals may rely on our politicians to provide the leadership required to manage crises and build a brighter future but most democratically elected political leaders would tell us that they believe that voters are always right, meaning that they actually depend on us to point them to the right direction. Some individuals may pray to the supernatural for salvation but this is what people have been doing since the dawn of civilization. Is there a different way to make the world a better place?

In 2008, I was diagnosed with rectal cancer. I underwent a bowel re-sectioning surgery but the post-op chemoradiotherapy had failed to prevent metastatic cancerous growth. Less than three years later, I needed a lung metastasectomy, followed by post-op chemotherapy. While undergoing chemotherapy, I started writing a book on Buddhist studies. Buddhism can be an effective antidote to greed, anger, and delusion, which are the root causes of most of our conflicts and problems today. Although many authors have written about this topic, my goal has been to produce a book detailed enough to cover the essence of Buddhism but simple and concise enough to demystify it for the lay person. To this end, I had invited Dharma Master Ji Chuan (繼傳法師), Abbot of the Buddhist Triple Wisdom Hall in Penang, Malaysia, to participate and each of us wrote a portion of the book without imposing our opinions on each other. The Chinese edition was

published in 2014 with the Chinese title "暮鼓晨鐘問到明" and English title "*Mu Gu Chen Zhong Wen Dao Ming: A Book of Buddhist Studies*". Paperback copies were printed in Hong Kong, China after a PDF had been uploaded to my website <u>www.buddhistdawn.ca</u>. The English edition was to follow in a few months but it ended up taking a few years due to a combination of my medical condition, my mother's increasing need for elderly care after I completed the 2014 Chinese edition, and my decision to annotate some of the chapters in greater detail, particularly Chapter 3 where an overview of Western ethics and Confucian ethics is used as a lead-in to introduce Buddhist ethics. It is reasonable to assume that the average English reader is less familiar with Confucian ethics than is the average Chinese reader and that he/she will enjoy the convenience of being able to find the right elucidation in the same source rather than having to look for information in the works of sinologists which can involve a diversity of opinions even on a small topic.

The English edition I have here is essentially a translation of the 2014 Chinese edition. I believe that this will serve the purpose since the fundamental doctrines of Buddhism are independent of the language in which they are expressed and since the Chinese Buddhist Canon, which was established during the first millennium, is the place where most Buddhist scriptures have been preserved in the form of translations despite the decline of Buddhism in the Indian subcontinent. In order to add value to the English edition, I have done some editing to the text to enhance clarity, reduce wordiness, correct a few minor errors, and avoid the outlandishness which would otherwise show up when translating from a source language into a target language which is distinctly different not only in terms of linguistic features but also in terms of many associated cultural concepts. Supplementary endnotes are used as the primary means for providing more information for the discussion of certain topics, including Confucian ethics, but readers can choose to skip them if they find the materials in the text adequate. I do not have the energy to do any update on topics which may be time sensitive, such as the debates about a certain ethical issue or the findings of a particular scientific inquiry, but my overall discussion should still be valid. I also do not have the energy to rewrite certain sections of the book by drawing more from Western history and Western literature to help illustrate my discussion of ethics and religions but since the vast majority of the references cited in the 2014 Chinese edition are English works of Western production, the current contents should suffice.

Although this book is formatted like a regular academic publication and although it has the depth to be one, it is entirely homemade up to and including the electronic version. Neither Dharma Master Ji Chuan nor I would like to go through a commercial publisher. I put it together without government grant, without corporate sponsorship, and without the assistance of a team of graduate students, post-doctoral staff, and manuscript editors. I did it bit by bit by using my limited personal resources, including my poor health, to exercise my freedom of religion and freedom of expression. For this reason, I must take this opportunity to once again thank Dharma Master Ji Chuan for contributing a very important chapter, his secretariat for handling most of our correspondence, my healthcare providers for their medical care, and my friends in Hong Kong, China for the printing, distribution, and mailing of the 2014 Chinese edition. Special thanks are due to my sister in Calgary and her family for doing more than their usual share of elderly care when I made time for this English edition so that our mother, who is in her nineties, is always in good hands.

> Lung, Tin Yick Calgary, Alberta, Canada

CONVENTIONS

Translation and Transliteration

- 1. The text of this English edition is essentially a translation of the text of the 2014 Chinese edition. Some editing has been done but most of the added information is included in the form of supplementary endnotes.
- 2. English spellings are used for anglicized Sanskrit terms (e.g. samsara). Other Sanskrit terms are shown as transliterations. Sanskrit transliterations are taken from the *Fo Guang Dictionary of Buddhism* (佛光大辭 典) or *The Princeton Dictionary of Buddhism* (e.g. "vijñāna").
- 3. Excerpts from Buddhist scriptures (e.g. the *Diamond Sutra* and the *Heart Sutra*) are taken from the Chinese Buddhist Canon for translation from Chinese into English.
- 4. Excerpts from various sources are quoted with their original punctuation marks.
- 5. The translation of poems is partly in free verse and partly in rhyme. It is not meant to conform to the rules of any particular style of English poetry.
- 6. Idioms, proverbs, maxims, etc. are translated as their English equivalents or translated literally with further explanation if necessary.
- 7. Unless otherwise noted, all Chinese-to-English translations are provided by the first author of this book.
- 8. The original of every quoted and translated passage, poems inclusive, is shown in the text or in an endnote for the ease of cross-reference since there may be other versions of translation. Poems written by an author of this book are translated without showing their originals.
- 9. The romanization system known as Hanyu Pinyin (abbrev. pinyin), complete with tone marks, is used to represent Chinese proper nouns, except for proper nouns whose anglicized spellings are well-known in the West (e.g. Confucius) or are used for official purposes (e.g. the names of the authors of this book).
- 10. When uniform translation is desirable but impossible or infeasible for a recurring Chinese term due to the lack of an English equivalent or due to the word's multiple meanings which must be understood in the context in which it is used, the pinyin of the word is used as a substitution followed by necessary explanation (e.g. the word "禮" is represented by the pinyin word "*li*" in this book except when quoting the works of others since it can express the meaning of etiquette, decorum, ceremonial(s), rules of propriety, gift(s), courtesy, respect, rite(s), ritual(s), etc.; thus, it should not be uniformly translated as "rite(s)" or "ritual(s)").
- 11. Chinese characters in full, traditional forms are provided in parentheses on the first occurrence in each chapter for all pinyin words (e.g. "yuè" (樂) stands for "music").
- 12. Chinese characters and/or Sanskrit transliterations are also provided in parentheses for certain translated technical terms (e.g. "no-self" (*Chi*. 無我; *Skt*. anātman)) and anglicized proper nouns (e.g. Mencius (孟子)) for enhanced clarity.

Endnotes and Bibliography

- 13. Endnotes are divided into two parts in each chapter for the ease of cross-reference. Part 1 is endnotes carried over from the 2014 Chinese edition, with necessary reformatting and typo corrections. Part 2 is supplementary endnotes for the English edition. The bibliography is also divided into two parts for the same reason.
- 14. Supplementary endnotes for the English edition are numbered alphanumerically with the prefix "E-" in order to make them discernible in the text. The source of any additional material cited by a supplementary endnote

Conventions

is shown in parentheses within the endnote in order to avoid having an extra layer of endnotes or footnotes.

- 15. Chinese references are listed in Chinese only since readers who are interested in finding information therein must be versed in Chinese.
- 16. The Common Era (CE) notation system is used to show the year of publication of a cited work. For works which used the Buddhist calendar notation system, the Buddhist calendar year is retained and the equivalent CE year is shown in parentheses.

General Formatting

- 17. The general formatting in this book is based on the first author's own style.
- 18. All calendar years are based on the Common Era (CE) unless otherwise noted. The abbreviation "BCE" is used to denote calendar years before the Common Era.
- 19. The word "god" is not capitalized when it does not refer to a specific god. Likewise, the word "buddha" is not capitalized when it does not refer to a specific buddha.
- 20. Book titles written entirely in pinyin are capitalized in the same manner as in the case of English book titles (e.g. *Dà Táng Xīyù Jì* (大唐西域記)). This is different from the rule set by some style manuals which is to capitalize only the first pinyin word in the title (e.g. *Dà táng xīyù jì*).
- 21. When the pinyin or anglicization of a person's Chinese name is written in full, the surname is shown before the given name for the ease of cross-reference between Chinese and English (e.g. Sīmă Qiān (司馬遷); Lung, Tin Yick (龍天翼)). The given name is not separated from the surname by a comma when the name is written in pinyin (e.g. Sīmă Qiān (司馬遷)).

A TRANSLATION OF THE PREFACE TO THE 2014 CHINESE EDITION

Be it curiosity or other legitimate reasons which prompted your interest in reading this book, I welcome you in my capacity as one of the authors. I started on the first draft of *Mù Gǔ Chén Zhōng Wèn Dào Míng* (暮鼓晨鐘問到明) in 2011. It took me more than two years to complete the manuscript because my medical condition only permits me to spend a small amount of time writing in a day.

It takes an author's wisdom to compose a book. It takes a reader's wisdom to digest its contents. You and I may not know each other. We may come from very different backgrounds and social settings. Our lives may have been very different. Yet, we have so much in common in a sense that we both reside in a non-ideal world, both have to struggle with our own problems, both have once or more been afflicted by disease, both have bodies which will age over time, and both have to leave this mortal realm when the time comes.

If you consider yourself one of the luckier ones who are living happily and comfortably, do you want the rest of the world to be able to do the same? Did you ever fear that one day you might lose everything? Do you always get what you have longed for? Did you ever have to put up with any annoying persons or any unpleasant situations? Can your loved ones and pets keep you company forever? Is there a person who truly understands your feelings? Can you always tell people what you really think?

If you consider your life difficult and your responsibilities burdensome or if you feel that you cannot enjoy a moment of peace due to problems and vexations, then I can tell you that this aspect of your fortunes is not much different from those of the mass of the people. I trust that you have no less potential than others but circumstances may not allow you to fully develop it. Your hard-earned success can be ripped off. Your loyalty can be made a convenience. Your reputation can be tarnished by false allegations. Your trusted ones can betray you. Your loved ones can reject you. Your high performance can excite people's jealousy. Your injury can invite more insults. I may not know about any of your challenges. Perhaps you are in the wrong place at the wrong time. Perhaps you came from a broken family. Perhaps you are forlorn and destitute. Perhaps you are decrepit and helpless. Perhaps you have some form of disability. Perhaps you have inherited hatred from past generations. Perhaps you have experienced the bloodsheds and slaughters of war. Perhaps you have to struggle for existence day after day. Perhaps you have a history which is more tragic and painful than the foregoing. The hair-stirring scenes, the heart-breaking incidents, and the lovehate relationships which occur in your life can leave you with both physical and emotional scars. When coping with the brutal realities of life, the shackle of emotion, and the devastating human elements, would you call the world unfair? Would you care to help others end their suffering because you are suffering?

If you want everyone to have happiness because you have happiness or if you want everyone to be free from suffering because you are suffering, then this book is for you. This book is for you because it introduces a path which anyone can follow to attain happiness and end suffering. There are eight chapters written separately by two authors and they drew on knowledge from the fields of ethics, science, religious studies, and Buddhist studies. Their goal is to help the readers penetrate the perplexities of the universe and the human life, clear up some common misconceptions, and seek an ultimate solution to the affliction of life and death. Do things happen inevitably or incidentally? Will good deeds be rewarded? How to act virtuously in a society of moral diversity? Was the earliest life a divine creation? Is human weakness the origin of religion? What are the distinctive features of Buddhism? How to practice the six paramitas of Buddhism? Does Buddhism conform to science? These are the major topics discussed in detail here. I hope you will find it useful. Before moving on to the first chapter, please read my opening poem:

I Keep Asking

Pour out the heart To make a start.

Hard to interpret the sentiment At this very moment.

Resentment or gratefulness? Neither can help the sadness.

Right or wrong? The same confusing song.

Love or hate? Just a transient state.

Singing or weeping? The life of a sentient being.

I keep asking: Who's pulling every thread which dangles Into a mess of knots and tangles?

I keep asking, From drum beats in the evening To bell tolls in the morning.

I keep asking, Until the truth dawns on me, Until the truth dawns on me ...

— Lung, Tin Yick —

CHAPTER 1

DO THINGS HAPPEN INEVITABLY OR INCIDENTALLY?

Lung, Tin Yick

The caption question is meaningful since those who live in the world would surely want to know how things happen in the world. One who knows the underlying principles of how things happen can do the utmost to promote what is favourable and inhibit what is unfavorable. Humans surpass in intelligence other known lifeforms on earth but their knowledge is still limited. As a result, things they cannot avoid are often deemed inevitable and things they cannot predict are often deemed incidental. Sometimes they may even view their own fortunes in the same manner and describe the inevitable as things fated to happen and the incidental as things not fated to happen. So, which occurrence is fated and which is not? Most people do not know the answer.

The words "inevitable" (*adv.* "inevitably") and "incidental" (*adv.* "incidentally") as used in our daily conversations are subject to interpretation. A dictionary definition of "inevitable" is "incapable of being avoided or evaded", which is the definition I have adopted for the purpose of this chapter.^(E-1) The word "inevitable" can give people a sense of certainty and indisputability. It is synonymous with "necessary", "ineluctable", and "unavoidable".^(E-2) Therefore, it may be feasible to use it in a statement of scientific prediction since a scientific theory must predict identical results under identical conditions. However, it is potentially misleading to use the same word to describe everything since for everything to be "inevitable", each tiny little step in any given process of occurrence must be like playing cinema films wherein the storyline is predesigned and, no matter how many times one hits the replay button, it will remain unchanged. If everything in the world were inevitable, the dishes we chose from a restaurant menu, the fashions we selected at a boutique store, and the furniture we picked for our homes would all be prearrangements rather than choices of our own.

"Incidental" is a near antonym of "inevitable" in the English vocabulary but it is a more polysemous word. For the purpose of this chapter, I have adopted the dictionary definition "occurring merely by chance or without intention and calculation".^(E-3) One may look up the synonyms of "incidental" in a thesaurus and find words such as "accidental", "fortuitous", "casual", and "chance".^(E-4) In daily conversations, things which are considered random, unexplained, unpredictable, untraceable, and probabilistic may also be described as incidental. To say that everything in the world occurs incidentally is the same as to refute or disregard the laws of nature and to call our deliberately planned action items random and purposeless.^(E-5)

Is the idea that things happen either inevitably or incidentally rooted in reality or is it just a subjective construct? Can an occurrence be partly inevitable and partly incidental? Can things happen by some other means? These philosophical questions are worth exploring and the answers should be sought in real life.

Take your most familiar stock index as an example. Would you consider its value at any given time during a trading session something inevitable or incidental? Stock indices are generated and maintained by

index providers for the convenience of those who want to track the movement and performance of the stock market or any segments thereof. A certain number of representative stocks are chosen as the stock index's component stocks. The share price of each component stock is plugged into a mathematical formula to calculate the value of the stock index in real time. There are different ways to do the calculation and stock indices can be classified accordingly. In a price-weighted index, every component stock is weighted in proportion to its price per share as in the case of the Dow Jones Industrial Average in the United States. In a market-value-weighted index, the component stocks are weighted according to the total market value of their outstanding shares as in the case of the Hang Seng Index in Hong Kong, China. The price per share (and hence the total market value) of any given stock is determined by the economic principle of supply and demand. Buyers and sellers may use different strategies to maximize their profits and profit is what they go after. Corporate investors and institutional investors may employ some sophisticated strategies to pursue bigger targets such as corporate takeover and global macro. Small retail investors may trade stocks for simpler reasons such as preparing for future retirement, guarding their savings against inflation, paying back some loans, and sending their children overseas for higher education. Activities in the stock market can be influenced by a number of factors such as governmental policies, bank rates, unemployment rates, inflation rates, energy prices, consumer confidence indices, the performance data of listed companies, and regional debt crises. It is a combination of these motives, strategies, and influencing factors which drives the trading and trading determines the individual share prices, which in turn determine the value of the stock index. Although it is difficult to foretell the value of a stock index, every single step of the process which produces it is well-founded and highly meticulous. Therefore, it would be equally inappropriate to label it as "inevitable" or "incidental".

Things which happen in the world are like the value of a stock index whose occurrence is the result of a highly intricate process wherein every tiny little step has its own cause(s) and effect(s). They are neither inevitable nor incidental. We may find a certain occurrence unpredictable or inexplicable because we do not know every single step in the process which gives rise to it or because we are unable to control some or all of these steps. We may hide our ignorance by calling it "inevitable" or "incidental", but these words are more of rhetoric than reality. If the example of stock index is not enough to convince you, let us draw a few more examples from other familiar experiences.

When one randomly throws a dice onto a level tabletop, intuition tells us that the chance of throwing a desired number is one in six, or a probability of one sixth (1/6) in mathematical terms. So, it may seem fair to say that the outcome of throwing dice is incidental. Why would some people argue that it is not? Well, the dice has well defined size and shape. It also has a certain initial momentum and a certain direction of takeoff. The tabletop has a fixed location relative to the hand of the thrower. Air will exert a certain amount of friction on the dice. Materials forming the dice and the tabletop have their respective physical properties. The dice will lose momentum due to impact, bouncing, and rolling before coming to rest with one side facing up. The entire process must obey the laws of physics. Therefore, if we know all these laws and all the physical parameters such as mass, geometry, material properties, initial linear velocity, initial rotational velocity, relative locations, coefficients of impact, coefficients of friction, and other influencing factors, we can simulate the dice's path of travel and accurately predict the end result. As a matter of fact, some skillful people are able to throw a desired number without knowing much about physics. From such perspective, we can say this: the outcome of throwing dice is not something causeless and fortuitous; the above-stated probability of one sixth is nothing but a statistical concept; and the physics involved. Chinese statisticians

and Chinese mathematicians rarely use the term "*ŏurán*" (偶然) to describe the act of throwing dice or the outcome thereof since "*ŏurán*" means "incidental" or "incidentally". Instead, they use the more felicitous term "*suíjī*" (隨機), whose meaning is "following the opportunity". "*Suíjī*" is literally similar to the English term "by chance" but its connotations are more positive than and more distinguishable from those of "by chance".

The two aforementioned examples involved human causes. What about things which do not? Well, let us look at water, a substance which life cannot do without, and see how it appears in multifarious forms in our natural environment. As geographical features, water can appear as seas and oceans covering the larger part of the surface of the earth, as rivers running without pausing, as lakes holding and collecting, as creeks streaming and adapting, and so forth. As seasonal or weather characteristics, water can take the form of clouds, rain, snow, hail, fog, dew, frost, ice, etc. Sometimes we may find these meteorological appearances of water charming, spectacular, and idyllic; sometimes we may find them dreadful, bone-chilling, and lifethreatening. Is the formation of these meteorological products of water inevitable or incidental? The answer to this question is the same as in the case of the last two examples: neither. These meteorological products are the results of a multiplicity of environmental factors and every single occurrence of any of them has its cause(s) and effect(s).

Meteorologists can tell us a lot about water-related weather phenomena. As a layperson's simplified account, water evaporated by the sun will rise with warm air from the surface of the earth. Rising water vapour will re-condense at a certain altitude due to heat loss, forming small liquid droplets or ice crystals. A visible mass of these small liquid droplets or ice crystals is known as "cloud". Sometimes a much broader layer of warm, humid air can meet with cool, dry air in the atmosphere. The warm front, which extends hundreds of miles, can produce enough clouds to obscure the entire sky. Water droplets or ice crystals in the clouds can grow bigger due to coalescence or moisture absorption. Gravity will eventually cause them to fall from the cloud. Re-evaporation can occur during the course of falling. What is not re-evaporated will reach the ground as "rain" or "snow", depending on the ambient temperature. If the ice crystals happen to be sitting within an unstable air mass such as a thunderstorm, strong updrafts will blow them back to the upper part of the cloud in the course of falling, allowing them to further increase in size. After a few cycles of ascending and descending, they become too heavy to be supported by the updraft of the storm. As a result, they will fall all the way to the ground as "hail". Sometimes environmental factors such as weather and topography can cause water vapours to condense into small liquid droplets near ground level, forming a type of low-lying cloud known as "fog". Be it the morning fog which emerges after a rainy night, the snow fog which appears when a warm air mass floats over a snowfield, or the mountain fog which develops when air is lifted over mountains, the underlying principle is the same. If the amount of water vapour near the ground is not enough to give rise to a fog and if the ambient temperature happens to drop to the dew point of water on a calm night or calm evening, condensation can occur on exposed objects to form "dew". If the ambient temperature happens to drop even lower to the freezing point of water, then, instead of dew, "frost" will form to give the person who touches it a stinging sensation. As for "ice" which is formed on the surface of the earth, it is just water frozen into a solid state at freezing temperature. Thus, it is inapposite to call these meteorological phenomena "incidental" since they are all governed by the laws of physics with traceable causes. It is also inapposite to call them "inevitable" since they are products of a multitude of environmental conditions in which no self-absoluteness can be claimed.

Like everything else in nature, weather conditions have their underlying principles and every weather

phenomenon has its own cause(s) and effect(s). Sometimes the weather may be considered unpredictable because there are still some unknown meteorological mechanisms or because the weather system is too large, too complex, or having too many parameters for our forecast to cover all the details. In order to compensate for our own inadequacy, meteorologists often use probabilities to describe certain weather prospects such as saying that the probability of precipitation on a certain day in a certain area is 30 percent. As a result, people may be left with the impression that rain is incidental but it is not.

Although the probability of a given event is supposed to tell us how good the chance is for that event to occur, experience tells us that things assigned a probability of zero can still happen. Likewise, things assigned a probability of 100 percent do not necessarily materialize. Some people would love to spread words about a miracle when something assigned a zero or close-to-zero probability occurs but the truth is that not only can things with a zero probability occur, they actually occur all the time in certain systems. A mathematician or statistician will tell you that the probability is zero that a continuous random variable takes on any given value and, even more disturbing to some, our ambient temperature is such a variable.⁽¹⁾ In other words, our ambient temperature can assume any value but the probability that any given value will occur when we take a temperature measurement is always zero. Why is that? Well, this is because the formula for calculating probabilities for continuous random variables must target a range of values. When the range of values is reduced to a single value, the associated probability will also reduce to zero. For instance, one may calculate the probability of having an ambient temperature which is between 18.5 °C and 19.5 °C and come up with a meaningful result but the probability of having an ambient temperature exactly equal to 19 °C is zero. Now that we know one of the math tricks, next time when we come across people who make religious propaganda out of events with a zero or close-to-zero probability, we can ask them to provide more details before accepting their stories.

Having examined a few cases of seemingly unpredictable occurrences, let us shift our focus to things which are often considered to be inevitable and see if they are truly what we think. Is death not inevitable since every person dies at the end of his/her life? Is it not inevitable that the earth will continue with its orbital motion around the sun? Knowing that scientific laws predict identical outcomes under identical conditions, can we not say that the predictable outcome of a scientific process is inevitable? Ultimately, there is only one answer to these questions: no. The reasons are as follows:

- 1) A person has to be born into this world before he/she can die as a person. If no one gives birth to him/her, there will be no such thing as his/her death. Thus, birth is the cause or antecedent and death is the effect or consequence. The link between birth and death is just a causal relationship, a logical sequence, and a conditional progression. In other words, birth is a prerequisite to death. If the prerequisite is not inevitable, neither is the consequence contingent upon it. We are used to calling death inevitable because our focus is on those who are living while forgetting or ignoring the fact that their births were preventable. One way to control birth is to feed parents with oral contraceptives.
- 2) There is no comparison between human longevity and the life of the earth. However, the way that the earth travels is still one of causality since it originated from the formation of the solar system. To be specific, the formation of the solar system is the cause or antecedent and the orbital motion of the earth is the effect or consequence. There is no absoluteness in the entire process. The average person is accustomed to taking the orbital motion of the earth as inevitable because the lifespan of

a human is far too insignificant when compared with the lifespan of the solar system and because the relationship between the earth and the sun is virtually eternal to humankind. Will the earth one day break away from its current orbit? Will the solar system eventually vanish from the universe? These are questions for astronomers and astrophysicists.

3) Scientists study natural phenomena and sum up the observed patterns and underlying principles in the form of scientific theories which predict identical outcomes under identical conditions. If a theory is believed to be the final verdict on the subject after an extended period of time, scientists may regard it as a scientific law such as the Newton's law of universal gravitation. However, a scientific law can be refuted or modified as the knowledge of humankind continues to develop. This will be discussed further in Chapter 8 of this book. For now, let us assume that scientific laws are irrefutable and find out why they do not imply inevitable occurrences. We can do this by simply noting that the governing scientific law of a certain type of phenomenon will only govern the way that a phenomenon occurs when it is to occur but it does not necessarily guarantee the presence of the conditions required to give rise to an occurrence. To put it another way, whether a particular phenomenon will occur and whether its occurrence will comply with a given scientific law in the event that it does occur are two separate issues. To illustrate my point without using any scientific law which may be too profound for some, I shall use a physical property of pure water as an example. We know that the boiling point of pure water at one atmospheric pressure is 100 °C. This physical property of pure water is incontestable since no matter when, where, and how many times we test it experimentally, the result will remain the same. Yet, for boiling to occur at exactly 100 °C, there must be some human means or natural causes which purify the water and then heat it up to the theoretical boiling point at exactly one atmospheric pressure or else the water will not boil or boiling will not occur at the specified temperature. So, the phenomenon that pure water boils at 100 °C and one atmospheric pressure is conditional rather than inevitable.

Why is it important to discuss the concepts of "inevitable occurrence" and "incidental occurrence" in great length here? Well, these two concepts can be quite misleading and there are many good reasons to dispel them. Some examples are as follows: (1) A misconception about how things happen in real life can potentially cause wrong attitudes. (2) A skewed mentality can potentially jeopardize normal interpersonal relationships. (3) A narrow way of thinking can potentially weaken a person's analytical mind and lead to poor judgments.

First, let us consider a person's attitude towards life. Except for some unfortunate cases of infant mortality, life is usually a long journey full of challenges. A person who maintains a positive attitude is in a better position to achieve fruitful results. If a person takes everything as inevitable, it is more likely that he/she will link events in real life to the belief in spiritual beings which are said to have the capability of manipulating the destinies of humankind. Should this happen, he/she may fear the supernatural, seek favour and protection therefrom, or act superstitiously all the time. His/her attitude may also turn passive as a result, holding that everything is predetermined such that a person can reap without sowing if ordained by fate or work to no avail if doomed by kismet. On the other hand, a person who sees everything as purely incidental will have a greater tendency to act recklessly, take chances indiscreetly, and have no respect for the law.

Second, we approach the aspect of interpersonal relationships. A good interpersonal relationship can

potentially be jeopardized by one's inevitability mentality or chance mentality. For instance, a person may be loved and cherished for some particular reasons but if he/she takes it for granted, he/she may think little of these reasons and ignore the fact that any sweet relationship between the loving and beloved needs to be appreciated and nurtured in order for the affection and solicitude to continue. If the loving is disheartened by the ingratitude of the beloved, the fondness and attentiveness may eventually melt away. Should this happen, the once beloved, who used to mistakenly believe in an ineluctable relationship, may be deeply confounded by the loss. The resulting aftershock and depression may never go away. On the other hand, when a person with a chance mentality is placed in a similar situation, he/she may either use a playful attitude to handle the relationship or feel insecure about it because it is deemed fortuitous. A playful attitude could cause a treasurable relationship to be wasted by treating devotion as a toy, sincerity as folly, and promises as deceptions. A feeling of insecurity could cause a warm and pleasant experience to become a source of vexation.

Last, we look at the aspects of judgment and analytical skills. Suppose there is a teacher who wants to help a failing student attain better grades. The best way to make a start is to identify all possible causes of the student's underachievement and proceed from there. There are many possibilities: disease, congenital condition, learning disability, lack of interest, family violence, school bullying, bad curriculum, inferior school facilities, the teacher's ineffective teaching techniques, personality conflict between the student and the teacher, religious incompatibility between the student and the school, etc. If the teacher adheres to a simplistic view by treating the student's poor academic performance as an inevitable outcome of fatuity or an incidental result of indolence, then there is a strong likelihood that the student will not do any better despite the teacher's heightened efforts. Likewise, suppose there is a new corporate president appointed to make an unprofitable corporation profitable again. In order to seek effective remedies, the new executive must first determine why the business has been losing money. The causes may lie internally in areas such as corporate culture, organizational structure, operational strategies, management style, staff quality, and the selection of technology; or externally in areas such as market trend, supply chain, customer demand, competitor pressure, creditor requirements, and regulatory policies. If he/she ignores the manifold issues and relies on layoffs and pay cuts as the unavoidable measures to return to profit or chances with some new schemes which do not tackle the real problem, then any short-term improvement in corporate finance will not likely translate into long term gains for the company and its shareholders.

To sum up, "inevitable occurrence" and "incidental occurrence" are subjective constructs which do not necessarily agree with reality. It can potentially engender a multitude of undesirable effects if one let such fragmentary concepts blend into one's philosophy of life. We may use the word "inevitable" to make an emphatic expression, follow the norm, or speak on the assumption that the preconditions for a certain phenomenon have been satisfied. We may also use the word "incidental" to describe a situation where we are unable to trace the origin of a certain phenomenon or predict its arrival. Strictly speaking, nothing in the world is inevitable or incidental. Everything which exists or occurs has its causes and these causes may be intimately interconnected, intricately interdependent, and inextricably interwoven. One might ask the question: "What made us the way we are and how did we get here?" The answer to this question will bring up an infinitely large number of causes and contributing factors. Some of them are obvious; some are not. Some of them are traceable; some are not. Some of them are controllable; some are not. Yet, none of them should be nonsensical or mysterious.

Sometimes we hear Chinese Buddhists discuss the topic of yīnguǒ (因果). It may sound illusive,

fathomless, and superstitious to some but " $y\bar{v}ngu\delta$ " as a technical term simply denotes causes and effects or antecedents and consequences, which cannot be more practical.^(E-6) In English, the equivalent term for " $y\bar{v}ngu\delta$ " is "causality" or "causation". Causality is one of the core beliefs in Buddhism since Buddhists believe that everything in the world exists or happens not by chance or predestination but by causality. If we adopt this Buddhist view of causality, we must target the cause(s) in order to pursue or avoid a certain effect. Thus, in order for our performance to be outstanding, our cultivation to be thriving, our strategies to be working, and our endeavours to be flourishing, we must exert ourselves to boost all contributing factors and influencing factors which are favourable and resolve those which are not. To be more specific, we can say the following: those who want to be wealthy must work diligently to make money and manage their finance prudently; those who want to be healthy must pay attention to physical fitness and mental hygiene; and those who want to be scholarly must remain studious and seek higher education. There is no better way of achieving it.

In the next chapter, we shall find out how to build a better future by applying the Buddhist principle of causality. In the meantime, please read my closing poem for this chapter:

Causality

Under our eyes, Time flies. Scenic charms and happy hours Are not always ours.

Firm as things may sound, Like ores and stones in the ground, They may be hard to seize, Like smoke in the breeze.

Amid the frustration, One may call it predestination Or the doings Of spiritual beings.

One may roll the dice And pay the price To go somewhere Without knowing where.

Generation after generation, Prosperity and liquidation, Rise and fall, We have seen them all.

The ominous and the auspicious, The disastrous and the propitious, One after another, Are all woven together.

Only by knowing causality In the world of reality, Do we understand Why the way things stand.

Thus ends the musing! Thus ends the guessing! Thus ends the pondering! Thus ends the murmuring!

— Lung, Tin Yick —

ENDNOTES

Endnotes carried over from the 2014 Chinese edition are numbered numerically as before, with some reformatting and typo corrections. Supplementary endnotes for the 2020 English edition are numbered alphanumerically with the prefix "E-".

Part 1: Endnotes Carried Over From the 2014 Chinese Edition

1. Irwin Miller, John E Freund, *Probability and Statistics for Engineers*, 2nd ed. (Englewood Cliffs: Prentice-Hall, 1977), p. 99.

Part 2: Supplementary Endnotes for the 2020 English Edition

- E-1. Webster's New Collegiate Dictionary, 1981 ed., s.v. "inevitable".
- E-2. Webster's Collegiate Thesaurus, 1988 ed., s.vv. "inevitable", "inevitably". (The word "inevitable" and the word "inevitably" are English translations of the Chinese word "bìrán" (必然), which can serve as an adjective or adverb. The word "bìrán" was used as a theme word in the same chapter of the 2014 Chinese edition but no dictionary reference or thesaurus reference was made. Pertinent references are included here for its English translations for greater clarity.)
- E-3. Webster's New Collegiate Dictionary, 1981 ed., s.vv. "incidental", "incidentally".
- E-4. Webster's Collegiate Thesaurus, 1988 ed., s.vv. "incidental", "incidentally". (The word "incidental" and the word "incidentally" are English translations of the Chinese word "*ourán*" (偶然), which can serve as an adjective or adverb. The word "*ourán*" was also used as a theme word in the same chapter of the 2014 Chinese edition but no dictionary reference or thesaurus reference was made. Pertinent references are included here for its English translations for greater clarity.)
- E-5. The term "laws of nature" is used in a scientific sense in this chapter and later chapters. It does not have a legal or moral or political aspect.
- E-6. In the Chinese vocabulary, "yīnguǒ" (因果) is a compound term formed by joining together the words "yīn" (因) and "guǒ" (果). "Yīn" can express the meanings of "antecedent(s)", "cause(s)", "reason(s)", "occasion(s)", "factor(s)", etc. when serving as a noun. A user can make its meaning clearer by adding a modifier such as "qiányīn" (前因; lit. antecedent), "qǐyīn" (起因; lit. cause), "yuányīn" (原因; lit. reason), "yòuyīn" (誘因; lit. occasion), and "yīnsù" (因素; lit. factor). "Guǒ" is also polysemous. When serving as a noun, its closest equivalent in English is the word "fruit(s)". Thus, "guǒ" can denote fruit(s) as in fruits

and vegetables or it can denote the effect or consequence of an action or process. The meaning of " $gu\check{o}$ " can also be made clearer by adding a modifier such as " $ji\acute{g}u\check{o}$ " (結果; *lit.* outcome), " $hoùgu\check{o}$ " (後 果; *lit.* consequence), " $xiàogu\check{o}$ " (效果; *lit.* effect), and " $ch\acute{n}ggu\check{o}$ " (成果; *lit.* result). The word " $y\bar{i}n$ " can link up with the word " $yu\acute{a}n$ " (緣) to form the compound term " $y\bar{i}nyu\acute{a}n$ " (因緣), whose meaning will be discussed in detail in the next chapter and Chapter 6. " $Yu\acute{a}n$ ", when used as a simple word, can convey the meanings of "cause(s)", "reason(s)", "condition(s)", etc. However, when Chinese Buddhists use " $y\bar{i}n$ " and " $yu\acute{a}n$ " separately to describe what gives rise to a certain phenomenon, " $y\bar{i}n$ " will usually refer to causes which are considered internal, major, or direct while " $yu\acute{a}n$ " will usually refer to some external conditions or causes which are considered indirect or secondary.

CHAPTER 2

WILL GOOD DEEDS BE REWARDED?

Lung, Tin Yick

The caption question shows a sense of wisdom since we can benefit ourselves and others by doing more good deeds if the answer to this question is a yes and if we know how it works. As discussed in the previous chapter, everything in the world has its cause(s) and effect(s). Sometimes the causality between two events is obvious. Sometimes it is not obvious but is still traceable. Sometimes it is not even traceable and our imagination may run wild as a result. If we take a person's good deeds as the cause and his/her subsequent improvement in well-being as the effect, then the relationship between the two will become a case of karmic causality. Does karmic causality exist? A lot of people would like to know the answer. What they may be more eager to find out is how big a karmic reward and when to expect it.

We talked about scientific laws in the previous chapter. The essence of a scientific law is that it must predict identical outcomes under identical conditions. A law of this nature does not have to come from the science community. It can be posited by anyone so long as there is enough evidence to convince the world and so long as the world remains convinced for a very long period of time. However, a law originated in the religious community is seldom regarded as such by the average person who would rather call them religious beliefs, particularly those empirical rules based entirely on experience. The belief that good deeds will be rewarded is not unique to any particular religion. One example is the Chinese Buddhist motto "sow good causes, reap good effects".^(E-1) Another example is the Bible quote "[i]t is more blessed to give than to receive" (Acts. 20:35 [Authorized King James Version]), where giving is a good deed and God's blessing is the resulting reward.^(E-2) We can probably find more statements like these by reading the scriptures of other religions but since this chapter is not about the comparative study of religions, only two examples are named to show that ancient preachers from different religions had independently advocated the causality between good deeds and rewards. Is the belief in causality based on factuality or is it just wishful thinking? It may not be a bad idea to extend our observation to the non-religious population for a more impartial answer.

The above-stated Buddhist motto was known to every household in the old China. The Chinese may simply refer to it as causality. It is a statement of how the principle of causality is supposed to work to naturally lead us to some welcome or unwelcome experiences according to the right or wrong things which we have done. There are many real-life examples of this principle. At the individual level, a person can accumulate wealth in his/her household through hard work and thrift; form lasting friendships with decent people by being sincere, affable, and magnanimous; reduce the risk of having traffic accidents by driving carefully and obeying safety rules; and win the loyalty of his/her subordinates by admiring talents and putting the right person at the right post. Conversely, a person can get into financial trouble by indulging himself/herself in extravagance, alienate his/her friends by acting arrogantly and bumptiously, encounter mishaps more often by allowing his/her heedlessness and inattention, and lose the allegiance of his/her underlings by treating them harshly and ungratefully. At the society level, we can make our public areas cleaner by having everyone remain mindful of public hygiene and cleanliness, maintain a better natural environment by having industries heighten their efforts on pollution control, and deter bribery by punishing wrongdoings. Contrariwise, we may see our streets filled with garbage if we do not refrain from littering, our ecosystem contaminated if industries are allowed to dump untreated wastes to their surroundings, and our economic growth jeopardized if authorities turn a blind eye to corruption.

While the aforementioned examples may support the principle of causality, you may quickly think of other situations which may seem to suggest the opposite: some tender-hearted people have been bullied because of their tender-heartedness; some faithful people have been cheated because of their faithfulness; some cunning people have struck a fortune by plotting cunning schemes; and some villainous people have come to power by employing villainous stratagems. If one takes one's cases of undeserving experience to religionists for explanation, some religionists may say that these are the tricks of the devil or that some creator god may want to test a person's faith before granting rewards. If we accept these types of answers, our lives may hereon be left at the mercy of gods and devils. If the same group of religionists go on to tell us that devils were also created by the same creator god, some people may remain unconvinced.

A common Buddhist explanation for cases wherein people do not get what we think they deserve is "sānshì yīnyuán" (三世因緣), which can be translated as "causality of multiple lifetimes" or "causality of past, present, and future". It is a Buddhist doctrine that the consciousness of every sentient being has a certain component or constituent which will not perish with the sentient being's body but will undergo samsara while being incessantly conditioned by the environment. Samsara is the endless cycles of life and rebirth perpetuated by the sentient being's cumulative karma and karma is what the sentient being has done, mentally and/or physically. For sentient beings reborn as humans or animals, the new cycle begins when the rebirth-bound consciousness from a previous life links up with what will develop into the body of a new life. Buddhists believe that karmic causality will not necessarily end in a single lifetime, but will work out its consequences in one or more lifetimes when the time is ripe. Thus, what a person reaps at any given time is not just what he/she has sowed in this life but some combination of that and what he/she had sowed in previous lives. Likewise, what a person does in his/her present life can help determine what he/she will enjoy or encounter in future lives. If the effects of past-life karma and present-life karma present themselves simultaneously, the net result can be either positive or negative after karmic addition and karmic offset.

Causality of multiple lifetimes may logically explain an apparent causal disconnect in terms of karmic timing and karmic offset but it is not readily testable. Everything happens at its own pace as suggested by the contrast between the Chinese proverbs "a shadow shows up when a pole goes up" and "ten years to grow a tree, one hundred years to grow a person", but those who believe that they only live once may find it difficult to accept a theory which involves lives before life and lives after life.^(E-3) Without engaging in the debate on rebirth, I can nevertheless name three simple reasons why some good deeds may seem to have gone unrewarded and why karmic rewards do not always show up when most needed:

- (1) In order to investigate karmic causality, we need a set of moral criteria to evaluate what a person has sowed. If our criteria are subjective or relative rather than universal and absolute, then any of our perceived karmic connections or karmic disconnects may or may not be true.
- (2) Karmic causality is a natural occurrence. It is not something designed to meet our expectations or to automatically deliver in times of need.

(3) Karmic causality is not a mechanism which rewards and punishes people. It is not meant to fulfil our dreams of having equity, impartiality, and justice in every situation.

KARMIC DISCONNECT OR DIFFERENCE IN MORAL VIEW

The next three examples are to illustrate why moral judgment is not a straightforward matter.

Example 1: Urban Growth

A developer purchased some farm lands and wooded areas on the outskirts of a rapidly growing city for a housing project featuring several apartment buildings plus a shopping mall and associated amenities. Those who support the development may view it as a good thing since it will help ease the city's housing shortage, create jobs, produce business opportunities, and contribute to local economic growth. Those who oppose the development may call it bad since the project will increase environmental pollution, destroy some wildlife habitats, take away some open space, reduce the supply of local fresh produce, and cause the dismissals of some agricultural workers.

Example 2: Law Enforcement

Street hawking outside designated areas is illegal in some jurisdictions due to concerns over unhygienic practices, unsightly streetscapes, obstruction of roadways, and unfair competition with business owners who have to pay taxes and high rents.^(E-4) Some unlicensed itinerant hawkers may nevertheless deserve our sympathy since hawking may be the economic lifeline for some seniors who do not have welfare benefits or cannot live off such a pittance. For some low-income families, hawking close to home may be the only viable means for the housewife to supplement household income when it is too expensive or too time-consuming to commute for a regular part-time job. Is it morally correct for a law-enforcement officer to chase away hawkers like these or arrest them and confiscate their merchandise? Those who view law and order as the top priority may support law enforcement. Those who think more about the humanitarian side may disagree.

Example 3: Freedom of Love

After a period of passionate mutual love, a young lady wants to marry her boyfriend who is handsome but not wealthy. She is well aware of his weaknesses but is confident that love will bring happiness and love will help overcome all obstacles, including her boyfriend's ill temper. Knowing that it will take more than love to sustain a marriage and fearing that their daughter may fall victim to domestic violence when living with an abrasive husband, the young lady's parents have some grave concerns about their daughter's plan. Is it morally right for them to dissuade their daughter from marrying her boyfriend? There is no need to analyze the opposing moral arguments in this example since stories like this are all too familiar.

In the above examples, there is not a single moral view which can satisfy every concerned party. One may readily name many other real-life cases which involve moral dilemmas. If it is difficult to distinguish between good and bad or right and wrong in these cases, on what basis do we discern their resulting karmic connections?

EXPECTATION VS. REALITY

As discussed earlier, karmic causality is a natural phenomenon and as such it will proceed at its own pace which is not necessarily in synchronization with the rhythm of one's life. Thus, karmic rewards for one's good deeds cannot be treated like savings in the bank which can be set up for automatic transfer or automatic withdrawal in times of need. The next two examples are to illustrate this point.

Example 4: Growing Crops

As everyone knows, it takes water to grow crops. Water requirements differ between species and vary during a growth cycle. Farmers cannot solely depend on rainfalls to irrigate their fields because rain is a natural phenomenon caused by a myriad of factors. There may be a rainy season in the year but there is no fixed timetable for precipitation and the amount of rainfall can vary considerably from year to year for the same month in the year. In order to ensure good yields, farmers must draw upon other sources of water to meet agricultural needs during dry periods and drain the excessive amounts of water in times of non-stop downpour. If a farmer does not do his/her job but instead waits in hopes that his/her good karma would bring the right amount of water all the time, chances are that there will be a crop failure due to his/her own stupidity, laziness, and negligence since his/her interpretation of karmic causality is wrong.

Example 5: HVAC Design

HVAC (heating, ventilating, and air conditioning) is an important aspect in the design of skyscraper office buildings. The purpose of an HVAC system is to ensure thermal comfort, acceptable air quality, and balanced clean air distribution all year round. The system must meet or exceed the minimum requirements of applicable engineering standard but it is not rocket science since pertinent technology is well established and it should be rather straightforward to meet design objectives. However, those who work in a building like this may notice that the ventilation on any given floor may vary from area to area and it is also possible to have a hot spot or a cold spot somewhere on the floor. Why is that? Well, in addition to the standard design parameters, factors such as the relative position of the sun, directions of winds, floor plan, furniture placement, the number of occupants, and the individual thermostat settings can each affect the actual room temperature and air flow at any particular location on the floor. So, if a mechanical system engineered to provide comfort is unable to please every user one hundred percent of the time, can we realistically expect karmic causality as a natural phenomenon to guard our well-being continually?

HUMAN-MADE VS. NATURAL

As a natural occurrence, karmic causality is not meant to be a system which rewards the virtuous and punishes the vicious. It works regardless of our religious beliefs and regardless of the rise and fall of any religion. It is superstitious to think of it as a kind of magic or religious miracles. It is impractical to rely on it to maintain social order and uphold the law. The next example is to illustrate this point.

Example 6: Breaking the Law with Impunity

In some countries where separation of powers is the model for governance, statutes are typically enacted by the legislature, whose members will debate and vote on new items of legislation after necessary public consultation and legal research. Statutory laws are enforced by police forces or other law enforcement agencies. Civil lawsuits and criminal cases will be brought to the appropriate courts for adjudication. There are also many lawyers for hire and their jobs are to ensure that their clients receive the benefit of all their rights under the law. The entire system, which is intended to deliver justice, prevent crimes, protect the innocent, and penalize offenders, is run by professionals and is very expensive. However, do we not hear from time to time that there are lawbreakers who have gone unpunished due to insufficient evidence for a conviction? If a legal system designed and operated by humankind can fail to bring us fast and fair justice all the time, what makes us think that we can pin all our hopes on karmic causality?

CLASSIFYING CAUSALITY

The above discussion should help clear up a few misconceptions about karmic causality and karmic rewards. The world can be full of discordance. Things are not necessarily black and white. There are gray areas for moral judgement. Those who believe in karmic causality should not find it disturbing when some karmic links seem to be missing since these links may not be obvious due to reasons like the ones illustrated by the above examples. A person can accomplish more by using his/her time, resources, and connections to do productive work than to keep gauging his/her karmic merit, keep guessing what was done wrong in a previous lifetime, or keep begging the spiritual beings for favour and protection. Good karma is produced when a person moves forward in the right direction, corrects his/her mistakes, practices more generosity in times of prosperity, shows more patience and courage in times of adversity, seeks common ground with opponents while tolerating differences, exits difficult situations in an honourable manner, etc. The door is open to the greatest karmic reward when he/she makes an incessant effort to act virtuously without clinging to the notion of virtuousness.

In the previous chapter, causality was discussed in layperson's terms by using words such as cause(s), effect(s), antecedent(s), consequence(s), reason(s), outcome(s), etc. Philosophers and religionists will be able to classify causality in a more comprehensive and insightful manner. Chinese Buddhists often refer to internal causes and direct causes as yin (因), external conditions and indirect causes as yuán (緣), and the effects of $y\bar{i}n$ and $yu\dot{a}n$ as $gu\dot{o}$ (\mathbb{R}). Thus, the seed which will grow into a tree is a $y\bar{i}n$. The air, water, and temperature required for the seed's germination are three examples of yuan. The fruits produced by the tree are an obvious example of $gu\check{o}(\mathbb{R})$. As for the classification of causality, it differs between Buddhist schools. One widely quoted system is known as "liù yīn, sì yuán, and wǔ guǒ" (六因, 四緣, 五果). It divides $v\bar{i}n$, or causes, into six categories (i.e. all-pervasive causes, coexistent causes, conjoined causes, enabling causes, homogeneous causes, and ripening causes), yuán, or conditions, into four categories (i.e. causal conditions, immediate antecedent conditions, objective-support conditions, and predominant conditions), and guo, or effects, into five categories (i.e. correlative effects, human-exertion effects, predominant effects, ripened effects, and separation effects).^(E-5) Can these traditional concepts be applied to today's complex societies? For instance, a drop in the national unemployment rate can be the result of having more new jobs or having fewer job seekers but these two possible causes can differ dramatically in terms of meaning, root causes, contributing factors, and influencing factors. So, how do we classify pertinent causes and factors in accordance with the Buddhist system of $y\bar{u}n$ and yuan? Well, these advanced questions will be best left to the experts. For beginners who want to enjoy the fruits of good karma, a basic understanding of causality will enable them to make a great start.

In the next chapter, we shall find out how to do good deeds in a society of moral diversity. For now, I shall close this chapter with the translation of one of my Chinese poems published in a poetry annual in Hong Kong several years ago. The theme of this poem is quite germane to the subject matter.⁽¹⁾

Lotus Seeds^(E-6)

I sow the lotus seeds everywhere With quiet determination. I say no prayer For favour or protection. When my mind clings to something, It ends up in affliction. When there is no clinging, It begins the liberation. I studied buddha-dharma For self-purification. Why seek help from the tathagata In a crisis situation? Forget the colourful sarīra Produced by one's cremation. The three thousand worlds in samsara Are fine dust in transition.

-Lung, Tin Yick -

ENDNOTES

Endnotes carried over from the 2014 Chinese edition are numbered numerically as before, with some reformatting and typo corrections. Supplementary endnotes for the 2020 English edition are numbered alphanumerically with the prefix "E-".

Part 1: Endnotes Carried Over From the 2014 Chinese Edition

1. 李國明、何乃文主編,《嶺雅》第 39 期 (香港: 嶺雅詩刊編輯部出版, 2010 年), p. 48。

Part 2: Supplementary Endnotes for the 2020 English Edition

- E-1. In its original language and expanded form, this Chinese Buddhist motto is "種善因, 得善果; 種惡因, 得惡 果". A complete word-for-word translation would be "sow good causes, reap good effects; sow bad causes, reap bad effects". For a more concise literal translation, this motto can be written as "one will reap what one sows", which is similar to the Bible quote discussed in endnote E-2 below.
- E-2. The Bible quote "for whatsoever a man soweth, that shall he also reap" (Gal. 6:7 AKJV) resembles the above-quoted Buddhist motto even more but since the Bible quote "[i]t is more blessed to give than to receive" (Acts. 20:35 AKJV) is better known among the non-Christian Chinese, it was used as an example in the 2014 Chinese edition.
- E-3. In their original language, these proverbs are written as (i) "立竿見影" and (ii) "十年樹木, 百年樹人".

- E-4. Street hawking may be a more common scene in Asia and Africa than is in North America. This example is based on some real-life stories in Hong Kong, China which is an Asian city.
- E-5. The criteria for classifying causes can differ between Buddhist schools. The same holds true for the criteria for classifying conditions and effects, the naming of the resulting categories, and the connections between the various categories. The name assigned to a given category does not necessarily tell us everything we need to know about the common characteristics therein or how it fits into the overall flowchart of causality. One must refer to pertinent Buddhist texts for details. Tabled below are the various categories of causes, conditions, and effects named in the current example. The Sanskrit transliterations and historical Chinese translations are taken from a printed version of the *Fóguāng Dàcidiăn* (佛光大辭典), a Chinese dictionary of Buddhism which is also known as the *Fo Guang Dictionary of Buddhism*. The English translations are rendered from the tabled Chinese words and they compare well with the Sanskrit-to-English translations found in *The Princeton Dictionary of Buddhism*.

English	Chinese	Sanskrit (Transliteration)
Six [Types of] Causes	六因	șad-hetavah
All-pervasive cause	遍行因	sarvatraga-hetu
Coexistent cause	俱有因	sahabhū-hetu
Conjoined cause	相應因	samprayukta-hetu
Enabling cause	能作因	kāraņa-hetu
Homogenous cause	同類因	sabhāga-hetu
Ripening cause (aka retributive cause)	異熟因 (報因)	vipāka-hetu
Four [Types of] Conditions [or Factors]	四緣	catvāraḥ pratyayāḥ
Causal condition	因緣	hetu-pratyaya
Immediate antecedent condition	等無間緣	samanantara-pratyaya
Objective-support condition	所緣緣	ālambana-pratyaya
Predominant condition	增上緣	adhipati-pratyaya
Five [Types of] Effects	五果	pañca phalāni
Correlative effect	等流果	niṣyanda-phala
Human-exertion effect	士用果	puruṣakāra-phala
Predominant effect	增上果	adhipati-phala
Ripened effect (aka retributive effect)	異熟果 (報果)	vipāka-phala
Separation effect	離繫果	visaṃyoga-phala

(Chinese source: 慈怡法師 主編, 星雲法師 監修, 《佛光大辭典》2-3 版, 全 7 冊, 另索引 (高雄: 佛光出版社, 1988/1989), 參閱條文: 士用果、五果、六因、四緣、同類因、因緣、所緣緣、相應因、俱有因、能作因、異熟因、異熟果、習因習果、等流果、等無間緣、遍行因、增上果、增上緣、離繫果。)

(English reference: Robert E. Buswell Jr. and Donald S. Lopez Jr., *The Princeton Dictionary of Buddhism* (New Jersey: Princeton University Press, 2014), s.vv. "adhipatiphala", "adhipatipratyaya", "ālambanapratyaya", "hetupratyaya", "kāraṇahetu", "niṣyandaphala", "puruṣakāraphala", "sabhāgahetu", "sahabhūhetu", "samanantarapratyaya", "samprayuktahetu", "sarvatragahetu", "vipākahetu", "vipākaphala", "visamyogaphala"; and, in "List of Lists", s.vv. "four conditions", "five effects", "six causes".)

E-6. The original title of this poem reads "答謝葉文意譚慧中兩居士" (*lit.* "[A Poem] to Thank the Lay Buddhists Ms. Ip, Man Yee and Ms. Tam, Wai Joan").

CHAPTER 3

HOW TO ACT VIRTUOUSLY IN A SOCIETY OF MORAL DIVERSITY?

Lung, Tin Yick

The caption question is profound yet practical. In order for us to act virtuously, we must first find out how to distinguish between virtue and vice. In order to distinguish between virtue and vice, we must first adopt a set of moral standards. To that end, my answer to this question will begin with a review of some common knowledge about morality and ethics.

The word "morality" commonly refers to some notional standards for judging the volitional activities of humankind so that we can call them right or wrong, good or bad, virtuous or vicious, and proper or improper. Volitional activities can be mental or physical. In the broadest sense, they can include any activities as directed by the conscious mind, such as thinking, cogitating, contriving, deciding, talking, and bodily actions. "Moral", the adjective form of "morality", is a word used to describe things which are considered right, good, virtuous, or proper. Conversely, things which are wrong, bad, vicious, or improper may be described as "immoral". In some restrained societies, "morality" refers to the rules of etiquette or the rules of propriety. Conformity to these rules is thought to be moral whereas a breach, immoral. The use of the word "morality" may sometimes be extended to the study of animals, especially social animals.

Often used interchangeably with the word "morality" is the word "ethics", which denotes the principle of human morality. However, these two words are not always interchangeable depending on the situation. Ethics as a branch of knowledge is also known as "moral philosophy". The field of moral philosophy is filled with abstruse concepts and theories. Things which are considered commonsensical by the average person are not necessarily that straightforward when viewed by philosophers. As well, the opinions of philosophers may or may not converge to unanimity when addressing the same topic.

A PEEK INTO WESTERN ETHICS

Both China and the West can claim a long history of development in the field of ethics featuring many great thinkers and many influential schools of thought but their moral traditions differ considerably from each other. Western ethics can be divided into three basic areas, namely normative ethics, applied ethics, and metaethics.⁽¹⁾ There are other fields of study, such as descriptive ethics and moral psychology, which also investigate ethics-related matters but they do not fall entirely within the domain of philosophy. The primary purpose of normative ethics is to study the principles about how one ought to live in order to be moral.⁽²⁾ The three main branches of normative ethics are consequentialism, deontology, and virtue ethics. Consequentialism holds that consequences are the only morally relevant factor when judging the goodness of a given act.⁽³⁾ Deontology says that some actions have moral values in themselves and one can prevent

wrongdoings by following moral rules.⁽⁴⁾ Virtue ethics defines morally right actions as what a person of true virtue would do when acting in character and advocates moral education as a means to acquire virtue.⁽⁵⁾ Each branch of normative ethics can have layers of subcategories covering many concepts and theories. For example, ethical egoism and utilitarianism are two different forms of consequentialism but the former will only examine consequences for the moral agent when assessing the moral rightness of an act while the latter will calculate the overall well-being by counting every affected individual equally.⁽⁶⁾⁽⁷⁾ When it comes down to the level of utilitarianism and rule utilitarianism by noting that the former describes moral correctness as maximizing the utility or benefit of each act while the latter views a morally good act as one which adheres to some rule(s) designed to maximize utility or benefit.⁽⁸⁾ The terms "well-being", "utility", and "benefit" can simply refer to the state of happiness or satisfaction and they do not necessarily entail the distribution of wealth and power. The aforementioned theories of normative ethics have their own merits but are not without shortcomings as will be discussed later in this chapter.

Applied ethics deals with particular moral problems in our daily lives. How do we define the notion of "applied ethics"? Whose moral norms and moral values should form the contents of applied ethics? Which model of moral justification works better? These are some of the basic questions which a practitioner may expect when discussing applied ethics.⁽⁹⁾ As for a standard method of classifying research topics in this field, there is none. New topics will continue to arise as society becomes increasingly more complex and diverse. We may attempt a taxonomy based on some shared characteristics and name a few wide-ranging but inevitably overlapping branches such as professional ethics which encompasses the occupational ethics of various professions and the doctrines and concepts common to all of them,⁽¹⁰⁾ business ethics which studies the connection between business and ethics as well as ethical decision making in commerce, (11)(12) and organizational ethics which applies existing moral standards and moral principles to the organizational context.⁽¹³⁾ One may also treat the various trades and contemporary moral issues individually and subdivide the subject matter of applied ethics into more specific sub-disciplines such as marketing ethics, agricultural ethics, bioethics, environmental ethics, Internet ethics, media ethics, racism, sexism, etc. As applied ethics often draws upon normative ethics for theories, the moral agent in charge of decision-making must seek practical judgments by examining particular circumstances when theories alone are too discordant or too abstract to lead the way. Casuistry, which heavily relies on case analysis, is one the most widely adopted techniques for this purpose.⁽¹⁴⁾ Can applied ethics effectively undergird the dichotomy between virtue and vice? We shall take a closer look later in this chapter.

Metaethics is often traced to G.E. Moore's 1903 classic *Principia Ethica*, whose powerful influence on moral thinkers has caused metaethical inquiry to expand and flourish for more than a century. Unlike normative ethics whose purpose is to spell out the morally correct and morally incorrect, metaethics seeks to answer questions about the semantics, metaphysics, and epistemology of moral thought and discourse as well as other second-order non-moral questions.⁽¹⁵⁾ In other words, metaethics is the philosophical study of moral philosophy itself and this is why it is a more recondite subject for the layperson than are other branches of ethics. Some authors have divided the multitudes of metaethical questions into three general categories:⁽¹⁶⁾

- (1) Questions about the meaning of moral terms or moral judgments (e.g. What is meant by the word "good"? What is meant by the word "bad"?)
- (2) Questions about the nature of moral judgments (e.g. Is this moral view relativistic or universal?)

(3) Questions about how to support or defend moral judgments (e.g. Is this moral utterance empirical or based on reason?)

Among the familiar topics in today's ethics textbooks, cognitivism, non-cognitivism, moral realism, moral naturalism, moral non-naturalism, prescriptivism, emotivism, moral nihilism, ethical relativism, and moral universalism are examples of metaethical theories which can address one or both of the first two above-stated categories of questions while rationalism, empiricism, intuitionism, and certain versions of moral skepticism are examples of theories pertaining to the third. To explain these philosophical views in a few words, cognitivism holds that moral utterances are factual statements which are either true or false from a logical standpoint but non-cognitivism contradicts it.⁽¹⁷⁾ Moral realism makes an ontological claim that mind-independent moral properties do exist in the world.⁽¹⁸⁾ Moral naturalism ties moral properties to natural properties in the same manner as utilitarians tie the meaning of the word "good" to the natural property of maximizing happiness.⁽¹⁹⁾ Moral non-naturalism defines moral values in terms of non-natural facts about the world, facts which are not scientifically detectable⁽²⁰⁾ Prescriptivism views moral judgments as a type of prescription.⁽²¹⁾ Emotivism posits that moral judgments express feelings.⁽²²⁾ Moral nihilism sees nothing real in moral rules and moral recommendations.⁽²³⁾ Ethical relativism contends that moral standards cannot be absolute and universal since they are validated through approval by the culture or the individual.⁽²⁴⁾ Moral universalism is the doctrine that certain objective moral principles are universally applicable.⁽²⁵⁾ Rationalism takes the stand that moral principles can be discovered by reason, independent of experience.⁽²⁶⁾ Empiricism states that knowledge comes with experience and morality is contingent upon feelings and desires.⁽²⁷⁾ Intuitionism asserts that a person can tell right from wrong by following his/her intuitions.⁽²⁸⁾ Moral skepticism, as the name suggests, is the branch of metaethics which raises doubts about moral beliefs.⁽²⁹⁾ Some varieties of moral skepticism even reject the idea that moral beliefs can be a form of knowledge or argue that moral knowledge cannot exist.⁽³⁰⁾

There may not be any direct connections between the aforementioned metaethical theories and the thesis of this chapter, which is to explore guidelines for virtuousness. I have nevertheless summarized them in crude terms in order to raise two important issues: First, if expert opinions on moral matters can diverge acutely or even go to different extremes among members of the academic elite, how can we expect members of the general public to make moral decisions on a whim and have no regrets for a lifetime? Second, if the world does not have a set of moral standards which is complete, absolute, and universal, how do we know for sure that the "equity", "impartiality", and "justice" in our longings are the true equity, impartiality, and justice indeed?

GLANCING BACK AT THE OLD CHINA

After a cursory overview of Western ethics, we now turn to traditional Chinese ethics to examine some moral concepts which are considered common knowledge in the field of Chinese studies for native Chinese. The word "traditional" is used here to describe what some Chinese people would refer to as common practice of the old Chinese society or "the old society" for short. I have decided to focus on the traditional without touching on the contemporary since the state ideology and cultural consciousness in mainland China have undergone some rapid transformations after the 1949 Revolution and this period of transition has not yet reached its conclusion. Furthermore, there have been major Western influences on the cultural evolution in China in the past two centuries and the resulting impacts on the moral views of the more recent

generations of Chinese people are too significant to be ignored but too complex and too involved to be discussed in the space available here.

Ancient China, regarded by some as one of the four greatest ancient civilizations on earth, had made an early start in cultural development, including the theorization of ethics. Chinese society used to be a restrained society whose moral norms and moral expectations were guided by a set of principles known as lǐ (禮; lit. decorum, etiquette, propriety, proprieties, ceremonial(s), rite(s), ritual(s), gift(s), courtesy, etc. depending on the context).^(E-1) Who established the earliest system of *li* in the written history of China? To the educated Chinese, the name which would quickly come to mind is probably Zhou Gong (周公; lit. the Duke of Zhōu) who instituted lǐ and composed yuè (樂; lit. music) in the Zhōu dynasty (周朝) (ca. 11th century - 256 BCE).^{(E-2)(E-3)} Had Yáo (堯), Shùn (舜), Yǔ (禹), or Tāng (湯), China's paragons of public virtue before Zhou Gong's time, ever conducted similar efforts in large scale? The answer should come from archeologists. All we know to date is that Zhou Gong's contribution has the greatest influence on later ages. Zhou Gong was neither a thinker nor a philosopher by trade but a feudal ruler with great talents, vigor, and foresight. When acting as the regent of his young nephew King Chéng (成王), he led a threeyear long eastern military campaign which quelled the rebellion led by Wǔ Gēng (武庚), Guǎnshū (管叔), and Càishū (蔡叔).^(E-4) Zhōu Gōng understood that military victories could eliminate immediate threats to national security but to achieve long term stability and prosperity, a better approach would be required to maintain social order and to nurture his people. The approach he adopted was to introduce a system of $l\check{t}$ (lit. ceremonials, etiquette, decorum, proprieties, etc.) and to compose yuè (lit. paeans, eulogistic songs, ceremonial music, etc.).^(E-5) The system of *li* developed by Zhou Gong had not only helped refashion the country's cultural norms and social institutions but also defined individual responsibilities and obligations in various occasions. Its scope of application extended to all members of society, ranging from the ruling class to the grassroots level and covering different genders and age groups. The notion of *li* is something which can be readily instilled into the commoners since $l\tilde{i}$ touches every aspect of a citizen's daily life and it is much less unsparing than the criminal code of a nation. $L\check{i}$ is also more humanistic than theocratic law, which is ultimately connected to beliefs in the supernatural. Yuè (music) on the other hand can condition a person's temperament. Depending on the content, music can soothe you, uplift you, or demoralize you. As documented by the Chinese classic Zuŏ Zhuàn (左傳), the dynastic music created around Zhōu Gōng's time was characterized as "sadness without anxiety" and "enjoyment without immoderation" while many folk songs created centuries later in the same dynasty still showed the qualities of "industriousness without resentment", "sorrow without distress", "concern without fear", and "joy without licentiousness".^(E-6) The fact that these two types of Zhou music reflected the same healthy mentality despite different authorship, despite social stratification, and despite the lapse of time is an excellent proof of the effectiveness of moral edification through *lĭ* and *yuè*.

As the Zhōu dynasty gradually declined over time, China entered upon two consecutive historical periods (722-221 BCE) respectively known as Spring and Autumn (春秋) and Warring States (戰國) in which the quality of life became increasingly miserable for the average commoner.^(E-7) Conflicts between ambitious feudal lords and power struggles within feudal families resulted in centuries of civil wars and chaos. However, a dark age in terms of moral decay, social conflicts, and individual suffering also turned out to be a fostering environment for intellectual efflorescence and philosophical formulations, much like what it says in the Chinese idiom "let a hundred of flowers blossom, let a hundred of schools contend."^(E-8) Driven by their burning aspiration to right the wrongs and attracted by the recruitment incentives of
competing feudal lords, scores of intellectuals came forward with their proposals of political reform and social improvement. This phenomenon lasted for generations and the outcome was a golden age in the history of China's scholarly circle during which the renowned Nine Genres and Ten Schools (九流十家) were born.^(E-9) Some of these schools had done little to promote morality and social harmony, such as the strategists whose primary interest was to develop strategies to help feudal lords gain quick advantages on the diplomatic front or military front. Others with a well-defined ideology offered their moral views in full or in part, such as Confucianism, Taoism, Moism, Legalism, and Agriculturalism. Confucianism, as represented by Confucius (孔子) and Mencius (孟子), inherited Zhou Gong's spirit of edifying people with li and yuè and identified rén ((\Box)) and yi (\tilde{a}) as the highest moral values. Rén can be understood as an amalgamation of humanness, benevolence, and self-sacrifice while yi can be translated as rightness. As recorded in the Chinese classic Lún Yǔ (論語), which is better known in the West as the Confucian Analects or Analects for short, Confucius had once used the term "li" to explain the term rén: "To subdue one's self and return to *li* is to practice rén."(E-10) Also recorded in the same source (book 12 of the Analects) was his reference to *li* when elucidating moral behaviours: "Look not if it is contrary to *li*; listen not if it is contrary to $l\check{i}$; speak not if it is contrary to $l\check{i}$; move not if it is contrary to $l\check{i}$."^(E-11) As for xiào (孝), which is a very important Confucian virtue and can be understood as the love and respect for one's parents, grandparents, and ancestors, Confucius had used the word "li" to explain it as recorded in book 2 of the Analects: "For the living, serve them according to *li*. For the departed, bury them according to *li* and offer them sacrifices according to *lĭ*."(E-12)

Confucius had a lifelong yearning for the type of social harmony and solidarity for which he coined the term "dàtóng" (大同; lit. great unity). Dàtóng existed during the times of ancient sage rulers Yáo (堯) and Shùn (舜), when China was a meritocracy.^(E-13) What Confucius strived to restore was the social order which prevailed during the heydays of the Zhou dynasty, featuring respect for seniority and respect for hierarchy (not to be interpreted in a religious sense), for which he coined the term "xiǎokāng" (小康; lit. small tranquillity).^(E-14) However, his doctrines were not limited to traditionalism but were meant to be a set of complete, humanistic, concrete and practical solutions for edifying individuals, resolving conflicts, and maintaining cooperation within families, states, and the world. From the Warring States to the two Hàn dynasties (漢朝) (i.e. Former Hàn and Later Hàn), Confucian scholars worked diligently to promote and expatiate on the teachings of Confucius, resulting in the step-by-step enrichment of Confucian literature. As for the *li* and *yuè* of the Zhou dynasty, which were highly regarded by Confucius, the Yuè Jīng (樂經; lit. Classic of Music) was long lost but three classics in the lǐ group have survived the ravage of time. The Yí Lǐ (儀禮; lit. Etiquette and Ceremonial Proprieties), which details the rules of etiquette and ceremonial proprieties of the Zhōu dynasty, received great attention in the Former Hàn (前漢), or Western Hàn (西漢), dynasty (206 BCE – 8 CE) whereas the Zhōu Lǐ (周禮) or Zhōu Guān (周官), which explains the bureaucratic system and organizational theories of same, found its way to the front stage during the Later Hàn (後漢), or Eastern Hàn (東漢), dynasty (25-220 CE). While social evolution and technological advancement have rendered some ancient proprieties and administrative wisdom obsolete, many of the ideals which were once embodied in these antiquities were lucidly captured by the Lǐ Jì (禮記; lit. Records of Li) which shines in Chinese history.^(E-15) As a matter of fact, Confucianism had been the state ideology of China for more than two millennia since Emperor Wǔ (武帝) of the Former Hàn dynasty accepted the proposal of Dǒng Zhòngshū (董仲舒) to embrace Confucian philosophy and dismiss all other schools of thought.^(E-16) Thus, Confucian concepts such as sān gāng (三綱; lit. the three cardinal rules of [human relationships]), sì wéi (四維; lit. the four custodians [of the state]), and wǔ cháng (五常; lit. the five guiding

principles [of common morality]) had taken firm root among the Chinese, from the literate to the illiterate, and were handed down through the generations until the early 20th century.

Confucian ethics is robust, thorough, and humanistic. If one examines some of the major schools of Western ethics such as Aristotle's virtue ethics,⁽³¹⁾ Immanuel Kant's deontology,⁽³²⁾ and John Stuart Mill's utilitarianism,⁽³³⁾ it can be seen that each of them has its own emphasis and their theories can be at odds with one another depending on the circumstances. This makes each of them a less balanced approach than is Confucian ethics. Confucian doctrines of character cultivation, self-restraint, and worldwide moral duties have encompassed the essence of Aristotle's virtue ethics and Kant's deontology (except for the religious aspect). The anecdote about Mencius' mother who moved houses three times to find a good neighbourhood for the upbringing of her son may be considered a classic example for virtue ethics.^(E-17) As for the comparison with utilitarian ethics, one may turn to the treatise "Lǐ Yùn" (禮運) in the *Lǐ Jì* and find that moral ideals epitomized by the *dàtóng*, or great unity, will not only satisfy the utilitarian criteria for being morally good but also set the highest moral standard assessable by utilitarian ethics. The paragraph which describes the great unity can be translated as follows:^(E-18)

"When [the philosophy known as] the Great Way prevailed, the country belonged to the public. They selected the virtuous and chose the competent [for public office]. They valued mutual trust and cultivated social harmony. Thus, people would have filial affection for not just their own parents and parental love for not just their own children. Elders were given elderly care. Ablebodied adults were duly employed. Children were properly reared. The aged and widowed, the orphaned, the aged and childless, the disabled, and the ailing had their needs attended to. As men had their proper duties, women had their marital homes. They did not like discarding their goods but goods were not necessarily kept for personal consumption. They did not like holding back their efforts but efforts were not necessarily made for personal gain. Thus, there was no plotting or conspiring and there was not a single incident of robbery, theft, or riot. Thus, people would not bother shutting the outer doors of their homes. Such [a society] is called the Great Unity".

It may sound implausible or utopian to some that Chinese people were that magnanimous and wellprovided-for during the times of Yáo and Shùn since not even today's developed countries in the West are able to rid themselves of unemployment, homelessness, and crime. However, the rationale behind the great unity in those days is actually quite simple. While firm evidence may not be available to confirm or refute in detail our knowledge of things which happened more than four millennia ago, an objective assessment can be made by considering the fact that China was already an agrarian society at that time and agriculture can feed more mouths and allow for more surplus than is the case with hunting and gathering or pastoral nomadism. Besides, members of an agrarian society are typically people who value harmony and stability and who live in the rhythm of nature. So, with other favourable conditions unmatchable by the modern world such as a much lower population density, far less sophisticated life styles, and much lower resource consumption rates, it should not be difficult for the Chinese ancients to develop a custom of mutual support and protection and to maintain equilibrium between ability and needs under the guidance of some virtuous and competent leaders.

After the two Hàn dynasties, China continued to make progress with time. She kept pace with other powerful civilizations and was once in the leading position in many aspects. Unfortunately, the Qīng dynasty (清朝) (1636-1912 CE) made a political blunder during the 18th century by complacently adopting

policies of conservatism and isolationism which hindered the country from seeking betterment, particularly in the area of technological innovations. At the same time, many European countries were charging down the path of industrial revolution at full gallop. For this reason, a stagnant China in the 19th century was extremely vulnerable to foreign aggression. From the days of the Opium War in 1840 to the inception of the Republic in 1912, China was reduced to what some historians would describe as a semi-colonial and semi-feudal state. Many Chinese people had painfully lost their pride because of that and some of them blamed their national calamity on the traditional moral values of China. The resulting cultural ferment continued into the earlier years of the People's Republic, causing Confucianism to repeatedly come under attack for nearly a century. Many critics accused it of being an ideological system designed to serve the feudal ruling class in a social pyramid featuring slavery and subjugation of women. The rationales behind such criticisms may well be defensible but when we examine world history at Confucius' time, we cannot help but ask: Which civilization on earth was not practicing slavery twenty-five hundred years ago? Which prominent culture then was not misogynistic? Which part of today's developed Europe was not once ruled by feudal lords? Is it not true that the United States of America, a country which loves to brag about her democracy and human-rights record, waited until after the American Civil War in the mid-19th century to emancipate slaves of African origin? Is it not true that American lawmakers waited until the 20th century to completely rescind their laws of a racist nature? Did we not see American women strive for gender equality in the 20th century? Apart from separation of power and judicial independence, which of today's Western democracies does not have a government which is pyramidally structured? Which of their large corporations is not organized in a similar manner?

During Confucius' lifetime (551–479 BCE), monarchy was not the only prevalent type of government on earth. Theocracy was also quite common. Confucius endorsed monarchy but disapproved of tyranny. He indicated that the working relationship between a ruler and his officers or functionaries should rest on a set of ethical principles which required each party to do its part in order to maintain mutual respect and mutual support. As explained in book 3 of the Analects, "[a] ruler should employ the services of his officials according to *li* and his officials should render their services with loyalty."(E-19) Mencius, who lived about a century later, elaborated on this position of Confucianism in a more vivid manner as recorded in part 2 of book 4 of the Chinese classic Mencius (孟子): "When a ruler treats his officials as his hands and feet, his officials regard him as their abdomens and hearts; when he treats them as his hounds and horses, they regard him as an ordinary citizen; when he treats them as dirt and grass, they regard him as a bandit or enemy."(E-²⁰⁾ Thus, it is Mencius' opinion that a monarch who abuses his power needs not to be treated like a monarch. An interpretive variation of Mencius's statement is the Chinese slang: "If you do me without humaneness, I'll do you without rightness."(E-21) As for theocracy, in which the ruler is deified or proclaimed a human agent of a certain deity,⁽³⁴⁾ it is definitely not something advocated by Confucius. According to the Analects, Confucius did not like to speak about the topics of strange phenomena, force, chaotic matters, and deities. When facing the social custom of sacrificing to the spirits and deities, he instructed his students to do what was right for the people and to keep aloof from the spirits and deities while showing them respect. As for the matter of one's afterlife, he considered it unimportant and not worth exploring as compared with one's duties in life. Shown below in the same order are the translations of pertinent quotes from books 7, 6, and 11 of the Analects:

The Master did not discuss the topics of strange phenomena, force, disorder, and deities.^(E-22)

The Master said, "Doing what is right for the people and keeping aloof from the spirits and deities

while showing them respect may be considered a form of wisdom."(E-23)

Jì Lù asked about serving spiritual beings. The Master said, "Before you can serve human beings, how can you serve spiritual beings?" [Jì Lù added,] "I venture to ask about death." [The Master] said, "Before you understand life, how do you understand the afterlife?"^(E-24)

As can be seen from the foregoing quotes, Confucian ethics is not tied to deities and spirits. Thus, it differs sharply from the divine command theory of the West since the divine command theory teaches that morality is to follow the commandments of a god.⁽³⁵⁾ Some commentators may call it a religious ritual when reading the Analects quote with the phrase "offer sacrifices according to li" or may call it a religious belief when they come across words with seemingly metaphysical connotations such as "tiān" (天; lit. nature, natural, heaven, calendar day, atmospheric season, etc. depending on the context) and "tiānmìng" (天命; lit. natural endowment, heaven mandate, etc. depending on the context) but such interpretations are partial and problematic.^(E-25) What Confucius meant by the phrase "offer sacrifices according to $l\bar{l}$ " is that filial piety for departed parents and ancestors should be expressed by observing ceremonial proprieties. What he meant by the word "*tiān*" must be understood in the context in which the word is used and, for most of its appearances in the Analects, it referred to the same thing as what it stands for in the Xiàng Zhuàn (象傳) of the first hexagram "Qián" (乾卦) in the Chinese classic Yì Jīng (易經), which states, "As the movement of *tiān* is ever vigorous, so must a gentleman ceaselessly strive along."(E-26) When the Chinese scholar Yán Fù (嚴復) translated and edited Thomas Huxley's Evolution & Ethics into literary Chinese in the late 19th century, he also used the word "tiān" consistently to title his work as "Tiānyǎn Lùn" (天演論) and to translate the scientific term "natural selection" as "tiānzé" (天擇; lit. selection by tiān).^{(36)(E-27)} Thus, Yán's translations of these terms have made the meanings of "tiān" easy to understand and we can explain the meanings of "*tiān*" and "*tiānmìng*" by using modern vocabulary as follows: "*tiān*" is nature; "*tiānmìng*" is what nature has chosen to do or where nature is taking us; and the word "ming" (命) by itself refers to things which happen to a particular person but are beyond the person's control.^(E-28) Thus, none of these terms necessarily suggests anything mystical. Mystification of the word "tiān" might have been originated by those who wanted to deceive the masses or to seek justification for feudal rulers' divine right of kings. So, if the teachings of Confucius and Mencius were that rational, non-authoritarian, and advanced at their times, why do we in the modern world have that many complaints about Confucianism and the Chinese moral traditions which were derived from Confucian ethics? Were there shortcomings in the original system of philosophy which manifested in the course of time? Were there problems created by intellectuals of later ages who misinterpreted and distorted Confucianism? Did controversy arise as a result of the abuse and misapplication by people who sought to consolidate their power and influence in the name of moral teachings? These questions are worth some profound introspection by the children of China.

MORAL DILEMMAS

After a somewhat lengthy discussion of Western ethics and traditional Chinese ethics, let us apply some of their theories to Examples 1 through 3 in the last chapter and see how well they can do in resolving the moral issues therein. Starting with traditional Chinese ethics, the moral dilemma in the case of urban growth can be summed up by the Chinese idiom "what satisfies the brother can upset the sister-in-law", meaning that you cannot please everyone.^(E-29) The moral dilemma in the case of law enforcement against street

hawking echoes the Chinese proverb "loyalty and rightness cannot always coexist", which is the Chinese way of describing conflicts between role morality and common morality.^(E-30) The moral dilemma in the case of freedom of love simply confirms the wisdom of the Chinese aphorism "even a good judge would find it difficult to settle family problems".^(E-31) We can take one step backward and use the Chinese idiom "to ease the mind" for moral criteria, which, in this context, is equivalent to saying "in all conscience", but conscience is something which is heavily dependent on the individual.^(E-32) For example, there may be a world of difference between the conscience of Mencius and the conscience of an infamous pirate whose livelihood is to attack and rob ships at sea since Mencius believed that every human being has the innate principles of commiseration, computcion, complaisance, and moral differentiation.^(E-33) If we change our strategy by switching from traditional Chinese ethics to normative ethics of the West, it will quickly become obvious that virtue ethics is of no help to these matters. Deontology will enable us to take a firm stand on our selected position but will do little to resolve conflicts. Consequentialism will require us to answer some questions which are potentially controversial: What types of consequences should be considered? Whose consequence will govern? Who is responsible for moral judgment? Whose moral standards will apply? Utilitarianism, which is a branch of consequentialism, can be brought into play but, apart from the need for answering some consequentialism questions, one must also calculate individual well-being and overall happiness which can be a challenge, particularly when dealing with non-material properties. If the more sophisticated techniques of applied ethics are used to solve these ethical problems, the moral agent must take into account a few more aspects of reality which, in theory, will help alleviate some of the negative impacts and make the moral decision more defensible but this does not necessarily translate into a happy ending for every concerned party. On the whole, regardless of where the moral decision lands, there will always be the more fortunate and the less fortunate or those who end up winning more and those who end up sacrificing more in the wake of a long and complex ethical contestation with far-reaching consequences. If those who have to sacrifice their well-being for the benefits of others are not convinced by the decision maker's moral reasoning, can we expect them to willingly submit to it?

The quest for a set of moral theories suited for conflict resolution in every situation may turn out to be fruitless. Even for what seems to have worked or seems to be working, it may not be acceptable forever. The moral propriety for Chinese women is a good example. It is part of my childhood memory that my mother and elders of my grandmother's generation would take it seriously when speaking of topics such as the three rules of obedience and four feminine virtues as well as the many exemplary Chinese women who would die to protect their premarital or marital chastity.^(E-34) However, these old morals are either unheardof or treated like laughing matters by the younger generations such as our daughters or granddaughters. As a second example, I remember that Sunday shopping was illegal when I immigrated to Canada in the 1970's. It was outlawed by the Lord's Day Act, a federal law with mainstream religious background. Defiant store owners would be subject to a penalty and they might also be regarded as immoral by some of their fellow citizens. Circumstances changed when the Supreme Court of Canada ruled in a 1985 lawsuit that the Lord's Day Act contravened the freedom of conscience and religion provision in the Canadian Charter of Rights and Freedoms. As a result, an old Act which had been upheld for nearly eight decades had suddenly become history and the regulation of Sunday shopping was left with governments at the provincial and municipal levels. Today, the provinces have either lifted or relaxed their restrictions on Sunday shopping and pertinent legislations are based on practical considerations rather than religious morality. One may look around the world and discover many more examples which involve a shift in moral norms. They serve as our reminders that some moral beliefs can change due to the passing of time or due to communication between cultures.

The evolution of morality can be a long, contentious process. The aforementioned example of Sunday shopping is a relatively straightforward case when compared with some other ethical matters. On the North American continent, several lingering ethical issues such as abortion, prostitution, euthanasia, recreational marijuana, and same-sex marriage are still the subjects of intense debate in certain regions with no end in sight.^(E-35) Some of them may be intertwined with other problems of political, economic, religious, cultural, historical, or social nature. A moral stance which has won the backing of legislation in a given jurisdiction may have yet to face other types of challenges. The multifold moral disagreements in our society tend to complicate things from time to time for anyone who has to make moral judgments. They also put moral judgements to the test of time since what is considered moral today may become immoral in the future or vice versa. In any event, moral judgments are part of our daily lives. From a pedestrian's spitting on the street to the administration of national affairs, everything has its moral implication. We cannot prevent a bad moral judgment from occurring by not making moral judgment at all since this is just as impractical as avoiding tripping by not walking. In light of this, I believe that the best answer to the caption question of this chapter is the practice of generosity or giving, which has been briefly discussed in the previous chapter. Giving, if done properly, can benefit a large number of people and reduce the risk of moral dispute. Depending on what the gift is, it can also proceed without drawing on your financial resources.

PURE GIVING

In the plainest and simplest terms, giving is the unconditional provision of something useful to those who are physically or emotionally in need. That something can be a sum of money, a household article, some form of material supply, some kind of service, the sharing of knowledge, the transfer of technology, a rescue from danger, some personal care, some enlightenment, some good advice, an act of forgiveness, a show of affection, an expression of concern, a statement of sympathy, a word of comfort, a warm wish, a courtesy, etc. The recipient in need can be a relative, a friend, a neighbour, a colleague, a classmate, an acquaintance, a passerby, a stranger who lives far away, or even some wild or domestic animals. As for the definition or ranking of neediness, it will depend on the circumstances. The contrast between the idioms "gild the lily" and "help a lame dog over a stile" may give us a hint. Giving is encouraged by many religions in the civilized world, as stated in the previous chapter. I like Buddhist doctrines better in this regard since they can serve as a set of specific, comprehensive, and religiously neutral guidelines for any individual who wants to achieve the best results when practicing generosity. The next few paragraphs are to capture their key points.

In Buddhism, there are different ways to classify the various types of giving.^(E-36) One way to do it is to divide the practice into three categories according to the nature of the charity, namely giving of alms, giving of dharma, and giving of fearlessness.^(E-37) Alms-giving refers to the donation of money, goods, human power, etc. Dharma-giving is to share with others the Buddha's teachings but it can extend to cover the transfer of knowledge and technology. Fearlessness-giving is to provide the emotionally insecure with peace of mind or to free someone or something from a state of panic. To those who have nothing to offer in these three categories, there is an another approach which is to simply rejoice in the virtuous acts of other people.^(E-38) Giving may also be classified as pure giving or impure giving.^(E-39) In the case of pure giving, the donor does not expect anything in return, not even a reward through karmic causality. In the case of impure giving, the donor does expect a karmic reward or something in return. Therefore, donations made to seek publicity or as a sprat to catch mackerel, gifts sent to win favoritism or to reciprocate a favour, and

presents delivered to cultivate a relationship are all examples of impure giving. As for forced expenditures or involuntary efforts such as debt repayment and money spent on bailing oneself out of trouble, it is totally irrelevant.

From a Buddhist standpoint, the giving of dharma is more effective than the giving of alms, and pure giving will far surpass impure giving in merit. These two principles are not difficult to comprehend. For Buddhists, it is obviously better to learn more about the teachings of the Buddha than to receive more goods and services since the former can benefit them forever and lead them to enlightenment while the latter will be consumed over time. For the average person, it is more sustainable to use knowledge and skills to make a living than to rely on the flow of relief supplies. As for the comparison between pure giving and impure giving, they can involve the same giver, the same recipient, the same gift, and the same sequence of events but the underlying difference is the giver's motive on which the immaculateness of the virtue of giving depends. In the case of impure giving, the giver is not without expectations such as reward or recognition and he/she will feel regretful or dejected if such expectations are not met. Furthermore, a giver who gives with expectations will often be selective about the recipients and the gifts. Therefore, any selfish motive of the giver will tend to lessen the virtuousness and effectiveness of giving.

How will giving as a virtuous act be rewarded? There is a fascinating collection of reports and accounts among various religious groups which advocate the practice of generosity. To rephrase some of the stories I have heard in the simplest way, giving can help the donor end poverty, prevent disasters, enjoy longevity, maintain household peace, gain rapid progress at work, live happier and healthier, and remain bright and cheerful. One way to explain the diversity of donor experiences is that no two acts of charity are identical in terms of the timing, the place, the donor, the recipient, the gift, the degree of neediness, the reason for giving, the method of giving, etc. Furthermore, the causal relationship between giving and karmic reward is a natural occurrence which is beyond human control. Hence, it is not surprising that karmic rewards for the practice of generosity can vary dramatically when everything adds up. For Buddhists whose ultimate goal is to achieve enlightenment, the primary purpose of practicing giving is to subdue their own greed and egocentricity and to relieve other sentient beings from suffering whereas any rewards generated by causality will be treated like side benefits. There are five things which Buddhist disciples are not supposed to do when practicing charity: (1) not to show bias towards the morally worthy or the morally unworthy, (2) not to favour the virtuous over the vicious, (3) not to select the recipient based on race, social class, and other discriminatory criteria, (4) not to scorn the supplicant, and (5) not to hurl invective at the recipient.^(E-40) The intent of these rules is to prevent the compassion and good will of pure giving from being blemished by the donor's subjectivity and personal sentiments. Therefore, Buddhists who observe these rules must not take into consideration factors such as their past pleasant or unpleasant experiences with the donee, the donee's moral conduct, and the donee's social status. They must also suppress their feelings of arrogance and condescension in order to act in a manner which will preserve the donee's self-esteem. These five rules, which are intended to tame the donor's attitude, have embodied a sense of equality and may be adopted by anyone who has something to donate.

As stated in the concluding remark of the previous section, giving is a rewardable virtuous act which will not instigate moral argument if practiced properly. So, how do we do it properly? Some Buddhists would suggest the use of correct methods and clean moneys. Correct methods generally refer to morally right methods and clean moneys refer to earnings from legitimate sources. These guidelines will not only provide a rational basis for rejecting proceeds from jobbery, frauds, unlawful trades, and other illegal

transactions but also help warn the donor against any mishandling or misjudgment in the course of giving. To elaborate on the latter, it will be a case of quality mismanagement which can potentially do more harm than good if one makes alms out of expired canned food, dirty clothing, and defective gadgets or donates dangerous goods to people who are not trained and equipped to use them. It will be a case of resource misallocation which can arouse controversy if a person spends lavishly to support philanthropic causes before satisfying the basic needs of his/her own family or keeps himself/herself occupied with volunteer work for charities while neglecting the well-being of family members. It will be a case of mistiming which can result in disappointment or nuisance if relief or donations are not dispatched in times of need but are delivered in times of oversupply. Thus, these cases of mismanagement, misallocation, and mistiming are all examples of failure to conform to the Buddhist standard of correct methods. Having read up to this point, my quick-witted readers may begin to wonder if the eleemosynary tactics of the popular English folk figure Robin Hood who is said to rob from the rich and give to the poor are acceptable from the Buddhist perspective. Well, I am not familiar with the history of Mr. Hood but, according to the character assigned to him in the famous historical novel *Ivanhoe* of Walter Scott, he was a heroic outlaw who fought against governmental villains and helped foil Prince John's conspiracy to steal the throne of his brother King Richard the Lionheart, who was captured by Leopold of Austria on his return journey to England after the failure of the Third Crusade.⁽³⁷⁾ Thus, from this perspective, it is inappropriate to draw parallels between Mr. Hood and criminals who rob the wealthy because of greed and resentment. It is also incorrect for those who live in a lawful and peaceful society to imitate a legendary avenger against evil and corruption.

THE FIVE PRECEPTS OF MORALITY AND THE TEN GUIDELINES FOR VIRTUOUSNESS

After a brief discussion of the Buddhist practice of giving, it is time to explore other rewardable virtuous acts which may involve an extra degree of complexity due to the need for additional moral judgments. Those who are familiar with Confucius ethic will find themselves behaving highly virtuously when acting in accordance with that part of Confucian doctrines which is still practical and worthwhile today. If the Confucian school is not to your liking, an alternative would be to consult the precepts or commandments of religions in the civilized world and look for religiously neutral contents which may serve as universal guidelines for virtuousness. On the subject of precepts and behaviour guidelines, I would recommend the Buddhist five precepts of morality and the Buddhist ten guidelines for virtuousness since they do not require religious conviction and may thus be practiced by any individual regardless of his/her religious background. These precepts and guidelines are listed below with my commentaries:^{(E-41)(E-42)}

The Five Precepts of Morality

- (1) No Taking Life Do not take the life of any sentient being. This precept is to preserve one's feeling of compassion, stop violence, and avert the tragedy of grievance and revenge.
- (2) No Stealing Do not take what is not freely consented or permitted. This precept is to keep one's greed and covetousness in check, to enhance mutual trust in society, and to help stamp out some property crimes.
- (3) No Sexual Misconduct Do not act licentiously. Do not engage in sexual promiscuity. Do not commit adultery, sexual abuse, or sexual assault. Sexual activities with a legitimate partner will only take place in a proper venue at a proper time. This precept is to steer the adherent towards a

healthier lifestyle and to respect the moral norm of a civilized society.

- (4) No Dishonest Utterances Do not lie. Do not make fraudulent claims, fallacious arguments, deceptive statements, or slanderous allegations. This precept extends to written language, sign language, and graphical expressions. Its intent is to protect one's integrity and to reduce damages caused by language-related wrongdoings.
- (5) No Drinking Do not consume alcohol or other substance which can cause intoxication. This precept is to protect the adherent from physical conditions and mental conditions which can result from substance abuse and any ugly consequence thereof. "No drinking" was the phraseological choice for the formulation of the five precepts since alcohol was probably the most common type of intoxicant at the time.

The Ten Guidelines for Virtuousness

- (1) Abstain from killing Same idea as the precept of no taking life.
- (2) Abstain from stealing Same idea as the precept of no stealing.
- (3) Abstain from sexual misconduct Same idea as the precept of no sexual misconduct.
- (4) Abstain from making dishonest utterances Same idea as the precept of no dishonest utterances.
- (5) Abstain from making divisive utterances Do not say anything to divide an otherwise united group of people or to cause anger and resentment between two otherwise concordant parties. This guideline also applies to written language, sign language, and graphical expressions.
- (6) Abstain from making invective utterances Do not make a statement of intrusive or invective nature or make a tone of voice of similar effects. Do not make curses or threats to people. This guideline also applies to written language, sign language, and graphical expressions.
- (7) Abstain from making indecent utterances Do not tell obscene jokes or use smutty humour in a speech or conversation. Do not use seductive words. Do not tease, satirize, or ridicule people. Do not prattle, drivel, or spread gossips. This guideline is also applicable to written language, sign language, and graphical expressions.
- (8) Free oneself from greed Subdue one's own feelings of greed, avarice, cupidity, covetousness, and anything along this line.
- (9) Free oneself from hatred Subdue one's own feelings of anger, resentment, aversion, hatred, and anything along this line.
- (10) Free oneself from wrong views Abandon wrong views and delusive thoughts, particularly those arising from one's own ignorance.

It is not an easy task to fully observe the Buddhist precept of no taking life since it covers all kinds of sentient beings. The average Buddhist would abstain from killing people as a minimum and abstain from harming other animal species as circumstances permit. Some other religions with a precept of no killing may make observance easier by lessening the scope of practice to not taking human lives and justify the killing of other animal species by devaluing their lives. Among the above-stated Buddhist guidelines for virtuousness, the first three take aim at bodily actions which are collectively known as "bodily karma". The next four target speeches and utterances which are collectively known as "verbal karma". The last three deal with mental doings which are collectively known as "mental karma". Together, these three types of karma are all referred to as "karma".^(E-43) From the perspective of Western normative ethics, Buddhist ethics has features similar to those of deontology, virtue ethics, and utilitarianism. Take the above-stated five precepts of morality and ten guidelines for virtuousness as an example, they are moral rules by which

a follower must abide as well as effective measures which can help cultivate a devotee's moral character. Take the Buddhist practice of pure giving as another example, it is in consonance with the fundamental principle of utilitarianism since giving can benefit both the donor and the donee despite the donor's altruistic motive. What we must bear in mind though is that it will still require moral judgments to follow these seemingly straightforward precepts and guidelines. This is no different from what we would do when observing the precepts of other non-Buddhist religions or when practicing other non-religious philosophies of life.

The last item in the ten guidelines for virtuousness says that one should abandon one's wrong views. Do we know what constitutes a wrong view? This is obviously a question of moral judgment. As for the guideline about controlling one's own greed, do we know how to define greed? Is it greed when a renter aspires to home ownership? Is it greed when he/she wants to move up to a more commodious dwelling after becoming a first-time homeowner? Is it greed when he/she works towards something more luxurious after experiencing something mid-range? Every one of these desires may be blameless in itself but when everyone strives to make more money, to move up a few more times, and to enjoy more of life, the resulting escalation of interpersonal competition and resource consumption will put an enormous amount of pressure on the supply chain of our natural resources and eventually our entire ecosystem. So, where do we draw the line? This will make another moral topic. Moving on to the Buddhist precept of no dishonest utterances, it is in essence a rule against lying. However, if a terminally ailing friend asks for our opinions about his/her chance of making a recovery, do we bluntly tell the truth or give a few words of comfort instead? Likewise, if a head of state is questioned by journalists about some politically sensitive matters whose disclosure can potentially lead to social upheaval or international conflicts, should he/she truthfully release the details or should he/she do what is politically correct to protect what is at stake? Again, it will require some prudent moral evaluation to formulate an answer. Finally, what are we supposed to do with the pests which damage our crops if we observe the Buddhist precept of no taking life? Do we know what moral position to take in the event of a gun battle between gang members and the police or in the event of a war between two nations if our scope of practice is downscaled to human lives only? From the dawn of human history, there have been wars in which leaders on both sides would eloquently argue that they were fighting a just war in order to win support and sympathy. Is it not true that their political rhetoric and war propaganda can all be reduced to some kind of moral arguments?

Some people may view karmic causality as a system which allows people to accumulate reward points and receive prizes from time to time. They may start grumbling and complaining if a reward does not show up as expected. What they may not realize is that everything we do can directly or indirectly affect people and things in our surroundings and the impacts thus produced may be hard to define and quantify. While our action or inaction may benefit some or improve a certain environment, they may be harmful to others as suggested by the Chinese idioms "honourable intention but bad consequence" and "I did not kill Bórén but Bórén died because of me".^(E-44) Thus, due to circumstances, our efforts can sometimes be met with undesirable outcomes and unwanted consequences regardless of our good will. With this in mind, it is not necessary for us to fall back on the concept of karmic offset or the concept of karmic timing when reality does not live up to expectations. Rather, the lack of an all-encompassing system of universal and absolute moral standards can be a factor and a misalignment can occur between motive and outcome due to many unknowns.

To the Buddhist practitioner, the practice of virtue is multivalent in value. There is no doubt that one

person's practice of virtue can help relieve others from suffering but for the practitioner himself/herself, virtue is essential to the purification of his/her own consciousness, which is more important than receiving karmic rewards or gaining karmic merit. The Buddhist concept of consciousness will be discussed in detail in Chapter 6 of this book. The following poem is my concluding poem for this chapter:

Ethics

Why borrow from the West^(E-45) In your quest For morality When you have your own As history has shown?

Don't let personal gain Put under strain Your probity When you are to harvest For public interest.

It is easy to fudge But hard to judge A person's integrity When the process can frustrate And irritate.

Let compassion Take over emotion For all humanity Since the world is more or less Like a gameboard of chess.

— Lung, Tin Yick —

ENDNOTES

Endnotes carried over from the 2014 Chinese edition are numbered numerically as before, with some reformatting and typo corrections. Supplementary endnotes for the 2020 English edition are numbered alphanumerically with the prefix "E-".

Part 1: Endnotes Carried Over From the 2014 Chinese Edition

- 1. Shelly Kagan, *Normative Ethics* (Boulder: Westview Press, 1998), p. 2.
- 2. Harry J. Gensler, *Ethics: A Contemporary Introduction*, 2nd ed. (New York: Routledge, 2011), p. 3.
- 3. Kagan, Normative Ethics, p. 60.
- 4. Gensler, *Ethics: A Contemporary Introduction*, p. 125.
- 5. Russ Shafer-Landau, *The Fundamentals of Ethics*, 2nd ed. (New York: Oxford University Press, 2012), pp. 253, 257.
- 6. Kagan, Normative Ethics, p. 63.

- 7. Ibid., p. 61.
- 8. H. J. McCloskey, *Meta-Ethics and Normative Ethics* (The Hague: Martinus Nijhoff, 1969), p. 176.
- 9. Tom L. Beauchamp, "The Nature of Applied Ethics" in *A Companion to Applied Ethics*, ed. R.G. Frey and Christopher Heath Wellman (Malden: Blackwell Publishing, 2003), pp. 1-16.
- 10. David Luban, "Professional Ethics" in *A Companion to Applied Ethics*, ed. R.G. Frey and Christopher Heath Wellman (Malden: Blackwell Publishing, 2003), pp. 583-596.
- 11. Patricia H. Werhane and R. Edward Freeman, "Business Ethics" in *A Companion to Applied Ethics*, ed. R.G. Frey and Christopher Heath Wellman (Malden: Blackwell Publishing, 2003), pp. 537-551.
- 12. Robert E. Frederick, ed., A Companion to Business Ethics (Malden: Blackwell Publishing, 2002).
- 13. Craig Johnson, *Organizational Ethics: A Practical Approach*, 2nd ed. (Thousand Oaks: SAGE Publications, 2012), pp. 10-12.
- 14. Beauchamp, 'The Nature of Applied Ethics', pp. 8-9.
- 15. Terry Horgan and Mark Timmons, Introduction to *Metaethics after Moore*, ed. Terry Horgan and Mark Timmons (Oxford: Clarendon Press, 2006), pp. 1-15.
- 16. Richard T. Garner and Bernard Rosen, *Moral Philosophy: A Systematic Introduction to Normative Ethics and Meta-ethics* (New York: Macmillan, 1967), pp. 214-215.
- 17. Louis P. Pojman and James Fieser, *Ethics: Discovering Right and Wrong*, 7th ed. (Boston: Wadsworth, 2012), p. 212, pp. 239-240, p. 247, p. 249.
- 18. Paul Bloomfield, "Egoism and Eudaimonism: Replies to Khawaja" in *Metaethics, Egoism, and Virtue: Studies in Ayn Rand's Normative Theory*, ed. Allan Gotthelf and James G. Lennox (Pittsburgh: University of Pittsburgh Press, 2011), p. 77.
- 19. Eleni Kalokairinou, *From Meta-Ethics to Ethics: An Overview of R.M. Hare's Moral Philosophy* (Frankfurt am Main: Peter Lang, 2011), p. 10.
- 20. Pojman and Fieser, Ethics: Discovering Right and Wrong, p. 228.
- 21. Gensler, Ethics: A Contemporary Introduction, p. 56.
- 22. Ibid., p. 46.
- 23. Shafer-Landau, The Fundamentals of Ethics, p. 306.
- 24. Pojman and Fieser, Ethics: Discovering Right and Wrong, pp. 14, 250.
- 25. Henry S. Richardson, Introduction to *Moral Universalism and Pluralism*, e.d Henry S. Richardson and Melissa S. Williams (New York: New York University Press, 2009), p. 1-2.
- 26. Pojman and Fieser, *Ethics: Discovering Right and Wrong*, pp. 123, 249.
- 27. Ibid., pp. 123, 248.
- 28. Gensler, Ethics: A Contemporary Introduction, p. 36.
- 29. Walter Sinnott-Armstrong, *Moral Skepticisms*, pb. ed. (New York: Oxford University Press, 2007), pp. 9-13.
- 30. Ibid., pp. 16, 32.
- 31. Aristotle, *Nicomachean Ethics*, trans. and ed. Roger Crisp (New York: Cambridge University Press, 2000, 16th printing 2012).
- 32. Immanuel Kant, *Groundwork of the Metaphysics of Morals*, rev. ed., trans. and ed. Mary Gregor and Jens Timmermann, rev. by Jens Timmermann, (New York: Cambridge University Press, 2012).
- 33. J.S. Mill, Utilitarianism, ed. Roger Crisp (New York: Oxford University Press, 1998, reprinted 2011).
- 34. Mario Ferrero and Ronald Wintrobe, eds., *The Political Economy of Theocracy* (New York: Palgrave Macmillan, 2009), p. 2.
- 35. Stuart Rachels, The Elements of Moral Philosophy, 7th ed. (New York: McGraw Hill, 2012), p. 51.
- 36. Thomas Henry Huxley, *Evolution and Ethics*, ed. Michael Ruse (Princeton: Princeton University Press, 2009).
- 37. Walter Scott, *Ivanhoe*, ed. Graham Tulloch (First published 1814; London: Penguin Books, 2000 (018)). Citations refer to the reprint edition.

Part 2: Supplementary Endnotes for the 2020 English Edition

E-1. The Chinese language is logographic. Words are not formed by combining alphabetical letters. Instead, each single word is represented by a written Chinese character. Hanyu Pinyin, abbreviated to pinyin, is a romanization system invented in the mid-20th century to teach people how to pronounce Chinese words in Standard Mandarin Chinese. The Chinese word "*li*" (禮), as represented by the traditional character "禮"

or the simplified character "礼", has multiple meanings which must be understood in the context in which it is used. It can be used as a noun, a verb, an adjective, or an adverb. It can also form compound terms by linking up with other Chinese words. At the time of composing this book, there is no word in the English vocabulary which can serve as its equivalent in every context or usage. Thus, its every occurrence in this book will be represented by the pinyin word " $l\tilde{t}$ " (i.e. 禮 $\rightarrow l\tilde{t}$). English translation(s) specific to the context will be shown in parentheses at the end of the sentence, if deemed necessary.

The etymology of the word " $l\tilde{i}$ " may be traced to religious activities in ancient times such as the offering of sacrifices (not necessarily an act of expiation) but the word itself had come to mean ceremonial(s), decorum, etiquette, gift(s), rules of propriety, and more even at Confucius' time. The word "rite" in its singular or plural form might have been the preferred translation of some European sinologists of the 19th century but James Legge, whose translation of the Chinese classic $L\tilde{i} J\tilde{i}$ (禮記; *lit. Records of Li*) formed two volumes of *The Sacred Books of the East* published by the Oxford University Press in the 1880's, saw the shortcomings of this approach. In volume 27 of *The Sacred Books of the East*, he inserted a dedicated page immediately after a preface to the introduction to show the title "The Lî Kî or a Collection of Treatises on the Rules of Propriety or Ceremonial Usages", repeated the same words in a heading immediately above the heading of the introduction to the book, and wrote the following in the introduction:

I have made little use in my translation of the word Rite or Rites, which Callery says he had endeavoured to adhere to as much as possible, but I do not think I have allowed myself so much liberty in other terms in my English as he has done in his French. For the symbol in the title I have said 'Rules of Propriety or Ceremonial Usages.'

Wylie's 'Book of Rites' and Callery's 'Mémorial des Rites' always failed to give me a definite idea of the nature of our classic. Sze-mâ K*h*ien's work is called Sze $K\hat{1}^2$, or 'Historical Records,' and L \hat{i} K \hat{i} might in the same way be rendered 'Ceremonial Records,' but I have preferred to give for the title – 'A Collection of Treatises on the Rules of Propriety or Ceremonial Usages'. (Footnote 2 in the original text reads "史記".)

(Source: F. Max Muller, ed., *The Sacred Books of the East*, vol. 27, *The Sacred Books of China: The Texts of Confucianism; Part III: The Lî Kî, I-X*, trans. James Legge (Oxford: Clarendon Press, 1885; rpt. Nabu), pp. 11-12.)

Note that "Li Ji" was written as "Li Ki" in Legge's romanization as Hanyu Pinyin was not developed until the mid-20th century.

To develop a better understanding of how much Legge had abstained from using the word "rite", "rites", "ritual", and "rituals" in his translation of Lǐ Jǐ, one may do a tally on the word "li" (禮) in the original, look up the English translation of each occurrence in Legge's work, and find the following: out of the 736 occurrences (not including title and headings), only 55 occurrences were rendered as "rite" or "rites"; only one occurrence was rendered as "ritual" (or more precisely, "ritual arrangements"); and no occurrence was rendered as "rituals". The remaining occurrences were rendered as "rule", "rules", "propriety", "rules of propriety", "ceremony", "ceremonies", "rules of ceremony", "ceremonial usage", "courtesy", "respect", "polite", etc. (ref. (i) Muller, ed., The Sacred Books of the East, vol. 27, pp. 61-479; (ii) F. Max Muller, ed., The Sacred Books of the East, vol. 28, The Sacred Books of China: The Texts of Confucianism; Part IV: The Lî Kî, XI-XLVI, trans. James Legge (Oxford: Clarendon Press, 1885; rpt. Nabu), pp. 1-470). Had Legge simply rendered "sàngli" (喪禮; lit. funeral) as "funeral" instead of "rites of mourning", and "hūnli" (昏禮; lit. wedding) as wedding instead of "rites of marriage", we would have seen even fewer of the word "rites" in his translation. As a consistency check, one may do the same with the Chinese classic Lún Yǔ (論語; trans. Confucian Analects or Analects for short) and find that only one out of the 75 occurrences of the word "li" (禮) in the original was rendered by Legge as "rites of propriety" while the rest of the occurrences were rendered as "propriety", "proprieties", "rules of propriety", "principles of propriety", "ceremonies", "rules of ceremonies", "regulations", "presents", "what is proper", etc. without using the words "rite", "rites", "ritual", or "rituals (ref. James Legge, The Chinese Classics: with a translation, critical and exegetical notes, prolegomena, and copious indexes, vol. 1, Confucian Analects, the Great Learning, and

the Doctrine of the Mean (2nd ed., Oxford: Clarendon Press, 1893; rpt. Hong Kong: Hong Kong University Press, 1960), pp. 137-354; citations refer to the reprint edition).

Legge was not the only translator smart enough to distinguish between etymology and usage of word when translating Chinese classics into English. When John Steele translated the Chinese classic Yí Lǐ (儀禮; lit. *Etiquette and Ceremonial Proprieties*) into English in the early 20th century, to which he assigned the title "The I-Li or Book of Etiquette and Ceremonial", he also rendered the word "li" specifically to the context and did not use much of the word "rite" or "rites" in his translation. As a matter of fact, only one out of the 178 occurrences of the word "li" in the original was rendered as "rites" in his work and none was rendered as "rite", "ritual", or "rituals" (ref. John Steele, trans., The I-Li or Book of Etiquette and Ceremonial, (London: Probsthain & Co., 1917; rpt. Taipei: Ch'eng-wen Publishing Co., 1966, 2 vols. in 1), vol. 1, pp. 1-259 and vol. 2, pp. 1-214; citations refer to the rpt. edition). When Wing-Tsit Chan compiled the first anthology of Chinese philosophy in English by using his own translations, he listed six different meanings of the word "*li*" as an example, stressed the need for doing context-specific translation for this word, and described the uniform translation "rites" or "ceremony" as being too narrow and misleading (ref. Wing-Tsit Chan, trans. and comp., appendix to A Source Book in Chinese Philosophy (Princeton: Princeton University Press, 1963), p. 790). He also stated in the same paragraph that the reason he used "Book of *Rites*" as the English title of the $L\check{I}J\hat{i}$ (in Chan's romanization, Li chi) was that it was becoming common and because he wanted "a good translation". It is understood that what he meant by "a good translation" is something less wordy than the title styled by Legge and should not be taken too literally.

The translations offered by Legge, Steele, and Chan might not be perfect but these translators were at least directionally correct in terms of doing context-specific translation for the word " $l\tilde{t}$ ". Unfortunately, there are other translators who prefer uniform translation for their own reasons. For example, when D.C. Lau translated the *Analects* into English in the 1970's, all but one of the occurrences of the word " $l\tilde{t}$ " in the original was translated as "rites" (ref. Confucius, *The Analects (Lun yü)*, trans. D. C. Lau (London: Penguin Books, 1979 (050)), pp. 59-160). An exception was made in one passage where it is too obvious that the meaning of $l\tilde{t}$ cannot be anything else other than gift(s) (ref. Confucius, *The Analects (Lun yü*), trans. Lau, p. 102 (bk. 10, para. 5)). Another example was Raymond Dawson's translation of the *Analects*, published in the 1990's, in which all occurrences of the word " $l\tilde{t}$ " were translated as "rites" or "ritual" (ref. Confucius, *The Analects*, trans. Raymond Dawson (Oxford: Oxford University Press, 1993, reissued 2008), pp. 4-82; citations refer to the reissued edition). In the same paragraph where Lau translated the word " $l\tilde{t}$ " as "a gift", Dawson translated it as "ritual gifts" (ref. Confucius, *The Analects*, trans. Dawson, p. 35 (bk. 10, para. 4)). He even argued in the same work (note 20 under "Note on Translation of Key Terms") that the word " $l\tilde{t}$ " originally referred to religious practice and also generally did so in the Confucian *Analects* (ref. Confucius, *The Analects*, trans. Dawson, p. xxv-xxvi). This, of course, was merely his interpretation.

By using the word "rite" in its singular or plural form as the English translation of the word " $l\tilde{l}$ " or by using the word "ritual" in a similar manner, it may well serve the purposes of those who believe that morality cannot be independent of religion and those who have decided to characterize Confucianism as a religion. It may also offer a large degree of convenience to those who prefer uniform translation to context-specific translation. Unfortunately, such a simplification can lead to translational errors and distortion of Confucian philosophy. Although Confucianism can sometimes function like a religion as will be discussed in Chapter 5 of this book, it is still a subject of debate among those who live the Chinese culture and among those who study the Confucian school of thought as outsiders as to whether Confucianism should be classified as a religion, especially a religion in the traditional Western sense. See endnotes E-22, E-23, E-24, and E-28 below for more discussions of Confucius' religious view and how people of his time, the Zhōu Chinese, interpreted the word "heaven".

E-2. In the English language, words with identical spellings but different meanings and pronunciations are known as heteronyms. In the Chinese language, there are also words which are represented by the same character but differ in meaning and pronunciation. When the Chinese character "樂" (simplified form "乐") is pronounced as "*yuè*" in pinyin, it is a word (noun) which means music, a surname, or the Chinese classic *Yuè Jīng* (樂經; *lit. Classic of Music*). When pronounced as "*lè*", it is a word (noun, adjective, or adverb) which means content, joy, joyful, or joyfully. When pronounced as "*yào*", it is a word (verb) which

means adore or enjoy. Since the discussion in this chapter focuses on the meaning "music" (vocal music and instrument music), the pinyin "yuè" is used.

E-3. According to the treatise "Míng Táng Wèi" (明堂位) in the Chinese classic *Lǐ Jì*, Zhōu Gōng completed the institutionalization of *lǐ* and the composition of *yuè* in the sixth year of his regency, which is the same year that he finished the standardization of the kingdom's system of measurement. The original passage and James Legge's translation are shown below for additional reference:

六年,朝諸侯於明堂,制禮作樂,頒度量,而天下大服;

(Source: 王夢鷗 註譯, 王雲五 主編, 《禮記今註今譯》修訂 2 版上冊 (臺北: 臺灣商務印書館, 1984), p. 524).

During six years he gave audience to all the princes in the Hall of Distinction; instituted ceremonies, made his instruments of music, gave out his (standard) weights and measures, and there was a grand submission throughout the kingdom. (bk. 12, para. 6)

(Source: Muller, ed., The Sacred Books of the East, vol. 28, p. 31).

Legge's translation is incomplete for two reasons. First, by rendering the phrase "*zhì lī*" (制禮) as "instituted ceremonies", he had inadvertently left out the rules of propriety which he considered important enough to be included in the title he styled for the *Lī Jì*. Second, by rendering the term "*zuò yuè*" (作樂) as "made his instruments of music", he had inadvertently left out the composition of music which is another important aspect of Zhōu Gōng's contribution to Chinese culture. See endnote E-5 below for more discussion of Zhōu Gōng's composition of music.

Note that the excerpts shown above were quoted from two different sources since, unlike *The Chinese Classics* of James Legge, the cited volume of *The Sacred Books of the East* is not bilingual. A similar arrangement has been made for the LiJi quotes in endnotes E-14, E-23 and E-34 below.

E-4. The Zhōu dynasty (周朝) began with King Wǔ (武王) who toppled King Zhòu (紂王), aka Dì Xīn (帝辛), of the Shāng dynasty (商朝) in the 11th century BCE. It was a bloody military campaign since Dì Xīn, who was notorious for his tyranny, licentiousness, and inhumanity, still commanded a big army at the time. Jī Dàn (姬旦), commonly known as Zhōu Gōng (周公; lit. the Duke of Zhōu), was King Wǔ's worthy and helpful younger brother who was also one of the dynasty founders. King Wu's reign was short, so Zhou Gong acted as the regent of his son and successor King Chéng (成王) during King Chéng's young and vulnerable years. Two other brothers of King Wǔ, Guǎnshū Xiǎn (管叔鮮) and Càishū Duó (蔡叔度), did not like this regency arrangement and they staged a rebellion by teaming up with Dì Xīn's son Wǔ Gēng (武庚) and leaders of some eastern tribes. This rebellion was quelled by Zhou Gong after a civil war which lasted for three years. Zhou Gong's military victory had also resulted in the expansion of Zhou's territory to the eastern seaboard. In the remaining years of his regency, Zhōu Gōng designed the dynasty's governmental structure, developed a system of li and yuè for the entire nation, coached King Chéng on ruling by virtue, and did other peacetime work required to secure the loyalty and support of their people. When King Chéng was mature enough to rule on his own, which happened on the seventh year of Zhou Göng's regency, Zhou Gong willingly stepped down.

A couple of convenient places to look up the history of Zhōu Gōng are the Chinese classic *Shū Jīng* (書經; *lit. Classic of Historical Documents*), aka *Shàng Shū* (尚書), and the monumental history text *Shǐ Jî* (史記; *trans. Records of the Grand Historian*) by Sīmă Qiān (司馬遷), which represents the orthodox history of China for a period from the 3^{rd} millennium BCE to the 2^{nd} century BCE (ending before the end of the reign of Emperor Wǔ (武帝) of the Former Hàn dynasty). For more than two millennia, Zhōu Gōng has been remembered in Chinese history as a moral paragon (ref. David Curtis Wright, *The History of China*, 2^{nd} ed. (Santa Barbara: Greenwood, 2011) p. 20). However, this does not mean that no attempts have been made to refute or partially refute the traditional view. An example of disparagement may be found in *The Cambridge History of Ancient China* wherein Edward Shaughnessy argued that a debate had once occurred

between Zhōu Gōng and another influential duke Shào Gōng (召公; *lit.* the Duke of Shào) with respect to Zhōu Gōng's meritocratic ideology and his role in the Zhōu court after the completion of Zhōu's eastern capital Chéngzhōu (成周) and that it was the combined effort of King Chéng and Shào Gōng that forced Zhōu Gōng to relinquish power (ref. Edward L. Shaughnessy, "Western Zhou History" in *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, eds. Michel Loewe and Edward L. Shaughnessy (New York: Cambridge University Press, 1999), pp. 315-317). This argument is highly controversial due to the following reasons:

- In order to illustrate the "debate" between Zhou Gong and Shao Gong, Shaughnessy quoted a few a) passages from a translation of the $Sh\bar{u}J\bar{u}ng$, which he claimed to be excerpts from a 1960 reprint of The Chinese Classics, vol. 3, The Shoo King of James Legge (ref. Shaughnessy, "Western Zhou History", pp. 315-316/fn. 55-59, p. 1066/bibliography). However, if one compares his "excerpts" with the actual passages in the alleged source, it can be seen that there are discrepancies in terms of both wording and meaning (ref. James Legge, The Chinese Classics: with a translation, critical and exegetical notes, prolegomena, and copious indexes, vol. 3, The Shoo King, or the Book of Historical Documents (London: Henry Frowde, 1865; rpt. Hong Kong: Hong Kong University Press, 1960), pp. 420-433, 474-486; citations refer to the reprint edition). The Chinese Classics by Legge is a set of multi-volume bilingual work, in which every passage from the original in Chinese and its English translation are shown on the same page for the ease of reference and Legge used his own system of romanization of Chinese words since pinyin was not yet invented then. However, Shaughnessy's "excerpts" do contain pinyin words. This means that he was either not quoting from The Chinese *Classics* or he had edited Legge's translation without showing the changes. (Note that in the Hong Kong University Press' 1960 reprint edition of The Chinese Classics, the title "Shū Jīng" was written as "Shoo King" and the copy I used for comparison is from the 2nd printing of that edition.)
- b) Shaughnessy described Zhōu Gōng as a believer of meritocracy and Shào Gōng, a believer of what is endowed from birth (ref. Shaughnessy, "Western Zhou History", p. 316). In order to back his claim, he quoted a passage from a translation of the chapter "Shào Gào" (召誥) in the *Shū Jīng* and stated in his footnote 59 that the "excerpt" was taken from pp. 430-431 of volume 3 of Legge's *The Chinese Classics*. The original passage and Legge's English translation in *The Chinese Classics* actually involved two paragraphs and they read as follows:

嗚呼、若生子、罔不在厥初生、自貽哲命、今天其命哲、命吉凶、命歷年、知今我初服。

Oh! it is as on the birth of a son, when all depends on *the training of* his early life, through which he may secure his wisdom in the future, as if it were decreed to him. Now, Heaven may have decreed wisdom *to our king*; it may have decreed good fortune or bad; it may have decreed a *long* course of years;—we only know that now is with him the commencement of his duties. (Pt. 5 "The Books of Chow", bk. 12, para. 19; italics as shown in the original)

宅新邑、肆惟王其疾敬德、王其疾敬德、王其德之用、祈天永命。

Dwelling in this new city, let the king now sedulously cultivate the virtue of reverence. When he is all-devoted to this virtue, he may pray to Heaven for a long-abiding decree in his favour. (Pt. 5 "The Books of Chow", bk. 12, para. 20)

(Source: Legge, *The Chinese Classics*, vol. 3, pp. 430-431. Note that "Zhōu" was written as "Chow" in Legge's romanization.)

So, if one goes by James Legge's translation, it is obvious that Shào Gōng and Zhōu Gōng were on the same wavelength since Shào Gōng also put great emphasis on the training and cultivation in a person's early life regardless of his/her endowment at birth. This is opposite to the point made by Shaughnessy. If there is any doubt regarding Legge's translation, one may also refer to vol. 3 of *The Sacred Books of the East*, which contains an earlier version of Legge's translation of the *Shū Jīng*, and see that the translation therein is very consistent with the above quotes (ref. F. Max Muller, ed., *The Sacred Books of the East*, vol. 3, *The Sacred Books of China: The Texts of Confucianism;*

Part I: The Shû King, the Religious Portion of the Shih King, the Hsiâo King, trans. James Legge (Oxford: Clarendon Press, 1879; rpt. Nabu), p. 187)).

The Shū Jīng is a collection of ancient documents. Legge referred to these documents as "books" c) while Shaughnessy referred to them as "chapters". Shaughnessy took excerpts from two different chapters in the Shū Jīng, namely the "Jūn Shì" (君奭) and the "Shào Gào" (召誥), and arranged them in an order which would make them look like records of a debate between Zhou Gong and Shao Gong. Shaughnessy also described certain statements made by Shào Gong in the "Shào Gào" as counterarguments to what Zhou Gong had said in the "Jun Shi". This technique of montage is problematic in two aspects. First, there are no direct links between the "Shào Gào" and the "Jūn Shi" and they are separated by a few other chapters in between. Second, historical documents in the Shū Jīng are known to be arranged in chronological order regardless of which version of the Shū Jīng is used. Shaughnessy identified his cited version as the Shàng Shū Zhèng Yì (尚書正義), which is the same version translated by James Legge in The Chinese Classics (ref. Shaughnessy, "Western Zhou History", pp. 315-316/fn. 55-59, p. 1066/bibliography). In the Shàng Shū Zhèng Yì, the chapter "Shào Gào" comes a few chapters before the chapter "Jūn Shì" (ref. Legge, The Chinese Classics, vol. 3, pp. 420-433, 474-486). This means that the author(s) of the Shàng Shū Zhèng Yì had endorsed the timeline in which the "Shào Gào was an earlier occurrence and therefore could not have possibly contained counterarguments made in response to the "Jūn Shì". In order to work around this time constraint, Shaughnessy cited his treatise titled "The Duke of Zhou's Retirement in the East and the Beginnings of the Minister-Monarch Debate in Chinese Political Philosophy" wherein he suggested that the chapter "Jūn Shì" might have been out of place in the Shàng Shū Zhèng Yì since there was some research done by others which suggested that the "Duō Fāng" (多方), a different chapter in the Shàng Shū Zhèng Yì, might have been out of place (ref. (i) Shaughnessy, "Western Zhou History", p. 315/fn. 54; (ii) Edward L. Shaughnessy, Before Confucius: Studies in the Creation of the Chinese Classics (Albany: State University of New Your Press, 1997), p. 132/endnote 41). Unfortunately, such a correlation is purely speculative and it cannot be accepted as serious historiography.

(Note that Shaughnessy's treatise was published in both the online journal *Early China* and his *Before Confucius: Studies in the Creation of the Chinese Classics*. He cited the former in *The Cambridge History of Ancient China*. I have to cite the latter since I am not a subscriber of *Early China*.)

In "The Duke of Zhou's Retirement in the East and the Beginnings of the Minister-Monarch Debate d) in Chinese Political Philosophy", Shaughnessy selectively made references to a wide range of textual records and bronze inscriptions and used an interpretive approach to sew together the selected bits and pieces to support his argument (ref. Shaughnessy, Before Confucius: Studies in the Creation of the Chinese Classics, pp. 101-136). If one accepts his story, then Zhou Gong was not much of a cultural hero or paragon of public virtue. Rather, he was an opportunist or hypocrite who wanted to steal his nephew King Chéng's throne, went into exile when his plot was foiled, had a smaller role to play in the eastern military campaign, and was later forced into retirement by King Chéng and Shào Gōng. If this hypothesis holds, then it follows that Confucian thought and Confucian classics are less worthy as they may seem since they were built on Confucius' over-exaltation of a nondeserving historical figure. So, how can we tell that Shaughnessy is wrong if anyone can draw upon an abundance of historical materials and arbitrarily make interpretations to devalue Confucian classics in an environment which protects the freedom of expression and freedom of academic research? The answer is amazingly simple and may be readily found in the Chinese classic $Sh\bar{i}J\bar{i}ng$ (詩經; lit. Classic of Poetry) and Sīmă Qiān's Shǐ Jì, which are two important sources of information in Shaughnessy's treatise.

As will be discussed in further detail in endnote E-5 below, there is a style of odes in the $Sh\bar{i} J\bar{i}ng$ known as Song (頌). It was a royal prerogative of the Zhou court to use music (odes inclusive) of the Song style for ancestral veneration and not even feudal lords who were siblings of a Zhou king were allowed to do the same. However, there were exceptions. There are three sections of Song in the $Sh\bar{i} J\bar{i}ng$, namely the Zhou Song (周頌), the $L\check{u}$ Song (魯頌), and the Shang Song (商頌). The Zhou Song of the Zhou dynasty. The $L\check{u}$ Song of the House of Lu. The Shang

 $S \partial ng$ is the $S \partial ng$ of the descendants of the Shāng dynasty. It is obvious that descendants of Shāng had been granted such a privilege by the Zhōu court since their ancestors were rulers of the land but why was the feudal state of Lŭ so special? Well, Lŭ was the feudal state of Zhōu Gōng and King Chéng had granted the descendants of his uncle Zhōu Gōng the privilege of performing dynastic music and dynastic ceremonials for ancestral veneration. This is summed up by the following passage in the *Shĭ Ji*:

於是成王乃命魯得郊祭文王。魯有天子禮樂者,以襃周公之德也。

(Source: [漢] 司馬遷 撰, [宋] 裴駰 集解, [唐] 司馬貞 索隱, [唐] 張守節 正義, 《史記》第5 冊, 卷 33 【魯周公世家第三】(北京: 中華書局, 第2版, 1982), p. 1523.)

Translation:

Thus, King Chéng ordered that the House of Lŭ be allowed to offer sacrifices to King Wén. The reason that the House of Lŭ had been granted the privilege of having the same $l\check{i}$ and $yu\check{e}$ as those of the kings of Zhōu was to praise the virtue of Zhōu Gōng. (In this context, " $l\tilde{i}$ " means "ceremonials" and " $yu\check{e}$ " means "music".)

Thus, it tells us right there how much King Chéng loved his uncle Zhōu Gōng, how grateful he was to his uncle Zhōu Gōng, and how wrong Shaughnessy was when he attempted to rewrite this part of Chinese history.

Those who want to argue against my analysis may challenge the accuracy of the Shi Ji in this regard. However, no one can dispute the presence of the $L\tilde{u}$ Song in the Chinese classic $Sh\bar{i}$ J $\bar{i}ng$ because it is there. Also, no one can dispute the fact that the use of Song style music was restricted during the Zhōu dynasty because the evidence is overwhelming. Most importantly, no one can offer a better explanation than what $S\bar{i}m\bar{a}$ Qiān had provided in the Shi Ji as to why the Chinese classic $Sh\bar{i}$ J $\bar{i}ng$ has a section known as the $L\tilde{u}$ Song. By allowing the House of $L\tilde{u}$ to perform dynastic music and by allowing the music they composed to be called "Song", the Zhōu court had clearly distinguished $L\tilde{u}$ from the other feudal states, whose music were collectively referred to as "Guó Fēng" (III. airs of the states) or "Fēng" (III. airs) for short. It should be noted that Shaughnessy touched on the Zhou Song but made no mention of the $L\tilde{u}$ Song and Shāng Song when he wrote about the Shī Jīng in the Cambridge History of Ancient China (ref. Shaughnessy, "Western Zhou History", p. 295).

Shaughnessy described his interpretation of the aforementioned chapters of the Shū Jīng as "quite novel" (ref. Shaughnessy, Before Confucius: Studies in the Creation of the Chinese Classics, p. 118). He might have used the right adjective in this regard but the distortion and denigration of Confucian classics is nothing new. During the fading decades of the Qīng dynasty (清朝), when China was in the hands of Western powers, some Chinese intellectuals began to blame the calamity of their country on the teachings of Confucius. In the early years of the Republic, pro-Western academic leaders such as Hu Shih (胡適; pinyin: Hú Shì) heightened the attack. After the 1949 Revolution, the new ruling party's mandate was to swiftly establish Marxism as the state ideology of the People's Republic. Mainland scholars and cultural workers who supported their government did their utmost to decry the entire system of Confucian values. Came the Cultural Revolution, which ran from 1966 to 1976, nothing traditional was exempted. So, who knows how many "novel" essays, treatises, books, research papers, and other forms of literary works had been published to censure Confucianism during a century of cultural turmoil? As China began to rise in peace in the late 20th century and as Hong Kong reverted to Chinese rule in 1997, anti-China sentiment in the West was also on the rise. The growing dissatisfaction in the United States has eventually led to an American-Chinese trade war. It is not surprising that some Western sinologists of this era would do something on the cultural front to help express anti-China sentiment. My advice for these sinologists is to not view Confucian classics as the cultural heritage of the Chinese but view them as the cultural heritage of all humanity, similar to the writings of Aristotle. After all, if a prominent Victorian like James Legge could treat Confucian classics with the respect they deserve, so can Western sinologists of the 21st century.

E-5. For information concerning the system of $l\check{t}$ institutionalized by Zhōu Gōng, one may refer to the three

Chinese classics in the *li* group, including the *Yi Li*, *Zhōu Li* (周禮), and *Li Ji* (see endnote E-15 below for a more detailed discussion of the *Li Ji*). As for the scope of Zhōu Gōng's composition of music, pertinent records including musical notation were supposed to be captured by the *Yuè Jīng* (*lit. Classic of Music*) but the *Yuè Jīng* was lost by the time of the two Hàn dynasties, hence we must turn to other reliable sources for evidence. According to the research reported by Chén Zizhǎn (陳子展) in his *Yǎsòng Xuǎnyì* (雅頌選譯), all Zhōu dynasty poems found in the Chinese classic *Shī Jīng* (詩經; *lit. Classic of Poetry*) were originally meant to be sung (ref. 陳子展, 《雅頌選譯》 (上海: 古典文學出版社, 1957), p. 8). Thus, one can search for the lyrics of the odes composed by Zhōu Gōng by studying the *Shī Jīng* although any reconstruction of the melodies would be little more than guesswork. Traces of evidence may also be found in Chinese classics in the *lǐ* group as *lĭ* and *yuè* were intimately connected at Zhōu Gōng's time. Given Zhōu Gōng's talents and the resources available to him as the regent of King Chéng, it is not surprising that he could compose both vocal music and instrumental music, write the melodies and the lyrics, orchestrate the songs, design musical instruments, and establish a governmental agency to manage music-related matters.

Odes in the $Sh\bar{i}J\bar{i}ng$ are divided into six sections: (i) the Guó Fēng (國風), which is a collection of the airs (comprising largely folksongs) of the various feudal states and political regions of Zhou; (ii) the Xiǎo Yǎ (小雅), which is a collection of the courtly music performed mostly for banquets and other special occasions; (iii) the Dà Yǎ (大雅), which is a collection of the courtly music performed for larger-scale formal occasions such as royal audiences; (iv) the Zhou Song (周頌), which is a collection of the dynastic music of the ruling Zhōu royal house; (v) the Lǔ Sòng (魯頌), which is a collection of the music of the state of Lǔ; and (vi) the Shāng Sòng (商頌), which is a collection of the music of the descendants of the Shāng dynasty (ref. (i) 馬 持盈 註 譯, 王雲五 主編, 《詩經今註今譯》修訂 3 版 (臺北:臺灣商務印書館, 1987), pp. 1, 251, 435, 551, 579, 595; (ii) William H. Baxter, A Handbook of Old Chinese Phonology (Berlin: Mouton de Gruyter, 1992), pp. 355-356). The ode "Chī Xiāo" (鴟鴞) in the Guó Fēng, the ode "Wén Wáng" (文王) in the Dà Yǎ, and the ode "Oīng Miào" (清廟) in the Zhōu Sòng are examples of odes ascribed to Zhōu Gōng (ref. (i) 陳子展,《國風選譯》(上海: 古典文學出版社, 1957), p. 324); (ii) 陳子展,《雅頌選譯》, pp. 283, 462). One must bear in mind that which or how many of the odes in the Shī Jīng were composed by Zhōu Gōng is of secondary importance since Zhou Gong's greatest cultural contribution in Chinese history is not his poetry but his systematic use of *li* and *yuè* to edify the entire nation. The fact that his *li* and *yuè* had served as a source of inspiration for Confucius, who lived centuries later and whose teachings became the foundation of traditional Chinese culture and traditional Chinese ethics for more than two millennia, is the best proof for this aspect.

When Edward Shaughnessy wrote about the Shī Jīng in The Cambridge History of Ancient China, he did not mention the Lŭ Song and Shāng Song and he translated "Zhōu Song" as "Zhou liturgies", "Da Yā" as "Greater Encomia", and "Xião Yã" as "Lesser Encomia" (ref. Shaughnessy, "Western Zhou History", p. 295). These translations are less than felicitous for two reasons. First, the word "liturgies" is too religious to represent the odes in the $Zh\bar{o}u$ song since they fall better into the category of paeans and eulogies and since the Zhou Chinese were less religious and more distant from the supernatural than were the Shang Chinese as will be explained in endnote E-23 below. Second, only a small portion of the odes in the Xião Yă are clearly panegyrical. If odes which are themed around gratitude, admiration, banquets, weddings, sacrificial ceremonies, royal hunting trips, and other joyful occasions are classified as encomiastic and odes which express nostalgia, resentment, loneliness, concern, sorrow, distress, admonishment, political content, criticism, protest, and other kinds of displeasure are classified as non-encomiastic, then roughly half of the odes in the Xiǎo Yǎ should be non-encomiastic based on the analysis done in the Shījīng Jīnzhù Jīnyì (詩經 今註今譯) by Mǎ Chíyíng (馬持盈) wherein the theme of each ode is summarized before annotation and translation from classical Chinese to modern Chinese (ref. 馬持盈,《詩經今註今譯》, pp. 251-434). Such a 1:1 ratio makes it inappropriate to label all odes in the Xião Yã as encomia. As for the Dà Yã, the number of odes which express discontent or dissatisfaction are much fewer percentagewise but there are still those which convey political satire and admonishment such as the "Sāng Róu" (桑柔), directed at corrupted Zhōu officials, and the "Zhān Áng" (瞻印), directed at King Yōu (幽王) of Zhōu (ref. 馬持盈,《詩經今註今譯》, p. 511, p. 543). So, it is still inappropriate to use the word "encomia" to describe the entirety of odes in the Dà Yă.

E-6. The Chinese classic Zuŏ Zhuàn (左傳; lit. Commentary of Zuŏ) is a narrative history text with its contents

arranged in the format of a commentary on the Chinese classic and chronicle Chūn Qiū (春秋), whose title is often translated as Spring and Autumn Annals. According to the Zuǒ Zhuàn, Zhá (札), son of the late viscount of Wú (吳), was on a friendly mission to Lǔ (魯) in the ninth month of the twenty-ninth year of duke Xiāng (襄公) of Lǔ. Upon completion of the diplomatic dialogue, he begged that he might hear all the music of Zhou since Lu was the only feudal state allowed to keep record of and perform it. Lu officials then had their musicians sing to him odes in the Guó Fēng as well as odes in the Xião Yã, Dà Yã, and Sòng, all with musical accompaniment. They also had their dancers perform for him court dances of the dynasties Xià (夏), Shāng (商), and Zhōu (collectively referred to as the "three dynasties"). Zhá praised everything in the show except for the Guó Fēng, or airs, of Zhèng (鄭) and Chén (陳) from which he predicted a gloomy future for these two states and except for the airs of Kuài (鄶) and Cáo (曹) on which he offered no comment. His words of compliment for the airs of Zhounán (周南) and Shàonán (召南) were "industriousness without resentment" (勤而不怨); for the airs of Bèi (邶), Yōng (鄘), and Wèi (衛), "sorrow without distress" (憂而 不困); for the airs of Wáng (王), which is the royal domain, "concern without fear" (思而不懼); for the airs of Bīn (豳), "joy without licentiousness" (樂而不淫); and for the Song, which is largely the dynastic music of Zhōu, "sadness without anxiety" (哀而不愁) and "enjoyment without immoderation" (樂而不荒). Since music is the pulse of a civilization, we can tell from these comments of Zhá that the same healthy mentality was embodied in the Song music created around Zhou Gong's time as well as many of the folksongs created centuries later in the same dynasty despite the lapse of time, despite different authorship, and despite social stratification. It can also be deduced from this piece of history that Zhou Gong's policy of moral edification through *li* and *yuè* had some profound effects and influences on the Zhou people.

The *Zuŏ Zhuàn* quotes in the above paragraph are my translations (e.g. enjoyment without immoderation). To seek a comparison of translations or to learn more about this particular historical event, one may refer to the works of other translators such as the works of James Legge and Stephen Durrant (ref. (i) James Legge, *The Chinese Classics: with a translation, critical and exegetical notes, prolegomena, and copious indexes*, vol. 5, *The Ch'un Ts'ew with the Tso Chuen* (London: Henry Frowde, 1872; rpt. Hong Kong: Hong Kong University Press, 1960), pp. 545-546, 549-550 (bk. 9, Duke Seang, 29th year); citations refer to the reprint edition; (ii) Stephen Durrant, Wai-yee Li, and David Schaberg, trans., *Zuo Tradition/Zuozhuan: Commentary on the "Spring and Autumn Annals"*, vol. 2 (Seattle: University of Washington Press, 2016), pp. 1242-1247 (Lord Xiang 29, para. 29.13a-29.13d)).

E-7. The Zhōu dynasty (ca. 11th century – 256 BCE) is commonly divided into the Western Zhōu period (西周) and the Eastern Zhōu period (東周) by historians who study its history. The calculated start year of the Western Zhōu period could vary by several decades depending on which ancient textual record or which archaeological discovery is selected as the reference. Towards the end of the 20th century, with the aid of radiometric dating and astronomical analysis, the newer estimates of this historical time tended to fall closer to the middle of the 11th century BCE but it seems that final consensus has not yet been reached to date. In the 2014 Chinese edition of this book, the start year of the Zhōu dynasty was shown as 1027 BCE and it was taken from on a mid-20th century history text titled "*Zhōngguó Lìshĭ Niánbiǎo*" (中國歷史紀年表) (ref. 萬國鼎, 《中國歷史紀年表》 (香港: 商務印書館, 1958), p. 64). To avoid potential controversy, the start year of the Zhōu dynasty is shown here as "ca. 11th century BCE".

The start year of the Eastern Zhōu period is traditionally taken as 770 BCE, which is the year when the Zhōu court moved from its western capital Zōngzhōu (宗周) to its eastern capital Chéngzhōu (成周). This move happened in the year after the western capital of Zhōu fell to the non-Zhōu tribe Quǎn Róng (犬戎), whose invasion of Zhōu had also resulted in the death of King Yōu (幽王) of Zhōu. Some historians have also treated the year 770 BCE as the start year of the Spring and Autumn (春秋) period and one example may be found in *The Cambridge History of Ancient China* (ref. Cho-yun Hsu, "The Spring and Autumn Period" in *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.*, eds. Michel Loewe and Edward L. Shaughnessy (New York: Cambridge University Press, 1999), pp. 545). This, however, may not be appropriate since the Spring and Autumn (春秋) period derives its name from the Chinese classic and chronicle *Chūn Qiū* (春秋; *trans. Spring and Autumn Annals*), whose first year of record entry was 722 BCE. As a matter of fact, Chinese historians used to carefully distinguish between the start year of Eastern Zhōu and the start year of the Spring and Autumn period until at least the mid-20th century. For instance, when the renowned Chinese historian Fàn Wénlán (范文瀾) wrote the 1955 edition of his

history text *Zhōngguó Tōngshǐ Jiǎnbiān* (中國通史簡編; *lit. A Concise General History of China*), he identified the start years of Eastern Zhōu and Spring and Autumn as 770 BCE and 722 BCE respectively and he also made it so conspicuous by showing the start and finish years of both historical periods right next to the chapter title of his chapter on Eastern Zhōu (ref. 范文瀾,《中國通史簡編》, 修訂本第 3 版第 1 編 (北京: 人民出版社, 1955), p. 153).

If one matches the start and finish years of the Spring and Autumn period with the first and last years of record entries of the *Spring and Autumn Annals*, then the Spring and Autumn period should have ended with the year 481 BCE. The Warring States period derived its name from the history text *Zhànguó Cè* (戰國策; *lit. Strategies of the Warring States*) compiled by Liú Xiàng (劉向) of the Former Hàn dynasty. Its exact start year is also a matter of opinion depending on which historian's view one wants to adopt. It could have been as early as 481 BCE or as late as 403 BCE. The beginning of the Eastern Zhōu period marked the turning point of the Zhōu dynasty, which reduced to a nominal power after the invasion by Quǎn Róng. It had further weakened to something equivalent to a small state during the Warring States period. Many historians would consider the year 256 BCE the last year of the Zhōu dynasty when the feudal state of Qín (秦) conquered the domain of King Nǎn (赧王) of Zhōu although another member of the royal Zhōu family managed to hold his fort until 249 BCE. Qín was on the march to reunify China by conquering other states and eventually got the job done in 221 BCE which marked the end of the Warring States period.

- E-8. In its original language, this idiom is written as "百花齊放, 百家爭鳴".
- E-9. In Chinese history, some of the better-known schools of thoughts which emerged during the Spring and Autumn period and the Warring State period are collectively referred to as "*jiŭliú shíjiā*" (九流十家), which can be translated into English as "nine genres and ten schools". The nine genres, in random order, are Confucianism (儒家), Legalism (法家), Taoism (道家), Moism (墨家), Agriculturalism (農家), Eclecticism (雜家), the school of logicians (名家), the school of yin-yang (陰陽家), and the school of strategists (縱橫 家). The ten schools include all schools in the nine genres plus the school of talks and tales (小說家), which originated with officials who listened to the talks and tales among commoners, surveyed the customs of the commoners, and reported their findings to the king or feudal lord.
- E-10. This statement was made by Confucius when explaining the concept of *rén* (仁) to his student Yán Yuān (顏淵). "*Lī*" means "propriety" in this context. The original passage and James Legge's translation are shown below for additional reference:

克己復禮為仁、

To subdue one's self and to return to propriety, is perfect virtue. (bk. 12, chap. 1, para. 1)

(Source: Legge, The Chinese Classics, vol. 1, p. 250).

Legge had done a great job in capturing the meaning of the phrase "*kè jī fû lī*" (克己復禮) by translating it as "to subdue one's self and to return to propriety". However, by rending the phrase "*wéi rén*" (為仁) as "is perfect virture", his translation may be a little bit weak in representing the word "*rén*" although *rén* is ranked highest among Confucian virtues. Besides, the formulation of a definition for "*rén*" by using the word "*lī*" (禮) may have its shortcomings (ref. *The Stanford Encyclopedia of Philosophy*, s.v. "Chinese Ethics", by David Wong, accessed 2018-04-12, <u>https://plato.stanford.edu/archives/spr2013/entries/ethicschinese/</u>). One way to avoid walking into the traps of philosophical debates which can potentially cause further distortion of Confucian thought is to retranslate the phrase "*wéi rén*" (為仁). Raymond Dawson retranslated it as "to practice humaneness" (bk. 12, para. 1), which is more subtle since *lī* is then not being made definitive of the whole of *rén* although the word "humaneness" is a little bit too narrow to capture all the meanings of *rén* in this context (ref. Confucius, *The Analects*, trans. Dawson, p. 44).

One may notice that the above quoted Chinese passage is not a complete sentence but Legge had translated it as such. This is quite acceptable so long as it makes sense after the translation since English writing is different from Chinese writing. As can be seen in the *Mencius* quote in endnote E-19 below and the $L \breve{t} J \hat{t}$

quote in endnote E-23 below, a Chinese paragraph can also be separated into two or more paragraphs in the English translation.

E-11. This statement was made by Confucius during the same conversation with Yán Yuān (顏淵) as mentioned in endnote E-10 above. "*Li*" means "propriety" or "rules of propriety" in this context. Yán Yuān first asked Confucius to explain the concept of *rén*. After listening to Confucius' answer (i.e. to subdue one's self and to return to propriety), Yán Yuān asked him about the details. So, Confucius elaborated on his answer. The original passage and James Legge's translation are shown below for additional reference:

非禮勿視、非禮勿聽、非禮勿言、非禮勿動。

Look not at what is contrary to propriety; listen not to what is contrary to propriety; speak not what is contrary to propriety; make no movement which is contrary to propriety. (bk. 12, chap. 1, para. 2)

(Source: Legge, The Chinese Classics, vol. 1, p. 250)

Legge's translation is very good since the word "li" (禮) does mean "propriety" in this context and since the above-stated rules of propriety are applicable to every aspect of the human life without any religious implication. Both D. C. Lau and Raymond Dawson had translated the same passage in a similar format but Lau rendered "li" (禮) as "rites" while Dawson rendered it as "ritual" (ref. (i) Confucius, *The Analects (Lun yü*), trans. Lau, p. 112 (para. 12-1)); (ii) Confucius, *The Analects*, trans. Dawson, p. 44 (para. 12-1)). In either case, it can potentially mislead the readers to make religious interpretations or to think that these general guidelines are only applicable to some particular situations such as ceremonial rituals or ritual ceremonies.

Some translators would render this passage as "See nothing improper, hear nothing improper, say nothing improper, and do nothing improper." It may sound like better English but all we need to do to test its validity is to ask ourselves whether we will read a letter written to us with improper grammar.

E-12. This statement was made by Confucius when explaining the concept of *xiào* (孝) to his student Fán Chí (樊 遲). "*Li*" means "propriety" or "standards of propriety" in this context. The original passage and James Legge's translation are shown below for additional reference:

生事之以禮、死葬之以禮、祭之以禮。

That parents, when alive, should be served according to propriety; that, when dead, they should be buried according to propriety; and that they should be sacrificed to according to propriety. (bk. 2, chap. 5, para. 3)

(Source: Legge, The Chinese Classics, vol. 1, p. 147).

Legge translated "xiao" ($\not\equiv$) as "filial piety", which is fine, but he limited the scope of filial piety to one generation which is the parents. The original passage was not that specific and the scope of xiao does cover grandparents, great grandparents, etc.

E-13. One may refer to the *Shǐ Jì* (史記) by Sīmă Qiān (司馬遷) for the histories of the sage rulers Yáo (堯) and Shùn (舜). In brief, Yáo selected Shùn as his successor and Shùn selected Yǔ (禹) as his successor. In both cases, the incumbent ruler chose not to make the kingdom a family inheritance and selected his successor based on talent, virtuousness, competence, contributions to the state, and popularity among the people. Although the actual process might have been different from our democratic elections today, we can tell from the below excerpts from volume 1 of the *Shǐ Jì* that the selected successor was indeed the choice of the people:

<u>堯</u>崩,三年之喪畢,<u>舜</u>讓辟<u>丹朱</u>於<u>南河</u>之南。諸侯朝覲者不之<u>丹朱</u>而之<u>舜</u>,獄訟者不之<u>丹朱</u>而之<u>舜</u>,謳歌 者不謳歌<u>丹朱</u>而謳歌<u>舜。舜</u>曰「天也」,夫而後之中國踐天子位焉,是為<u>帝舜</u>。 Translation:

Yáo (堯) passed away. After the three-year mourning period, Shùn (舜) relinquished power to [Yáo's son] Dānzhū (丹朱) and moved to the south of Nánhé (南河). However, feudal lords who came for royal audience would go to Shùn instead of Dānzhū, people with lawsuits would take their cases to Shùn instead of Dānzhū, and even encomium singers would sing about Shùn instead of Dānzhū. Shùn then said, "This must be heaven's way." Thus, he returned to [the capital of] China to ascend to the throne as Dì Shùn.

三年喪畢,禹亦乃讓舜子,如舜讓堯子。諸侯歸之,然後禹踐天子位。

(Source: [漢] 司馬遷,《史記》第1冊,卷1【五帝本紀第一】, p. 44.)

Translation:

After the three-year mourning period [of Shùn], Yǔ (禹) relinquished power to Shùn's son in the same manner as Shùn relinquished power to Yáo's son. However, the feudal lords supported him instead. Thus, Yǔ ascended to the throne.

E-14. A common misconception about Confucianism is that Confucian ethics was designed to uphold the feudal system of early Western Zhou and Confucian ideal was a healthy feudal society similar to the one built by Zhou Gong and other founders of the Zhou dynasty. Such a misconception can be readily cleared up if one can afford a few minutes' time to read through the first few paragraphs of the treatise "Lǐ Yùn" (禮運) in the Chinese classic Lǐ Jì which recorded a conversation between Confucius and his disciple Yán Yǎn (言 偃) wherein Confucius expatiated on two different types of societies which could both bring peace and tranquillity. The first one is known as "dàtóng" (大同), or "great unity". It features meritocracy, sharing of wealth and resources, affection and kindness which go beyond family boundaries, and social and political harmony as a natural consequence of public-spiritedness. The second one is known as "xiǎokāng" (小康), or "small tranquillity". It features hereditary monarchy, protection of ownership, human relationships which are built on institutionalized beliefs and values, and peace and prosperity which are hinged on everyone's compliance with the rules of propriety. Confucius named Yǔ (禹), Tāng (湯), King Wén (文 王), King Wǔ (武王), King Chéng (成王), and Zhōu Gōng (周公), who were founders of the three dynasties (i.e. Xià (夏), Shāng (商), and Zhōu (周)), as representative figures of the small tranquillity. As the names suggest, "small tranquillity" is inferior to "great unity". Therefore, Confucius' ideal of a perfect society was something better than the feudal society of Western Zhou and his moral values should not be equated to the feudal ethics of Zhou Gong. One may also deduce from this comparison that the reason Confucius endeavored to rebuild the small tranquillity of early Western Zhou instead of the great unity which occurred prior to the threes dynasties was the much bigger challenges involved in the pursuit of the great unity at his time.

The below passage from the Li Ji is to show the readers how Confucius described the great unity and the small tranquillity in his own words. The original is taken from a Chinese source. The English translation is taken from *The Sacred Books of the East*. Note that the phrase "Yu, Tāng, Wén, Wu, king Chéng, and the duke of Zhōu" was written as "Yu, Thang, Wan, Wu, king *Kh*ăng, and the duke of *K*âu" in Legge's romanization. Also, Legge had rendered the term "*dàtóng*" as "grand union".

大道之行也, 天下為公。選賢與能, 講信脩睦, 故人不獨親其親, 不獨子其子, 使老有所終, 壯有所用, 幼有 所長, 矜寡孤獨廢疾者, 皆有所養。男有分, 女有歸。貨惡其棄於地也, 不必藏於己; 力惡其不出於身 也, 不必為己。是故, 謀閉而不興, 盜竊亂賊而不作, 故外戶而不閉, 是謂大同。今大道既隱, 天下為家, 各親 其親, 各子其子, 貨力為己, 大人世及以為禮。城郭溝池以為固, 禮義以為紀; 以正君臣, 以篤父子, 以睦兄 弟, 以和夫婦, 以設制度, 以立田里, 以賢勇知, 以功為己。故謀用是作, 而兵由此起。禹湯文武成王周公, 由此其選也。此六君子者, 未有不謹於禮者也。以著其義, 以考其信, 著有過, 刑仁講讓, 示民有常。如有 不由此者,在執者去,眾以為殃,是謂小康。

(Source: 王夢鷗, 《禮記今註今譯》上冊, pp. 362-363.)

When the Grand course was pursued, a public and common spirit ruled all under the sky; they chose¹ men of talents, virtue, and ability, their words were sincere, and what they cultivated was harmony. Thus men did not love their parents only, nor treat as children only their own sons. A competent provision was secured for the aged till their death, employment for the able-bodied, and the means of growing up to the young. They showed kindness and compassion to widows, orphans, childless men, and those who were disabled by disease, so that they were all sufficiently maintained. Males had their proper work, and females had their homes. (They accumulated) articles (of value), disliking that they should be thrown away upon the ground, but not wishing to keep them for their own gratification.² (They laboured) with their strength, disliking that it should not be exerted, but not exerting it (only) with a view to their own advantage². In this way (selfish) schemings were repressed and found no development. Robbers, filchers, and rebellious traitors did not show themselves, and hence the outer doors remained open, and were not shut. This was (the period of) what we call the Grand Union. (bk. 7, sec. 1, para. 2; quoted without original footnotes)

Now that the Grand course has fallen into disuse and obscurity, the kingdom is a family inheritance. Every one loves (above all others) his own parents and cherishes (as) children (only) his own sons. People accumulate articles and exert their strength for their own advantage. Great men imagine it is the rule that their states should descend in their own families. Their object is to make the walls of their cities and suburbs strong and their ditches and moats secure. The rules of propriety and of what is right are regarded as the threads by which they seek to maintain in its correctness the relation between ruler and minister, in its generous regard that between father and son; in its harmony that between elder brother and younger; and in a community of sentiment that between husband and wife, and in accordance with them they frame buildings and measures, lay out the fields and hamlets (for the dwellings of the husbandmen), adjudge the superiority to men of valour and knowledge, and regulate their achievements with a view to their own advantage. Thus it is that (selfish) schemes and enterprises are constantly taking their rise, and recourse is had to arms; and thus it was (also) that Yü, Thang, Wăn and Wû, king Khăng, and the duke of Kâu obtained their distinction. Of these six great men every one was very attentive to the rules of propriety, thus to secure the display of righteousness, the realisation of sincerity, the exhibition of errors, the exemplification of benevolence, and the discussion of courtesy, showing the people all the normal virtues. Any rulers who did not follow this course were driven away by those who possessed power and position, and all regarded them as pests. This is the period of what we call Small Tranquillity¹." (bk. 7, sec. 1, para. 3; quoted without original footnote)

(Source: Muller, ed., The Sacred Books of the East, vol.27, pp. 364-367.)

E-15. The Chinese classic *Lĭ Jî* (禮記) is a collection of ancient treatises on *lĭ*-related topics. Some passages of the *Lĭ Jî* have been cited in endnotes E-3 and E-14 above. The reason why the title "*Lĭ Jî*" should not be translated as the "*Book of Rites*" or "*Record of Rites*" has been elucidated in endnote E-1 above. The *Lĭ Jî* had more than one version and the version which has been handed down from the Former Hàn dynasty and is being widely used today was recompiled by Dài Shèng (戴聖) of Former Hàn and annotated by Zhèng Xuán (鄭玄) of Later Hàn (ref. (i) 王夢鷗, 《禮記今註今譯》上冊, pp. 1-7; (ii) Muller, ed., *The Sacred Books of the East*, vol. 27, pp. 1-14).

Depending on the numbering scheme, there is a total of forty-six or forty-nine treatises in the LiJ. The discrepancy is due to the presence of three two-part treatises: "Qū Lǐ" (曲禮), "Tán Gōng" (檀弓), and "Biǎo Jì" (表記). Some editors or translators such as James Legge would assign the same book number to both parts of the same treatise while others would number the two parts separately. Some commentators would further exclude the treatises "Zhōng Yōng" (中庸) and "Dà Xué" (大學) when annotating or translating the LiJi since "Zhōng Yōng" and "Dà Xué" have long been elevated to the rank of the Four Books (四書) of Confucianism. This will result in another source of discrepancy in terms of book numbering and book count. Therefore, it is important to refer to the title of the treatise when citing from the LiJi.

As noted above (endnote E-1), "*Lĭ Ji*" was written as "*Lî Kî*" in Legge's romanization. For the ease of cross-reference, it should be noted that the above-stated treatise titles "Dài Shèng", "Qū Lĭ", "Tán Gōng", "Zhōng Yōng", "Biǎo Ji", and "Dà Xué" were written as "Tâi Shǎng", "*Kh*u Lî", "Than Kung", "*K*ung Yung", "Piâo *K*î", and "Tâ Hsio" respectively in Legge's translation of the *Lĭ J*î.

E-16. Those who would like to find out how Confucianism became the state ideology of China during the *Hàn* dyasty may refer to the ancient history text *Hàn Shū* (漢書; *trans. History of the Former Hàn*) by Bān Gù (班固) for details. Shown below are two excerpts from the *Hàn Shū*, the first one from the biography of Dǒng Zhòngshū (董仲舒) (volume 56) and the second one from the biography of Emperor Xiào Wǔ (孝武 帝), often abbreviated to "Emperor Wǔ" (武帝) (volume 6):

及仲舒對冊, 推明孔氏, 抑黜百家。立學校之官, 州郡舉茂材孝廉, 皆自仲舒發之。

(Source: [漢] 班固 撰, [唐] 顏師古 注,《漢書》第8冊,卷56【董仲舒傳第二十六】(北京:中華書局, 1962 第1版, 1983 第4次印刷), p. 2525)

Translation:

When Zhòngshū presented his political views to the Emperor, he recommended the adoption of Confucian philosophy while dismissing all other schools of thought. As for the establishment of governmental institutions of education, regional nomination of the talented and skillful, and district nomination of civil officers based on the virtues of filial piety and integrity, they were all originated by Zhòngshū.

孝武初立,卓然罷黜百家,表章六經。

(Source: [漢] 班固 撰, [唐] 顏師古 注,《漢書》第1冊,卷6【武帝紀第六】(北京:中華書局, 1962 第 1 版, 1983 第 4 次印刷), p. 212)

Translation:

Early in his reign, Emperor Xiào Wǔ gloriously dismissed all schools of thought but commended the Six Classics [of Confucianism].

E-17. The biography of Mencius's mother and the anecdotes of Mencius's childhood may be found in the Liènů Zhuàn (列女傳; lit. Categorized Biographies of Women) of Liú Xiàng (劉向) of the Former Hàn dynasty (ref. Exemplary Women of Early China: the Lienü zhuan of Liu Xiang, trans. and ed. Anne Behnke Kinney (New York: Columbia University Press, 2014), pp. 18-20). As mentioned in endnote E-7 above, Liú Xiàng was the historian who compiled the Zhànguó Cè (戰國策; lit. Strategies of the Warring States), which is a text that recounts the history of the Warring States period. Some Western sinologists or even some Chinese commentators would weigh the biographies in the Liènů Zhuàn less than history for their own reasons. For example, when James Legge expatiated on the life of Mencius in The Chinese Classics, he referred to the Liè Nů Zhuàn (which he dubbed the "Record of Noteworthy Women") for information about Mencius's mother and Mencius's childhood but he included a disclaimer that he found in it "more the character of legend than history" (ref. James Legge, The Chinese Classics: with a translation, critical and exegetical notes, prolegomena, and copious indexes, vol. 2, The Works of Mencius (2nd ed., Oxford: Clarendon Press, 1895; rpt. Hong Kong: University of Hong Kong Press, 1960), pp. 14-17; citations refer to the reprint edition). Likewise, D.C. Lau also referenced the Liènü Zhuàn (or "Lieh Nü Chuan" in his romanization) when he wrote about the same topic but he described the biographies in the Liènů Zhuàn as "traditions" rather than history (ref. Mencius, Mencius, rev. ed., trans. D.C. Lau (Hong Kong: Chinese University Press, 2003; rpt. London: Penguin Books, 2004), pp. 177-179; citations refer to the reprint edition). However, the skepticism of Legge, Lau, and other authors alike may be just a matter of opinion if one considers the fact that the entire collection of official history books in the Twenty-Four Histories (二十四史) of China, covering a period from the origin of civilization (ca. 3000 BCE) to the Míng dynasty (明朝) (1368-1644

CE), were written in the biographical format. The beauty of the biographical format, in which history is presented through a series of biographies, is that individuals who do not have a role in any historical event but whose life stories are honourable or notorious enough to go down in history can still be part of history. Unfortunately, the advantage of the biographical format is also its disadvantage since a biographical account may read like legend if the biographee is not directly linked to one or more historical events.

The biographical format employed in the composition of the Twenty-Four Histories of China is termed "jizhuàn ti" (紀傳體) by Chinese historians. It is an invention of Sīmă Qiān (司馬遷), whose Shǐ Jì (史記) has been cited in endnotes E-4 and E-13 above. "Jizhuàn" is a compound term made up of the words "ji" (紀) and "zhuàn" (傳). In this context, "ji" is an abbreviation of the term "běnji" (本紀) whose meaning is "core records" and "zhuàn" is an abbreviation of the term "lièzhuàn" (列傳) whose meaning is "categorized biography"; "tī" (體) means "style" or "format". Biographies in the Shǐ Jì are divided into three categories. The first category is known as *běnji*, which refers to the biographies of rulers (e.g. kings, emperors, and empresses). The second category is known as shijiā (世家; lit. hereditary house), which refers to the biographies of feudal lords and other influential people who deserve the same level of respect. The third category is known as *lièzhuàn*, which refers to the biographies of officers and commoners. As indicated by the Táng dynasty historiographer Liú Zhījī (劉知機) in his Shī Tōng (史通), records of major historical events in a typical běnjì are arranged in yearly sequence as in the case of annals but only events concerning the ruler are recounted (紀者既以編年為主,唯敘天子一人) (ref. 金毓黻,《中國史學史》(上海: 商務印書館, 1941年4月初版, 1957年12月重印第1版) p. 223). Thus, it is important to draw a distinction between annals and *běnji* since the former are not dedicated to any individual but the latter is. In other words, a *běnjì* does display some of the features of annals but it has even more of the features of a biography since it typically begins with an introduction of the biographee's name, hometown, ancestral lineage, background, and family information, and it can include biographical data such as the biographee's education, experience, relationships, accomplishments, anecdotes, legacies, physical characteristics, and personality. Since the head of state was, by default, the representative of the state in the old China, chronicling the major political, social, economical, cultural, and military events concerning his/her public life was in effect chronicling the historical events of the state which occurred in his/her lifetime. Thus, I would not recommend translating "běnji" as "basic annals" or translating "jìzhuàn ti" as "annals-biography", which is what the sinologist Endymion Wilkinson has done in his manual of Chinese history (ref. Endymion Wilkinson, Chinese History: A New Manual (Cambridge: Harvard University Asia Center, 2012), p. 621). Those who disagree with Liú Zhījī may argue by saying that some of the earlier běnjis in the Shi Ji are dedicated to a historical period or a dynasty rather than a single ruler, such as the "Wǔdì Běnjì" (五帝本紀) and the "Xià Běnjì" (夏 本紀). A logical explanation for this type of arrangement is that Sīmă Qiān had grouped together the biographies of all rulers of the same historical period or the same dynasty to form a combined *běnji* when the amount of available historical materials was not enough to support a meaningful stand-alone *běnji* for each individual ruler due to their remoteness in time. If we read these "dynasty-based" or "period-based" *běnjis* carefully, it is not difficult to see that they all show the characteristics of biographies.

- E-18. James Legge's translation of this *Lǐ Jì* passage has been quoted in endnote E-14 above. I used my own translation in the main text for consistency of writing style. Legge translated the phrase "*nǚ yǒu guĩ*" (女 有歸) as "females had their homes". I translated the same phrase as "women had their marital homes" since ancient Chinese women regarded their marital homes as their homes instead of their parents' homes where they spent their childhood and maidenhood. Likewise, the Chinese idiom "*zhī zǐ yú guĩ*" (之子于歸) would be best rendered as "this child is getting married" instead of "this child is going home".
- E-19. This statement was made by Confucius when answering a question from duke Ding (定公), head of the feudal state of Lǔ (魯), regarding how a ruler should employ his officials and how officials should serve their ruler. "Li" means "rules of propriety" in this context. The original passage and James Legge's translation are shown below for additional reference:

君使臣以禮、臣事君以忠。

A prince should employ his ministers according to the rules of propriety; ministers should serve their prince with faithfulness. (bk. 3, chap. 19)

(Source: Legge, The Chinese Classics, vol. 1, p. 161).

This translation of Legge is less than perfect for two reasons. First, by translating the word "jūn" (\exists) as "prince", the king, to which this moral rule also applies, was inadvertently left out. Since this quote is meant to be a universal statement covering all rulers (kings and princes inclusive) and those who provide services to them, the word "jūn" would be best translated as "a ruler" or "rulers". Second, the word "ministers" in its single or plural form is not an exact equivalent of the word "chén" (\boxplus). In the English vocabulary, the word "minister" refers to a high officer of state who heads a government department (ref. *Webster's New Collegiate Dictionary*, 1981 ed., s.v. "minister"). In the Chinese vocabulary, however, the word "chén" can refer to anyone assigned official duties in a monarchy and "chén" is also the name an official would call himself/herself when speaking with the monarch. Thus, a minister in Confucius's time would definitely call himself "chén" but so would the palace guards, the army officers, the functionaries, and the commoners who were recruited by the government to perform services although commoners were seldom interviewed by the monarch and, if an interview was granted, certain prerequisites had to be fulfilled in order to observe the rules of propriety set by the Zhōu court. The following passage from the *Mencius* will help illustrate my point:

萬章曰、敢問不見諸侯、何義也。孟子曰、在國曰。市井之臣、在野曰、草莽之臣、皆謂庶人、庶人不 傳質為臣、不敢見於諸侯、禮也。萬章曰、庶人召之役、則往役、君欲見之、召之、則不往見之、何也 。曰、往役、義也、往見、不義也。

Wan Chang said, 'I venture to ask what principle of righteousness is involved in a *scholar's* not going to see the princes?' Mencius replied, 'A scholar residing in the city is called "a minister of the marketplace and well," and one residing in the country is called "a minister of the grass and plants." In both cases he is a common man, and it is the rule of propriety that common men, who have not presented the introductory present and become ministers, should not presume to have interviews with the prince.' (bk. 5, pt. 2, chap. 7, para. 1)

Wan Chang said, 'If a common man is called to perform any service, he goes and performs it; -how is it that a scholar, when the prince wishing to see him, calls him to his presence, refuses to go?' Mencius replied, 'It is right to go and perform the service; it would not be right to go and see the prince.' (bk. 5, pt. 2, chap. 7, para. 2)

(Source: Legge, The Chinese Classics, vol. 2, pp. 387-388.)

The phrases "minister of the market-place and well" and "minister of the grass and plants" may sound weird to the Western ears. This is probably why D. C. Lau rendered the word "*chén*" (\boxplus) as "subjects" and rendered the corresponding phases as "subjects of the market place" and "subjects in the wilds" in his translation of the *Mencius* (ref. Mencius, *Mencius*, trans. Lau, p. 119/bk. 5, pt. B, para. 7). However, the word "subjects" is not necessarily a better choice in this context since not every subject of the ruler is assigned official duties. Thus, the word "officials" is used in my translation.

Readers who can read Chinese may notice that one of the punctuation marks in the above quoted Chinese passage does not seem right, but interestingly, all punctuation marks in the English translation make sense. The problematic Chinese punctuation mark is the Chinese period or Chinese full stop "。" after the phrase "在國曰", which is definitely not the end of the sentence. This misprint could have occurred when the Hong Kong University Press produced its reprint edition of *The Chinese Classics* or it could have been a carryover from an earlier edition. The punctuation in modern Chinese writing is different from that of ancient Chinese texts, which could do without punctuation and punctuation known as "*jùdòu*" (句讀) were added by annotators to show where they thought a sentence should end and where a pause should occur within the sentence, if any. Apparently, the Chinese text included in *The Chinese Classics* of Legge may not be the most ancient original but it is old enough to have made use of the *jùdòu* system for punctuation in which the end of a sentence is marked by the *jùhào* (句號) ("。") and a pause within the sentence is marked by the *dòuhào* (讀號) ("、"). In the modern Chinese punctuation system, the old *jùhào* symbol is still in use but

the *dòuhào* symbol has changed to something which looks like an English comma (", ") and the old *dòuhào* symbol is now reserved for the *dùnhào* (頓號) or enumeration comma, which is used when separating words constituting a list. When ancient Chinese texts were annotated and reprinted in the 20th century, the usage of modern punctuation marks was largely based on the annotator's discretion. Therefore, it should not be surprising that there are variations in this regard between the different editions of reprints. One may refer to some modern, annotated reprints of the *Mencius*, such as the *Mèngzĭ Zhèngyì* (孟子正義) of Jiāo Xún (焦循) and the *Mèngzĭ Jīnzhù Jīnyì* (孟子今註今譯) of Shǐ Cìyún (史次耘), to see how their usages of Chinese punctation marks differ from each other and how they differ from the above *Mencius* quote from volume 2 of *The Chinese Classics* of Legge (ref. (i) 焦循 撰, 沈文倬 點校,《孟子正義》下冊 (北京: 中華書局, 1987), pp. 719-720); (ii) 史次耘 註譯, 王雲五 主編,《孟子今註今譯》修訂 2 版 (臺北: 臺灣商務印書館, 1987), pp. 275-276). One may also do similar comparisons for the *Analects* quotes in endnotes E-10, E-11, E-12, E-19, E-20, E-23, and E-24 by referring to some modern, annotated editions of the *Analects*, such as the *Lún Yǔ Jīnzhù Jīnyì* (論語今註今譯) of Máo Zǐshuǐ (ref. (i) 楊伯峻 譯注,《論語譯注》 (北京: 中華書局, 1980); (ii) 毛子水 註譯, 王雲五 主編,《論語今註今 譯》 (臺北: 臺灣商務印書館, 1986)).

E-20. This statement was made by Mencius in a conversation with king Xuān of Qí. The original passage and James Legge's translation are shown below for additional reference:

君之視臣如手足、則臣視君如腹心、君之視臣如犬馬、則臣視君如國人、君之視臣如土芥、則臣視君如 寇讎。

When the prince regards his ministers as his hands and feet, his ministers regard their prince as their belly and heart; when he regards them as his dogs and horses, they regard him as any other man; when he regards them as the ground or as grass, they regard him as a robber and an enemy. (bk. 4, pt. 2, chap. 3, para. 1)

(Source: Legge, The Chinese Classics, vol. 2, pp. 318.)

Again, for the reason stated in endnote E-19 above, the translations "prince" and "ministers" would be best replaced by "ruler" and "officials" respectively.

- E-21. In its original language, this slang is written as "你不仁, 我不義". The word "*rén*" (仁) is best translated as "humaneness" and the word "*yi*" (義) is best translated as "rightness" in this context. This is what I have done in the main text.
- E-22. This appears to be one of the stand-alone statements in the *Analects*. The original passage and James Legge's translation are shown below for additional reference:

子不語、怪、力、亂、神。

The subjects on which the Master did not talk, were – extraordinary things, feats of strength, disorder, and spiritual beings. (bk. 7, chap. 20)

(Source: Legge, The Chinese Classics, vol. 1, p. 201).

The phrase "extraordinary things" may be a little bit too vague for a good translation of the word "guài" (\mathbb{K}). The word "portent" is actually a pretty good fit but it will likely offend some religious groups if used as a substitution. So, "strange phenomena" would be the right choice considering both translation accuracy and political correctness. As a matter of fact, this is what David Wright has done in *The History of China* (ref. Wright, *The History of China*, p. 24).

The most important aspect of this *Analects* quote is that it can serve as a forthright articulation of Confucius's religious view. One can call Confucius an agnostic but he was definitely not religious in the traditional Western sense. Those who want to treat Confucianism as a religion or theology may want to

downplay the significance of this quote. For instance, Raymond Dawson acknowledged the mainstream view in his translation of the *Analects* but argued that it "could perhaps more plausibly refer to a single incident" (ref. Confucius, *The Analects*, trans. Dawson, p. 92 (note to bk. 7, para. 21)). To prove that this *Analects* quote should indeed be taken as a generalization, all we need to do is to compare it with other *Analects* quotes involving the afterlife, spiritual beings, etc. and find that Confucius was consistent with respect to his standpoint. See endnotes E-23 and E-24 below for further discussion.

E-23. This statement was made by Confucius as an answer when his student Fán Chí (樊遲) asked him to explain the concept of wisdom. The original passage and James Legge's translation are shown below for additional reference:

子曰、務民之義、敬鬼神而遠之、可謂知矣。

The Master said, 'To give one's self earnestly to the duties due to men, and, while respecting spiritual beings, to keep aloof from them, may be called wisdom.' (bk. 6, chap. 20)

(Source: Legge, *The Chinese Classics*, vol. 1, p. 191)

In this passage, the word "yuàn" (遠) was rendered as "to keep aloof from". For a quick comparison, D. C. Lau rendered the same word as "to keep one's distance from" (ref. Confucius, *The Analects (Lun yü*), trans. Lau, p. 84 (bk. 6, para. 22)), whereas Raymond Dawson rendered it as "to keep them at a distance" (ref. Confucius, *The Analects*, trans. Dawson, p. 22 (bk. 6, para. 22)). So, what exactly is meant by "to keep aloof from", "to keep one's distance from", or "to keep them at a distance"? Dawson suggested that the purpose of keeping the ghosts and spirits at a distance was to make certain that their hungers were satisfied with sacrifices, so that they would not meddle in of human activities (ref. Confucius, *The Analects*, trans. Dawson, p. 90 (explanatory note 6-22)). Was he right or was he just being imaginative? To answer these questions, all we need to do is to turn to the treatise "Bião Ji" (表記) in the Chinese classic *Lĭ Jî* and read the following statements by Confucius:

子曰:夏道尊命,事鬼敬神而遠之,近人而忠焉,先祿而後威,先賞而後罰,親而不尊;其民之敝: 憃而愚, 喬而野,朴而不文。殷人尊神,率民以事神,先鬼而後禮,先罰而後賞,尊而不親;其民之敝: 蕩而不靜,勝 而無恥。周人尊禮尚施,事鬼敬神而遠之,近人而忠焉,其賞罰用爵列,親而不尊;其民之敝:利而巧,文而 不慚,賊而蔽。

(Source: 王夢鷗 註譯, 王雲五 主編, 《禮記今註今譯》修訂 2 版下冊 (臺北: 臺灣商務印書館, 1984), p. 858.)

Under the Hsiâ dynasty it was the way to give honour to the nature conferred on men; they served the manes of the departed, and respected Spiritual Beings, keeping them at a distance, while they brought the people near, and made them loyal; they put first the (attraction) of emolument, and last the terrors of power; first rewards, and then punishments; showing their affection (for the people), but not giving them honour. The bad effect on the people was, that they became stupid and ignorant, proud and clownish, and uncultivated, without any accomplishments.

Under the Yin dynasty, they honoured Spiritual Beings, and led the people on to serve them; they put first the service of their manes, and last the usages of ceremony; first punishments, and then rewards; giving honour (to the people), but not showing affection for them. The bad effect on the people was, that they became turbulent and were restless, striving to surpass one another without any sense of shame.

Under the $K\hat{a}u$ dynasty, they honoured the ceremonial usages, and set a high value on bestowing (favours), they served the manes and respected Spiritual Beings, yet keeping them at a distance, they brought the people near, and made them loyal, in rewarding and punishing they used the various distinctions and arrangements of rank; showing affection (for the people), but not giving them honour. The bad effects on the people were, that they became fond of gain and crafty, were all for

accomplishments, and shameless; injured one another, and had their moral sense obscured." (bk. 29, para. 30)

(Source: Muller, ed., The Sacred Books of the East, vol. 28, pp. 341-342.)

Thus, according to the Li Ji, Confucius had once compared the governmental strategies of the dynasties Xià, Shāng (aka Yīn), and Zhōu (or "Hsiâ", "Yin", and "Kâu" in Legge's romanization) as well as their respective effects on the people. It was not the policy of Xià or Zhōu to use the worship of spiritual beings as part of their governmental strategy, nor would they use it as an instrument to lead or edify their people. Yīn did the opposite by leading its people to serve the spiritual beings, make it a priority, and govern on such a foundation. Each of models had its own merits and shortcomings. Thus, by comparing the above passage from the *Analects* with the above passage from the Li Ji, we can tell with certainty that when Confucius said "to keep aloof from them" or "keeping them at a distance", he meant to not use the belief in spiritual beings as a tool to govern the state or to edify the people. Thus, Dawson had annotated it wrong.

E-24. This statement was made by Confucius as an answer when his student Zǐlù (子路) asked him how to serve the spiritual beings. The original passage and James Legge's translation are shown below for additional reference:

季路問事鬼神。子曰、未能事人、焉能事鬼。敢問死。曰、未知生、焉知死。

Chî Lû asked about serving the spirits of the dead. The Master said, 'While you are not able to serve men, how can you serve their spirits?' Chî Lû added, 'I venture to ask about death?' He was answered, 'While you do not know life, how can you know about death?' (bk. 11, chap. 11)

(Source: Legge, The Chinese Classics, vol. 1, pp. 240-241).

Note that Zǐlù (子路) was an eminent student of Confucius. In Legge's romanization, "Zǐlù" was written as "Chî Lû".

- E-25. The literal translations shown in parentheses here are based on dictionary definitions found in a 20th century edition of the highly regarded Chinese dictionary *Cihăi* (辭海) (ref. 舒新成等 編,《辭海》(合訂本) (香港: 中華書局, 1947 年初版, 1998 年重印),參閱條文: 天、天命).
- E-26. A number of Western scholars have translated or written about the Chinese classic Yì Jīng (易經; lit. Classic of Changes), whose title has been translated as "Yî King", "I Ching", "Yi Jing", "Book of Changes", "Classic of Changes", etc. The quoted statement may be found in the "Xiàng Zhuàn" (象傳; lit. "Commentary on the Image" or "Commentary on the Symbol") of the first hexagram "Qián" (乾) in the Yì Jīng. The original passage and James Legge's translation are shown below for additional reference:

天行健。君子以自強不息。

(Source: 南懷瑾、徐芹庭(註譯), 王雲五(主編), 《周易今註今譯》修訂 3 版 (臺北: 臺灣商務印書館, 1987), p. 15).

Heaven, in its motion, (gives the idea of) strength. The superior man, in accordance with this, nerves himself to ceaseless activity. (app. 2, sec. 1, para. 1)

(Source: F. Max Muller, ed., *The Sacred Books of the East*, vol. 16, *The Sacred Books of China: The Texts of Confucianism; Part II: The Yî King*, trans. James Legge (Oxford: Clarendon Press, 1882; rpt. Kessinger), p. 267.)

Gary Banyes rendered Richard Wilhelm's German translation of the same passage as follows:

"The movement of heaven is full of power. Thus the superior man makes himself strong and untiring."

(Source: Richard Wilhelm, trans./Gary F. Baynes, Eng. trans., *The I Ching: or, Book of Changes*, 3rd ed. (Princeton: Princeton University Press, 1967, 12th printing 1984), p. 6.)

I have not done a survey on the variety of translations for this passage but among what I have seen so far, the word "*tiān*" (\mathcal{R}) is typically translated as "heaven" and is sometimes capitalized. This is acceptable so long as no religious interpretation is made of it.

The *Yi Jīng* is known to many as originally a manual of divination which is still used widely as such today. Some Western authors would briefly mention this aspect when expatiating on this ancient text while others, such as Richard Rutt and Edward Shaughnessy, have chosen to discuss it at greater length (ref. (i) Richard Rutt, trans., *The Book of Changes (Zhouyi): a Bronze Age Document* (Richmond: Curzon Press, 1996), pp. 145-204; (ii) Edward L. Shaughnessy, trans., *I Ching: The Classic of Changes* (New York: Ballantine Books, 1997), pp. 1-13). What exactly is meant by "divination" as far as the *Yi Jīng* is concerned? Did Confucius ever believe in divination? How could a manual of divination dramatically become one of the core Chinese classics? Questions like these may perplex many people but the correct answers are not difficult to find if one takes the right approach.

From a technical standpoint, the Yi Jīng is a literary work which explores the meanings and applications of the hexagrams (六十四卦). It is traditionally ascribed to King Wén and Zhōu Gōng of the Zhōu dynasty and is therefore also known as the Zhou Yì (周易; lit. the Yì of Zhou). Since the hexagrams were invented before the three dynasties (i.e. Xià, Shāng, and Zhōu), it is logical to assume that similar efforts had been made during the Xià dynasty and Shāng dynasty. Some Chinese scholars believe that the Xià dynasty's equivalent of the Zhōu Yì is the Lián Shān (連山) and Shāng dynasty's equivalent of the Zhōu Yì is the Guī Cáng (歸藏) but such a hypothesis has to be verified through archaeological discoveries (ref. 南懷瑾、徐芹 庭,《周易今註今譯》, p. 3). In a 2014 publication, Edward Shaughnessy compared the names and order of appearance of the hexagrams as found in four different versions of the Zhou Yi and two different versions of the Guī Cáng (ref. Edward L. Shaughnessy, Unearthing the Changes: Recently Discovered Manuscripts of the Yi Jing (I Ching) and Related Texts (New York: Columbia University Press, 2014), Table 4.1, pp. 167-169). Except for the version handed down from the Former Han dynasty, every version he analyzed was unearthed from archaeological sites discovered in the past half century and Shaughnessy referred to the traditional version as the "received $Zh\bar{o}u$ Yi". The received $Zh\bar{o}u$ Yi and the manuscript text unearthed at the Măwángduī (馬王堆) archaeological site in 1973 appear to be more complete and they both have an appendix known as the Xì Cí (繁辭; lit. "Appended Commentaries" or "Appended Statements") which is a later addition to the original text. It is obvious that the Xì Cí was compiled no earlier than Confucius' time since both versions of the Xì Cí contain Confucian quotes. Shaughnessy discussed some microscopic discrepancies between these two versions of the Xì Cí when translating the "Măwángduī Zhōu Yì" (ref. Shaughnessy, I Ching, pp. 20-22) but, for the purpose of our discussion which is at the macroscopic level, the information contained in these two versions of the Xi Cí may be considered consistent in general.

According to the Xì Cí, it was Fúxī (伏羲), a prominent ruler of China in remote antiquity, who developed the original eight trigrams (八卦) after observing a variety of natural phenomena on earth and in the skies as well as the bodily features of his own and the markings of various birds and beasts with the intent to penetrate the virtue of spiritual brightness and to categorize the myriads of things (ref. (i) Shaughnessy, *I Ching*, p. 205; (ii) Muller, ed., *The Sacred Books of the East*, vol. 16, pp. 382-383/app. 3, sec. 2, chap. 2, para. 11); (iii) 南懷瑾、徐芹庭, 《周易今註今譯》, p. 414). The sixty-four hexagrams were formed by stacking (multiplying) two trigrams together (8 x 8 = 64) and it was these hexagrams which inspired the Chinese ancients to invent things like fishing and trapping nets, plows and hoes, marketplaces and commercial trades, boats and vehicles, bows and arrows, palaces and chambers, coffins and funeral proprieties, writings and inscriptions (ref. (i) Shaughnessy, *I Ching*, pp. 202-207, p. 331/note 104; (ii) Muller, ed., *The Sacred Books of the East*; vol. 16, pp. 379-380/app. 3, sec. 2, chap. 1, para. 1, pp. 382-385/app. 3, sec. 2, chap. 2, para. 11-23; (iii) 南懷瑾, 徐芹庭, 《周易今註今譯》, pp. 411, 414-420). Thus, with a general understanding of the *Zhōu Yi*, we can reconstruct the big picture from the *Xì Cí* in a simple and logical manner as follows:

- (a) The invention of the trigrams and hexagrams was not a result of divine revelation and it did not involve the supernatural. It was straightly a human effort which followed the very first step of what we would consider a scientific method today: to study natural phenomena by making observations (see Chapter 8 for a detailed discussion of the five steps of an idealized scientific method).
- (b) It did not take long for the Chinese ancients to go from trigrams to hexagrams and such a progress might have occurred even during Fúxī's lifetime since it is easy to form the hexagrams by building on the trigrams and since the hexagram "Lí" (離) (or "Luó" (羅) in the Măwángduī Zhōu Yì) was mentioned in the Xì Cí as what inspired Fúxī in his design of ropes and nets for fishing and trapping. If one has reservations about this reasoning due to the presence of a trigram which is also known as "Lí" (離), he/she can simply look at the invention of the plow and hoe which, according to the Xì Cí, was inspired by the hexagram "Yì" (益) and occurred during the lifetime of Shénnóng (神農), the next prominent ruler of China after Fúxī.
- (c) Since many new ideas and developments which led to social, cultural, and technological inventions were inspired by the hexagrams, the Chinese ancients valued the hexagrams highly.
- (d) The Shāng Chinese worshiped the supernatural (as explained in the *Lĭ Jî* quote included in endnote E-23 above). Therefore, they used the hexagrams for divination.
- (e) The Zhōu Chinese held a different concept of "heaven" (as explained in the Lĭ Jì quote included in endnote E-23 above and as discussed in endnote E-28 below). They too used the hexagrams to make predictions but they did it in a more scientific manner. Authors of the Zhōu Yì made observations of the changes which took place in their surroundings and they also analyzed the rise and decline of their preceding dynasties. From there, they deduced the underlying principles of those changes. Thus, they incorporated those principles into the text of the hexagrams in order to refine their model of prediction. This gave rise to the Zhōu Yì and this is why the Zhōu Yì is also known as the Classic of Changes. In short, the Zhōu Chinese considered the hexagrams a powerful tool for modelling and predicting things in their world, much like what Einstein had hoped to do with a unified field theory in his world of physics. Although the hexagrams might not have been as powerful a tool as the Zhōu Chinese had believed, the motive of the Zhōu Chinese was indeed very scientific since a scientific method typically involves the step of using an existing scientific model/hypothesis to make predictions and the model or hypothesis will be refined by the user by conducting more tests and/or observations (see Chapter 8 for what constitutes a scientific method).
- (f) Confucius found parallels between his ethical theories and the meanings of the hexagrams. Hence, he used the former to explain the latter or vice versa, as can be seen from the Confucian quotes in the Xì Cí and other appendix-like treatises attached to the main text of the Zhōu Yì (ref. (i) Shaughnessy, I Ching, pp. 168-185, 192-201, 206-209, 214-233, pp. 236-243; (ii) Muller, ed., The Sacred Books of the East, vol. 16, pp. 348-378/app. 3, sec. 1, para. 36, 42-48, 58, 65-66, 75-76; 379-407/app. sec. 2, para. 31, 35-37, 39-42, 44; 408-421/app. 4, sec. 1, para. 4-9; (iii) 南懷瑾、徐芹庭,《周易今註今譯》, pp. 395-399, 403-404, 407-408, 422-429).
- (g) Since the hexagrams were treasured by the Chinese ancients and since Confucius praised the *Zhōu Yì*, it followed as a matter of course that the enhanced *Zhōu Yì* (i.e. the original *Zhōu Yì* plus the *Xì Cí* and other appendix-like treatises) was elevated to the level of core Chinese classics as the *Yì Jīng*.

The above reconstruction of the historical big picture is rational and straightforward. It does not employ the technique of montage. It also does not require any microscopic arguments concerning the interpretation of certain keywords in the $Zh\bar{o}u$ Yi, the arrangement or formatting of the contents of the $Zh\bar{o}u$ Yi, or the naming and sequencing of the hexagrams. It will stand regardless of how many more versions of the $Zh\bar{o}u$ Yi have ever existed and how many more ancient tombs they will dig up in the future to find them. With the aid of the big picture, we can clear up several misconceptions surrounding the $Zh\bar{o}u$ Yi and say with full confidence that Confucius did not believe in divination and it would be grossly inappropriate to treat the $Zh\bar{o}u$ Yi as merely a book of divination or a text of theology.

When Western mathematicians like Wilhelm Leibniz (1646-1716) and Immanuel Olsvanger (1888-1961) examined the Fúxī order (binary order of the hexagrams), they gave credit to the Chinese ancients for knowingly using a binary notation but Richard Rutt argued against it by saying that the Fúxī order as a binary series was no more than an automatic result of designing a complete series of hexagrams by using only two elements (i.e. a solid line segment and a dashed line segment) (ref. Rutt, *The Book of Changes (Zhouyi)*, pp. 90-93). While pertinent arguments may simply boil down to a difference of opinion, one may turn to other reputable sources like the *Science and Civilisation in China* of Joseph Needham to see how advanced pre-modern China was in mathematics, engineering, agriculture, medicine, industry, warfare, transportation and the physical sciences. In other words, there is no need to doubt the wisdom of the Zhōu Chinese and their capability of using the hexagrams as a scientific tool and refining their tool in a scientific manner.

- E-27. In the 2014 Chinese edition, the *Evolution and Ethics* of Thomas Huxley and its Chinese translation *Tiānyăn Lùn* (天演論) by Yán Fù (嚴復) were referenced but only a source of the former was identified in the endnote (see endnote 36 above). It was assumed that most educated Chinese readers would have read about the translation "*wùjìn tiānzé*" (物競天擇). For the convenience of English readers who are versed in Chinese and would like to read Yán's translation in full, I should mention that I was able to find it in the Wéijī Wénkù (維基文庫), which is the Chinese library of Wikisource (ref. 嚴復, 《天演論》, 維基文庫, accessed 2018.04.24, <u>https://zh.wikisource.org/zh-hant/%E5%A4%A9%E6%BC%94%E8%AB%96</u>).
- E-28. The Chinese word for "heaven" is "*tiān*" (天). This may be one of the reasons why many translators and commentators misled themselves to seek religious or theological interpretations when they read about terms and passages containing the word "*tiān*" in Confucian texts. As pointed out by David Wright, the Chinese word "*tiān*", translated as "heaven", was the word which the Zhōu Chinese used for nature and its function on earth as well as in the skies and the Zhōu kings called themselves "Sons of Heavens" since they believed that they were acting upon the will of heaven and complying with its standards (ref. Wright, *The History of China*, p. 19).

The word "ming" (命) has several different meanings if we look it up in a Chinese dictionary (ref. 《辭 #》, 參閱條文: 命). Only the one which is most relevant to our discussion is shown here.

- E-29. In its original language, this idiom is written as "順得哥情失嫂意".
- E-30. In its original language, this proverb is written as "忠義兩難存".
- E-31. In its original language, this aphorism is written as "清官難審家庭事".
- E-32. In its original language, this idiom is written as "求心之所安".
- E-33. Mencius identified what he considered the four innate principles of human nature in his work *Mencius*. The original passage and James Legge's translation are shown below for additional reference:

由是觀之, 無惻隱之心, 非人也, 無羞惡之心, 非人也, 無辭讓之心, 非人也, 無是非之心, 非人也。

惻隱之心, 仁之端也, 羞惡之心, 義之端也, 辭讓之心, 禮之端也, 是非之心, 智之端也。

From this case we may perceive that the feeling of commiseration is essential to man, that the feeling of shame and dislike is essential to man, that the feeling of modesty and complaisance is essential to man, that the feeling of approving and disapproving is essential to man. The feeling of commiseration is the principle of benevolence. (bk. 2, pt. 1, chap. 6, para. 4)

The feeling of shame and dislike is the principle of righteousness. The feeling of modesty and complaisance is the principle of propriety. The feeling of approving and disapproving is the principle of knowledge. (bk. 2, pt. 1, chap. 6, para. 5)

(Source: Legge, The Chinese Classics, vol. 2, pp. 202-203).

Note that the phrase "*fēi rén yē*" (非人也) will become "is not human" if it is translated literally. This is exactly what D.C. Lau had done (ref. Mencius, *Mencius*, trans. Lau, p. 119/bk. 2, pt. A, para. 6). Legge properly did not like the harshness of calling people "not human", so, instead of making his translation "a person without the feeling of commiseration is not human", he paraphrased it as shown above. However, a literal translation is still possible since "*fēi rén yē*" can also be literally translated as "is inhumane" (i.e. "a person without the feeling of commiseration is inhumane"). As for the translation of the word "*xīn*" (心), Legge had used the word "feeling" while Lau had used the word "heart" but neither is perfect in the context of this *Mencius* quote. If we look up the word "*xīn*" in a 20th century edition of the Chinese dictionary *Cíhăi* (辭海), we shall see that it is polysemous and its meanings include heart, mind, thought, centre, basic nature, etc. (ref. 《辭海》, 參閱條文: 心). So, I would say that the word "*xīn*" in the context of this *Mencius* quote would be best translated as "innate principle" or "basic nature" since Mencius was talking about what he considered the basic nature of human beings.

E-34. "Sān cóng sì dé" (三從四德) used to be the moral norm of Chinese ladies but it faded away with the old society. It can be translated into English as the "three rules of obedience and four feminine virtues". The three rules of obedience are (i) to obey the father in your maidenhood, (ii) to obey the husband in your marital life, and (iii) to obey the son(s) in your old age and widowhood. There is no evidence that these moral rules were set by Confucius. Some may argue that these rules were actually set by Confucianists or neo-Confucianists of a later time based on their own interpretations of Confucian literature.

The four feminine virtues which Chinese ladies of the old society were supposed to acquire are (i) wifely virtue (婦德), (ii) wifely speech (婦言), (iii) wifely appearance/carriage (婦容), (iv) and wifely work (婦功). They can be traced to the treatise "Hūn Yì" (昏義) in the Chinese classic Li Ji. The original passage and James Legge's translation are shown below for reference but note that "Hūn Yì" was written as "Hwǎn Δ in Legge's romanization:

是以古者婦人先嫁三月,祖廟未毀,教于公宮,祖廟既毀,教于宗室,教以婦德、婦言、婦容、婦功。教 成祭之,牲用魚,芼之以蘋藻,所以成婦順也。

(Source: 王夢鷗, 《禮記今註今譯》下冊, pp. 968-969.)

Therefore, anciently, for three months before the marriage of a young lady, if the temple of the high ancestor (of her surname) were still standing (and she had admission to it), she was taught in it, as the public hall (of the members of her surname); if it were no longer standing (for her), she was taught in the public hall of the Head of that branch of the surname to which she belonged;—she was taught there the virtue, the speech, the carriage, and the work of a wife. (bk. 41, para. 10)

(Source: Muller, ed., The Sacred Books of the East, vol. 28, p. 432.)

- E-35. This generic statement, translated from the 2014 Chinese edition, is still valid despite some legislative changes which occurred in certain jurisdictions in recent years (e.g. recreational marijuana was legalized in Canada in 2018).
- E-36. One may refer to the *Fóguāng Dàcídiăn* (佛光大辭典), or the *Fo Guang Dictionary of Buddhism*, for more discussion of the Buddhist practice of giving (*Chi.* 布施; *Skt:* dāna) and the classification thereof (ref. 慈怡 法師 主編, 星雲法師 監修, 《佛光大辭典》2-3 版, 全 7 冊, 另索引 (高雄: 佛光出版社, 1988/1989), 參閱條 文: 二種布施、五種布施、四種布施、布施). Further information about the Sanskrit term "dāna" may also be found in *The Princeton Dictionary of Buddhism* (ref. Robert E. Buswell Jr. and Donald S. Lopez Jr., *The Princeton Dictionary of Buddhism* (New Jersey: Princeton University Press, 2014), s.v. "dāna").
- E-37. One may refer to the *Fo Guang Dictionary of Buddhism* for more discussions of the giving of alms (*Chi.* 財施; *Skt.* āmişadāna), giving of dharma (*Chi.* 法施; *Skt.* dharmadāna), and giving of fearlessness (*Chi.* 無 畏施; *Skt.* abhayadāna) (ref. 《佛光大辭典》, 參閱條文: 布施、財施、法 施、施無畏). Further information about these Sanskrit terms may also be found in *The Princeton Dictionary of Buddhism* (ref. *The Princeton*)

Dictionary of Buddhism, s.vv. "abhayadāna", "āmisadāna", "dharmadāna").

E-38. The Sanskrit term which describes the act of rejoicing in the virtuous acts of others is "anumodana" and its Chinese translation as provided by the *Fo Guang Dictionary of Buddhism* is "*suixi*" (隨喜), which literally means "rejoicing with" or "rejoicing after" (ref. 《佛光大辭典》, 參閱條文: 隨喜). The same term is also explained in *The Princeton Dictionary of Buddhism* and the English translations provided therein are "admiration" and "gratification" (ref. *The Princeton Dictionary of Buddhism*, s.v. "anumodana"). So, it is important to read the entire entry instead of reading the translations only in order to better understand the meaning of the term. Some people are happy to use the word "compersion" as a translation but I would recommend against it due to the sexual implication or sexual connotation of this word.

Some Chinese Buddhists may use the term "*suixi*" to describe the act of rejoicing in other people's success and happiness. I believe this is acceptable.

- E-39. One may refer to the *Fo Guang Dictionary of Buddhism* for more information about pure giving (*Chi.* 清淨 施) and impure giving (*Chi.* 不清淨施) (ref. 《佛光大辭典》,參閱條文: 二種布施、不清淨施、布施、清淨 施).
- E-40. One may refer to the *Fo Guang Dictionary of Buddhism* for more information about the five things which Buddhists are not supposed to do when practicing giving (*Chi.* "布施離五種法") (ref. 《佛光大辭典》, 參 閱條文: 布施離五種法).
- E-41. The five precepts (*Chi*. 五戒; *Skt*. pañca śīlāni) discussed here are entry-level precepts only since there are many Buddhist precepts depending on the practitioner's level of practice. According to the *Fo Guang Dictionary of Buddhism*, there is more than one version of the five precepts even for lay-Buddhists (ref. 《佛光大辭典》, 參閱條文: 五戒). The most common version known to the public is also the version discussed here and in *The Princeton Dictionary of Buddhism* (ref. *The Princeton Dictionary of Buddhism*, s.v. "pañcaśīla", and, in "List of Lists", s.v. "five precepts").
- E-42. The ten guidelines for virtuousness (*Chi.* 十善; *Skt.* daśakuśala-karmāni) are Buddhist conduct guidelines as explained in the *Fo Guang Dictionary of Buddhism* (ref. 《佛光大辭典》, 參閱條文: 十善十惡). There is some overlap between the ten guidelines for virtuousness and the ten precepts of Buddhism (*Chi.* 十戒; *Skt.* daśaśīla) but they are not identical in terms of contents and purposes. For more information about the latter, refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* (ref. (i) 《佛光 大辭典》, 參閱條文: 十戒; (ii) *The Princeton Dictionary of Buddhism*, s.v. "daśaśīla", and, in "List of Lists", s.v. "ten precepts").
- E-43. Karma (*Chi.* 業; *Skt.* karman) is a person's volitional doings which may be called deeds, actions, etc. In Buddhism, one way to classify karma is to divide them into three categories, namely verbal karma (*Chi.* □ 業 or 語業; *Skt.* vāk-karman), physical karma (*Chi.* 身業; *Skt.* kāya-karman), and mental karma (*Chi.* 意業; *Skt.* manas-karman). One may argue that verbal karma should be a subset of physical karma since, in the broadest sense, physical activities should include all bodily movements produced by skeletal muscles and since a person must move his/her tongue, lips and some facial muscles in order to talk. However, verbal karma is so important that it has been assigned its own category. More information about these Buddhist terms may be found in the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* (ref. (i) 《佛光大辭典》, 參閱條文: 業、三業、□業、意業、身業; (ii) *The Princeton Dictionary of Buddhism* s.vv. "karman", "vākkarman").
- E-44. In their original language, these idioms are written as (i) "好心做壞事" and (ii) "我不殺伯仁, 伯仁由我而 死".
- E-45. Like other poems in this book, this poem is a translation of what was included in the 2014 Chinese edition. The first line reads "[w]hy borrow from the West" because that edition was intended for Chinese readers.

CHAPTER 4

WAS THE EARLIEST LIFE A DIVINE CREATION?

Lung, Tin Yick

The caption question is age-old. Many people would lump it together with questions concerning the birth of the earth. Humans and other terrestrial lifeforms are native to this planet. If we trace the lineage of a species generation by generation, it will eventually bring up the question about origin. After realizing that this is not an easy question to answer, some people would use "divine creation" as the response. What is meant by "divine", anyway? There are countless ways to explain it.

The term "divine creation" may remind us of certain creation myths as well as certain religious beliefs. Creation myths are a common feature of many ancient cultures. In Chinese mythology, for example, it was Pángǔ (盤古) who opened up heaven and earth and Nǚwā (女媧) who used yellow earth to create humanity.^(E-1) In Greek mythology, the universe began with Chaos and the gods used different metals to make men;⁽¹⁾ Prometheus also created man from clay.⁽²⁾ Once a creation myth becomes a religious belief, believers will embrace it as part of their religious doctrines rather than an imaginary anecdote or legendary tale. Creation narratives which may sound absurd if taken literally may be given some meaningful interpretations or may be viewed as metaphors which express profound truths. So, which narrative is creation myth and which is not? Whose religious beliefs involve creation myths and whose religious beliefs do not? The answers to these questions can be extremely subjective. As a result, the learned ones would approach these questions with extra caution lest it may infringe on other people's freedom of religion. The reason that I have chosen to include this topic for discussion is two-folded. First, there are all kinds of cruel realities and unavoidable conflicts in the world and we need to know how exactly they are connected to the phenomenon of "life" in order to protect our well-being. Second, many people professed a religion based on their beliefs in divine creation and we can learn from their examples if we want to find out whether this is a wise choice.

WHAT IS LIFE

The notion of divine creation is not necessarily an invention of some extant religions. Primitive humans were less capable and less knowledgeable than we are and it was not an easy task to survive in their natural environment. It would definitely cause panic and confusion when they were hit by some powerful and destructive natural phenomena such as earthquakes, tsunamis, typhoons, floods, and volcanic eruptions but sometimes things which are relatively harmless such as the change of seasons, the undulating mountains and rivers, and what they saw in their dreams could still strike them with a sense of mystery due to their lack of understanding of the underlying scientific principles. When the feeling of fear and the sense of mystery intermixed with human imagination, figments of the imagination could make them think that there were some invisible forces behind the scenes. As imaginations got carried away, they could also develop the idea that everything they came across was created by such invisible forces. Modern humans understand
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better the mechanisms of many natural phenomena and are no longer perplexed by thunder and lightning. However, there are still those who would feel that the universe should be the work of a creator god when viewing galaxy clusters through an astronomical telescope or those who would call it a miracle when examining the complex and exquisite assemblies of gene molecules through an electronic microscope. If we compare such modern-day thinking with the thinking of the far ancients who considered thunder and lightening the act of a thunder god, do we see a fundamental difference or just a difference in scale and expression? I am afraid that the answer will depend on one's perspective.

Over the course of history, a great diversity of ethnicities, cultures, and civilizations have emerged. It is conceivable that they could each have a system of religious beliefs and life philosophies. As adherents went through their rise and decline, many religions and philosophies faded into oblivion. Some managed to survive or to spread beyond their places of origin. Before natural science was established as a branch of knowledge, there were people who would take their difficult questions to religionists and philosophers for enlightenment but where did religionists and philosophers obtain their information? I would imagine that they took some of the answers from religious scriptures or philosophical texts available at the time but other than that, their sources would be hard to trace. As for the cited scriptures and texts, who were their authors? How were they composed, reviewed, and verified? Was there a loss in accuracy when they were handed down through the generations? Have the semantics changed over the ages? Could there be errors in translation in the case of scriptures and texts translated from a foreign language? Were the contents of these scriptures and texts interpreted in a straight literal sense or were they interpreted with the reader's opinions? Whose view should govern if there is more than one interpretation? Questions like these can justify our reservations about accepting the words of religionists and philosophers from those days.

I once conceived a simple analogy to help my friends avoid perplexity when selecting between religion, philosophy, and science. It went like this: "When I am ill, I go to a clinic or hospital for treatment. When I want to borrow money, I go to the bank for financing. When my car has a problem, I take it to the shop for service. If I went to see a mechanic when not feeling well, consulted a physician when needing a loan, sent my car to the bank for repairs, I would make myself a laughingstock. For the same reason, it would be inappropriate to seek a religious or philosophical answer to a scientific question." Whether this analogy can be applied to the inquiry concerning the origin of life will depend on how "life" is defined. If "life" is defined as physical life found in nature, we should seek a scientific answer. If "life" is defined by using concepts beyond the physical world, such as the concept of soul as postulated by some philosophies or religions,⁽³⁾ our subject matter will be immediately dragged into the domain of philosophy and religion. Some philosophical views and religious beliefs are less objective than science. They are also not up to the standard of science in terms of the requirements for theoretical foundation and experimental verification. But the key question is: whose religion do we embrace and whose philosophy do we adopt at times of disagreement? In order to discuss religious ideas in parallel with scientific knowledge, this chapter will focus on physical life. By drawing the line this way, I can avoid potential disputation regarding the subject of the soul. Moreover, the study of physical life alone is enough to highlight the controversies arising from the notion of divine creation.

What I meant by "physical life found in nature" is life comprising of matter and energy. To be specific, it is the "living things" or "living organisms" as studied in biology and it does not involve anything which goes beyond nature. The method for defining living things is not much different from the methods for defining other ordinary things which is to outline the major properties of the target item and use them as

distinguishing features for definition purposes. The major properties can include substantive properties and/or functional properties. Life is hard to define because it is an entity of matter and energy as well as a process of continuous changes. Furthermore, any definition devised today may be superseded later since life on earth is amazingly diverse and extraterrestrial life is still an unknown. A conventional way to define life in biology textbooks is to use the living organisms on earth as a starting point and provide a general description of their shared properties or common characteristics which can be used to distinguish living things from non-living things.⁽⁴⁾ All known living organisms on earth use cells as their basic structural and functional units and some biologists would associate the following properties with them:⁽⁵⁾

- (1) All living organisms exhibit a highly complex organization in their bodies.
- (2) Within limits, they can regulate the internal environment of their bodies despite changes in ambient conditions (e.g. homeotherms can maintain a constant body temperature).
- (3) They use the inherited information stored in their genes to control the pattern of their own growth and development.
- (4) They take in energy from the surroundings and convert it to other forms of energy to meet their needs (e.g. animals use the chemical energy stored in their food to sustain metabolism and other bodily activities).
- (5) They respond to environmental stimuli (e.g. a Venus flytrap will close its trap rapidly when an insect lands on it).
- (6) They reproduce their own kind.
- (7) Through the process of evolution which occurs over many generations, they can make their offspring more adaptable to the environment.

Among the aforementioned distinguishing features, genetics and evolution are probably the most active topics of today's biological research. What I would like to explore here, though, is the connection between internal order and requirement for energy. Living organisms rely on external energy to survive: animals relying on chemical energy stored in their food, photosynthetic plants relying on solar energy from the sun, and so on. In the physical world, the transfer of energy is governed by the laws of thermodynamics. One of the corollaries of the second law of thermodynamics says that the entropy of any isolated system will increase unless the system is undergoing a reversible process.⁽⁶⁾ Entropy can be understood as the internal disorder of a system.⁽⁷⁾ Thus, the second law of thermodynamics tells us that any isolated system will become more and more disorganized when undergoing an irreversible process and it will be impossible for such a system to maintain its original internal order. Living organisms are live examples of how the second law of thermodynamics works since their bodies are highly organized and since life is an irreversible process as demonstrated by the natural aging and dying of a person. When living organisms are isolated, they can no longer consume external energy. Without an adequate supply of energy, they can no longer maintain the internal order of their bodies. Having failed to maintain the internal order of their bodies, they must die.⁽⁸⁾ An animal will die sooner or later if we cage it and deny it food. A photosynthetic plant will perish sooner or later if we put it in a sealed dark room and deny it light, water, and nutrients. Examples like these prove but one thing: no living organisms are truly self-sufficient.

Nature as a whole has a tendency towards disarray. A room without house keeping will turn messier over time. A building without maintenance will eventually become ruins. The fact that living organisms can maintain the internal order of their bodies, particularly the storage of complex information in their genes, does not imply that they have the ability to defy the laws of nature since the internal order they construct and maintain for themselves is more than compensated for by the disorder they add to the surroundings. The process of aerobic respiration is a typical example of how living organisms contribute to nature's overall disorder since when living organisms perform aerobic respiration, they release waste heat to the surroundings which is a form of energetic disorder and they also break down a smaller number of high-energy molecules (i.e. glucose) into a larger number of low-energy molecules (i.e. water and carbon dioxide) which will heighten the amount of molecular disorder in the surroundings.⁽⁹⁾ In other words, living organisms flourish at the expense of the environment which gives them the energy they need and absorbs the disorder they create.⁽¹⁰⁾ What is the philosophical implication of this phenomenon? It will be discussed later in this chapter. Before we come to that, let us first analyse a few conceptions of the origin of life.

THREE TYPES OF CONCEPTIONS

Throughout the ages, all kinds of ideas have been formed to explain the origin of life. New ideas may continue to emerge as a result of the rapid development of modern science and the on-going emergence of new religious beliefs. Therefore, it would be difficult for anyone to do a complete listing without the risk of omission. The best way to do a simple but systematic analysis may be to identify the major categories of conceptions through inductive reasoning. In order to do some inductive reasoning, we must first have a clear view on two aspects, namely the time of the origin and the place of the origin. Regarding the time, we need to think towards the past. If the first life was something which came into being at some point in time in the past, we can say that life has an origin or beginning. If life existed even in the infinite past, we cannot make such a claim, particularly not the process of creation since creation implies a beginning. As for the place, there are ultimately two different places to look for the origin of life, namely nature and beyond nature. In the context of this chapter, "nature" refers to the entire system of physical universe which encompasses our home planet Earth, the solar system to which the earth belongs, the Milky Way in which our solar system resides, other galaxies beyond the Milky Way, all matter and energy forming the rest of our universe, and the multiverse beyond our universe, whereas the term "beyond nature" is an abstraction of unlimited ambiguity or a synonym of the term "supernatural". Since a place beyond nature is a place outside the natural world, it cannot be observed or explained by scientific means no matter how advanced our technology is. Some people may collectively refer to all phenomena currently inexplicable by science as supernatural phenomena but this is inappropriate since it is only a matter of time for science to unlock the secrets of phenomena arising from natural causes and such phenomena do differ in essence from things which can never be observed or explained by science regardless of the passage of time. In order to avoid potential semantic disputes in this regard, it may not be a bad idea to define "beyond nature" as the place where supernatural beings come from and define supernatural beings as things which are not bounded by nature and are capable of intervening in the business of nature. What I meant by "not bounded by nature" is the state of not belonging to nature, not being subject to the laws of nature, but having the ability to freely enter and exit nature. Thus, if we go by these definitions, the gods and goddesses in many Western religious traditions will fall under the category of supernatural beings.

With a clear view on the significance of the time of the origin and the place of the origin, it follows that we can divide the major conceptions concerning the origin of life into three categories:

There were no living things in the beginning; living things were created by supernatural being(s) (i.e. divine creation).

- (2) There were no living things in the beginning but living things can evolve from nature's non-living things under suitable conditions.
- (3) Living things were not created, nor did they evolve from non-living things; instead, they forever exist in nature, generation after generation, with no beginning and no end.

(A) Divine Creation: Searching Beyond Nature for the Origin of Life

To go beyond nature in search for the origin of life is the same as declaring one's belief in divine creation. Divine creation can be represented by more than one technical term. Besides "creation myth", there is also "creationism" which is used in a more solemn sense. Creationism is by no means unique to any religion. It can be found in major religions such as Christianity and Hinduism or religions with fewer followers such as the faiths of some indigenous groups in North America.⁽¹¹⁾ To many mainstream North Americans, however, the common understanding of the term "creationism" is a firm belief in the biblical book Genesis.⁽¹²⁾ Some academicians would only mention biblical beliefs when composing a dictionary definition for this term.⁽¹³⁾ The content of creationism can change over time as believers become more and more knowledgeable. Take Genesis for example, although the average believer in the 1st millennium was happy to learn about the world through literal interpretations of the Bible, disaccords between such interpretations and the discoveries of science became more and more noticeable in the latter part of the 18th century, particularly in the academic field of geology. When came the 19th century, even a geologist and ordained Christian minister was not afraid of making open criticism about Mosaic geology.⁽¹⁴⁾ As attitudes towards the on-going accretion of scientific knowledge vary among believers, different forms of Genesisbased creationism were developed in the 20th century. Presently, the three main branches of biblical creationism are as follows:⁽¹⁵⁾

- (1) Young-Earth Creationism
- (2) Old-Earth Creationism
- (3) Evolutionary Creationism

Among these three branches of biblical creationism, young-Earth creationism is most distant from mainstream science. Some would call it "scientific creationism", "creation science", "flood geology", etc. Believers of young-Earth creationism insist on making literal interpretations of Genesis. They disregard the age of the earth as determined by radiometric dating and assert that the earth was created by God within six 24-hour days no more than ten thousand years ago. They also argued against evolution by saying that the fossils unearthed from various geological formations are relics of creatures which used to live together but were submerged and scattered by the biblical flood which occurred during the time period of the Old Testament.⁽¹⁶⁾⁽¹⁷⁾⁽¹⁸⁾ Evolutionary creationism, on the other hand, is most compatible with mainstream science. Its adherents can completely refrain from making literal interpretations of Genesis and they view galaxy evolution and the evolution of various species as God's way of creating the universe.⁽¹⁹⁾ Hence, it is also known as "theistic evolution" or "continuous creation". As for old-Earth creationism, which settles in between the other two branches of creationism, its upholders basically accept radiometric dating for the age of the earth, acknowledge that the earth is billions of years old, but at least partially reject the concept of biological evolution.⁽²⁰⁾ In order to avoid any obvious disagreement between the scriptural and the scientific, they have made a number of interpretations of Genesis. Day-age theory interprets the days of Genesis to represent vast ages in the history of the earth.⁽²¹⁾ Gap theory interprets the Edenic creation, which occurred in six literal days, as a restoration of the world after some creation(s) and destruction(s)

which took place eons ago.⁽²¹⁾ Progressive creationism holds the view that God's intervention occurred on occasion, especially between geological eras, creating new root-species which then radiated, and all of these were to prepare for the arrival of humankind.⁽²²⁾ These are examples which typify the techniques used by old-Earth creationists. Although old-Earth creationism has a number of variations, not every one of them is presented by its advocates as a religious doctrine in an aboveboard manner. For instance, intelligent design is considered a form of progressive creationism but its supporters would rarely acknowledge that their intelligent designer is the God of Christianity since they want to win governmental approval to teach their belief in public schools in the United States.⁽²³⁾⁽²⁴⁾ As a result, their movement has raised a number of legal issues in that country.⁽²⁵⁾

In the 20th century, UFO religions came to light. Some of them shared the belief that life on earth was created by extraterrestrials.⁽²⁶⁾ Whether the tenet of creation by extraterrestrials should be ranked among other forms of creationism will depend on how the term "extraterrestrials" is defined. If it is defined as some advanced lifeforms in the natural universe and if the process of "creation" is nothing more than making or growing by using scientific means, then any tale of this kind should at the most be classified as a scientific hypothesis rather than a miracle of divine creation.

(B) Abiogenesis: Searching Among Nature's Non-living Things for the Origin of Life

Creationism and creation myths are not the only long-standing propositions about the origin of life. Spontaneous generation, which proposes that some lifeforms may suddenly arise from lifeless matter, is another one.⁽²⁷⁾ Some scholars have traced the idea of spontaneous generation to the *Historia Animalium* of Aristotle, which suggested that some plants could spring up spontaneously but not from the seeds of other plants and some animals could arise spontaneously from putrefying earth or plants without any parent.⁽²⁸⁾ In ancient China, there was a similar belief that decaying grass could turn into fireflies, as recorded by the treatise "Yuè Lìng" (月令) in the Chinese classic *Lǐ Jî* (禮記).^(E-2) Spontaneous generation was still a prevalent theory in Europe during the early 19th century and it was commonly used to explain the origins of infusorians and parasitic worms.⁽²⁹⁾ It was not until after the French microbiologist Louis Pasteur performed a series of experiments between 1859 and 1872 to demonstrate that new living organisms had to come from existing living organisms did this old theory fail to stand its ground.⁽³⁰⁾

One may deduce from Pasteur's experiments that every living organism found on earth today is the reproductive products of his/her/its parent(s) and seek proofs by naming the following examples: humans giving birth to their children, chickens laying eggs to hatch as young chicks, rice plants producing rice seeds to germinate as rice seedlings, single-cell organisms reproducing themselves by means of cell division, etc. While such a reasoning may be valid, it does not help explain the origin of the first life on earth. Since the earth itself also has a beginning and since the logical sequence of events is that the earth came into being prior to hosting life, the first life on earth would have to come from space or would have to evolve from some non-living things locally. The scientific hypothesis that living things can develop from non-living things through the process of chemical evolution is known as abiogenesis, whose paradigm was established by the Russian biochemist Alexander Oparin (1894-1980 CE) and the British biologist J.B.S. Haldane (1892-1964 CE) during the 1920's and 1930's.⁽³¹⁾ Oparin and Haldane believed that conditions in favour of the evolution of living things from non-living things did occur once on the primeval earth but this type of evolution was a rather slow process.⁽³²⁾⁽³³⁾ Oparin said that living things and non-living things had to

obey the same physico-chemical laws and the peculiarity of the former was found only in their sophisticated collection and integration of a large number of physico-chemical properties and characteristics shared in isolation by various non-living things. He also stressed that what made it difficult for non-living things to evolve into living things on the present-day earth was that conditions had changed dramatically since the primordial days and, even though chemical evolution might still be taking place, any intermediate products would have been consumed by the existing living organisms before having a chance to develop into new lifeforms.⁽³⁴⁾

Inspired by the research of Oparin, the American scientist Stanley Miller (1930–2007 CE) made an attempt to replicate the atmosphere of the primeval earth in a laboratory in 1952 by mixing ammonia, hydrogen, and methane with water vapour. He circulated the mixture through repeated cycles of electric discharge (to simulate lightning), cooling (to simulate raining), and re-boiling (to simulate evaporation from the sea), thereby producing a variety of amino acids.⁽³⁵⁾ Since amino acids are the building blocks of protein and protein is a major constituent of life on earth, Miller's sensational experiment went down in history as a classic known as the "Miller-Urey Experiment". Jeffrey Bada (1942 - CE), a former student of Miller, repeated this experiment in 2007 by using the latest model of the earth's primitive atmosphere (nitrogen and carbon dioxide) and added iron and carbonate minerals (which existed in abundance on the surface of the primeval earth) for a closer imitation of actual conditions.⁽³⁶⁾ Although this second-edition experiment was also successful in producing a good number of amino acids, it did not turn out to be as stunning as the original experiment conducted half a century ago since scientists had already discovered other natural processes for the production of building blocks of life.

Through the observation of solar systems in different stages of evolution, scientists can, in a human lifetime, learn about the entire evolution process of stars and planets that spans up to billions of years.⁽³⁷⁾ They can also determine the chemical compositions of galactic objects by means of spectral analysis.⁽³⁸⁾ Decades of technological advance have enabled them to trace the origin of life to the stars.⁽³⁹⁾ According to the current mainstream scientific model, the nucleosynthesis which initially occurred in the universe could only synthesize light elements such as hydrogen and helium but heavier elements required to form living things and non-living things on earth were able to form later within the stars.⁽⁴⁰⁾ The reason that stars are able to emanate light and heat in the universe for millions or billions of years is the nuclear fusion which happens in their interiors and such a process of nuclear fusion enables them to unremittingly release energy in the same manner as a nuclear reactor.⁽⁴¹⁾ The high-temperature and high-density environment inside the stars and the enormous amount of energy generated during the explosion of some massive stars can both propel the type of nucleosynthesis required to make elements heavier than hydrogen and helium.⁽⁴²⁾ After consuming all of its nuclear fuel, a star may reduce to a white dwarf or neutron star or may collapse to form a black hole but the exact path of stellar evolution and the number and types of elements it can produce will depend on its initial mass.⁽⁴³⁾ A dying star may experience the phenomenon known as red giant or, if it is massive enough, the explosive phenomenon known as supernova which is what generates elements heavier than iron. In either case, matter contained within the star will be violently expelled and the ejected gases and dust will form giant molecular clouds in the interstellar space. The denser parts of molecular clouds will gradually condense due to various physical reasons and, step by step, develop into a new generation of stars.⁽⁴⁴⁾ The overall process is an immense recycle of matter in which our solar system, which is capable of nurturing life, is a transitional product.

While acting as stellar nurseries which give rise to a new generation of solar-star systems, molecular

clouds also contain dust grains which facilitate the formation of interstellar organic materials.⁽⁴⁵⁾ Chemical elements and simple chemical molecules which adhere to the surface of these dust grains can react with one another to form organic compounds with the aid of interstellar ultraviolet light.⁽⁴⁶⁾ As proto-stars and their associated proto-planetary disks gradually form from these molecular clouds, these organic compounds can further combine with one another to form the more complex biomolecules.⁽⁴⁷⁾ After the planet Earth was born, comets and meteorites can carry extraterrestrial biomolecules to its surface,⁽⁴⁸⁾ thereby improving the chance of producing life on the primordial earth. One scientist has summarized the chemical reactions in the evolution of living things from non-living things as follows:⁽⁴⁹⁾

- (1) Elements combine into the simplest reactive compounds (e.g. hydrogen combining with oxygen to form water, hydrogen combining with nitrogen to form ammonia, etc.).
- (2) Simple reactive compounds react with one another to form monomers of life (e.g. formaldehydes combining to form carbohydrate, cyanide combining with formaldehyde to form amino acid, etc.).
- (3) Physical and chemical properties of the monomers cause them to form more complex structures such as polymers and compartments (e.g. sugars combining to form polysaccharides, amino acids combining to form peptides, amphiphiles self-assembling to form membranous compartments, etc.).
- (4) A variety of polymers become encapsulated in compartments to form protocells which develop into primitive single-cell organisms.

At the time of composing this book, the fourth tier in the above summary is still a hurdle for scientists to overcome. Once a breakthrough occurs, the theory of abiogenesis can be combined with Darwin's theory of evolution to explain how non-living things can evolve into complex living organisms.⁽⁵⁰⁾ Among the hypotheses propounded during the late 20th century for the origin of life, some reasoned that replication preceded metabolism, as in the case of the RNA hypothesis.⁽⁵¹⁾ Some asserted that metabolism came first, as in the case of the iron-sulphur world hypothesis.⁽⁵²⁾⁽⁵³⁾ Which of these two camps is correct? Well, according to a more recent view, both of these postulations are problematic from the perspective of the second law of thermodynamics and scientists must look for something which is more compatible with this scientific law.⁽⁵⁴⁾ Will abiogenesis eventually lead us to the discovery of the origin of life? When will the answer be available? Many people would like to know.

(C) Panspermia: Searching Among Nature's Living Things for the Origin of Life

Influenced by Pasteur's experiments, some 19th century scientists switched the focus of their research from spontaneous generation to panspermia in order to be compatible with biogenesis.⁽⁵⁵⁾ Panspermia, whose concept and etymology can be traced to Anaxagoras of ancient Greece, who was before Aristotle's time, is the hypothesis that an infinite number of cosmic seeds will continuously fall onto the planet Earth and other cosmic bodies to produce life when conditions are ripe.⁽⁵⁶⁾ It is somewhat similar to exogenesis which proposes that life was transported to the earth from a different planet in our solar system.⁽⁵⁷⁾ The British astronomer Fred Hoyle (1915-2001 CE) and his student Chandra Wickramasinghe (1939- CE) can be considered representative figures of panspermia in the 20th century. They reasoned that interstellar organic materials were bacteria or remains thereof and not even the high radiation and high temperature differential in interstellar space could completely destroy them due to their extreme hardiness, so, when the survivors landed on new solar systems formed by molecular clouds, they could multiply exponentially in

suitable environments such as comets and planets.⁽⁵⁸⁾ One of the reasons that panspermia could not be ignored during the scientific debate of the late 20th century was that Darwinism lacked a good explanation for the discontinuities in evolution but panspermia was able to offer a straightforward answer by tracing the origin of life to extraterrestrial sources and positing that the on-going arrivals of new genetic materials could cause the evolution and mutation of lifeforms on earth.⁽⁵⁹⁾ Whether this panspermia view can hold its ground in the future will depend on the findings of gene research.

At the first glance, it may seem that panspermia does not solve the problem of the origin of life but merely transfer the origin to some extraterrestrial sources. However, the panspermia model proposed by Hoyle and Wickramasinghe is obviously a model of endless cycles requiring no origin. According to the research of these two scientists, cells produced by the system of stars, planets, and comets can be spread and re-spread by comets and other means to start new life cycles in new molecular clouds and such a process can go on forever.⁽⁶⁰⁾ For their thesis to be valid, the universe itself must exist forever and must remain in a steady state or quasi steady state. If the universe itself is not eternal or not immune to changes which are drastic enough to cause the disintegration of all chemically formed molecules, it will be impossible for any chemistry-based genealogy to reach eternity. As a matter of fact, Hoyle did strongly promote steady state cosmology during the 20th century.⁽⁶¹⁾ Even in the year before he died (2000 CE), he still theorized a quasi-steady-state universe.⁽⁶²⁾ Unfortunately, the result ran counter to his desire and all his efforts had failed to prevent the Big Bang hypothesis from becoming mainstream cosmology.

What the Big Bang means is that neither space nor time existed originally but they began to exist at a point of singularity where the volume of the universe was zero. From that point onward, space has been expanding ceaselessly to become our seemingly boundless universe and time has been passing steadily with the instant of the Big Bang being time zero.⁽⁶³⁾ In other words, the Big Bang was not an explosion in space; rather, it was space itself which came into being in the form of explosion.⁽⁶⁴⁾ Such a perplexing doctrine was originated in 1927 by the Catholic priest and astronomer George Lemaitre (1894-1966 CE) who followed in the footsteps of the Russian mathematician Alexander Friedmann (1888-1925 CE) to use Einstein's general theory of relativity to calculate the changes of the universe. Lemaitre first looked at the expansion of the universe and then back-calculated its past. From there, he deduced that the universe should be smaller in the past than as at present and, eventually, he arrived at its primordial condition.⁽⁶⁵⁾ Since the volume of the primordial universe is zero at the point of singularity, the corresponding density and temperature will reach infinity accordingly. Such startling mathematics, however, have no practical implication since the physical meaning of a singularity is that the theory used to perform the calculation is no longer applicable under the condition.⁽⁶⁶⁾ Lemaitre nevertheless chose not to back down. Instead, he published his findings in a book titled *Primeval Atom Hypothesis*,⁽⁶⁷⁾ which won the formal approval of Pope Pius XII (1876-1958) in 1951.⁽⁶⁸⁾ Hoyle called this model "the Big Bang" during a radio broadcast and he might have done it sarcastically but the term stuck and has been in use ever since.⁽⁶⁹⁾

The initial model of the Big Bang hypothesis agreed well with the Catholic beliefs of Saint Augustine (354-430 CE) who alleged that time was created by God and time did not exist prior to such a process of creation.⁽⁷⁰⁾ By the mid-1970's, the Big Bang hypothesis became mainstream cosmology not for religious reasons but for the following three pillars of scientific evidence:⁽⁷¹⁾⁽⁷²⁾⁽⁷³⁾⁽⁷⁴⁾

(1) The astronomer Edwin Hubble (1889-1953 CE) reported in 1929 that the observed redshifts of galaxies were directly proportional to their distances from the earth. Since redshift (a shift of light

spectrum towards the red end of the spectrum) is the observed elongation of wavelength of light waves from a source of light moving away from the observer, the physical implication of this observation is that the entire universe is expanding.

- (2) The theory of Big Bang nucleosynthesis (nucleosynthesis driven by the Big Bang itself) agrees well with the observed abundance and quantity ratio of hydrogen and helium in the universe.
- (3) The cosmic microwave background radiation discovered in 1964 has properties consistent with the theoretical cooling of the universe after a primeval Big Bang.

Apart from some disagreements concerning the interpretation of the point of singularity, cosmology in the past half century was mostly developed from the conceptual framework of the Big Bang hypothesis. For example, various inflation models were formulated to describe what happened during the extremely short instant immediately following the Big Bang in order to address some technical questions arising from the initial Big Bang model.⁽⁷⁵⁾⁽⁷⁶⁾ Models like the Big Freeze and Big Rip were proposed to predict the ultimate outcome of the universe's expansion so that our universe will have both a beginning and an end.⁽⁷⁷⁾⁽⁷⁸⁾ The reason that the United States launched the COBE satellite in 1989 and the WMAP satellite in 2001 was to gather data about the Big Bang.⁽⁷⁹⁾ What is worth noting, though, is that some scientists in the 21st century are working to unveil the universe before the Big Bang.⁽⁸⁰⁾ In other words, they do not believe that the Big Bang was the beginning of time and everything else. Among the newer generation of hypotheses, there are models of a cyclic universe which can go on perpetually.⁽⁸¹⁾⁽⁸²⁾⁽⁸³⁾⁽⁸⁴⁾ There are also models of a multiverse which is a multitude of universes with their respective arrows of time.⁽⁸⁵⁾ These newer models are not only compatible with the observed redshifts, abundance of light elements, and cosmic microwave background radiation but also compatible with the constraints imposed on irreversible processes by the second law of thermodynamics. Will the Big Bang hypothesis be superseded by a new generation of cosmology? Will the new generation of cosmology inspire more hypotheses for the origin of life? It is hard to tell at the present time.

THOUGHT-PROVOKING QUESTIONS

After seeing three different types of conceptions for the origin of life on earth, one may ask the question: "Which of them is the most reasonable?" Well, creationism is a kind of religious belief whereas abiogenesis and panspermia are scientific hypotheses. It goes without saying that they are not meant to be bundled for discussion. Religious talks often involve ideas that transcend nature but so long as there are those who are not afraid of telling it and so long as there are those who are willing to believe it, religious ideas can spread everywhere. Contrastingly, natural science only studies things in the natural world and a typical process of scientific study includes the steps of observation, question, hypothesis, prediction, and experiment. Also, scientific models and scientific hypotheses must repeatedly pass tests which are conducted in an open and objective manner before they can win a broad acceptance from the learned ones. Those lacking the support of sufficient scientific evidence will remain as unconfirmed hypotheses and those proven wrong will have to be modified or debunked.⁽⁸⁶⁾⁽⁸⁷⁾ Some non-religious people may think that they can use proven scientific knowledge to challenge certain traditional religious beliefs but their attempts can be met with surprising outcomes. For example, scientists have established that the earth is approximately 4.5 to 4.6 billion years old, as determined by radiometric dating.⁽¹⁷⁾ However, young-Earth creationists who argued against this scientific fact were able to win a higher approval rating from the audience than were participating scientists in some public debates held in the United States.⁽¹⁶⁾⁽⁸⁸⁾ Is this not indicative that religious beliefs are not as

simple as finding the truth by using scientific means? What is so magical about religions? This topic will be explored in the next chapter. In the remaining space of this chapter, let us find out if a general and non-polemical comparison can be made between the concept of divine creation and some of its rival scientific models.

There is no doubt that I have chosen to only consider physical life in this chapter in order to seek a common ground for the comparison between religious beliefs and scientific views when discussing the definition and origin of life. But there is yet another good reason, which is the crucial role played by the physical component of life in the physical world. Those who believe that life has a physical component and a non-physical component may assign different names to the latter, such as "soul", "spirit", "shi" (識), and "yuénshén" (元神), but no matter how you name it or annotate it or whether it is part of nature or not, this non-physical component will normally reside within the associated physical component which is the body (mental faculty inclusive).^(E-3) When the body dies, the life in question must be declared dead regardless of the non-physical component's ability to move on independently. As a matter of fact, our usual definitions for "life" and "death" is based on the life and death of the body. For instance, a person can be punished by law for killing the body of another person but it would be difficult to convict him/her for harming another person's soul. What is more noteworthy is that ordinary living organisms on earth do normally rely on their bodies to do what they want to do and the vast majority of their deeds are to satisfy the needs of the body, be it their own bodies or the bodies of others. Using humans as an example again, the acts of lifting, stepping, sitting, standing, looking, gazing, uttering, talking, hearing, discerning, sniffing, tasting, sensing, and touching are bodily functions. When people are contemplating with eyes closed, the brain is still active. When people fall into a deep slumber, the heartbeats will not stop. As for their needs for clothing, food, housing, and transportation, these are the needs of the body. As for their struggles over wealth and power, these are the wealth and power of the body. As for the protection of someone's territory, it is the territory of the body. As for the pleasures of drinking, dining, recreation, entertainment, and sexual intercourse, they are pleasures for the body. Therefore, no matter how high we exalt the non-physical component of life or how much we praise its immortality, it is the body or physical component of life which strongly influences every bit of details of our daily lives. Thus, by limiting or restricting what the body can do, we are in effect constraining life as a whole.

Speaking of constraints on the body, they differ between organisms. For humankind, some of the usual constraints are time constraint, space constraint, gender constraint, identity constraint, health constraint, body-shape constraint, financial constraint, authority constraint, legal constraint, moral constraint, political constraint, cultural constraint, and conventional constraint. However, constraints which are applicable to all known living organisms are simply the rules which govern their survival. If all living organisms must obey the same rules of survival, it stands to reason that these rules of survival will constitute their common constraints. So, what are the rules of survival for all living organisms on earth? As hinted by the above discussion of the common characteristics of living organisms and the second law of thermodynamics, these rules are as follows:

- (1) In order to maintain their internal equilibrium and obtain necessary nutrients, living organisms must intake what is useful to their bodies and discharge what is useless.
- (2) In order to grow and survive, living organisms must consume external energy and other external resources.
- (3) In order to build their own internal order, living organisms must increase the disorder of their

surroundings.

The above-stated innate rules may sound selfish but they cannot be defied since the consequence of defiance is death! Thus, the biosphere is an on-going battlefield. Animals must eat other organisms to survive. Photosynthetic plants will fight one another to the bitter end to compete for water and sunlight. Archaea and bacteria cannot stay out of it since they too have their basic needs. Even for humans, the most intelligent of all known lifeforms, it is difficult to break away from these primitive rules since the human form of nutrition is to eat other organisms. From bad to worse, humans who build modern infrastructures and live high-end lifestyles will heavily consume renewable and non-renewable energy, seize lands and water resources from other ecosystems, destroy forests and mine minerals, and release waste materials to pollute the environment. Such egocentric and bullying behaviours do not represent the struggle between virtue and vice. Rather, they are a manifestation of the basic rules of survival. Who sets the rules? The answer comes in different versions.

From a scientific standpoint, all living things and non-living things on earth are chemical compounds. Every activity of a living organism involves the transfer of matter and energy. The transfer of matter and energy is a series of physical changes and chemical reactions governed by the physico-chemical laws of nature. To those who believe in natural science but not miracles, the aforementioned rules of survival are all derived from these physico-chemical laws of nature. The innate selfish quality of living organisms as summarized by these rules of survival are just one example of how the second law of thermodynamics shapes the biosphere. The second law of thermodynamics does not say that living organisms have to kill one another to survive, nor does it say that they have to be self-interested. However, when the physical changes and chemical reactions which take place inside their bodies proceed in accordance with this law of physics, this is what happens. The laws of nature are natural and they only involve causes and effects. There is no manipulation, no purpose, no good or bad, no right or wrong, and no virtue or vice. Those who comply with the laws of nature can operate within nature. Those who defy the laws of nature will cease to exist. The laws of nature are the foundation of all scientific laws and theories. Humankind has come a long way on the path of evolution to become a much more sophisticated species than single-cell organisms. They have invented moral standards to help stabilize interpersonal relationships and reduce confrontation during times of prosperity. This may be viewed as an achievement of biological evolution. Unfortunately, conflicts can still occur when competition heats up or when natural resources are depleted. Such a tragic phenomenon reminds us of but one thing: no matter how advanced a lifeform we evolve into in the future, our bodies are always part of nature and we are not exempted from the laws of nature.

Moving on to creationism, the rules of survival for living organisms can hardly be decoupled from the will(s) of some divine being(s). The divine creator who created the universe should, in theory, have acted in accordance with his/her own will rather than following the directions of his/her creatures. If the divine creator is the only divine being or the supreme divine being, he/she should not fear the intervention of other supernatural beings. Who that divine creator is, however, is a matter of secondary importance. The most important aspect is the results of creation. To examine the results of creation, we need not go very far since all we need to do is to look at the human society. If humankind was created by a divine creator who had also prearranged the fate of every individual, the results of creation can be hard to justify. Some people were born smart, active, lovely, and healthy but some were born mentally disabled or born with structural birth defects. Some were born to happy and loving parents who will give their children everything they want but some were born orphans without kith and kin. Some were born into rich families residing in

megapolis but some were born in poor remote hinterlands without enough food and clothing, without the opportunity to attend school, and even without clean potable water. Are such cases of inborn inequality a testimony to the equity, impartiality, and justice of the divine creator? If the divine creator had only created the beginning of the universe and the rules of survival for his/her creatures but without making subsequent interventions, he/she could not have anticipated at the time of creation any later changes in the universe or the fortunes, thoughts, and choices of any individual. Can such a divine creator be described as omniscient and omnipotent? The still more perplexing question is: why did the divine creator make the rules of survival so ruthless and merciless and why did he/she not give us the option of keeping out of the fight? According to the above analysis, the three common rules of survival are in essence something which drive all living organisms to a ceaseless conflict. If it was the idea of the divine creator to put us and other living organisms in a universe of ceaseless conflict, how do we distinguish him/her from the Roman aristocrats who hosted gladiatorial shows in the Colosseum?

My discussion of the origin of life ends here. The below poem is to bring this chapter to a closure.

The Origin of Life

I traced my roots up the galaxy. Star dust is our common ancestry. Circumstances gave birth To our bodies. We meet again on earth To tell our stories. We kill for food relentlessly. But who will die willingly? The living and the non-living Are all formed chemically. Only a sentient being Will take it sentimentally.

— Lung, Tin Yick —

ENDNOTES

Endnotes carried over from the 2014 Chinese edition are numbered numerically as before, with some reformatting and typo corrections. Supplementary endnotes for the 2020 English edition are numbered alphanumerically with the prefix "E-".

Part 1: Endnotes Carried Over From the 2014 Chinese Edition

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- 87. Bennett and Shostak, *Life in the Universe*, pp. 33-39.
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Part 2: Supplementary Endnotes for the 2020 English Edition

- E-1. No source was cited in the 2014 Chinese edition for these Chinese creation myths since Chinese people who have been exposed to the traditional culture would find them familiar. English readers may refer to the *Handbook of Chinese Mythology* of Lihui Yang and Deming An for more details (ref. Lihui Yang and Deming An, with Jessica Anderson Turner, *Handbook of Chinese Mythology* (New York: Oxford University Press, 2008), p. 170, p. 176).
- E-2. In Chinese literature, the hypothesis that decayed grass can turn into fireflies in the summer can be traced to the treatise "Yuè Lìng" (月令) in the Chinese classic *Lǐ Jì* (禮記). Below are excerpts from the original:

季夏之月,日在柳,昏火中,旦奎中。

溫風始至, 蟋蟀居壁, 鷹乃學習, 腐草為螢。

(Source: 王夢鷗 註譯, 王雲五 主編, 《禮記今註今譯》修訂 2 版上冊 (臺北: 臺灣商務印書館, 1984), p. 280.)

James Legge's translations in *The Sacred Books of the East* are as follows:

In the third month of summer the sun is in Liû, the constellation culminating at dusk being Kwo, and that culminating at dawn Khwei. (book 4, sec. 2, pt. 3, para. 1)

Gentle winds begin to blow. The cricket takes its place in the walls. (Young) hawks learn to practise (the ways of their parents)¹. Decaying grass becomes fire-flies. (book 4, sec. 2, pt. 3, para. 4) (Source: F. Max Muller, ed., *The Sacred Books of the East*, vol. 27, *The Sacred Books of China: The Texts of Confucianism; Part III: The Lî Kî, I-X*, trans. James Legge (Oxford: Clarendon Press, 1885;

rpt. Nabu), pp. 276-277. His footnote 1 is not quoted here. Note that in Legge's romanization, "*Lĭ Jî*" was written as "*Lî Kî*" and "Yuè Lìng", "Yueh Ling".)

I did not quote from the *Li Ji* when composing the 2014 Chinese edition of this book. I only mentioned the rhymed prose "Fǔcǎo Wéi Yíng Fū" (腐草為螢賦; *lit.* "The Rhymed Prose of Transformation from Decaying Grass to Fireflies") by Chén Tíngzhāng (陳廷章) of the Táng dynasty (唐朝) (618-907 CE) since this work of Chén was the only example which came to mind at the time. I was able to find its full text in the Wéijī Wénkù (維基文庫), which is the Chinese library of Wikisource (ref. 陳廷章, "腐草為螢賦", 維基文庫, accessed 2012.12.04, URL: https://zh.wikisource.org/wiki/%E8%85%90%E8%8D%89%E7%82%BA%E8%9E%A2%E8%B3%A6%

EF% BC% 88% E4% BB% A5% E3% 80% 8C% E7% A9% 8D% E8% 85% 90% E6% 9C% 89% E5% 85% 89% EF % BC% 8C% E5% 8F% AF% E5% 90% 8D% E7% 82% BA% E8% 9E% A2% E3% 80% 8D% E7% 82% BA% E9% 9F% BB% EF% BC% 89).

E-3. "Shî" (識) is the Chinese pinyin word for Buddhist consciousness (Skt. vijñāna). "Yuénshén" (元神) is a Chinse Taoist term similar to the English term "soul".

CHAPTER 5

IS HUMAN WEAKNESS THE ORIGIN OF RELIGION?

Lung, Tin Yick

The caption question may sound caustic but it is extremely practical. If human weakness is what gave rise to religion, then all we need to do to eradicate religion is to find some proper means to rectify this particular aspect of human weakness. Once religion is gone, the astronomical amount of time, money, labour, and material resources consumed by religious activities every year can be reassigned to other useful purposes and all religious delusions, religious absurdities, religious injustices, religious conflicts, religious oppression, religious terrorism, and religious wars will also disappear. As for the humanitarian efforts led by religious organizations, they can be readily taken over by non-sectarian charities.

In the year before he died, Albert Einstein (1879-1955 CE), who was regarded as the father of modern physics, wrote a letter to the Jewish philosopher Eric Gutkind (1877-1955 CE) wherein he forthrightly made the statement: "The word God is for me nothing more than the expression and product of human weaknesses, and the Bible a collection of honorable but still primitive, rather childish legends. No interpretation, no matter how elegant, can change this [for me]".⁽¹⁾ This letter was made public by its collector more than half a century later and was sold at an auction in London in 2008 for a price twentyfive times the presale estimate. Einstein was quoted earlier as saying that God would not play dice with the world.⁽²⁾ He had also made the statement: "Science without religion is lame, religion without science is blind".⁽³⁾ Although these two quotes are often used out of context by missionaries to prove his biblical belief, Einstein was in fact an agnostic according to the findings of some accomplished scholars who conducted detailed research into Einstein's words, deeds, and life story.⁽⁴⁾⁽⁵⁾ Like the 17th century Jewish philosopher Baruch Spinoza (1632-1677 CE), Einstein did not embrace the concept of a personal god who would reward and punish people.⁽⁶⁾⁽⁷⁾ What he believed was that the scientific laws governing the operation of the universe were indicative of a divine design.⁽⁸⁾ When once asked whether scientists would believe in praying, his answer was that a scientist would hardly be inclined to believe that a prayer to a supernatural being could change things since the fundamental idea of scientific research was that every occurrence in the universe, including the actions of people, was determined by the laws of nature.⁽⁹⁾ Thus, we can tell how different Einstein's religious view was from the teachings of the Bible.

At first glance, it may seem that Einstein's letter has provided a straightforward answer to the caption question of this chapter. I nevertheless believe that it is necessary to conduct our own investigation since a prudent person should not simply parrot the words of others, not to mention that Einstein's comment was only about a certain type of religion and it might have been based on his own personal bias. In our quest for a serious answer to the caption question, the first challenge is to seek a universal definition of the term "religion". As we are well aware, religion is interwoven with history, society, culture, and human nature. It involves a myriad of abstract concepts and it is linked to the intricate sentiments in the human mind as well as things said to be outside the material world. Very often, religion is also closely connected to politics,

economics, geographical environment, and local customs and conventions. Religious notions which have taken firm roots in one community may be utterly unheard of in another community of dissimilar cultural background or the two communities may share the same religious term but not the same denotation. After defining the term "religion", we also need to make interpretation of the word "origin". How did the very first religious idea of humankind arise in human prehistory? How did an extant religion emerge in history? What was it that caused a given person or group of persons at any given time to become religious? These three questions can all be interpreted as targeting the origin of religion but they refer to different things. How much of our understanding of the prehistorical world is purely based on archeological evidence and how much of it has incorporated our assumptions? What were the roles of religion in human history and prehistory? How does religion interact with society, culture, history, politics, economics, and human nature? How do we deal with the cultural chasm when comparing the religions of two distinct cultures? Is it possible to use scientific means to track the spiritual beings said to exist by the various religions? Can personal religious feelings and spiritual experiences be shared publicly in a rational and analytical manner? Who would volunteer for a candid disclosure of his/her secret religious sentiments? Questions like these will surely complicate our inquiry but they can help explain why there is a boundless domain of research for the complex and inclusive field of religious studies.

WHAT IS RELIGION

When speaking of religions, we may think of certain worldwide religions such as Buddhism, Islam, and Christianity. We may also think of some folk religions and practices which involve the worship of spiritual beings as well as the sacrificial rituals of some ancient tribes. Those who have been exposed to traditional Chinese culture would likely have seen debates concerning the correctness or incorrectness of classifying Confucianism as a religion. People who are seeking the exact meaning of the term "religion" and are interested in having something more in-depth than dictionary definitions may start their search in the field of theology or the field of religious studies but these are two substantially different branches of knowledge. Theological approaches are essentially based on one's belief.⁽¹⁰⁾ Theological definitions tend to summarize and reiterate the internal believer's perspective.⁽¹¹⁾ Also, a theologian's goal is to prove his/her own religion true and disprove all others.⁽¹²⁾ So, what can come out of this type of academic attitude are opinions suitable for sharing only with those who have accepted the same belief. The field of religious studies, on the other hand, is to examine religion and compare various religions from an external point of view.⁽¹³⁾ Researchers may explore and experience the insider's perspective as part of the investigation but, in principle, they are not supposed to be biased in their research. Therefore, definitions formulated by practitioners in this field will be more useful to the general public. Although historically many practitioners of religious studies have some sort of theological background, a practitioner cannot openly attack the views of others simply based on his/her own religious beliefs or disbeliefs when following the most fundamental principle of this field. Are there any exemplars of perfect impartiality in the last two centuries? This question will be addressed later in this chapter and also in the next chapter. In the mean time, I shall make an attempt to define religion by using the wisdom of an average person and supplement my discussion with a few expert opinions.

The term "religion" can sometimes give people the impression of something which is very concrete and formal while at other times something which is very abstract and unconventional. On the concrete side, there are religious groups which are noticeably organized, churches and temples which are architecturally majestic, rituals and ceremonials which are sacred and solemn, texts and scriptures which are rich in both

emotion and rhetoric, hymns and music which can calm or move people's minds, paintings and craftworks which are exquisite and breathtaking, precepts and commandments which form moral principles, scriptural verses which are profound and inspiring, myths and narratives which touch people's hearts, and monks and nuns who have vowed to devote their whole lives to faith. All these are things which the average person can discern with physical senses. On the abstract side, religion can also involve transcendent concepts and ideals, unsearchable spiritual beings, mysterious supernatural forces, and tales of one's prelife and afterlife. All these are things which the average person can grasp only through imagination. Religious activities can sometimes be very open while at other times very private. Preaching functions such as dharma events, evangelist events, and celebration of religious festivals are usually open for public participation. The meditation of a hermit, the reconciliation inside a confessional, and a large number of the activities which take place in the holy shrine are isolated. Religious aura can sometimes fill the entire community whereas, at other times, it can be purely personal. The parades at various religious festivals, the religious decorations in many households, the resounding bell tolls at churches and temples, and the legal system of a theocracy can all remind us of the presence of religion. The experience of meditation, the attainment of enlightenment, the gain from spiritual formation, and the feeling of divine presence may, in contrast, only be knowable to the individual involved. However, despite the multitudes of impressions created by the term "religion" and despite the uniqueness which any of these impressions may claim, every religion has to depend on their adherents to survive. In other words, a religion can become a religion because there are those who would follow the religious leader. A religious doctrine is worshipped as the truth because there are those who would take it as the truth. The scriptures and objects of a religion are regarded as holy scriptures and sacred objects because there are those who would treat them as holy scriptures and sacred objects. To the nonreligious or adherents of a different religion, such "truth", "holy scripture", and "sacred objects" may have no transcendent meanings. In the unfortunate event that this religion comes under attack by the exclusive and intolerant adherents of a different religion, it may even be portrayed as something evil and sacrilegious since terms like "heresy" and "possessed by all devils" had been used in similar historical incidents.

Judging from their daily lives, the religious and the non-religious are not much different from one another. They all need food, clothing, housing, and transportation. They all have emotions to some extent. They all can catch diseases and become ill. They all have better days and worse times. They all have impressive features and the less impressive. When the time comes, they all will perish. When comparing religious people and non-religious people from the same category, no one seems to have any advantage over the others. However, when you take a closer look at the true devotees, it is not difficult to discover that they have certain qualities which may be missing in the average non-religious person. For whatever happens in the world, whether good or bad, the true devotees can explain it from their religious perspectives and make it sound meaningful despite the contradictions and perplexities. Their religious peace of mind can keep them from falling deeply into despondence and depression amidst the ordeals of life and they appear to be spiritually motivated by their religion to remain confident and persistent even under adverse conditions. More importantly, they do not seem to be overly concerned with the dreaded phenomenon of death. If you talk with them further, you will discover that they are different from the average person in terms of their values, life-views, and worldviews. Although religious doctrines differ between religions, with some being atheist, some being monotheist, some being polytheist, some involving a perpetual soul, some involving a varying stream of consciousness, some believing in judgment after death, some believing in samsara, some emphasizing salvation, some emphasizing unity with heaven, and some emphasizing selfpurification, the diversity in doctrines is not the nub of the matter. The nub of the matter is the values, the life-views, and the worldviews shaped by various religions can significantly alter their believers' spiritual lives and equip their believers with faith and impetus different from those of the ordinary person. This, seemingly, is a special function of what we call "religion".

In the foregoing chapter, we talked about how scientists defined life in some biology textbooks. By applying our learning therefrom, it may seem feasible to name three approaches for defining religion. The first approach is to seek some doctrinal elements common to all religions and lay bare them with one penetrating remark to formulate the definition. For example, if what the average person would accept as "religion" are religions which emphasize faith and posit that life has a non-physical component which will not die with the body, then we can define "religion" as a faith that life has a non-physical component. The second approach is to seek some important functions common to all religions and use them as the basis of our definition. For example, if what the average person would classify as "religion" are religions which can instill a system of special concepts into their believers and this system of concepts can alter the believers' life-views and enable them to maintain their moods and show their mettle, which is something that no other types of education can accomplish, then we can define "religion" as the spiritual education capable of controlling a person's attitude towards life for an extended period of time. The third approach is to ignore the essence and functions of all religions but simply list the superficial features common to all of them for definition purposes. For example, if what the average person would recognize as "religion" are religions featuring founder(s), followers, beliefs, scriptures, preaching, practices, precepts, institutions, rituals, myths, sacred objects, and spiritual experiences, then anything with such features may be called a religion.

Examples in the last paragraph were amateurishly composed. How do experts in the field of religious studies define religion? Well, modern religious studies originated in 19th century Europe.⁽¹⁴⁾ There has never been a general consensus on the definition or explanation of religion. Any definition or explanation proposed by a practitioner can be heavily criticized by his/her colleagues. In a 21st century work, Seth Kunin named essentialist definitions, substantialist definitions, and functionalist definitions as the three basic types of definitions. He also suggested that open-ended definitions could be sought analogically or dialectically for greater flexibility and cross-cultural applicability.⁽¹⁵⁾ Thus, the process of definition is diverse even in its approaches and methodologies. The below examples, which are quotes from the works of some renowned authors or paraphrases thereof, is to let the readers have a feel for such diversity:

 In his Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Language, Art and Custom, the British anthropologist Sir Edward Burnette Tylor (1832-1917 CE) wrote the following:⁽¹⁶⁾

The first requisite in a systematic study of the religions of the lower races, is to lay down a rudimentary definition of religion. By requiring in this definition the belief in a supreme deity or of judgment after death, the adoration of idols or the practice of sacrifice, or other partiallydiffused doctrines or rites, no doubt many tribes may be excluded from the category of religious. But such narrow definition has the fault of identifying religion rather with particular developments than with the deeper motive which underlies them. It seems best to fall back at once on this essential source, and simply to claim, as a minimum definition of Religion, the belief in Spiritual Beings.

Note that Tylor, as a Victorian, had used the racist term "lower races" which is unacceptable in the

present world but was probably quite common in his time as many prominent civilizations in the old days had the habit of scorning the less developed. I do not support the use of racist terms by Tylor or by anyone else but, since this is a direct quote, no editing has been done.

2) In *The Varieties of Religious Experience*, American philosopher and psychologist William James (1842-1910 CE) wrote the following:⁽¹⁷⁾

Religion, therefore, as I now ask you arbitrarily to take it, shall mean for us *the feelings*, *acts*, *and experiences of individual men in their solitude*, so far as they apprehend themselves to stand in relation to whatever they may consider the divine ...

We escape much controversial matter by this arbitrary definition of our field. But, still, a chance of controversy comes up over the word 'divine', if we take it in the definition in too narrow a sense. There are systems of thought which the world usually calls religious, and yet which do not positively assume a God. Buddhism is in this case. Popularly, of course, the Buddha himself stands in place of a God; but in strictness the Buddhistic system is atheistic. Modern transcendental idealism, Emersonianism, for instance, also seems to let God evaporate into abstract Ideality ...

In *The Elementary Forms of the Religious Life*, French sociologist Emile Durkheim (1858-1917 CE) wrote the following:⁽¹⁸⁾

Thus we arrive at the following definition: A religion is a unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden—beliefs and practices which unite into one single moral community called a Church, all those who adhere to them. The second element which thus finds a place in our definition is no less essential than the first; for by showing that the idea of religion is inseparable from that of the Church, it makes it clear that religion should be an eminently collective thing.

- 4) In his paper titled "Religion: Problems of Definition and Explanation", American anthropologist Melford Spiro (1920-2014 CE) defined religion as an institution made up of culturally modelled interaction with culturally posited superhuman beings.⁽¹⁹⁾ He explained "interaction" as two types of activities including (i) those believed to be performed at the pleasure of superhuman beings in order to win their blessings and/or to guard against their wrath, and (ii) those believed to influence superhuman beings so that they would fulfil the believers' needs.⁽²⁰⁾ As for "superhuman beings", he described them as beings who were more powerful than humankind and capable of helping or harming humankind and whose attitudes towards humankind were influenceable, to some extent, through the two aforementioned types of activities.⁽²¹⁾
- 5) In his paper titled "Religion as a Cultural System", American anthropologist Clifford Geertz (1926-2006 CE) defined religion as a "system of symbols" which initiates "powerful, pervasive, and long-lasting moods and motivations" in humankind by constructing "conceptions of a general order of existence" and dressing such conceptions with an "aura of factuality" which would make "the moods and motivations seem uniquely realistic".⁽²²⁾ Knowing that the word "symbol" was quite polysemous, Geertz made it clear that the meaning of "symbol" was the conception to be instilled and the "system of symbols" could be anything tangible (e.g. an object) or intangible (e.g. an act,

an event, a quality, or a relation) used as a medium for a conception.⁽²³⁾

- 6) Ninian Smart (1927-2001 CE), a Scottish educator and a religious phenomenologist who taught religious studies in Britain and the United States, did not support the use of essentialist definitions since, in his opinion, the search for essence would end up in vagueness.⁽²⁴⁾ In his work titled *The World's Religions*, he identified seven aspects or dimensions of religion which one could look at in order to understand the variety and discern the patterns of the religions of the world. These seven dimensions are as follows:⁽²⁵⁾
 - a) the practical and ritual dimension which encompasses regular religious activities such as worship, preaching, and prayers;
 - b) the experiential and emotional dimension which includes believers' religious emotions and religious experiences;
 - c) the mythic and narrative dimension which involves creation myths, edifying tales, and endof-the-world predictions as well as stories about the founders, the saints, the great heroes, etc.;
 - d) the doctrinal and philosophical dimension which entails all kinds of intellectual and philosophical statement of what the religion is all about;
 - e) the ethical and legal dimension which embraces the moral rules for adherents and the religious law derived from religious principles (e.g. the five precepts for lay Buddhists, the hundreds of rules of Judaism, and the Islamic law);
 - f) the social and Institutional dimension which subsumes the products of organization and institutionalization of religion (e.g. the Roman Catholic Church); and
 - g) the material dimension which covers various material forms with religious significance, such as buildings and works of art on a smaller scale and holy cities and sacred rivers or mountains on a larger scale.

PLUGGING INTO THE FORMULAS

After reading six different definitions of religion formulated separately by some famous scholars, let us see if any of them can encompass Confucianism. Since Confucianism originated from the teachings of Confucius (孔子) who did not discuss the topics of strange phenomena, force, disorder, and deities and who also did not teach subjects outside the physical world as mentioned in Chapter 3 of this book, it is obvious that neither of the definitions proposed by Tylor and Spiro can qualify it as a religion. The definition of James laid stress on the relationships between individuals and what they would consider the divine, which is completely out of phase with the emphasis which Confucianism placed on the relationships between a person and his/her family and society. Durkheim's definition did centre on the social aspect but what he meant by "sacredness" was a value created by setting things apart and forbidden which is not comparable to the Confucian values of *rén* (仁) and *yì* (義) (meanings as discussed in Chapter 3) since *rén* and *yì* are supposed to be self-motivated and naturally expressed through every aspect of our daily lives. The next definition to be trialed is Smart's seven dimensions, which were obviously derived from the framework of Christianity. If we arbitrarily split up the system of Confucian classics and associated cultural heritage for the sake of plugging into Smart's doctrinal and philosophical dimension, cramming the *Zhōu Lǐ* (周禮) into

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the social and institutional dimension, wedging the *Yi Lĭ* (儀禮) into the practical and ritual dimension, shoehorning the *Lĭ Jî* (禮記) and *Xiào Jīng* (孝經) into the ethical and legal dimension, hammering the Three Commentaries on the *Spring and Autumn Annals* (春秋三傳) into the mythic and narrative dimension, and labelling the monuments built in remembrance of Confucius as examples of the material dimension, the result will be neither fish nor fowl. After all, the Confucian quote on no discussion of strange phenomena, force, disorder, and deities has already provided concrete evidence that Confucianism is not underdeveloped in the mythic and narrative dimension but is simply against the use of mythic materials as the guiding principles for edifying oneself and building harmony in the family, the state, and the world. Thus, after some initial screening, only the definition of Geertz remains.

If we treat the Thirteen Classics (十三經) of Confucianism as the "system of symbols" in Geertz's definition, then the Confucian moral concepts of $s\bar{a}n g\bar{a}ng$ (三綱), $s\bar{i}$ wéi (四維), and wǔ cháng (五常) as discussed in Chapter 3 may be regarded as some formulated "conceptions of a general order of existence"; and $q\bar{i}jie$ (氣節; *lit.* integrity and moral courage), a virtue traditionally prided by Chinese scholars for over two millennia, may be viewed as one example of the "powerful, pervasive, and long-lasting moods and motivations" established through the instillation of Confucian thought. As for how an "aura of factuality" can be generated to make these moods and motivations "seem uniquely realistic", let us use the history of Wén Tiānxiáng (文天祥) (1236-1283 CE) as an example.

During the final years of the Sòng dynasty (\Re 朝), the army of the Yuán dynasty (π 朝) pushed south and captured Wén who was a scholar and a general on the defence line. As a prisoner of war admired by his captors, Wén was offered the opportunity to defect but he opted for execution instead. He selected his fate not because he thought he would enter heaven for eternal life after dying for his country but because of his determination to die with a clear conscience and to fulfill the commitment of accomplishing *rén* and *y* $\hat{\imath}$, which are the two highest moral values in Confucianism. His "powerful, pervasive, and long-lasting moods and motivations" were well summarized by his last poem, written just before his death, which can be translated as follows:^(E-1)

Confucius said, "Accomplish rén."	孔曰成仁
Mencius said, "Accomplish yì."	孟曰取義
As my <i>yì</i> has been fulfilled,	惟其義盡
The next step is <i>rén</i> .	所以仁至
By studying the texts of our sages,	讀聖賢書
Is this not what I have learned?	所學何事
From this point onward,	而今而後
I should have no regret.	庶幾無愧

For the rest of the discussion, I shall quote and translate the first ten lines of his famous poem "Zhèng Qì Gē" (正氣歌; *lit*. Song of Positive Energy), which was written earlier in captivity:^(E-2)

The positive energy of heaven and earth,	天地有正氣
Diffused and endowed in various forms,	雜然賦流形
Down below formed rivers and mountains,	下則為河嶽
Up above formed the sun and the stars.	上則為日星
In humankind, it's called greatness.	於人曰浩然

Lustily it fills the entire universe.	沛乎塞蒼冥
In times of peace and good government,	皇路當清夷
It inspires harmony in the court.	含和吐明庭
In adversity, it shows our integrity;	時窮節乃見
Every heroic act goes down in history	一一垂丹青

As can be seen from the above excerpt, the "aura of factuality" created by the first six lines of the "Zhèng Qì Gē" is distinctly strong despite the lack of scientific evidence. The next four lines are very effective in making the corresponding moods and motivations "seem uniquely realistic". Thus, if we go by the definition of Geertz, the Confucian thought of Wén would suddenly appear as a religion. With that being the case, we must bear in mind that not every system of philosophy which meets Geertz's definition is as peaceful and merciful as Confucianism. If you prefer to not talk about contemporary politics, let us use Nazism as an example since history has already reached a conclusion on it. We can look at what the Nazi "system of symbols" was, what "conceptions of a general order of existence" it had formulated, how it had acted to establish "powerful, pervasive, and long-lasting moods and motivations" among the Nazis, and how it had turned a vanquished, post-World War One Germany into a robust world power in less than two decades. Would you care to accept some radical political ideologies as religion?

SEEKING THE ORIGIN

The foregoing discussion has led to the preliminary conclusion of this chapter. If there is no universal definition of religion, how can we judge that all religions are products of human weakness? In the opening remarks of this chapter, I indicated that the phrase "origin of religion" could have multiple meanings. I do not intend to cover the history of any particular religion in this section unless there is a very good reason since an overview of the individual histories of the world's religions will not, for the most part, help answer our caption question. Furthermore, if a religion proclaimed that its origin was the teachings of a certain supernatural being or the divine revelation received by a certain prophet, then all we could do would be to either believe it or not believe it but we could not falsify or verify it by using objective evidence. Hence, the discussion in this section will be limited to theories which explain the origin and function of religion as a whole and the majority of them are analyzable and testable.^(E-3) The theories chosen for illustration here were postulated by theorists of the father generation of modern religious studies and their influence in this field was very significant during the 20th century. I am definitely not the first person who writes about these theories and there are many good books which cover the materials which I am about to present but I have to do it in order to arrive at the conclusion in the next section.

(A) Theory of Survival, Association of Ideas, and Animism

The first theory to be introduced is taken from Tylor's *Primitive Culture* from which we have already quoted a definition of religion. The first edition of *Primitive Culture* was published approximately eleven years after Darwin published his influential theory of evolution. Not surprisingly, the 19th century idea of unilinear evolution prevailed in this work.⁽²⁶⁾ Tylor postulated that the development of religion started with the concept of the soul, then progressed to polytheistic faiths, and culminated at monotheistic religions.⁽²⁷⁾ In other words, the various forms of religion, from his perspective, were products of human evolution from the stage of being the savage to the stage of being the civilized. Tylor's theorization can be understood in

three steps. First, there was the theory of survival, meaning that some of todays' absurd ideas and outdated practices were actually passed down from past generations. One of the examples he named was the practice of saying "bless you" to someone who sneezed, which originated in ancient Europe since ancient Europeans believed that a person's body was more susceptible to invasion by evil spirits when sneezing.⁽²⁸⁾ Second, there was the association of ideas, meaning that the ancients believed that many things were associated after observing a few which truly were and then, regardless of the actual relevance or irrelevance, they started to draw parallels between things and make predictions through association of ideas.⁽²⁹⁾ Last, there was animism which was not his invention but he considered it the origin of all religions.⁽³⁰⁾ According to Tylor's deduction, primitive humans inferred from the phenomena of dream and death that life should include a non-physical component which could leave and re-enter the body and such an inference gave rise to the concept of the soul.⁽³¹⁾ As imagination turned creative, more types of souls were named and souls or spirits were also ascribed to things such as animals, plants, tools, rivers, and stones.⁽³²⁾ Taking it one step further, various natural phenomena were thought to be controlled by spiritual beings.⁽³³⁾ When these spiritual beings and the souls of people's ancestors were treated as deities and ranked according to their importance, polytheistic religions began to form.⁽³⁴⁾ Finally, people decided that it would be adequate to worship just one supreme deity and monotheism was born.⁽³⁵⁾

(B) From the Inefficacy of Magic to the Uncertainty of Religion

The second theory to be introduced is the theory of James Frazer (1854-1941 CE), who was a student of Tylor. *The Golden Bough* by Frazer was first published in 1890. Its sources of information included a large collection of folklores, legends, literatures, mythologies, and field reports which came from the more distant parts of the British Empire.⁽³⁶⁾ Frazer believed that magic came before religion in the history of human culture.⁽³⁷⁾ According to his research, primitive humans viewed magic as a useful technology and they used it for practical purposes such as curing diseases, resolving infertility, injuring their enemies, and enhancing the yields from fishing and hunting.⁽³⁸⁾ In other words, they understood magic in the same manner as we understand science today and they took magic as real and firm rules.⁽³⁹⁾ However, primitive humans learned their lessons over time and, after discovering the inefficacy of magic, they admitted their ignorance and weakness and accepted the idea that their destinies were controlled by the more powerful divine beings.⁽⁴⁰⁾ Primitive humans personified these divine beings by assuming that they were conscious and personal so that they could employ various means to propitiate them.⁽⁴¹⁾ It was such a combination of belief and practice which gave rise to religion. Frazer made a prediction in the concluding remarks of *The Golden Bough* that religion, as an explanation of nature, would eventually be displaced by science due to the ever increasing knowledge of humankind.⁽⁴²⁾

Daniel Pals called Frazer's theory ingenious. He indicated that people's faith in magic could be lost if a magic trick failed to yield the expected results but, in the world of religion, the unpredictability of divine will and competitions between deities in the case of polytheistic faiths could both serve well as explanations for why the results of prayers could not be assured; therefore, the uncertainty of religion is an advantage over magic and it agrees better with real-life experiences.⁽⁴³⁾

(C) The Oedipus Complex and the Universal Obsessional Neurosis

The third theory to be introduced is the theory of Austrian neurologist Sigmund Freud (1856-1939 CE),

who was regarded as the father of psychoanalysis. Freud often made references to religious views and practices in his works but his focused discussion about religion happened to be found in three titles, namely *Totem and Taboo, The Future of an Illusion,* and *Moses and Monotheism.*⁽⁴⁴⁾ Since *Moses and Monotheism* deals with the history of a particular religion and is not relevant to our caption question, it will not be considered here.

Totem and Taboo, as the name suggests, is a book which investigates the totemic beliefs of prehistorical tribes. Freud admitted that he was not the pioneer to seek connections between totemism and modern religions.⁽⁴⁵⁾ However, he had quite a unique interpretation about totemic worship. He noticed that the slaughter of the totem animal was an act impermissible to the individual and warrantable only through the involvement of the entire clan in a ceremonial occasion in which a meal would be made out of the animal, followed by mandatory mourning and then a celebration.⁽⁴⁶⁾ Through a psychoanalysis of this tradition, he posited the origin of totemism as follows:⁽⁴⁷⁾ Primitive humans lived in patriarchal hordes in which the robust father was the leader who would not share any of the females with others even after the sons had grown up. Acting out of jealousy and an Oedipus Complex, the sons joined forces to kill their father, take control of the horde and the females, and divide their father's corpse for a meal in order to gain a portion of his strength; but the remorse and other complicated psychological effects arising thereafter made them reflect and their filial sense of guilt resulted in two totemic taboos designed to prevent similar tragedies in the future, namely the protection of the totem animal and the prohibition of incest. Thus, the totem meal was a rerun and remembrance of the murder of the father, who was substituted by the totem animal, and the protection of the totem animal during regular days was to symbolize the refrainment from killing the father. As for the god of totemism, Freud deduced that it was also a representation of the dead father.⁽⁴⁸⁾ Freud's psychoanalytical interpretation of totemism was that human society was developed from complicity in criminal activity, that religion was developed from the feeling of guilt and the associated self-reproach, and that morality was developed from a combination of the urgent needs of society and the atonement claimed by the feeling of guilt.⁽⁴⁹⁾ In brief, he traced the origins of religion, morality, society, and art to the Oedipus Complex.⁽⁵⁰⁾

After linking the origin of religion to the Oedipus Complex in his *Totem and Taboo*, Freud offered a complementary psychoanalytical discussion in *The Future of an Illusion* which also dimmed the lustre of certain religious groups. According to this analysis, a child's need for his father's care and protection to grow up would produce a father-complex which reveals itself during adulthood at times of helplessness and results in an adult's longing for a god who would offer protection and care like a father.⁽⁵¹⁾ Freud used the term "illusions" to denote things which people believed to be true because they wanted them to be true. He concluded that illusions, though different from delusions, were derived from human wishes and all religious thoughts were illusions.⁽⁵²⁾ He described religion as the universal obsessional neurosis of humankind, much like the neurosis which a human child needed to go through before developing into adulthood.⁽⁵³⁾ As for his prediction for the longer-term, Freud argued that humans could eventually do without the consolation of religious illusions and that scientific knowledge could offer assistance to make this happen.⁽⁵⁴⁾

(D) The Sacred-Profane Dichotomy That Motivates People

The fourth theory to be introduced came from *The Elementary Forms of the Religious Life* by Emile Durkheim, whose definition of religion has been quoted. Durkheim identified the first criterion of religious beliefs as a dichotomy between sacred things and profane things; he defined sacred things as things which

were set apart and protected by interdictions and profane things as things to which such interdictions would apply.⁽⁵⁵⁾ In order to demonstrate that sacred things were not necessarily connected with divinity, he used Buddhism as an example and said that Buddhism became a religion without gods because it acknowledged the existence of sacred things, namely the four noble truths.⁽⁵⁶⁾ Durkheim also placed great emphasis on the type of organization known as "Church" and asserted that there was not a single religion in history which existed without a Church.⁽⁵⁷⁾

Like Freud, Durkheim also considered totemism the most elementary form of religion but he had a greater interest in Australian totemism than other varieties due to its homogeneity and simplicity and due to the completeness of pertinent documents.⁽⁵⁸⁾ He researched religion from a sociological perspective with emphasis on the function of religion and the relationship between religion and society. He did not see the later and more complex forms of religion as necessarily better.⁽⁵⁹⁾ He believed that members of a religious group were united by their common faith and common view regarding the sacred world.⁽⁶⁰⁾ He noted the multifunctionality of the totem, which could serve as a name, an emblem, and the very sacred thing of a religion.⁽⁶¹⁾ The conclusions of his analysis are very different from those in Freud's study of totemism: The clan's worship of the totemic principle is the same as worshipping itself.⁽⁶²⁾ The soul in totemism is the totemic principle in the consciousness of every member of the clan.⁽⁶³⁾ The immortality of the soul is the endless life of the clan which carries on despite the deaths of individuals.⁽⁶⁴⁾ The tribal god is the spirit of a prominent ancestor.⁽⁶⁵⁾ Religious ascetism is a symbol of individual sacrifice for the good of the clan.⁽⁶⁶⁾ The purpose of holding ceremonies of celebration and ceremonies of mourning are to gather members of the clan, bring out their common faith and collective sentiments, renew their motivating force, and heal their emotional wounds.⁽⁶⁷⁾ In the final chapter of *The Elementary Forms of the Religious Life*, Durkheim said that science could not take the place of religion since religion could give faith and impetus to action while science was fragmentary and incomplete and the progress of science was slow, never finished, and longer than what life could wait.⁽⁶⁸⁾ Thus, Durkheim's vision for the future of religion is very different from those of Tylor, Frazer, and Freud.

(E) Defending the Ruling Class by Making False Consciousness

The fifth theory to be introduced is the religious view of German philosopher Karl Marx (1818-1883 CE). Marx considered economics the underlying structure from which other superstructures such as arts, religion, science, and law were derived; for this reason, he viewed religion not as something independent and necessary but something invented to justify a given economic structure, alienate people, make false consciousness, and help the ruling class sedate the ruled majority.⁽⁶⁹⁾ Like Freud, Marx theorized on the basis of his study of Judeo-Christian monotheism and treated his conclusion as universally applicable to all other religions.⁽⁷⁰⁾ The below passages are short excerpts from a translation of his "Critique of Hegel's Philosophy of Right":⁽⁷¹⁾

The basis of irreligious criticism is this: *man makes religion*; religion does not make man. Religion is indeed man's self-consciousness and self-awareness so long as he has not found himself or has lost himself again. But *man* is not an abstract being, squatting outside the world. Man is *the human world*, the state, society. This state, this society, produce religion which is an *inverted world consciousness*, because they are an *inverted world*. Religion is the general theory of this world, its encyclopedic compendium, its logic in popular form, its spiritual *point d'honneur*, its enthusiasm, its moral sanction, its solemn complement, its general basis of consolation and justification. It is *the fantastic realization*

of the human being inasmuch as the *human being* possesses no true reality. The struggle against religion is, therefore, indirectly a struggle against *that world* whose spiritual *aroma* is religion.

Religious suffering is at the same time an *expression* of real suffering and a *protest* against real suffering. Religion is the sigh of the oppressed creature, the sentiment of a heartless world, and the soul of soulless conditions. It is the *opium* of the people.

(F) A Theologian's Counterattack and the Invention of a New Word

Each of the five theories discussed above may be unique in certain aspects but they share at least one important commonality: they explain the origin of religion in terms of some non-religious phenomena such as knowledge, psychology, society, and economics.⁽⁷²⁾ This technique of reductionism had undoubtedly deprived many religions of their sacredness and autonomy. As a result, counterattacks from religionists were much anticipated. The Idea of the Holy by the German historian and theologian Rudolf Otto (1869-1937 CE) is a theological work which emerged against such a background.⁽⁷³⁾ Otto opened the first chapter of this title by claiming the superiority of Christianity. His theologian temperament can be seen throughout the entire work. He was subtle enough to not propose a theory which could be explained away by the reductionists. Instead, he told his readers to explore the non-rational factor when seeking to understand the idea of the holy.⁽⁷⁴⁾ In order to show that religion was meant to be understood in its own terms, he created the word "numinous" from the Latin word "numen", used it to portray the holiness of the divine, and distinguished it from the notion of sacredness which could be a human construct applicable to a variety of things.⁽⁷⁵⁾ He also provided a lengthy, self-containing explication for this new word invented by himself and used terms such as "mysterium tremendum", "the wholly other", "awe", and "fascination" to describe the "creature-feeling" which he said would occur during an encounter with the numinous.⁽⁷⁶⁾ Ivan Strenski called this work of his "a model piece of religious phenomenology".⁽⁷³⁾ Seth Kunin pointed out that his comparative study was grounded in his own "theological presuppositions and beliefs" but neither of which was testable.⁽⁷⁷⁾ As for the "awe", the "tremendum", and the "fascination" suggested by him, the readers can decide for themselves as to whether these are signs of the type of human weakness as mentioned in the letter which Einstein wrote to Gutkind.

AN EXAMPLE OF EXCEPTION

If we seek an integrated answer to our caption question by taking the pith of the respective theories of Tylor, Frazer, Freud, Durkheim, and Marx, it may seem fair to say that all religions are either products of the ignorance, weakness, remorse, illusions, self-worship, and escapism of humankind or tools devised by the ruling class to gather and control the ruled masses. Such a generalization will not only encompass the keynote of the aforementioned letter of Einstein but also agree with many real-life examples. From time to time, we hear religious testimonies where adherents preach their respective faiths by sharing some of their personal experiences. Some of them would tell it smoothly and vividly. Some of them would make it loud and awakening. Some of the following set patterns: (1) The testifier was caught in a helpless situation for whatever reasons but was fortunate enough to be bailed out by some divine being or to have received support from a certain religion to survive through the difficult times. (2) The testifier went down a path of self-destruction or made some irredeemable blunders which ruined his/her life but the message of

a certain holy spirit or the preaching of a certain religion brought him/her back on track to start a new life. (3) The testifier suffered some traumatic experiences or some devastating losses which completely changed his/her attitude towards life and since then he/she became a devout believer. (4) The testifier lived in a state of sadness and depression due to circumstances or due to his/her own doings but became a happy person after accepting or converting to a certain religion. The tragic past of these testifiers may well deserve our sympathy but, with all due respect, and, as a comment without prejudice, such religious testimonies cannot prove any religion truer or better since adherents of other religions can have similar experiences and they too can give similar testimonies about their respective faiths. What such religious testimonies are most capable of proving are these two things: (1) Emotional fragility can cause the majority of people to become more receptive to religion and more dependent on religion. (2) Religious attitude is more often directed by emotion than by rationality.

I lived in Hong Kong during my childhood and part of my teenage years. I remember picking up religious leaflets from the mailbox from time to time saying that some great catastrophe would strike on a certain date and urging people to seek divine protection by donating peace money to some religious groups or by buying talismanic placards from them. When the day came, I noticed that some of the neighbours did paste those placards onto their doors. I also remember reading stories in the newspapers about sex crimes and property crimes which involved religious schemes. Although different types of tricks were used, they all seemed to target vulnerabilities caused by the victim's own greed and other aspects of human weakness. Sadly, many people would rather accept make-believe stories than to ignore them when dealing with the unknown and religious threats. It was observations like these which made me think that my ethnic group, the Chinese, was particularly superstitious. However, after immigrating to Canada in the 1970's, which was a time when the world was unnerved by the Cold War between the United States and the Soviet Union, I could still pick up religious leaflets from the mailbox and religionists would come to the door to tell me that the world was about to end and one should start praying for salvation immediately. There were also televised faith healing events and dramatized stories about the Cold War which made the apocalypse sound so real. These new experiences revealed to me that the tie between religious belief and human weakness was not ethnical or geographical but universal.

Hitherto, it appears that we are left with only two options in our search for the origin of religion: (1) to accept the guidance of reductionists and use real-life properties to explain away all religions, or (2) to follow in the footsteps of theologians and let our own everchanging subjective feelings and emotions to lead us to believe in things which we shall never rationally understand. Is this the ultimate outcome of doing in-depth research in religious studies? Absolutely not. In my opinion, such an apparent stalemate can only represent the limit of academic research occurred in the times and geographical regions of the ancestors of modern religious studies. Although the aforementioned theories differed in thesis and although some of them were not published until early in the 20th century, all of them seemed to have been bounded by the mainstream cultural thought pattern of 19th century Europe to a certain degree. From the 19th century to the early 20th century, the economic growth, industrial expansion, and intellectual development in Europe and America were all in a rapid stride, leading to unprecedented achievements. At the same time, European colonialism had reached its peak of ruling the world. Despite the fact that certain Western scholars had shown interest in the cultural heritage of the Eastern Hemisphere and despite the academic objectivity of some individuals, the overall academic climate in the West was Eurocentric and it was not unusual for Western intellectuals in those days to use values and concepts of the West as the basis for evaluating various cultural aspects of the East. Thus, it should not be surprising that such an approach could have led to neglect, distortion, or

even disparagement of the subjects of their Eastern studies. Religion as an important aspect of cultural development was no exception. Had every Western scholar of the father generation of modern religious studies been able to give the same level of respect to ancient China's Confucianism and ancient India's Buddhism as they did with the major religious traditions in the West, some of their theories might have been written differently. Since it is still a subject of debate among the Chinese as to whether Confucianism should fall within the category of religions, I shall use Buddhism as an example to illustrate that human weakness is not necessarily involved in the origin of every religion.

Buddhism is the belief in the teachings of the Buddha and the practice of the teachings of the Buddha. In order to avoid materials which may be considered mythic, only the historical Buddha will be introduced here and the information will be limited to what is available in one of the widely used university textbooks of religious studies in the West, which should, in theory, contain no biases towards Buddhism.

According to various studies, the Buddha was born in the southern part of present-day Nepal and lived for about eighty years around the 6th or 5th century BCE.⁽⁷⁸⁾ At that time, northern India was one of the world's most vibrant centres of civilization. The Buddha, whose name at birth was Siddhārtha Gautama, was originally a prince from the small kingdom of the Sākya people. He was known as the "Sākyamuni Buddha" after attaining buddhahood and is commonly referred to as "the Buddha" today.^{(79)(E-4)} The young prince was endowed with martial and intellectual talents and had won every bit of his father's love. Since some brahmins predicted that he would either rule a large empire one day or live the life of a monk and attain perfect enlightenment as a buddha, his father ordered that no sign of unhappiness be allowed near him for fear that any exposure to the harsh realities of life might lead him to forsake the secular world. Grown up in such a perfect environment, the prince went for a chariot ride one day and saw a suffering old man, a sick man, and a dead man which were scenes that suddenly made him aware of the hard facts of life. He also saw a monk whose calmness and serenity inspired him to follow the example and find a way to free everyone from the adversity of life.⁽⁸⁰⁾ After becoming a monk, the prince learned classical yoga from two gurus but found that even the tranquillity offered by their highest level of practice was inadequate for his purpose. He then switched to asceticism for six years but that still did not fulfill his goal. Therefore, he resumed normal diet and meditated under a tree which was later known to Buddhists as the Bodhi tree. From there, he finally reached the state of full and highest enlightenment and discovered that the method of breaking samsara (the endless cycles of life and death) was to attain buddhahood. Emerged as the Sākyamuni Buddha (also referred to as the "Gautama Buddha"), he decided that his method of liberation from samsara was teachable to everyone and learnable by everyone. So, he travelled to various kingdoms in India in the next forty years to enlighten others and had disciples ranging from kings to commoners. This was the beginning of Buddhism.⁽⁸¹⁾

The above historical account of the Buddha is brief but it is good enough to serve as an example to show that a religion does not have to arise from human weakness. Siddhārtha Gautama was born into a royal family and was next in line for the throne. His kingdom, power, and glory were inborn assets; so, he needed not to acquire them through religious means. He was one of the intellectual elites educated in the royal system; so, he did not turn to the religious world because of ignorance. He enjoyed life as a happy prince and he was always given what he wanted; so, he had no remorse, no regret, no racial hatred, and no resentment of class struggle. He did not leave the palace to redeem some sort of sin, or to find a way to bring his people together, or to escape reality, or to pursue the illusion of eternal life. He did not return to the palace to start a theocracy after attaining enlightenment. He did not use religion as a political tool. He

did not call himself god to win worship and glorification from his people. He gave up what the average secular person would long for to enlighten other sentient beings. He advocated social equalitarianism in a society of strict caste. He rejected the idea that gods and goddesses were the absolute controlling power in an era when blind faith in deities was the norm. All these factors are evidence that may show us that the origin of Buddhism was pure compassion, pure right resolve, and pure courage of which none may be considered a sign of human weakness. It is worth mentioning that many of my Buddhist friends became Buddhists simply for the sake of compassion. Like what was said in the preface of this book, they want everyone to have happiness when they have happiness and they want everyone to be free from suffering when they are suffering. This is not a sign of human weakness also.

That is all for my answer to the caption question of this chapter. Now is time for a concluding poem:

Religion

Mysterious as ever Is the supernatural. Don't call it clever When we try magic on what's natural. Totem poles can spark discussions And annotations. Illusions can reveal one's longings And yearnings. A sniff of the religious opium, My consciousness loses its signal. A glimpse of the *mysterium*, The "numinous" blinds the rational. So much about the spiritual And the non-spiritual. My return to compassion is final, For the world is not eternal.

-Lung, Tin Yick -

ENDNOTES

Endnotes carried over from the 2014 Chinese edition are numbered numerically as before, with some reformatting and typo corrections. Supplementary endnotes for the 2020 English edition are numbered alphanumerically with the prefix "E-".

Part 1: Endnotes Carried Over From the 2014 Chinese Edition

- 1. Alice Calaprice, ed., *The Ultimate Quotable Einstein* (Princeton: Princeton University Press, 2011), p. 342.
- 2. Ibid., p. 393.
- 3. Ibid., p. 335.
- 4. Walter Isaacson, *Einstein: His Life and Universe* (New York: Simon and Schuster, 2008), p. 390.
- 5. Calaprice, The Ultimate Quotable Einstein, p. 340.

- 6. Isaacson, *Einstein*, p. 84.
- 7. Calaprice, The Ultimate Quotable Einstein, p. 325.
- 8. Isaacson, *Einstein*, p. 335.
- 9. Ibid., p. 388.
- 10. Seth D. Kunin, *Religion: The Modern Theories*, (Baltimore: The Johns Hopkins University Press, 2003), p. vii.
- 11. Seth D. Kunin w/ Jonathan Miles-Watson, eds., *Theories of Religion: A Reader* (Edinburgh: Edinburgh University Press, 2006), p. 3.
- 12. Daniel L. Pals, *Eight Theories of Religion*, 2nd ed. (New York: Oxford University Press, 2006), p. 4.
- 13. Kunin, *Religion*, p. 3.
- 14. Eric J. Sharpe, *Comparative Religion: A History*, 2nd ed. (London: Duckworth, 1986, impression 2009), pp. 27-35.
- 15. Kunin, Theories of Religion, pp. 3-7, pp. 19-21.
- 16. Edward Burnett Tylor, Vol. 1 of *Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Language, Art, and Custom*, 6th ed. (London: John Murray, Albemarle Street, 1920; repro. by Nabu), p. 424.
- 17. William James, *The Varieties of Religious Experience: A Study in Human Nature*, ed. Martin E. Marty (USA: Longmans, Green, & Co., 1902; London: Penguin Books, 1985 (40)), p. 31. Citations refer to the reprint edition.
- 18. Émile Durkheim, *The Elementary Forms of the Religious Life*, trans. Joseph Ward Swain (London: George Allen & Unwin Ltd., 1915; Mineola: Dover Publications, 2008), p. 47. Citations refer to the reprint edition.
- 19. Melford E. Spiro, "Religion: Problems of Definition and Explanation" in *Anthropological Approaches to the Study of Religion*, ed. Michael Banton (London: Tavistock Publications, 1966; London: Routledge, 2004), p. 96. Citations refer to the Routledge reprint edition.
- 20. Ibid., p. 97.
- 21. Ibid., p. 98.
- 22. Clifford Geertz, "Religion as a Cultural System" in *Anthropological Approaches to the Study of Religion*, ed. Michael Banton (London: Tavistock Publications, 1966; London: Routledge, 2004), p. 4. Citations refer to the Routledge reprint edition.
- 23. Ibid., p. 5.
- 24. Ninian Smart, *The World's Religions*, 2nd ed. (New York: Cambridge University Press, 1998, 5th printing 2011), pp. 11-13.
- 25. Ibid., pp. 13-22.
- 26. Kunin, *Theories of Religion*, p. 99.
- 27. Daniel L. Pals, ed., *Introducing Religion: Readings from the Classic Theorists* (New York: Oxford University Press, 2009), p. 3.
- 28. Tylor, Vol. 1 of *Primitive Culture*, pp. 97-102.
- 29. Ibid., pp. 115-121.
- 30. Ibid, p. 426.
- 31. Ibid., p. 428.
- 32. Ibid., pp. 467-477.
- Edward Burnett Tylor, Vol. 2 of *Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Language, Art, and* Custom, 4th ed., revised (London: John Murray, Albemarle Street, 1903; repro. by Bibliolife), pp. 184-186.
- 34. Ibid., pp. 109-124, 247-251.
- 35. Ibid., pp. 334-336.
- 36. Pals, *Introducing Religion*, p. 37.
- 37. James George Frazer, *The Golden Bough: A Study in Magic and Religion*, a new abridgement from the 2nd and 3rd ed., ed. Robert Fraser (Oxford: Oxford University Press, 1994, reissued 2009), pp. 52-53. Citations refer to the re-issued edition.
- 38. Ibid., pp. 28-31.
- 39. Ibid., p. 45.
- 40. Ibid., pp. 55-57.
- 41. Ibid., pp. 46-48.
- 42. Ibid., p. 805.
- 43. Pals, Introducing Religion, p. 38.

- 44. Ibid., pp. 71-72.
- 45. Sigmund Freud, *Totem and Taboo: Some Points of Agreement between the Mental Lives of Savages and Neurotics*, trans. James Strachey (New York: W.W. Norton, 1950), p. 100.
- 46. Ibid., p. 140.
- 47. Ibid., pp. 141-145.
- 48. Ibid., pp. 147-148.
- 49. Ibid., pp. 145-146.
- 50. Ibid., pp. 156-157.
- 51. Sigmund Freud, *The Future of an Illusion*, trans. and ed. James Strachey, bio. intro. Peter Gay (New York: W.W. Norton, 1989), pp. 29-30.
- 52. Ibid., pp. 38-42.
- 53. Ibid., pp. 54-56.
- 54. Ibid., pp. 62-63.
- 55. Durkheim, The Elementary Forms of the Religious Life, pp. 40-41.
- 56. Ibid., p. 37.
- 57. Ibid., p. 44.
- 58. Ibid., pp. 95-96.
- 59. Kunin, Religion, pp. 16-17.
- 60. Durkheim, The Elementary Forms of the Religious Life, p. 43-44.
- 61. Ibid., p. 119.
- 62. Ibid., p. 206.
- 63. Ibid., pp. 248-249.
- 64. Ibid, pp. 268-269.
- 65. Ibid., p. 290, 295.
- 66. Ibid., pp. 316-317.
- 67. Ibid., pp. 348-349, 401-402.
- 68. Ibid., pp. 430-431.
- 69. Kunin, *Religion*, pp. 6-8, 11.
- 70. Pals, Introducing Religion, p. xxiii.
- 71. Karl Marx, "Critique of Hegel's Philosophy of Right" [1844], in *Karl Marx: Early Writings*, trans. and ed. T.B. Bottomore (London: C.A. Watts & Co., 1963), p. 171.
- 72. Ivan Strenski, *Thinking about Religion: An Historical Introduction to Theories of Religion* (Malden: Blackwell Publishing, 2006), pp. 176, 209, 234, 295.
- 73. Ibid., pp. 181-183.
- 74. Rudolf Otto, *The Idea of the Holy: An Inquiry into the non-rational factor in the idea of the Divine and its relation to the rational*, 2nd ed., pb., trans. John W. Harvey (London: Oxford University Press, 1958 (59)), pp. 1-4.
- 75. Ibid., pp. 5-7.
- 76. Ibid., pp. 8-40.
- 77. Kunin, Religion, p. 66.
- 78. Roy C. Amore, "Buddhist Traditions" in *World Religions: Eastern Traditions*, 3rd ed., ed. Willard G. Oxtoby and Roy C. Amore (Don Mills: Oxford University Press, 2010), pp. 182-183.
- 79. Ibid., p. 180.
- 80. Ibid., pp. 184-186.
- 81. Ibid., pp. 186-189.

Part 2: Supplementary Endnotes for the 2020 English Edition

- E-1. This poem may be found in many anthologies of Chinese literary works but I quoted it from the *Gǔjīn Wénxuǎn* (古今文選) edited by Liáng Róngruò (梁容若) and Qí Tiěhèn (齊鐵恨) (ref. 梁容若、齊鐵恨 主編, 注音詳解《古今文選》精裝本第一集, 梁容若 撰寫, "成仁取義的文天祥" (臺北: 國語日報社印行, 1957), p. 248 (總)). Note that the original is rhymed but my translation is in the form of free verse.
- E-2. This is another famous poem of Wén Tiānxiáng (文天祥) which may be found in many anthologies of Chinese potetry. I quoted it from a different article in the same source as stated in endnote E-1 above (ref.

梁容若、齊鐵恨 主編, 注音詳解《古今文選》精裝本第一集, 文天祥 撰寫, "正氣歌並序" (臺北: 國語日報社 印行, 1957), p. 241 (總)). Again, the original is rhymed but the translation is not.

- E-3. It appears that the words "theory" and "hypothesis" are often used interchangeably in the field of religious studies. This is different from the practice in the field of natural science where a sharp distinction is drawn between the two. Since this chapter is focused on religion, the words "theory" and "hypothesis" are also used interchangeably throughout the entire chapter (plural forms inclusive).
- E-4. Endnotes 78 through 81 in the 2014 Chinese edition made references to the work of Roy Amore where the English spelling for "Śākya" is "Shakya" and the English spelling for "Śākyamuni" is "Shakyamuni".

CHAPTER 6

WHAT ARE THE DISTINCTIVE FEATURES OF BUDDHISM?

Lung, Tin Yick

The caption question can be academic or non-academic. In order to identify the distinctive features of Buddhism, one must compare it with the others of the same category. In order to compare it with the others of the same category, one must first figure out how to categorize it. So, how do we categorize Buddhism? There is no consensus of opinion among the general public. Some may regard it as a religion. Some may consider it a type of life philosophy. Some may view it as an ancient cosmology. Some may understand it as a path towards spiritual liberation. Depending on who we talk to, there may well be other ideas. If Buddhism is to be treated solely as a religion and if an academic answer is sought, then the caption question will become an academic question concerning the comparative study of religions. In the previous chapter, numerous references were made to publications in the field of religious studies. The precursor of modern religious studies was known as the "science of religion" or "comparative religion". These names may still be in use today.

COMPARATIVE RELIGION

Religion is an intellectual product, a cultural gem, and a spiritual destination of humankind. It is quite normal for people to compare one religion with another. The findings of a comparative research are often dependent on the method and attitude adopted by the researcher. The adopted method and attitude may in turn rest on the motive behind the research. Motives can be friendly, neutral, or unfriendly. The simplest motive can be nothing more than human curiosity. Curiosity can develop into interest, which is the feeling of wanting to know more about something or to participate in something. Other motives can exist in parallel and the one which must not be ignored is also known as "interest(s)", which in this case refers to advantage or benefit. Interest(s) can be individual or collective. It can also be disclosable or ulterior. Motives may be tied to a person's religious background, which can range from some form of religious conviction to anti-religionism. If the researcher has a motive or an attitude which is not compatible with the basic principles of religious studies, then the credibility of his/her research can potentially be undermined. Attitudes can be neutral or non-neutral. It goes without saying that an arrogant attitude can contribute to academic bias.

As shown in the last chapter, the term "religion" has no universal definition and its connotations can be highly metaphysical. Likewise, there is no universal criteria or standard methodology for the comparative study of religions. If one pushes ahead with the research, there are nevertheless a multitude of topics which can be used for comparison purposes. For example, the outward features of a religion such as historical origin, goal, doctrines, scriptures, cosmology, worldview, life-view, moral view, values, institution, rites, precepts, legends, myths, music, hymns, artifacts, practices, history, saints (or equivalent), denominations, exclusiveness, typical method of preaching, route of spread, geographical distribution, current trend of

development, and demographics of believers are all candidates for comparison. One may also conduct a more in-depth examination by probing into the contributing factors behind these external aspects, such as psychological factors, historical factors, geographical factors, cultural factors, political factors, social factors, and economic factors. Thus, the wealth of topics and information in this field can provide learned scholars with plenty of opportunities for doing systematic analyses with added commentaries and, in doing so, they can make the academic discipline of religious studies very splendid and graceful by presenting one paper after another, publishing one book after another, and offering courses one semester after another.

Which ancient scholars in the West are considered pioneers of the comparative study of religions? One example to name is Herodotus (c. 484-425 BCE) of ancient Greece who believed that much of Greek culture and Greek religion had its origin in Egypt and who also identified some Greek deities with their Egyptian counterparts.⁽¹⁾ At the beginning of the Common Era, critical inquiry of established religion was quite common in the Mediterranean world and thinkers had repeatedly tried to explain religious phenomena in a logical manner.⁽²⁾ However, due to the attitude of religious exclusiveness which Christianity inherited from Judaism,⁽³⁾ and due to Christianity's success in becoming the state religion of the Roman Empire in the 4th century,⁽⁴⁾ such a valuable academic practice discontinued in the Christianized Medieval Europe.⁽⁵⁾ During the Medieval Period, works strong on the history of religion and systematization of religions were actually produced by Muslim scholars.⁽⁵⁾ The Renaissance revived interest in ancient art and literature but had done little to enhance the data source for studying religions.⁽⁶⁾ It was not until the epoch of world exploration. when European warships and merchant vessels were dispatched to the more distant parts of the world to conquer and explore, did things begin to change. Starting in the 16th century, the Society of Jesus let their missionaries travel with officers and merchants to the Far East and the New World to preach their religion and erudite Jesuits such as Matteo Ricci (1552-1610 CE) and Roberto di Nobili (1577-1656 CE) sent reports home to introduce to European intellectuals the new cultures they had encountered.⁽⁷⁾ Some of China's Confucian classics were translated into European language(s) at that time, allowing Europeans who used to deprecate the wisdom of infidels to become aware that the Chinese had developed a highly moral "religion" without involving mysteries and without biblical guidance.⁽⁸⁾

Religious studies, as taught and researched in many post-secondary institutions today, is an academic discipline originated in 19th century Europe. It was named the science of religion or comparative religion. Eric Sharpe, an authority in this field in the 20th century, praised the German philologist Friedrich Max Muller (1823-1900 CE) as the "father of comparative religion" and Muller's Introduction to the Science of *Religion* as the "foundation document of comparative religion".⁽⁹⁾ He described Muller as a person in which three streams of thought converged (i.e. the fusion of German Romantic idealism, comparative Indo-European philology, and post-Hegelian philosophy of history).⁽⁹⁾ Muller was a devout Christian, the son of German Romantic poet Wilhelm Muller, and a talented writer.⁽¹⁰⁾ He translated the Rig-Veda of ancient India into English and assumed the role of chief editor of The Sacred Books of the East, which is a 50volume set of English translation of Asian religious and philosophical texts published by the Oxford University Press over a period of three decades commencing in the late 1870's.⁽¹⁰⁾ In his Introduction to the Science of Religion, Muller advocated the study of religions in a scientific manner and emphasized the need for multiplicity with his famous motto "He who knows one, knows none", which was derived from the German poet Johann Wolfgang von Goethe's linguistic paradox "He who knows one language, knows none".⁽¹¹⁾ In his Chips from a German Workshop, he wrote, "The Science of Religion may be the last of the sciences which man is destined to elaborate; but when it is elaborated, it will change the aspect of the world and give a new life to Christianity itself."⁽¹²⁾
Why did Muller champion the scientific study of religions? The reason is closely tied to the historical background of his time. Muller lived in 19th century Europe, which had been through the Renaissance of the 14th – 17th century, the Protestant Reformation of the 16th century, and the Age of Enlightenment of the 17th - 18th century. The religious context at his time was far more complex than it used to be during the Medieval Period. The Protestant Reformation initiated by Martin Luther (1483-1546 CE) had fragmented the religious territory of the Church of Rome and the split between Catholics and Protestants had led to the formation of numerous Bible-based but faith-divided religious sects as well as ferocious theological debates which later escalated into religious wars between Christians, causing people to wonder if biblical truth could be found in groups which brutally persecuted their opponents.⁽¹³⁾ Entering the Age of Enlightenment, some 18th century thinkers such as Immanuel Kant returned to simplicity by advocating Deism and they believed in a creator god who left the world to a set of physical laws without post-creation intervention and who left humankind to a set of moral laws which would become the basis of judgment after death.⁽¹⁴⁾ The Deist creed drew attacks from both the old church and the new sects, particularly from the Romantics, and such historical streams, the warmth of Romanticism and the coolness of Deism, met in the mind of Muller, who happened to be a Romantic and a virtual Deist, to motivate him to investigate the various religions and their ancient origin.⁽¹⁵⁾ Coincidently, a series of momentous events occurred in the European scholarly sphere during the mid-19th century such as the publication of Charles Darwin's Origin of Species, the debate about evolution between Thomas Huxley and Bishop Samuel Wilberforce (1805-1873 CE) of the Church of England, the identification of animism as the origin of all religions by Edward Burnette Tylor, and the initiation of totemic research by John McLennan (1827-1881 CE).⁽¹⁶⁾ The first two of these four examples signified natural scientists' readiness to publicly challenge traditional religious power while the last two marked the beginning of social scientists' study of the prehistoric origin of religion. Thus, Muller's science of religion might not have been that pioneering in his time and his statement "give a new life to Christianity itself" might have been an honest disclosure of his academic motive.

I mentioned Tylor's theory of religion in the previous chapter but not Muller's. Muller traced the origin of religion to what he called the "disease of language" but this proposition had been heavily criticized even during his lifetime.⁽¹⁷⁾ Both Muller and Tylor were Victorians and both of them studied religion by using the techniques of social science. The fact that their theorizations were completely different proves that the scientific study of religion will not restrict the outcome of research. Muller was Christian but Tylor was non-religious.⁽¹⁸⁾ Religious background would have been an influencing factor in their works but it was not necessarily the only factor. According to some critics, there is Eurocentric distortion in the field of religious studies and ecumenical theology can disguise as the phenomenology of religion since the foundation of this field was laid by theorists who, as a result of 19th century Eurocentrism, had the habit of projecting Western ideological assumptions and Christianized European concepts onto every culture being studied despite any significant dissimilarity between them.⁽¹⁹⁾⁽²⁰⁾⁽²¹⁾ We can tell from criticisms like this that the perfection of cross-cultural religious studies may not be that easy and accomplishable as it may seem.

Outside the academic world, the comparison of religions can be an even more sensitive topic. In the West, there is the maxim "Do not discuss politics and religions at the dinner table." Why is it so? The reason is that the average person would not approach either of these two subjects in a truly objective and impartial manner and both of these two subjects can instantaneously instigate fanatic emotions; therefore, any disagreement at the dinner table in this regard may result in the loss of appetite or may even spoil the friendly atmosphere in the dining room. As shown by the many examples in human history, excessive religious passion can cause catastrophes. Like what happened in the eastern Mediterranean during the

Medieval Period and what happened in Europe during the aftermath of the Protestant Reformation, the result of a religious war is always calamitous no matter which side wins and no matter which side is seen as fighting for justice. Most unfortunately, many people do not learn from history. Today, there are still religionists who would exalt their own faiths by denigrating the religions of others and there are still religious practitioners who would use sensational rhetoric to urge their followers to convert more non-believers to their respective religions for the very simple sake of giving themselves a sense of triumph and a sense of domination. This type of demeanor can potentially turn religion from a supposedly sublime form of spiritual cultivation into a radical movement which eliminates non-adherents. It will also sow the seeds of religious discrimination and religious persecution which can come back to haunt humankind as a whole.

THE DOCTRINES OF BUDDHISM

After explaining the difficulty of comparing religions, the next step is to introduce to our readers some of the concepts and principles which are fundamental to Buddhism. One may have the impression that Buddhism exists in many different forms or comprises many different divisions, branches, or schools. For over two millennia, the main divisions used to be the two vehicles or two traditions, namely Hinayana and Mahayana or, geographically, Southern Buddhism (covering the mainstream Buddhist practice in Sri Lanka and Southeast Asian countries such as Thailand, Myanmar, Cambodia, and Laos) and Northern Buddhism (covering the mainstream Buddhist practice in countries such as China, Japan, Korea and Vietnam). Some differentiation can also occur when the original tradition is spread to a new territory. For instance, Huáyán (華嚴), Chán (禪, commonly translated as "Zen" in Japan), Jìngtǔ (淨土; also translated as "Pure Land" in the West), and Tiāntái (天台) are four branches of Mahayana Buddhism developed on Chinese soil instead of being direct imports from ancient India. Is Buddhism supposed to be divided into doctrinal branches? My late Buddhist teacher Dharma Master Chuk Mor (竺摩法師) said that he did not think so in a meeting with the Supreme Patriarch of Thailand in the 1950's.^{(22)(E-1)} So, what could have accounted for the various branches? Well, differences in scriptural interpretation and doctrinal emphasis as well as the occasional needs for new programs or practices to suit certain environments are some of the conceivable factors which could cause divergence. Today, Western scholars are more used to naming the three vehicles instead of the original two and they do it by keeping Mahayana as one vehicle, renaming Hinayana as Theravada for heightened respect, and exalting Vajrayana from originally a branch within Mahayana to the higher rank of a third vehicle.⁽²³⁾ Such a "tripod" redivision is probably a result of the increased interest in Tibetan Buddhism among Westerners in recent decades. However, regardless how Buddhists identify themselves and regardless of how outsiders classify the various divisions of Buddhism, the fundamental doctrines of Buddhism cannot be altered. Once altered, it is no longer Buddhism.

(A) That Which Is Called Buddha-Dharma Is Not Buddha-Dharma^(E-2)

On a mild sunny day with gentle breezes, a city person makes a trip to the countryside for some fresh air. When he/she looks at the azure sky, the luxuriant trees, the diligent farmers on the field, and the birds circling above in search for food, he/she may find the scenes of nature quite pleasing and enjoyable. Alternatively, he/she may consider the livelihood of the farmers just as demanding as his/her own job in the city and the sight of birds hunting for insects is merely a reminder of the cruel reality of predator and prey. It is common knowledge that the same neutral facts can cause different feelings and perceptions depending on the observer's point of view. So, how are Buddhists supposed to view things in the world? The answer is "*sānguān*" (三觀), or the threefold view, comprising three simultaneous and complementary ways of viewing or contemplating things, namely (1) the conventional view, (2) the emptiness view, and (3) the neutral view.^(E-3) The concept of the threefold view is embodied in many paradoxical verses found in various Buddhist scriptures. This is illustrated by the following quotes from the *Diamond Sutra*:^(E-4)



When expressed in mathematical form, the logic behind these quotes is $X\neq X$ and $X\rightarrow X$ which, at first glance, may look contradictory and ludicrous. Some Chinese novelists and script writers borrowed the idea to make philosophical statements in their works but readers and viewers could be bored by seeing the same muddling trick again and again. So, what exactly is meant by such a paradox? A Chinese engineer by the name Yóu Zhìbiǎo (尤智表) expounded on it in 1946 by using the tea cup as an example.^{(24)(E-5)} I shall elaborate on it further in the next few paragraphs by using a different example.

The Conventional View

Let us look at a man whose household consists of his mother, his wife, his children, and himself. In the eyes of his mother, he is a son. In the eyes of his wife, he is a husband. In the eyes of his children, he is a father. Thus, he does not have an immutable role or a fixed identity even in his own home. When he enters his workplace, he becomes an employer or employee. When he shops in a store, he becomes a customer. When he is stopped by the police for speeding, he becomes a suspect of traffic violation. If he opted for a gender reassignment surgery, his identity would change from his mother's son to his mother's daughter. If he divorced his wife, he would no longer be her husband. If he ran away from home and abandoned his wife and children, his children would be without a father. Therefore, the so-called "son", "husband", and "father" are simply products of human cognition. They exist from a conventional point of view but do not represent absolute reality. This is not to dispute the demonstrable existence of the man in question or to say that he should be treated like a mannequin. Rather, any conventional identity of his is built on a certain variable relationship or variable function wherein no self-absoluteness can be claimed.

The Emptiness View

If we take our analysis one step further, we find that the man in question is not just a variable in terms of role, identity, and function. In fact, his entire person is also a variable. Before his conception, he did not exist. After his death, his body will decompose. During his lifetime, every single living cell in his body must unceasingly engage in the type of chemical process known as metabolism. His entire body grows and ages without stopping. His sentiments and consciousness also vary with time. Although some of his memories and personal characteristics such as genetic information and fingerprint patterns may remain the same for the rest of his life, the "he" at age ten is very different from the "he" at the time of delivery.

Likewise, the "he" at age thirty is very different from the "he" at age ten, not to mention the "he" at age eighty. It is clear from such observations that his entire life journey is but a process of change and his body is nothing more than some compounds of chemical elements which in turn are physical assemblies of some subatomic particles. If these subatomic particles were reassembled into a different configuration, this would be the end of the "son", "husband", and "father" as his family knows him and the "he" could turn into something beyond imagination. Such an insight into the true nature of things regardless of their outward appearances is called the "emptiness view" in Buddhism. This is not to argue that the three-dimensional space occupied by the man should be empty; rather, we must keep in mind that he is an impermanent entity empty of self-essence.

The Neutral View

With a good understanding of the conventional view and the emptiness view, it is easy to comprehend the third element of the Buddhist threefold view. When a person sees and faces reality with an attitude which is sane, unbiased, open-minded, objective, calm, prudent, and peaceful after realizing that everything before him/her is non-absolute and impermanent, it is the "neutral view". Thus, all three elements of the Buddhist threefold view are to be integrated for practical application. People who cling to the conventional view are more vulnerable to the harm created by emotional situations and they can turn stubborn or selfish under stressful conditions. People who stick to the emptiness view can become more erratic and desultory at times and they may act without a sense of propriety. Continuing with the above example, Buddhists are supposed to discern the man's identity and function in any given occasion and interact with him accordingly in the most appropriate manner while keeping in mind that he is a variable from inside to outside. Imagine how much grief, pain, distress, and misery it can cause in the event that the mother loses her son, the wife undergoes a marriage breakup, or the children are abandoned by their father if the conventional view is the only way they see things. Also imagine how family members will treat one another in their everyday lives if everyone adheres to the emptiness view. Only by adopting the threefold view and centring on the neutral view can the man and his family live in love and harmony in times of peace and maintain the equanimity required to reduce mental suffering and turn crises into opportunities in times of turbulence.

The threefold view as an important aspect of Buddhist life-view can be used on anything which initiates human cognition. There is nothing negative or cynical in it.

(B) Countless Worlds and Countless Sentient Beings

Space and time are two important aspects of our daily lives. From looking back at history to managing the present to planning for the future, everything involves place and time. Place and time must be specified for every occasion, from the issuance of a birth certificate to attending school to joining the workforce to participating in various meetings and social functions to the issuance of a death certificate. Well, place is a particular area in space while and time is time. In Chinese vocabulary, the word for "universe" is "yŭzhòu" (宇宙), which is a compound term formed by combining the word "yŭ" (宇) and the word "zhòu" (宙). "Yŭ" refers to space in all directions and "zhòu" refers to time from the past to the present to the future. Therefore, "yŭzhòu" literally means "space-time" (時空), a technical term frequently used in modern physics and mathematics, particularly in the field of astronomy. Humans must have acquired the concept of time in their early stage of development since it is not difficult to distinguish between past, present, and future after

experiencing many repetitive cycles of yesterday, today, and tomorrow. However, the knowledge about space is a different story. How big is the earth? How high is the sky? The primitive human would be at a loss for answers to these questions. Even in some ancient civilizations, the vast majority of people would believe that the earth was flat and the sun, the moon, and the stars were all rotating about it. It was not until after one of the ships of Ferdinand Magellan (1480-1521 CE) sailed around the globe in the 16th century did humans hold firm evidence that the earth was not a flat plate. It was not until Einstein proposed his theory of relativity in the 20th century did humans come to realize that space and time are not absolute and independent and time may be viewed as a fourth dimension in addition to the three accustomed dimensions comprising their physical world. It was not until Einstein posited the formula for mass-energy equivalence did humans begin to understand that matter and energy are two interchangeable forms of existence. So, how many universes are there? How many dimensions can a universe have? Apart from our own planet, where else can life be found in our universe? Can life exist in non-material form? These questions are scientific questions and they require scientific answers.

Some Buddhist scriptures do touch on the topic of space-time. The $\bar{Ap}(d\acute{am}\acute{o} Jushe Lun$ (阿毘達磨俱舍 here); *Skt. Abhidharmakośa-śāstra*) mentioned the "three thousandfold great thousandfold world system", aka "trichiliocosm", which is the totality of worlds in a buddha-land.^(E-6) Mathematically, a trichiliocosm is equal to one billion (10⁹) worlds since it is a third order world system containing one thousand secondorder world systems, each of which contains one thousand first-order world systems, each of which in turn contains one thousand worlds. It says in the $\bar{Am}(t\acute{uo} J\bar{n}g)$ (阿彌陀經; *Skt. Amitābhasūtra*), "Beyond the ten trillion buddha-lands to the west of us, there is a world known as Ultimate Bliss".^(E-7) So, if one takes the number of buddha-lands in the said passage and multiplies it by the number of worlds in each buddha-land as stated in the $\bar{Ap}(d\acute{am}\acute{o} Jushe Lun$, then the number of worlds between ours and Ultimate Bliss will be ten to the power twenty-two (10²²). While it is understood that scriptural astronomical figures are not to be interpreted as exact values, they do reveal the Buddhist view that the universe has an uncountable number of worlds and our world is not necessarily the centre of it. One may also turn to the *Lényán Jīng* (楞嚴經; *Skt. Śūraṃgamasūtra*) and find the following passage whose meaning may seem to resemble relativity or multiplicity of space-time dimensions: "On the tip of a down feather, the greatest buddha-land emerges; within a speck of dust, the great wheel of the Dharma turns."^(E-8)

Besides verses with space-time implication, the Buddhist terms "three realms" and "six planes" may also be interpreted by some as Buddhist cosmology. The "three realms", or "three realms of existence", refer to the desire realm, the form realm, and the formless realm. The "six planes", or "six planes of rebirth destination", refer to the plane of celestial beings, the plane of demigods, the plane of human beings, the plane of animals, the plane of starving ghosts, and the plane of hell denizens.^(E-9) Mysterious as they may sound, they are in essence two different ways of classifying sentient beings according to some of their major characteristics and mental states. For the three realms, the criteria used to classify sentient beings can be understood as (1) the total intensity of the sentient being's desires, from being desire-ridden to completely desire free, (2) the sentient being's form of existence, from having a certain discernible form to downright formless, and (3) the purity of the sentient being's consciousness. For the six planes, some additional characteristics are also used, such as the general living environment of the sentient being. Overall, one may sum up the concepts of the three realms and the six planes with a single statement that sentient beings can exist in different forms (formlessness inclusive) in different environments under different constraints with different mental conditions and different consciousness ratings while their surroundings may range from something which is relatively calm, joyful, and happy to something which is filled with horrors, agony, and

anguish. Why did Buddhism propose the system of three realms and six planes but not other ways of categorizing existence? Is there a separate space-time assigned to each realm or each plane? These topics will be discussed later in this chapter.

(C) Impermanence, No-self, Causality, and Emptiness

If we watch ourselves and our surroundings carefully, it is not difficult to discover that everything which occurs or operates does have its underlying principles. Within one's own body, for instance, the respiratory system operates on certain principles, the digestive system operates on certain principles, and the nervous system operates on certain principles. Within our surroundings, likewise, plenty of examples can also be named. When running a computer, the most basic principle is that the hardware must take commands from the software and the user. When conducting commercial activities, the principle of good business practice is to fulfill contractual terms and conditions, conform to industrial standard, and obey commercial laws. When visiting foreign lands, the principle of cultural adaption is to observe their local customs and respect their local bans and taboos. It is not a specialty of the civilized human to learn and follow principles. When the primitive human drilled wood to make fire, he/she made use of the ignitability of wood and the principle of energy conservation which, in this case, allowed a portion of friction energy to convert into heat. Natural phenomena are no exceptions. Winds blow from a high-pressure area to a low-pressure area, rivers flow from a higher elevation to a lower elevation, and heat transfers from a high-temperature object to a lowtemperature object. These are some of the simplest physical principles of nature. Of course, we can analyse various phenomena in a more thorough and sophisticated manner but the deeper we go, the more principles will be involved. Before we know these principles, a myriad of things can capture our imagination or cause bafflement. Once we have come to know them, the sense of mystery will vanish. Even though we may not be powerful enough to alter these principles, we can face them with rationality.

What are the underlying principles of the multitudes of worlds and universes? As discussed in the first two chapters of this book, Buddhism offers a simple answer to this question: the principle of causality or causality for short. In the broadest sense, causality means that every phenomenon must originate from one or more preceding phenomena and every phenomenon will lead to one or more subsequent phenomena. This process can go on forever with no beginning and no end while the relationships produced by causality can be inextricably interwoven and interlinked such that traceability is not always a straightforward matter. What is called "phenomenon" can be any of an unlimited variety of things such as a universe, a world, a substance, some energy, a lifeform, an event, a feeling, a memory, a relationship, and a natural process. Since everything in the universe came into being by causality, nothing in the world can be truly permanent or intrinsically independent. In Buddhist terms, the state of not being truly permanent is "impermanence" and the state of not being intrinsically independent is "no self", just like what it says in the *Zá Āhán Jīng* (雜阿 含經; *Skt. Saṃyuktāgama*): "All things formed are impermanent. All phenomena brought into being have no self."^(E-10) Some Chinese Buddhist idioms are also meant to express these two concepts, such as the following:^(E-11)

- (1) [Everything with] dependent origination is empty [of self-essence].
- (2) The five aggregates have no self.
- (3) The four great elements are empty [of self-absoluteness].
- (4) [The four phases of life are] birth, living, degenerating, and perishing.
- (5) [The four stages of material existence are] formation, holding, deteriorating, and vanishing.

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My translations have made these Buddhist idioms self-explanatory but there are two Buddhist terms which may require further elaboration. The "five aggregates" refer to the "aggregate of form", "aggregate of sensation", "aggregate of cognition", "aggregate of formation", and "aggregate of consciousness", which may be considered the five constituents of a sentient being in the form realm or material world.^(E-12) This term is sometimes used figuratively to represent the person or any sentient being with a body. The "four great elements" include "earth" (symbolizing the quality of solidity), "water" (symbolizing the quality of liquidity), "fire" (symbolizing the quality of energy or temperature), and "wind" (symbolizing the quality of mobility) which are classical elements conceptualized in ancient India as the basic substances forming all living things and non-living things in the physical world.^(E-13) As everything formed by combining the "five aggregates" or "four great elements" are impermanent and without self-essence, none of them can be intrinsic existence. Thus, they must all have a beginning, an end, and a process of change in between. This principle is encapsulated by the last two idioms stated above in which the overall process is divided into four phases, namely birth, living, degenerating, and perishing for living things and formation, holding, deteriorating, and vanishing for non-living things. In either case, the logic is not difficult to follow.

The Buddhist concepts of impermanence and no-self should not be interpreted as a state of randomness or lawlessness. As discussed in the earlier chapters of this book, natural phenomena must obey the laws of nature although their actual occurrence will depend on a number of conditions or contributing factors. The goal of scientific research is to discover the laws of nature in order to better understand natural phenomena, better predict natural phenomena, and better utilize natural phenomena. Thus, if we take the Buddhist view of causality as the fundamental premise and science as the branch of knowledge which develops detailed theories and mathematical models for various causal relationships, then Buddhism and science can be fully compatible in this respect.

(D) Samsara and Karmic Force

The word "consciousness" is used in our daily conversations but it is also a technical term. In the broadest sense, it refers to one's state of wakefulness and alertness as well as other mental phenomena such as awareness, feelings, emotions, desires, memories, imaginations, cogitation, reasoning, judgments, volition, and dreams. In medicine, a patient's consciousness may be monitored in order to assess his/her awareness and responsiveness as well as other health aspects of his/her nervous system. However, any indepth scientific study of the subject of consciousness can be a highly challenging undertaking since many phenomena concerning consciousness do involve people's subjective experience and inner feelings, not to mention that some people may, for religious reasons, still refuse to accept the fact that birds and beasts are lifeforms with consciousness. How do we formulate a universally acceptable definition for the term "consciousness"? Does consciousness exist in material form or non-material form? Is consciousness a product of the nervous system or something which interacts with it? At which point of biological evolution did consciousness begin to exist? Do plants have consciousness? How does the consciousness of birds, beasts, or insects differ from human consciousness? What are the underlying principles and mechanisms of consciousness? Is there a certain part of human consciousness which can temporarily leave the body of a live person? Will consciousness die with the body in its entirety? If a certain part of consciousness will continue to exist after the death of a person's body, where does it go from there? Does the consciousness of a person have some constituent which existed prior to the person's conception? If there is a pre-existed constituent, how does it enter the zygote or embryo? How would a person's consciousness be affected by

the amputation of some body parts or by damages done to the nervous system? What are the implications of drug-induced effects for a person's consciousness? Can artificial intelligence have consciousness? Everyone who studies consciousness would probably have pondered upon questions like these.

The concept of consciousness is extremely important in Buddhism since Buddhism is for sentient beings and every sentient being must have consciousness or else there will be no such thing as a sentient being. Buddhists believe that the consciousness of a sentient being has to obey causality and a certain non-material part of a sentient being's consciousness will not die with the body but will, upon the death of the sentient being, flow on to wherever causality will take it to start a new lifecycle by integrating itself with the other constituents or aggregates required to form a new life. It is this rebirth-bound consciousness, though not a perduring entity itself, which allows some of the sentient being's old temperaments, persistent desires, and lingering sentiments to redevelop in the next lifecycle. As the process of birth and rebirth incessantly repeats itself and as consciousness develops and redevelops under the influence of its surroundings, we have a phenomenon known as samsara. When undergoing samsara, things done by a sentient being are, to varying degrees, controlled by the sentient being's consciousness but the sentient being's volitional actions and conscious mental activities can also affect the future development of his/her/its consciousness. Where the rebirth-bound consciousness will land after the sentient being's death and what the sentient being's next life will be like will depend on what the sentient being has done in his/her/its present life and previous lives or, in Buddhist terms, karma. Karmic force, or the formless force of karma, will act on the rebirth-bound consciousness, lead it to an environment as determined by causality, shape the new life, and influence the sentient being's fortunes in the new lifecycle. Such is the principle of samsara in Buddhism. As for the karmic rewards or karmic retribution discussed in the earlier chapters of this book, they will surely show up when the opportunity arises.

The classification of human consciousness differs between Buddhist schools at the more detailed level. Theravada Buddhism embraces the concept of "six consciousnesses", which means that consciousness is divided into six categories, namely visual consciousness, auditory consciousness, olfactory consciousness, gustatory consciousness, tactile consciousness, and mental consciousness.^(E-14) For a normal person, this network of six consciousnesses is always in a dynamic state due to the continual contact between the "six sense-bases" and the "six sense-fields". The "six sense-bases" refer to the eyes (visual faculty), the ears (auditory faculty), the nose (olfactory faculty), the tongue (gustatory faculty), the body (tactile faculty), and the mind (mental faculty).^(E-15) The "six sense-fields" refer to sights (visual objects), sounds (auditory objects), smells (olfactory objects), tastes (gustatory objects), touch (tactile objects), and mental phenomena (mental objects).^(E-16) In Chinese Buddhism, the prevailing practice has been to include the afflicted mental consciousness and storehouse consciousness as two more categories and come up with what is called the "eight consciousnesses" as set forth in the Chéng Wéishí Lùn (成唯識論; Skt. Vijñaptimātratāsiddhi-śāstra), which is a Buddhist text translated from Sanskrit sources into Chinese during the Táng dynasty (唐朝) by the Buddhist monk Xuánzàng (玄奘).^(E-17) In some Buddhist schools, the list can be further expanded from eight to nine (i.e. "nine consciousnesses") by incorporating the immaculate consciousness or from eight to ten (i.e. "ten consciousnesses") by adding another two lesser-known categories of consciousness.^{(25)(E-18)} At the time of composing this chapter, the mechanisms of the first five categories of human consciousness can be thoroughly explained by science. Take the visual consciousness as an example, scientists can accurately describe how the human eye detects visible light waves, how the optic nerve transmits visual signals to the brain, and how the brain produces visual perception of colours and three-dimensional pictures. However, much more research is required to investigate any type of consciousness which is beyond those associated

with the traditional five senses due to the complexity of the human brain. Although I am more used to the convention of eight consciousnesses, I would not recommend doing serious debate on any higher-order consciousness unless there is sufficient scientific data to support one's claims.

In Chinese folklore, there are many tales of spiritual beings. There are also many accounts of a dead person's resurrection in the recently deceased body of another person or a dead person's reincarnation in a new body. In the West, there are a wealth of legends and religious texts which involve souls. As a matter of fact, the primary motive behind many people's religious profession is that they want to send their souls to heaven when the time comes. On the topic of rebirth, Buddhism rejects the idea of the soul but embraces the concept of consciousness for two reasons. First, the soul represents a permanent entity of existence and this contradicts sharply with the Buddhist belief that nothing with dependent origination can be permanent. Second, a soul or a spiritual being may be formless but it cannot be equated to a net stream of consciousness since it also comprises the aggregates of sensation, cognition, and formation. However, whether it is the soul or a stream of consciousness which takes part in rebirth, it appears that some people are able to tell the stories of their previous lives or to recognize their past-life personal belongings when fully awake or under hypnosis. Some cases like this have been professionally recorded for publication.⁽²⁶⁾ While many people are happy to accept past-life memories as evidence of rebirth, I would consider such recollections indirect evidence at the most since we cannot rule out the possibility that some memories of a person can somehow be projected from his/her brainwaves onto a certain naturally occurring electromagnetic field which can retain and repropagate the information to a newborn after the death of the original person. Thus, the best approach to prove that rebirth does occur is, in my opinion, to use scientific means to track down the rebirthbound consciousness of a dying person and see how it will exit the dead body and link up with the zygote or embryo of a new organism. Such an amazing technology is science fiction at present but assuming that it will come true one day, it may not be an advantage after all since your enemies can use it to pursue you and persecute you in your next life or to capture your rebirth-bound consciousness for confinement so that you will not have the opportunity to start a new life before the container breaks.

(E) The Four Noble Truths and the Twelvefold Chain of Dependent Origination

A discussion of impermanence, no-self, and other related topics will eventually lead to the question of values. We know that the opposite of impermanence is permanence but which of them represents a higher value? In my opinion, this seemingly philosophical question should actually be a statistical question since the answer will depend on the situation as well as the individual. There are many examples we can pick from our daily lives to show the situational response. With things like clothing, hairstyle, and jewelry, the average person would naturally prefer fashions to something which always look the same but when it comes to things like youthfulness, wealth, and power, most people would love to keep them forever. Likewise, the average tax payer would like to see their highways, bridges, and dams remain in good working condition for a long time without maintenance but the sooner that herbicides and pesticides will decompose to some harmless breakdown products the better after serving their purposes. As for the individual variance, there are no fewer examples available but I would only use the phrase "love you forever" for illustration here. Many men and women would melt at this honeyed phrase, which suggests a sense of permanence, but many others would find something impermanent more appealing instead. A series of television commercials was aired in Hong Kong in the early 1990's for a brand of wristwatch and they used the same narrator statement

which can be translated as follows: "Love without eternality is fine, so long as the memory is mine".^(E-19) This narrator statement was regarded as a classic by the advertisement industry. It was popularly quoted and requoted by the masses for a number of years. The reason that people found it so endearing was probably its bold expression of an idea which the older generations were too shy to admit as well as its accuracy in reflecting the truth that any comparison of values between permanence and impermanence may rest entirely with the satisfaction of the concerned party or parties.

Is it always the case that impermanence and no-self will bring disappointments or even disasters in our daily lives? It appears that the answer to this question will also depend on the situation and the individual. A happy family can be ruined by a natural or human-made disaster. An affectionate couple can turn against each other due to a partner's extramarital relationship. A talented young person can lose all prospects after a traffic accident. A popular brand of product can be discontinued in the course of time. A boomtown can turn into a ghost town because of socioeconomic transformation or environmental factors. Examples like these may show us the fearsome sides of impermanence and no-self but they are not necessarily the whole story. A service provider may find opportunities for disaster cleanup after a major disaster. A person may meet the ideal partner after ending a bad relationship. A wage-earner may become a successful entrepreneur after being laid off. An ordinary person may change into a hero or heroine due to circumstances. A pauper may get rich overnight by winning the lottery. Thus, some contrasting cases may show that impermanence and no-self can also result in outcomes which are the envy of many. If you are not convinced by isolated incidents, we can also use the stock market as an example since there are stock markets in different parts of the world and they operate on every business day with trading details available to the public.

The stock market is impermanent because neither the market index nor any individual stock price will constantly hold the same value. The stock market has no self because its transactions are not controlled by the market itself or by any single market participant. Among traders who operate in the impermanent and no-self environment of a stock market, some have become multimillionaires or multibillionaires. Some have been able to earn a livelihood. Some have scored a breakeven. Some have lost their life savings or even their lives. So, are there more winners than losers in the long run or is it the other way around? Among those who have made a net profit, how many can solely depend on it to become rich and famous and stay that way for long? Which investor does not see the value of his/her assets shrink considerably during a global financial turmoil? Questions like these may draw mixed opinions from the public and it may require plenty of statistical data to sort out the details. However, this example of stock market is good enough to show that impermanence and no-self can create both positive impacts and negative impacts on people's lives.

Money, fame, status, power, and influence do not necessarily give a person happiness but they form the usual metrics which the secular world uses to evaluate a person's accomplishment or advantage and their respective distributions among the human population are highly uneven. Those who fall within a lower social class usually have less in these five aspects than do those who sit in the next class up and their fates are more dependent on others than are those in the next class up. In the year 2011, a protest movement known as Occupy Wall Street initiated in New York City and it quickly spread to some other major cities in the world. The theme of this movement was to express the working class' discontent over wealth inequality as well as the unfair advantages enjoyed by big corporations and the socioeconomic elite. Wealth inequality is a world-wide issue whose severity varies dramatically across the globe. It is a reality of life that some people are more fortunate than others. When watching the human society, it is not hard to

discover that only a small group of people are capable of manipulating things at the national or international level and they do it by means of their wealth. We also see that this class of wealthy elite, which amounts to one percent or less of the overall population, does have more advantages over the middle class, which in turn has more advantages over the working class, and the working class in a developed country in turn has more advantages over the working class in a poor developing country. If this pattern of comparison is extended to the entire biological kingdom Animalia (i.e. all animals) and if belonging to a higher trophic level in the food chain is considered an advantage, then it is evident that humans have a greater advantage over other higher animal species, which in turn have a greater advantage over the lower animal species. If we examine the size of population at each trophic level for a comparison, then it will become obvious that those having a greater advantage are overwhelmingly outnumbered by those in the next trophic level below. Sadly, the inequity represented by such a cross-species pyramid is a characteristic feature of kingdom Animalia.

The unaided presence of impermanence and no-self may not be seen as a threat by those who are exceedingly self-assured. Much like some investment wizards who can net huge profits in the stock market regardless of the market trend, some people do seem to have the confidence and know-how to always outperform others regardless of the general conditions of their respective environments. However, if one takes samsara into consideration, then the combined effect of impermanence and no-self will make a world of difference. Due to the way samsara works, there is no guarantee that you will have the same capability and luckiness in your next life no matter what special knack you possess today and no matter how far you can exert your supremacy in your present world. Depending on how much good and how much bad you have done, karmic force can potentially lead your rebirth-bound consciousness to a very gruesome place within or beyond the human plane to begin a new life after the cessation of your current life and you will have to start all over again. Imagine that a computer app or file can fail to perform after being copied over to a different computer due to hardware or software incompatibility, the uncertainty and unpredictability associated with a rebirth can be a great challenge even for the elites.

According to Buddhist doctrines, a sentient being in the mundane world will experience more pain than comfort and more dissatisfaction than satisfaction in the long run due to the joint effect of impermanence, no-self, and samsara. Besides, any temporary advantage enjoyed by the sentient being does not necessarily bring happiness or when happiness comes, it will not stay forever. These aspects of reality are known to Buddhists as the "truth of suffering". The root cause of suffering can be traced to the combination of bad qualities including, first, the sentient being's natural tendency to crave or cling to objects and conditions which are found pleasing and, second, the sentient being's three innate character flaws, i.e. greed, anger, and delusion (not to be interpreted medically). Such a connection is known as the "truth of origination" or "truth of combination". Suffering can nevertheless be brought to an end. This is the meaning of the "truth of cessation". The right way to end suffering is to practice the noble eightfold path of Buddhism, which is the path in the "truth of the path". Together, these four truths constitute the basic orientation of Buddhism and are referred to as the "four truths" or "four noble truths".^(E-20)

As part of the Buddha's discourse on the truth of suffering, eight types of human suffering had been identified. They are often referred to as the "eight sufferings":^(E-21)

(1) Birth — This category of suffering covers the discomfort, tiredness, pain, distress, and struggle which typically arise during gestation and at the time of natural birth. It also extends to include

the hard facts of having to make a living and to fight for survival at times of adversity.

- (2) Aging This category of suffering covers the suffering caused by the inconvenience and health issues associated with old age.
- (3) Illness This category of suffering covers the suffering caused by mental illnesses and physical illnesses.
- (4) Dying This category of suffering covers the pain, distress, and struggle which a person will typically experience when dying a natural or accidental death.
- (5) Being separated from people or things you like.
- (6) Being associated with people or things you dislike.
- (7) Having unfulfillable longings.
- (8) The aggregation of the five aggregates.

In Buddhism, samsara is understood as a causal, cyclic process with interdependent and interconnected steps like the links in a circular chain. For sentient beings with six sense-bases such as human beings, there are twelve steps or twelve links in a typical cycle of samsara which may be referred to as the "twelvefold chain of dependent origination", the "twelve links of dependent origination", or something with identical meaning but slightly different wording. There are different versions of explanation as to what these twelve steps are but I am more used to the version which involves multiple lifetimes as described below wherein the first two steps are assigned to the previous life (or lives) and the last two, to the next life:^(E-22)

- (1) Ignorance The sentient being's lack of understanding of reality resulted in the ignorance in his/her/its previous life (or lives).
- (2) Volitional Actions Karma formed and accumulated when the sentient being acted out of ignorance in his/her/its previous life (or lives).
- (3) Consciousness The rebirth-bound consciousness, shaped by past-life karma and carrying impressions of the past, moves on at the death of the last life.
- (4) Name and Form The rebirth-bound consciousness amalgamates with other aggregates required to form the initial state of the new life and a new body-mind complex is formed.
- (5) The Six Sense-Bases Formation of the new life allows the six internal bases of sensing to fully develop.
- (6) Sensory Contact Stimuli from the six sensing-fields are detected by the six internal bases of sensing.
- (7) Sensation Sensory contact generates all kinds of feelings, emotions, and perceptions by which the consciousness in the current body is ceaselessly conditioned.
- (8) Craving Feelings translate into pleasure or displeasure and the sentient being craves what is pleasing and detests what is displeasing.
- (9) Clinging The sentient being clings to what he/she/it craves (this can include sensuality, false values, wrong morals, self-delusions, etc. in the case of human beings).
- (10) Existence/Becoming Karma accumulates again when the sentient being acts to pursue what he/she/it craves and defend what he/she/it has clung to.
- (11) [Re]birth Karma accumulation will lead to another rebirth after the sentient being dies.
- (12) Aging and Death Another cycle of aging and death will naturally follow after the next rebirth.

The four noble truths, the eight sufferings, and the twelvefold chain of dependent origination are sometimes annotated in extra detail by scholars who prefer complexity to simplicity but which of us, as an ordinary person, has not experienced the many different kinds of pain, distress, displeasure, bitterness, and dissatisfaction after reaching a certain age? Even without living through every aspect of the harsh reality of life, one can get a feel of what it is like by watching others who are experiencing it. Those who are suffering would definitely be eager to seek liberation but the key issue is how to seek liberation and what constitutes a true liberation?

(F) The Essence of Buddhism: Self-Purification

If we compared the system of three realms and six planes to a factory, the twelvefold chain of dependent origination would be a production line of samsara whose products are cycle after cycle of life lived by a sentient being and the suffering which comes with them. In order to break the chain of samsara, one must shut down the production line. Everyone can shut down his/her own production line and the way to do it is to deactivate one or more of its links. We cannot change the first two links (ignorance and past-life actions) since they are things of the past. It is premature to tackle the last two links (the next rebirth and the aging and death which will follow) since they are things of the future. The third, fourth, and fifth links (consciousness, name and form, and the six bases) represent a person's body parts and body functions and hence must be allowed to develop healthily for effective usage. The sixth and seventh links (contact and sensation) involve the normal operation of one's body and mind and hence must be managed carefully without any arbitrary interruption. Therefore, the only links which we can actually work on are the eighth, ninth, and tenth links (craving, clinging, and existence/becoming). Existence/becoming originates from clinging, which in turn arises from craving. From a secular standpoint, craving and clinging are natural instincts of humankind and they also serve as the impetus which keeps a person going. Without them, it may sound pretty sad since the mundane person will have nothing to live for. However, Buddhism has a non-abrasive and effective way to deal with them. This non-ascetic approach, proven by the Buddha's own experience, is to refine one's behaviour and then purify one's mind. Once a person's consciousness is thoroughly purified, it will no longer be under the influence of karmic force. The person will thus enjoy freedom from affliction and freedom from samsara. The entire process can be summed up by the verse: "To abstain from doing any of the unvirtuous, to practice all the virtuous, and to purify one's own mind – these are the teachings of all buddhas."(E-23)

How do Buddhists abstain from doing what is unvirtuous? How do they practice what is virtuous? How do they purify their own minds? Well, in addition to the pure giving as discussed in Chapter 3 of this book, the preliminary work will include the observance of Buddhist precepts. For lay-Buddhists, it begins with the five precepts of morality and ten guidelines for virtuousness as discussed in Chapter 3; for ordained Buddhists, there are many more precepts to follow. After the basic behavioural training, additional training is required to purify the practitioner's consciousness. Among them, the noble eightfold path is an integrated practice with eight parallel principles to cultivate the practitioner's wisdom, morality, and consciousness, and may be regarded as the most essential and straightforward path to enlightenment. For the lay-person, these eight principles may be described as follows:^(E-24)

- (1) Right View Applying the threefold view in daily life; understanding the reality of the world, especially the aspects of impermanence, no-self, and the sufferings associated with samsara; understanding the four noble truths.
- (2) Right Intention Thinking and resolving without avarice, aversion, and ill-will.
- (3) Right Speech Abstaining from making vocal expressions which are mendacious, divisive,

invective, or indecent by observing pertinent rules and guidelines in the five precepts of morality and ten guidelines for virtuousness; also applying the same concept to written languages, sign languages, and body languages.

- (4) Right Action Behaving morally by obeying pertinent rules in the five precepts of morality, i.e. no taking life, no stealing, no sexual misconduct, and no consumption of intoxicating substances.
- (5) Right Vocation Earning a living by using legitimate means and avoiding trades which are not in consonance with the five precepts of morality and the ten guidelines for virtuousness (e.g. drug trafficking, prostitution, and animal slaughtering).
- (6) Right Effort Endeavouring unremittingly to cultivate one's virtues, enhance existing virtues, prevent wrongdoings, and right the wrongs in one's deeds.
- (7) Right Mindfulness —Being conscious of the filthiness of the human body, the sufferings of life, the unpredictability of the mind, and the lack of a true self in various phenomena.
- (8) Right Concentration Practicing Buddhist meditation from the first level to the fourth level.

Buddhist ethics such as the five precepts of morality, the ten guidelines for virtuousness, and the noble eightfold path are primarily aimed at the practitioner's own edification, with nirvana being the final goal. Nirvana is a special state of spiritual enlightenment which, in secular terms, can be described as a state of complete tranquillity, ultimate freedom from affliction, irreversible liberation from suffering, and the cessation of samsara which would otherwise be unstoppable. To be more specific, it can be said that the fully purified consciousness of a person is immune to the traction of karmic force, which is what propels samsara. However, due to physical continuity and due to the fact that human beings are residents of the physical world, a person's body will not suddenly disappear when he/she enters nirvana. Rather, it must continue to exist as a remainder until the end of the person's physical life. The state of nirvana attainable by a live person is known as "nirvana with remainder" while the state of nirvana which he/she will enter at the end of his/her physical life is known as "nirvana without remainder".^(E-25) If you find this type of nirvana somewhat similar to going into hiding and somewhat incompatible with your kind wish of liberating others from suffering, you may wish to consider a different Buddhist path which will benefit both the practicing person and the masses. In order to pursue a wider goal, one must first develop four concurrent virtuous attitudes through meditation and other forms of mental cultivation. These four attitudes are known as the four immeasurables, which can be summarized as follows:(E-26)

- (1) Boundless loving-kindness Total dedication to bringing happiness to the countless sentient beings.
- (2) Boundless compassion Total dedication to liberating the countless sentient beings from suffering.
- (3) Boundless sympathetic-joy Total dedication to rejoicing in the happiness and well-being of the countless sentient beings.
- (4) Boundless Equanimity Total dedication to maintaining composure and impartiality for the benefits of the countless sentient beings and achieving it by abandoning one's personal feelings, self-interest, and self-centredness.

In addition to working diligently on self-purification by practicing the five precepts of morality, the ten guidelines for virtuousness, and the noble eightfold path, Buddhists motivated by the four immeasurables are supposed to cultivate additional Buddhist virtues which can help other sentient beings end suffering and gain happiness. The four means of conversion and the six paramitas are two examples of practices which

meet such criteria. The four means of conversion are giving, kind words, helpful acts, and peer support. Besides their obvious merits, they also serve to inspire non-believers to take an interest in Buddhism. The six paramitas are giving, moral precepts, forbearance, effort, meditative concentration, and prajna. They can be viewed as a system of integrated training as in the case of the noble eightfold path but the scope is considerably more profound. Since the six paramitas have certain aspects which are beyond my religious experience, I will let a competent author elucidate the details in the next chapter. The following is a brief explanation of the four means of conversion:^(E-27)

- (1) Giving As discussed in Chapter 3 of this book, this is a practice of generosity.
- (2) Kind words Kind words are useful words given in a sincere manner in the right place at the right time. They can be words of comfort for those in grief, words of congratulations for those in celebration, words of advice for those in perplexity, words of good wishes for those in action, words of encouragement for those in frustration, etc.
- (3) Helpful acts Helpful acts are nice things done in good will to benefit others. They can have varying degrees of impact and some overlaps with the other three means of conversion. Some examples are as follows: helping a lost person find his/her way; speaking in defence of a victim of injustice; resolving conflicts for some friends; engaging in neighbourhood watch; offering relief efforts to victims of natural disasters; building schools, hospitals, orphanages, nursing homes, and career training centres; introducing national policies to ease poverty and social strains; and reforming unhealthy cultural customs.
- (4) Peer Support Build trust and friendship with those who may be interested in Buddhism by working alongside them in the capacity of a co-worker, providing support, sharing the benefits of cooperation, and creating a feeling of brotherhood or sisterhood.

The four means of conversion may remind us of similar work done by other non-Buddhist religious organizations since they also encourage their adherents to act virtuously and their charities also contribute a lot to society by making relief efforts, building schools, opening hospitals, sponsoring aid-programs for orphans and poverty-stricken children, etc. Such commonalities reveal to us that different religions can use similar humanitarian tactics to influence the public, approach the public, earn the trust of the public, and instill into the public what they consider the correct religious ideas. Since karmic reward is a natural phenomenon without religious boundaries as discussed in Chapter 2 of this book, those who have benefited others by acting virtuously can gain happiness or can see improvement in their own well-being regardless of their religious orientations when their fruits of causality ripen. However, the crux of the issue is: is it right to attribute the results of their good karma to the tenets of their respective religions which may actually be irrelevant? It is important to bear in mind that no karmic effects are permanent. Thus, you may be able to live a better life by being a worthier person but you simply cannot do enough in any given period of time to carry yourself forward forever. Where your religious beliefs will take you once your karmic rewards have been used up is something which you will need to find out when the time comes since the old saying "all roads lead to Rome" may not always hold true in the religious world.

Buddhists who practice the four means of conversion and the six paramitas do not do it for their own karmic gain. They want to model themselves on the Buddha and follow in his footsteps. Since a buddha is not someone who sits atop a certain pyramid structure but an awakened person who has perfected his/her merit and wisdom, any sentient being can attain buddhahood by progressing on the right path. It will usually take many lifetimes to reach perfection, hence the practitioner must make unremitting efforts one lifetime

after another to purify his/her own consciousness and to contribute to the well-being and enlightenment of others. When the practitioner's bodhisattva practice has reached the point that his/her consciousness is fully purified and he/she is able to transcend the world without leaving it, face affliction without being agitated by it, and endure all the suffering without being burdened by it, then it is a different state of nirvana known as nirvana without lodgment, meaning that the practitioner is neither lodged in samsara nor lodged in nirvana.^(E-28) In Chinese Buddhism, nirvana without lodgment is generally considered a higher level of accomplishment than nirvana without remainder since the effort of liberating others from samsara is ongoing in the case of the former.

As pointed out in Chapter 3 of this book, it will require a set of moral standards to define virtue and vice but, unfortunately, no moral standards can satisfy all parties under all circumstances. If the scope of moral evaluation is extended to cover sentient beings outside the human species, the situation will be even more tangled. Although Buddhists can use their religious precepts and the noble eightfold path as moral norms, they may still experience friction and confrontation with other sentient beings in a world of fierce competition. Buddhists who aim for nirvana without lodgment will likely be exposed to more ethical issues than will Buddhists who aim for nirvana without remainder since the former has a broader interface with the secular world. A motorist with no intention to kill cannot avoid the hard fact of occasionally hitting birds, animals, and insects when zooming down the highway. A benevolent person can give away his/her money to needy people but his/her dependents may suffer as a result. A kind-hearted person can preserve harmony by yielding to the excessive demands of others but his/her concession can put fairness at risk, particularly when dealing with insatiable bullies. A head of state can support a certain peace initiative by ordering unilateral disarmament amidst international tension but this may quickly compromise national security. Moral dilemmas such as these will put the wisdom, fortitude, and perseverance of the practitioner to the test. When you find out how to resolve all the moral problems in the world, you are very close to your own enlightenment.

Some people may view Buddhism as a passive and reclusive religion. This is probably due to the fact that the practice of consciousness purification will often require the practitioner to show forbearance and tolerance and the effort to end samsara may resemble abandonment or withdrawal, but thoughts like this are utter misperceptions nonetheless. As a matter of fact, Buddhists are not supposed to be pessimistic or world-weary and their concept of transcendence should be interpreted as values exceeding secular values rather than departing the mundane world. As for Buddhists whose goal is nirvana without lodgment, samsara is the least of their concerns since they are committed to make things better in their surroundings as they go through the repeated cycles of life and death. What they would strive to avoid is participation in schemes which profit at the expense of others. As discussed in Chapter 4 of this book, the incessant competition between living organisms can be explained by using the second law of thermodynamics but, despite such a cruel reality, happiness and unhappiness do coexist in the mundane world and this makes it an ideal place for studying and experiencing Buddha-dharma as well as building some good relationships with other sentient beings. Thus, no matter which type of nirvana is taken as the ultimate goal, Buddhists will appreciate everything they have but will not cling to any of them.

It may seem extremely time-consuming and effort-demanding to practice the buddha-dharma of selfpurification, perhaps more difficult than pursuing the Confucian ideals of rén (仁) and yi (義) in China during the Spring and Autumn Period and Warring States Period since the China then was a society which adored quick success. Unfortunately, there is no shortcut for true enlightenment. We can definitely pick the do-nothing scenario and bite the bullet of samsara or practice religions which promise all kinds of convenience. Some of these promises may be very irresistible indeed, such as straightaway blessing after kneeling and bowing, immediate salvation after professing, or instant deliverance by crying out "I believe". Well, if it can be done in such an expeditious manner, how come the world is still full of calamities?

SUCH ARE REFERRED-TO AS DISTINCTIVE FEATURES

The previous section touched on the fundamentals of Buddhism, from its goals to some of its paths of practice. The key points can be summarized as follows: (1) Consciousness acts perpetually to accumulate karma. (2) Karma acts incessantly to direct consciousness. (3) The causality between consciousness and karma traps the sentient being in endless cycles of life and death, a process which is known as samsara. (4) Samsara causes suffering, pain, distress, dissatisfaction, and other forms of unhappiness which justify the liberation of its victims. (5) Karmic force has no effect on fully purified consciousness, meaning that every sentient being can liberate himself/herself/itself from samsara by thoroughly purifying his/her/its own consciousness. (6) The state of being free from samsara is known as nirvana or ultimate bliss. (7) The most effective way to purify one's own consciousness is to act virtuously, refrain from craving, and refrain from attachment. (8) The amount of time required to reach the state of nirvana will depend on the sentient being's effort and cumulative karma. (9) What is not accomplishable in a single lifetime can be continued in the next lifetime if one has the right resolve. (10) Buddhists who vow to liberate the countless sentient beings from samsara will work towards this goal while seeking self-purification and they may follow the course of samsara to enlighten other sentient beings even after their own enlightenment.

At the time when the Buddha gave his dharma lectures, modern science plainly did not exist. Therefore, he could not have possibly made references to any of the scientific theories developed in recent centuries. However, the spirit of science may be found in the fundamental doctrines of Buddhism. What is the basis of this statement? Well, science will only use natural causes to explain natural phenomena and it will not theorize on the possibility of supernatural factors.⁽²⁷⁾ When we compare this hallmark of science with the Buddhist theories of causality and samsara, the commonality between Buddhism and science becomes obvious since causality and samsara are natural processes which occur without divine intervention and their invariability lies in the fact that nothing which comes into being can defy the principle of causality and no sentient being is inherently exempted from samsara. From a scientific standpoint, what in the universe is/are truly universal, truly inflexible, and truly non-alterable by any civilization? The only logical answer to this question is the laws of nature! The term "laws of nature" may be polysemous as some may use it to express legal, moral, or political ideas but I am not using it in more than a straight scientific sense, nor am I using it to describe natural phenomena which appear to occur in a cyclic or recurring pattern since cyclicity or recurrence can change depending on the conditions which give rise to them. What I mean by the "laws of nature" are laws governing the various processes or phenomena which occur with or without human input and they are the foundation of our science. Some of these laws may apply to conditions found only in certain parts of the universe while others may apply to conditions which are present everywhere until the universe renews itself. Humans have the technology to modify certain natural phenomena, such as building artificial oases in the middle of a desert, making artificial rainfalls in dry weather, and bypassing the natural path of evolution to create new species through genetic engineering. Such artificial alterations must not be interpreted as acts of defiance of the laws of nature since all humans have done in each of these cases is to obtain their desirable results by introducing into the process a set of factors or conditions which nature itself is not prepared to provide. After all, humans are part of nature and anything they do is in essence a form of biological activities within nature.

One may wonder if Buddhism is in a mode of self-contradiction since, on the one hand, it considers samsara as an immutable law while, on the other hand, it teaches the method of liberation from samsara. The answer to this question is a no. The Buddha had discovered a unique natural property of fully purified consciousness: immunity to karmic attraction which is what fuels samsara. He then taught people the right path to self-purification so that people could make use of this natural property to seek their own liberation. The entire process can be understood in natural terms and there is nothing mysterious about it. In other words, the Buddhist concept of "liberation" is utterly different from the concept of "salvation" in many Western religious traditions since salvation is done by one or more divine beings and divine beings are believed to be supernatural beings capable of transcending nature and having the ability to intervene with nature and change the laws of nature. In the doctrines of Buddhism, such divine beings simply do not exist. The type of liberation proposed by the Buddha may be interpreted as a form of self-improvement within a given environment. Despite the fact that there is the Buddhist classification of three realms and six planes for the various sentient beings, despite the fact that there are those who would compare the plane of celestial beings to the rank of gods or goddesses, and despite the fact that some spiritual beings are said to possess superhuman powers, all beings in the three realms and six planes are sentient beings whose existence and capabilities are merely transitional products of samsara. None of them has a permanent identity. None of them has a permanent advantage. None of them can defy the principle of causality with which nature itself must also comply.

If Buddhist philosophy is that advanced and scientific, why did the Buddha bring up notions such as the three realms and six planes in his dharma lectures to make things sound so mysterious? What is the basis for the three realms and six planes? How do we validate their existence? Or, to rephrase my questions in modern terms, are the three realms three different systems of dimensions? Are sentient beings of the six planes living in separate space-times? Do celestial beings, demigods, starving ghosts, and hell denizens have bodies composed of material elements? Which of the six planes, besides the plane of animals, are also sharing the same world with us? Will celestial beings, demigods, starving ghosts, and hell denizens ever come into contact with us in our daily lives? Every one who studies Buddhism and has some sort of scientific background would probably have pondered on questions like these. To find the right answers, we must first understand the historical background of Buddhism.

The Buddha gave his dharma lectures in ancient India some twenty-five hundred years ago. It should not be surprising that he had used terms and notions which were familiar and traditional at the time in order to suit the cultural background of his audience and to make the principles of Buddhism easier to understand. So long as these terms and notions did not hinder the teaching of buddha-dharma and so long as any crucial errors in these terms and notions had been corrected, the purpose of his dharma lectures should have been well served. The cosmological view of "trichiliocosm", wherein a mathematical form similar to exponential expression is used to represent an extremely large number of worlds, was indigenous to ancient India.^(E-29) Since it is directionally correct, the Buddha used the same term in his lectures. The notions of karma and samsara were also shared by various traditions in ancient India since ancient Indians believed in endless cycles of rebirth.^(E-30) However, some misconceptions were found in their beliefs when compared with the Buddha's insight from enlightenment. So, the Buddha redefined these two terms, taught them the concepts of impermanence and no-self, and showed them the right path to liberation while adopting the old cultural

framework such as the three realms. For the modern Buddhist, all he/she needs to remember is that the boundless universe or multiverse can have an infinite number of worlds occupied by an infinite number of sentient beings who/which exist in a limitless diversity of forms and, while living in different environments with different mental states, these sentient beings are all subject to causality and samsara.

Among the uncountable multitudes of things and untold number of laws of nature, only some are known to us. The unknowns definitely surpass the knowns in quantity; consequently, our interest in Buddhism needs not to dwindle when certain Buddhist beliefs have not yet been proven by science. It is fair to say that if notions such as the three realms and six planes do have physical meanings, then scientific research will unveil their profiles sooner or later. If they are purely abstractions or metaphors accepted in a certain venue at a certain time for a certain cultural reason, then there is no point in making guesses about the irrelevant because the practice of self-purification does not have to be linked to the taxonomy of sentient beings. Those who want to see the living conditions in hell can save making a trip there by imagining the bloodbaths inside a warzone, the helplessness during a catastrophe, the torments under oppression, and the miseries caused by illness and poverty since these are scenes of a hell on earth. Those who are interested in a tour of heaven can visualize themselves living in an environment which guarantees sheer pleasure, maximum satisfaction, constant pampering, and ultra lightheartedness since a place like this may be called an earthly paradise.

After an introductory discussion of the basics of Buddhist teachings, it may seem feasible to deduce therefrom the defining characteristics of Buddhism in order to answer the caption question of this chapter. For instance, one may suggest the following:

- (1) There is no almighty god/goddess in Buddhism which is a religion that does not win people's faith by praising miracles.
- (2) It is a Buddhist view that every natural process or every natural phenomenon can be explained by causality and anything seemingly inexplicable is only a manifestation of our current inability to pinpoint the underlying principles and contributing factors.
- (3) No individual or nation is chosen to be more blessed in Buddhism since every sentient being in the way that he/she/it exists may be regarded as a transitional product of samsara and every sentient being has an equal opportunity to attain buddhahood by following the right path.
- (4) Buddhist attitude is practical and positive since Buddhism teaches that one must exert one's own efforts to end suffering rather than praying for divine salvation.
- (5) Buddhism is a peaceful religion since it renounces violence and it does not instill superciliousness and exclusiveness into its believers.

Any attempt to describe the uniqueness of Buddhism in the above fashion may seem harmless but it is actually prone to risks. First of all, it can stir up controversies since uniqueness is something which can only be identified on the basis of comparison but the comparison of religions may be considered offensive by some people, particularly those who feel that their religions are being criticized. Second of all, Buddhist philosophies are not something which can be patented or copyrighted in a society which allows freedom of speech and freedom of religion, meaning that any non-Buddhist religious group has the right to teach Buddhist philosophies, absorb them as part of their religious doctrines, or even call them their own. Lastly, if certain features of Buddhism are used to define its distinctiveness, then any religion or system of philosophy which displays such features can potentially be mistaken for a new branch of Buddhism. So,

after assessing the risks involved, I think it is better to let the readers make their own judgments after familiarizing themselves with Buddhist doctrines.

In my young and ambitious years, Dharma Master Chuk Mor made a foldable handheld fan for me as a gift to enlighten me. He drew on one side of the fan a Chinese-style painting and wrote down two of his old poems on the other side, "The Orchid" and "The Lotus". In Chinese culture, the orchid symbolizes the virtues of a gentlemen. In Buddhism, the lotus symbolizes sacredness. I treasure this gift and I think that these two poems have captured the essence of Chinese Buddhism. I would silently recite them a few times to soothe my nerves and re-concentrate when being pushed hard by interpersonal issues or other challenges from my surroundings. Photos of the two sides of this fan have been shown in the opening pages of this book. I shall attempt a translation of these poems as follows:

"The Orchid" by Dharma Master Chuk Mor	《詠蘭》	竺摩法師
Qí Huán and Jìn Wén won victories, ^(E-31)	齊桓晉業不	「聲揚
But few would cite their feudal-lord stories.		
Buddha and Confucius did not fade away,	佛孔門風源遠長	
Since we still practice their teachings today.		
Force, used in place of kind-heartedness,	以力假仁難	儲德
Cannot win against virtuousness.		
While others fight to dominate,	人多稱霸我	え 稱王
I am here to illuminate.		
"The Lotus" by Dharma Master Chuk Mor	《詠荷》	竺摩法師
"The Lotus " by Dharma Master Chuk Mor A hero is one who advances	《詠荷》 自來時勢達	
A hero is one who advances		连英雄
A hero is one who advances With the backing of circumstances.	自來時勢進	连英雄
A hero is one who advances With the backing of circumstances. Transcendence is not a higher plane;	自來時勢進	5英雄 、世同
A hero is one who advances With the backing of circumstances. Transcendence is not a higher plane; It shows itself among the mundane.	自來時勢違 出世還如入	5英雄 、世同
A hero is one who advances With the backing of circumstances. Transcendence is not a higher plane; It shows itself among the mundane. Where is not Buddhist Pure Land	自來時勢違 出世還如入	5英雄 、世同 手淨土

Dharma Master Chuk Mor, founding abbot of the Buddhist Triple Wisdom Hall (三慧講堂) in Penang, Malaysia, passed away in 2002. At my special request, Dharma Master Ji Chuan (繼傳法師), an eminent disciple of Dharma Master Chuk Mor and the incumbent abbot of the Buddhist Triple Wisdom Hall, will write the next chapter to provide a concise overview on the six paramitas. I will reconvene with the readers in Chapter 8 to discuss the subject of Buddhism and science.

ENDNOTES

Endnotes carried over from the 2014 Chinese edition are numbered numerically as before, with some reformatting and typo corrections. Supplementary endnotes for the 2020 English edition are numbered alphanumerically with the

prefix "E-".

Part 1: Endnotes Carried Over From the 2014 Chinese Edition

- Eric J. Sharpe, *Comparative Religion: A History*, 2nd ed. (London: Duckworth, 1986, impression 2009), p. 4.
- 2. Ibid., p. 6.
- 3. Ibid., pp. 7-8.
- 4. Thomas A. Robinson and Hillary Rodrigues, eds., *World Religions: A Guide to the Essentials* (Grand Rapids, MI: Baker Academic, 2010), p. 84.
- 5. Sharpe, *Comparative Religion*, pp. 9-13.
- 6. Ibid., p. 14.
- 7. Daniel L. Pals, *Eight Theories of Religion*, 2nd ed. (New York: Oxford University Press, 2006), p. 6.
- 8. Sharpe, Comparative Religion, p. 15.
- 9. Ibid., pp. 35-36.
- 10. Ibid., pp. 36-38.
- 11. F. Max Müller, *Introduction to the Science of Religion: Four Lectures Delivered at the Royal Institution, with Two Essays on False Analogies, and the Philosophy of Mythology* (London: Longmans, Green, and Co., 1873; repro. by Nabu), pp. 15-16.
- 12. F. Max Müller, Vol. 1 of *Chips from a German Workshop: Essays on the Science of Religion* (London: Longmans, Green, and Co., 1867; repro. by Nabu), p. xix.
- 13. Pals, Eight Theories of Religion, pp. 6-7.
- 14. Ibid., p. 7.
- 15. Ibid., pp. 8-9.
- 16. Sharpe, Comparative Religion, p. 27.
- 17. Ibid., pp. 41-43.
- 18. Pals, *Eight Theories of Religion*, pp. 20-21.
- 19. Daniel Dubuisson, *The Western Construction of Religion: Myths, Knowledge, and Ideology*, trans. William Sayers (Baltimore: The Johns Hopkins University Press, 2007), pp. 147-150, 189-194.
- 20. Timothy Fitzgerald, *The Ideology of Religious Studies*, pb. ed. (New York: Oxford University Press, 2003), pp. 33-53.
- 21. Tomoko Masuzawa, *The Invention of World Religions: Or, How European Universalism Was Preserved in the Language of Pluralism* (Chicago: The University of Chicago Press, 2005), pp. 12-13, 256.
- 22. 釋竺摩,《南遊寄語》 (檳城: 慧堂印經會,佛曆 2528 年 (1984 CE) 5 月再版), pp. 35-36。
- 23. Roy C. Amore, "Buddhist Traditions" in *World Religions: Eastern Traditions*, 3rd ed., ed. Willard G. Oxtoby and Roy C. Amore (Don Mills: Oxford University Press, 2010), pp. 201-224.
- 24. 尤智表,《一個科學者研究佛經的報告》單行本(原載 1946 年 7 月《漢口正信月刊》,繼有由王季同寫序的單 行本出版,先後有多個佛教團體翻印。此處用作參考者乃香港法相三輪世佛佛學班同學會於 1970 年代製作的 翻印本,確實翻印日期未有標明),正文 pp. 14-15。
- 25. 慈怡法師 主編, 星雲法師 監修, 《佛光大辭典》電子版 (高雄: 佛光山, 2011), 2011 年至 2013 年間於網上 參閱。(<u>http://www.fgs.org.tw/fgs_book/fgs_drser.aspx</u>)
- 26. Brian L. Weiss, Many Lives, Many Masters, 20th anniversary ed. (NewYork: Simon & Schuter, 2008).
- 27. Jeffrey Bennett and Seth Shostak, *Life in the Universe*, 3rd ed. (San Franscisco: Pearson / Addison-Wesley, 2012), p. 34.

Part 2: Supplementary Endnotes for the 2020 English Edition

The Buddhist concepts and Buddhist terminology introduced in this chapter are considered basic and familiar within the intellectual circle of Chinese Buddhism and I am competent enough to explain them. For this reason, no specific sources were named for the majority of Buddhist terms discussed in the 2014 Chinese edition of this book. Only a general statement was made to refer my readers to the online version of the *Fóguāng Dàcídiăn* (佛光大辭典), aka the *Fo Guang Dictionary of Buddhism*, in case they would like to look up more information about certain topics. Since the average reader of this English edition is expected to be less familiar with Buddhism, full notes are provided for the same Buddhist terms to include references and other additional comments I would like to make. The two major sources used for reference purposes are *The Princeton Dictionary of Buddhism* and a printed version of the *Fo Guang*

Dictionary of Buddhism since they are relatively more complete, more readily available, and more user-friendly than many other publications in the field of Buddhist studies. The *Fo Guang Dictionary of Buddhism* is still cited here since my discourse is based on Chinese Buddhism and since some English readers may be versed in Chinese. A disclaimer must be added to say that I do not necessarily agree with everything said in either of these two sources and they are cited for supplementary information only. Also, my English translations of Buddhist terms may not always be identical to those provided by *The Princeton Dictionary of Buddhism*.

The Chinese Buddhist monk Zhúmó (竺摩) (1913-2002), better known as Dharma Master Chuk Mor (竺摩 E-1. 法師) to some, was an educator, a poet, a painter, a calligrapher, and a writer who had written more than a score of books. He travelled a lot to preach Buddhism within and outside China. During his residence in Malaysia, he founded or co-founded several Buddhist organizations. The monastery Sānhuì Jiǎntáng (三慧 講堂) was one of them. In Malaysia, the name "Sānhuì Jiǎntáng" has been officially translated into English as "Buddhist Triple Wisdom Hall" but I also remember seeing elsewhere the translation "Buddhist Hall of Three Wisdoms". The official anglicization of the name "Zhúmó" is or used to be "Chuk Mor". The name "Dharma Master Chuk Mor" (竺摩法師) is adopted here since this is his English name as shown on the title page of his bilingually-titled work "篆香室書畫集/Chinese Arts & Calligraphy by Dharma Master Chuk Mor", which was published in 1985 by the Buddhist Foo Yeun Lim Editorial in Singapore. The courtesy title "dharma master" is an English translation of the Chinese compound term "fǎshī" (法師), which in turn is a Chinese translation of the Sanskrit term "dharmabhānaka" (ref. (i) 慈怡法師 主編, 星雲法師 監修, 《佛光大辭典》2-3版, 全7冊, 另索引 (高雄: 佛光出版社, 1988/1989), 參閱條文: 法師; (ii) Robert E. Buswell Jr. and Donald S. Lopez Jr., The Princeton Dictionary of Buddhism (New Jersey: Princeton University Press, 2014), s.v. "dharmabhānaka"). "Făshī" is generally and traditionally the most widely used courtesy title for Chinese Buddhist monastics although other courtesy titles may be used according to their respective roles and seniority.

All ordained Chinese Buddhist monastics are assigned the same Buddhist surname "Shì" (釋), which is the transcription of the first syllable of the Śākyamuni Buddha's title as well as the transcription of the first syllable of his clan name, Śākya (ref. 《佛光大辭典》, 參閱條文: 釋; (ii) *The Princeton Dictionary of Buddhism*, s.v. "shì"). However, this Buddhist surname is often left out even in formal writing.

- E-2. The Sanskrit term "buddhadharma" (*Chi.* 佛法) is often used by Buddhists to represent the teachings of the Buddha although it can also refer to a few more things in a broader sense (ref. (i) 《佛光大辭典》, 參閱條文: 佛法; (ii) *The Princeton Dictionary of Buddhism*, s.v. "buddhadharma"). Some authors have anglicized it with an identical English spelling (i.e. buddhadharma) but such an anglicization has not yet found its way to some popular English dictionaries at the time of composing this book. Therefore, the hyphenated word "buddha-dharma" is used here as its translation.
- E-3. "Sānguān" (三觀) is a Chinese Buddhist term and a compound term made up of the modifier "sān" (\equiv ; *lit*. three, third, threefold, etc.) and the head noun "guān" (觀; lit. view, observe, observation, contemplate, contemplation, etc.). It can be understood as a set of three simultaneous but different perspectives which enables a person to see the true reality of the world. There are several versions of explanation regarding its meaning. The most commonly cited version was originally proposed by the Tiāntái (天台) school of Chinese Buddhism, which identifies the three perspectives as *jiǎguān* (假觀), *kōngguān* (空觀), and zhōngguān (中觀) (ref. (i) 《佛光大辭典》, 參閱條文: 三觀; (ii) The Princeton Dictionary of Buddhism, s.v. "sanguan", and, in "List of Lists", s.v. "threefold contemplation"). Authors of The Princeton Dictionary of Buddhism translated "sānguān" as "threefold contemplation" and the three elements therein as "contemplation of conventional existence", "contemplation of emptiness", and "contemplation of their mean". This is likely due to the contemplative practice of Tiantái. My translations in the same order are "threefold view", "conventional view", "emptiness view", and "neutral view" since I have adopted the version of explanation offered by the Chinese engineer Yóu Zhibiǎo (尤智表) in 1946 (cited in endnote 24 above), which is consistent with that of Tiantái but simple enough for people to comprehend without entering the state of religious meditation. More specifically, I have translated the head noun "guān" as "view" (way of thinking) rather than "contemplation" so that the concept is less connected to a meditative practice. Note that the modifier "jiǎ" (假) literally means false or non-reality and hence "jiǎguān" will become "false view" or "non-reality view" if translated literally. It is not a bad idea to translate "jia" as

"conventional existence" or simply "conventional" as some translators have done since, in this way, the translation will be less outlandish for English readers and since conventionality by itself is not the true reality. As for the modifier "*zhōng*" (中) in "*zhōngguān*", I would prefer the translation "neutral" to the translation "mean" since *zhōngguān* would be better interpreted as a view which is unbiased instead of something which is the midpoint between *jiǎguān* (假觀) and *kōngguān* (空觀).

E-4. The *Diamond Sutra* (*Chi.* 金剛般若波羅蜜經 or 金剛經 for short; *Skt.* Vajracchedikā-prajñāpāramitā-sūtra) is a very important sutra in Mahayana Buddhism. It has more than one version of Chinese translation. The version used for reference here was translated from Sanskrit into Chinese by the Central Asian Buddhist monk Jiūmóluóshí (鳩摩羅什; *Skt.* Kumārajīva) (344-409/413 CE), hereinafter referred to as "Kumārajīva". The two quoted passages may be found in chapter 8 and chapter 10 of this sutra respectively. In the Chinese text, they are written as follows:

所謂佛法者.即非佛法。

莊嚴佛土者.即非莊嚴.是名莊嚴。

More information about this sutra and its translator may be found in the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* (ref. (i) 《佛光大辭典》, 參閱條文: 金剛般若波羅蜜經、鳩摩羅 针; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "Vajracchedikāprajñāpāramitāsūtra", "Kumārajīva").

- E-5. This work of Yóu Zhìbiǎo (尤智表) will be discussed further in Chapter 8.
- E-6. In Chinese Buddhism, the Sanskrit term "tri-sāhasra-mahā-sāhasra-loka-dhātu" is literally translated as "*sānqiān dàqiān shìjiề*" (三千大千世界, *lit.* three thousandfold great thousandfold world system), which is sometimes abbreviated to "*sānqiān shìjiề*" (三千世界, *lit.* three thousandfold world system or three thousand worlds). In English, it is often translated as "trichiliocosm". One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for more information about this Buddhist term and its source (ref. (i) 《佛光大辭典》, 參閱條文: 三千大千世界、阿毘達磨俱舍論; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "Abhidharmakośabhāşya", "trisāhasramahāsāhasralokadhātu").
- E-7. The *Āmítúo Jīng* (阿彌陀經; *Skt. Amitābhasūtra*) used for reference here is the version translated from Sanskrit to Chinese by Kumārajīva, whose name has been mentioned in endnote E-4 above (ref. 《佛光大 辭典》, 參閱條文: 阿彌陀經; (ii) *The Princeton Dictionary of Buddhism*, s.v. "Amitābhasūtra"). In the Chinese text, the quoted passage is written as follows:

從是西方過十萬億佛土。有世界名曰極樂。

which is basis of my English translation. Note that the term "Jílè" (極樂), whose meaning is "ultimate bliss", is the Chinese translation of the Sanskrit term "sukhāvatī", which refers to the Buddhist pure land of the buddha Āmítúofó (阿彌陀佛; *Skt*. Amitābha) (ref. (i) 《佛光大辭典》, 參閱條文: 極樂世界; (ii) *The Princeton Dictionary of Buddhism*, s.v. "sukhāvatī"). Also note that the Chinese sometimes pronounce "Āmítúofó" as "Ēmítúo Jīng" as "Ēmítúo Jīng".

E-8. This passage is a quote from volume 4 of the Lényán Jīng. In the Chinese text, it is written as follows:

於一毫端。現寶王刹。坐微塵裏。轉大法輪。

As mentioned in both the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism*, there have been discussions as to whether the *Lényán Jīng* (楞嚴經; *Skt. Śūraṃgamasūtra*) is an indigenous Chinese composition or a Chinese translation of some Buddhist scripture imported from ancient India (ref. (i) 《佛光大辭典》, 參閱條文: 楞嚴經; (ii) *The Princeton Dictionary of Buddhism*, s.v. "*Śūraṃgamasūtra*"). The uncertainty in this regard, however, is not a good reason to prevent us from using the quoted passage as an example to illustrate certain Buddhist concepts. Note that the same passage was also quoted by Yóu Zhìbiǎo (尤智表) in his work which has been mentioned in endnote 24, endnote E-3, and endnote E-5 above.

- E-9. There is a chart in the *Fo Guang Dictionary of Buddhism* which shows that the existence of a sentient being can be classified into more than two dozen categories (ref. 《佛光大辭典》, 參閱條文: 三界). The "three realms" (*Chi*. 三界; *Skt*. "traidhātuka") and "six planes" (*Chi*. 六道 or 六趣; *Skt*. "şaḍgati") are two different simplified versions of classification (ref. (i) 《佛光大辭典》, 參閱條文: 三界、六道; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "gati", "şaḍgati", "traidhātuka", and, in "List of Lists", s.vv. "three realms", "six destinies"). The Sanskrit term "şaḍgati" is translated as "six destinies" in *The Princeton Dictionary or Buddhism* but I prefer not to use the word "destiny" in the translation since it may sound a little bit superstitious to some when used in this context.
- E-10. "Impermanence" (*Chi.* 無常; *Skt.* anitya) and "no-self" (*Chi.* 無我; *Skt.* anātman) are two important concepts in Buddhism. They are discussed explicitly in a number of Buddhist scriptures. The *Saṃyuktāgama*, whose full collection is only preserved in a Chinese translation known as the *Zá Āhán Jīng* (雜阿含經), is one of them. In the Chinese text, the quoted passage is written as follows:

一切行無常。一切法無我。

One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for more information about the Buddhist concepts of impermanence and no-self as well as the Buddhist scripture Zá Āhán Jīng (ref. (i) 《佛光大辭典》, 參閱條文: 無常、無我、雜阿含經; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "anātman", "anitya", "Saṃyuktāgama").

- E-11. In their original language, these five Chinese Buddhist idioms are written as (i) 緣起性空, (ii) 五蘊無我, (iii) 四大皆空, (iv) 生住異滅, and (v) 成住壞空. One may refer to the *Fo Guang Dictionary of Buddhism* for further discussions of item iii and item v (ref. 《佛光大辭典》, 參閱條文: 四大皆空、成住壞空).
- E-12. The five aggregates (*Chi.* 五蘊; *Skt.* pañca-skandha) are "rūpa-skandha", "vedanā-skandha", "samjňāskandha", "samskāra-skandha", and "vijňāna-skandha" when written in Sanskrit transliteration; or "色蘊", "受蘊", "想蘊", "行蘊", and "識蘊" when written in Chinese (ref. (i) 《佛光大辭典》, 參閱條文: 五蘊; (ii) *The Princeton Dictionary of Buddhism*, s.v. "skandhas", and, in "List of Lists", s.v. "five aggregates"). The Sanksrit term "saṃskāra" is polysemous. Its meanings include "conditioning factors", "formation", and more (ref. *The Princeton Dictionary of Buddhism*, s.v. "saṃskāra"). Authors of *The Princeton Dictionary of Buddhism* translated "saṃskāra-skandha" as "aggregates of conditioning factors" but I like the translation "aggregate of formation" better since the word "saṃskāra" can refer to mental formation as well as things which have been formed and since this translation is a little bit more consistent with the way that "saṃskāraskandha" is explained in the *Fo Guang Dictionary of Buddhism* (ref. 《佛光大辭典》, 參閱條文: 行、行蘊). "Saṃskāra" is translated into Chinese as "*xíng*" (行). The Chinese word "xíng" is also polysemous. It can denote "formation" as in the "aggregate of formation". It can also denote "volitional action" as in the second link of the twelvefold chain of dependent origination, which will be discussed in endnote E-22 below.
- E-13. One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for more information about the "four great elements" (*Chi.* 四大; *Skt.* catvāri mahābhūtāni) (ref. (i) 《佛光大辭 典》, 參閱條文: 四大; (ii) *The Princeton Dictionary of Buddhism*, s.v. "mahābhūta", and, in "List of Lists", s.v. "four great elements").
- E-14. One may refer to the Fo Guang Dictionary of Buddhism and The Princeton Dictionary of Buddhism for more information about the "six consciousnesses" (Chi. 六識; Skt. ṣaḍvijñāna) (ref. (i) 《佛光大辭典》, 參 閱條文: 六識; (ii) The Princeton Dictionary of Buddhism, s.v. "vijñāna", and, in "List of Lists", "six consciousnesses").
- E-15. In brief, the "six sense-bases" (*Chi.* 六根; *Skt.* ṣaḍ indriyāṇi) can be understood as the sense-organs associated with the traditional five senses plus the sentient being's mental faculty. One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for further information on this topic (ref. (i) 《佛光大辭典》, 參閱條文: 六根; (ii) *The Princeton Dictionary of Buddhism*, s.v. "indriya",

and, in "List of Lists", s.v. "six sense faculties/sense bases"). Also see endnote E-16 below.

- E-16. In brief, the "six sense-fields" (*Chi.* 六境; *Skt.* şaḍ vişayāḥ) can be understood as sense objects targeted by the "six sense-bases" as discussed in endnote E-15 above. One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for further information on this topic (ref. (i) 《佛光 大辭典》, 參閱條文: 六塵、六境; (ii) *The Princeton Dictionary of Buddhism*, s.v. "vişaya"). The "six sense-bases" and the "six sense-fields" are collectively known as the "twelve sense-fields/bases" (*Chi.* 十二處; *Skt.* āyatana for "處") wherein the "six sense-bases" are categorized as internal sense-fields/bases and the "six sense-fields" are categorized as external sense fields/bases (ref. (i) 《佛光大辭典》, 參閱條文: 十二處; (ii) *The Princeton Dictionary of Buddhism*, s.v. "āyatana", and, in "List of Lists", s.v. "twelve sense-fields/bases of cognition").
- E-17. In the system of "eight consciousnesses", the seventh consciousness is the consciousness which mistakes the eighth consciousness for a true self and clings to it accordingly. It is therefore responsible for a person's self-clinging and all the vexations arising therefrom. The Sanskrit term for the seventh consciousness is "klistamanovijñāna" (or "klistamanas" for short) and one of its English translations is "afflicted mental consciousness" (ref. *The Princeton Dictionary of Buddhism*, s.vv. "klistamanas", "klistamanovijñāna", and, in "List of Lists", s.v. "eight consciousnesses"). In the Yogācāra school, the word "klistamanas" can be abbreviated to "manas" (ref. *The Princeton Dictionary of Buddhism*, s.v. "manas"). Since the Chinese translation of the Sanskrit word "manas" is "yi" (意) and the resulting translation of "manas consciousness" is "yisht" (意識), which is identical to the Chinese translation of the sixth consciousness, Chinese Buddhists prefer to use the transcription "mònàshi" (末那識) to avoid potential confusion when referring to the seventh consciousness (ref. 《佛光大辭典》, 參閱條文: 末那識).

The eighth consciousness in the system of "eight consciousnesses" is the consciousness which serves as a foundation of other types of consciousness and stores the karmic seeds of past lifetimes. Therefore, it is responsible for karmic continuity. The Sanskrit term for this consciousness is "ālayavijñāna" and one of its English translations is "storehouse consciousness" (ref. *The Princeton Dictionary of Buddhism*, s.v. "ālayavijñāna"). The Chinese translations of "ālayavijñāna" include "*běnshí*" (本識; *lit.* "foundational consciousness"), "*cángshí*" (藏識; *lit.* "storehouse consciousness"), and more but the Chinese transcription "*ālàiyēshí*" (阿賴耶識) seems to be used more frequently by Chinese Buddhists when referring to the eighth consciousness (ref. 《佛光大辭典》, 參閱條文: 阿賴耶識).

One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for more discussions of the eight types of consciousness and the *Chéng Wéishí Lùn* (成唯識論) (ref. (i) 《佛光 大辭典》, 參閱條文: 八識、成唯識論; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "vijňāna", "Cheng Weishi Lun", and, in "List of Lists", s.v. "eight consciousnesses").

E-18. The Sanskrit term "amalavijñāna" can be translated into English as "immaculate consciousness" (ref. *The Princeton Dictionary of Buddhism*, s.v. "amalavijñāna"). When the immaculate consciousness is added to the eight types of consciousness identified by the *Chéng Wéishí Lùn*, the resulting system is known as "nine consciousnesses" (ref. 《佛光大辭典》, 參閱條文: 九識義). The Chinese transcription of "amalavijñāna" is *āmóluóshí* (阿摩羅識). The Chinese translations of "amalavijñāna" include "*rúláishí*" (如來識; *lit.* tathāgata consciousness), "*wúgòushí*" (無垢識; *lit.* immaculate consciousness), and more (ref. 《佛光大辭典》, 參閱 條文: 阿摩羅識).

In the system of "ten consciousnesses", the first eight types of consciousness are identical to those in the system of "eight consciousnesses". The two additional types are "*yīqiè yīxīnshî*" (一切一心識) and "*yīxīn yīxīnshî*" (一心一心識) as stated in the *Fo Guang Dictionary of Buddhism* (ref. 《佛光大辭典》, 參閱條文: 十識).

In Chinese Buddhism, there is also a system of "eleven consciousnesses" (ref. 《佛光大辭典》, 參閱條文: +一識). The contents are a little bit more philosophical.

E-19. The original narrator statement was rhymed: "不在乎天長地久, 只在乎曾經擁有". My translation is also

rhymed: "Love without eternality is fine, so long as the memory is mine."

- E-20. The four noble truths are "duḥkhasatya", "samudayasatya", "nirodhasatya", and "mārgasatya" when written in Sanskrit transliteration; or "苦諦", "集諦", "滅諦", and "道諦" when written in Chinese (ref. (i) 《佛光大 辭典》, 參閱條文: 四諦; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "catvāry āryasatyāni", "four noble truths", and, in "List of Lists", s.v. "four noble truths"). Note that the second truth "samudayasatya" is translated as the "truth of origination" in *The Princeton Dictionary of Buddhism*, which may seem to be different from the Chinese translation "*jidi*" (集諦) as provided by the *Fo Guang Dictionary of Buddhism* since "*jidi*" literally means "the truth of combination" or "the truth of coming together". However, the translations in both sources are consistent since the Sanskrit word "samudaya", used as a modifier in the compound word "samudayasatya", can express the meaning of "combination" or "coming together" and since it is a Buddhist belief that suffering originates from the aggregation or combination of bad qualities such as craving, attachment, avarice, aversion, delusion, etc.
- E-21. One may refer to pertinent entries in the Fo Guang Dictionary of Buddhism and The Princeton Dictionary of Buddhism for more discussions of the eight types of suffering (Chi. 八苦; Skt. aştalduḥkha) (ref. (i) 《佛 光大辭典》, 參閱條文: 八苦; (ii) The Princeton Dictionary of Buddhism, s.vv. "aṣṭalduḥkha", "duḥkha", and, in "List of Lists", s.v. "eight sufferings").
- E-22. When written in Sanskrit transliterations, the twelve links forming the twelvefold chain of dependent origination (*Chi.* 十二因緣; *Skt.* dvādaśāṅga-pratītya-samutpāda) are "avidyā", "saṃskāra", "vijñāna", "nāma-rūpa", "ṣaḍ-āyatana", "sparśa", "vedanā", "tṛṣṇā", "upādāna", "bhava", "jāti", and "jarā-maraṇa"; when written in Chinese, they are "無明", "行", "識", "名色", "六處", "觸", "受", "愛", "取", "有", "生", and "老死" (ref. (i) 《佛光大辭典》, 參閱條文: 十二因緣、六入、生、名色、有、老死、行、取、受、無明、愛、 觸、識; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "avidyā", "bhava", "jarāmaraṇa", "jāti", "nāmarūpa", "nidāna", "pratītyasamutpāda", "ṣaḍāyatana", "saṃskāra", "sparśa", "upādāna", "vedanā", "vijňāna", and, in "List of Lists", s.v. "twelvefold chain of dependent origination").
- E-23. This verse is a quote from the Zēngyī Āhán Jīng (增壹阿含經; Skt. Ekottarikāgama), which was translated from Sanskrit to Chinese during the 4th century CE by Gautama Samghadeva (Chi. 瞿曇僧伽提婆). In the Chinese text, this verse is written as follows:

諸惡莫作。諸善奉行。自淨其意。是諸佛教。

Similar verses may be found in other Buddhist scriptures such as the *Fǎjù Jīng* (法句經; *Pli. Dhammapada*; *Skt. Dharmapada*). One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for more information about the *Zēngyī Āhán Jīng* (ref. (i) 《佛光大辭典》, 參閱條文: 增壹阿 含經; (ii) *The Princeton Dictionary of Buddhism*, s.v. "*Ekottarāgama*").

- E-24. For more discussions of the noble eightfold path (*Chi.* 八正道; *Skt.* "āryāṣṭāṅgamārga"), refer to pertinent entries in the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* (ref. (i) 《佛 光大辭典》, 參閱條文: 八正道、正見、正命、正定、正念、正思惟、正業、正精進、正語; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "āryāṣṭāṅgamārga", "samyagājīva", "samyagdṛṣṭi", "samyagvāc", "samyakkarmānta", "samyakpradhāna", "samyaksamādhi", "samyaksamkalpa", "samyaksmrti", and, in "List of Lists", s.v. "eightfold noble path").
- E-25. For more discussions of "nirvana with remainder" (*Chi.* 有餘涅槃; *Skt.* sopadhiśeṣa-nirvāṇa) and "nirvana without remainder" (*Chi.* 無餘涅槃; *Skt.* nirupadhiśeṣa-nirvāṇa), refer to pertinent entries in in the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* (ref. (i) 《佛光大辭典》, 參閱條文: 有餘涅槃、無餘涅槃; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "sopadhiśeṣanirvāṇa", "nirupadhiśeṣanirvāṇa").
- E-26. The "four immeasurable states of mind" are often referred to as the "four immeasurables" (*Chi*. 四無量; *Skt*. catvāry apramāņāni). In Sanskrit transliteration, they are written as "maitry-apramāņa", "karuņāpramāņa",

"muditāpramāņa", and "upekṣāpramāṇa" and their short forms are "maitrī", "karuņā", "muditā", and "upekṣā". In Chinese, they are written as "慈無量", "悲無量", "喜無量", and "捨無量" and the short forms are "慈", "悲", "喜", and "捨". One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for more information on this topic (ref. (i) 《佛光大辭典》, 參閱條文: 四無量心; (ii) *The Princeton Dictionary of Buddhism*, s.vv. "apramāṇa", "karuņā", "maitrī", "muditā", "upekṣā", "upekṣāpramāṇa", and, in "List of Lists", s.v. "four boundless states/immesaruables").

- E-27. The four means of conversion (*Chi.* 四攝法; *Skt.* catvāri samgraha-vastūni) are "dāna", "priyavādita", "arthacaryā", and "samānārthatā" when written in Sanskrit transliteration; or "布施", "愛語", "利行", and "同事" when written in Chinese (ref. (i) 《佛光大辭典》, 參閱條文: 四攝法; (ii) *The Princeton Dictionary of Buddhism*, s.v. "samgrahavastu", and, in "List of Lists", "four means of conversion"). The Chinese translation of "samānārthatā" is "*tòngshi*" (同事) which literally means "working together" or "working alongside". This is utterly different from the English translation provided by *The Princeton Dictionary of Buddhism* which is "consistency between words and deeds". To me, the Chinese translation seems to be more relevant since the four means of conversion are supposed to be guidelines for interactions between the practitioner and other sentient beings and these interactions are supposed to directly benefit all sentient beings involved. The translation "consistency between words and deeds" seems to be less relevant since it reads like a moral rule which is aimed at improving the practitioner's integrity and it does not necessarily imply any interaction between the practitioner and other sentient beings. Having said that, it is up to experts of Sanskrit semantics to sort out the differences.
- E-28. For more discussions of nirvana without lodgment (*Chi*. 無住處涅槃; *Skt.* apratisthita-nirvāṇa), refer to pertinent entries in the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* (ref. (i) 《佛光大辭典》, 參閱條文: 無住處涅槃; (ii) *The Princeton Dictionary of Buddhism*, s.v. "apratisthitanirvāṇa"). Note that the English translation used in this book and the English translations provided by *The Princeton Dictionary of Buddhism* are identical in meaning but different in terms of phrasing. Also note that the Chinese translation "wúzhùchù nièpán" (無住處涅槃) may be abbreviated to "wúzhù nièpán" (無住涅槃) which is what *The Princeton Dictionary of Buddhism* has adopted.
- E-29. According to the *Fo Guang Dictionary of Buddhism*, the trichiliocosm was an indigenous ancient-Indian cosmological view and was not proposed by the Buddha (ref. 《佛光大辭典》, 參閱條文: 三千大千世界). Also see endnote E-6 above.
- E-30. The notions of karma and samsara were not innovations of the Buddha but, rather, beliefs common to all the traditions in the Ganges region of ancient India although the Buddha had redefined them when teaching buddha-dharma (ref. (i) Roy C. Amore, "Buddhist Traditions" in *World Religions: Eastern Traditions*, 3rd ed., ed. Willard G. Oxtoby and Roy C. Amore (Don Mills: Oxford University Press, 2010), p. 180; (ii) 《佛光大辭典》, 參閱條文: 業、輪迴; (iii) *The Princeton Dictionary of Buddhism*, s.v. "karman").
- E-31. Qí Huán Gōng (齊桓公), or Duke Huán of Qí, and Jìn Wén Gōng (晉文公), or Duke Wén of Jìn, were two of the most influential feudal lords of the Spring and Autumn (春秋) period in Chinese history.

CHAPTER 7

HOW TO PRACTICE THE SIX PARAMITAS OF BUDDHISM?

Shi, Ji Chuan

(Translated from Chinese to English and annotated by Lung, Tin Yick)

The six paramitas, also known as "liù dù" (六度) [in Chinese Buddhism], are mandatory practice for bodhisattvas as well as dharma approaches used by bodhisattvas to enlighten sentient beings.^(E-1) The six paramitas include the paramita of giving, the paramita of moral precepts, the paramita of forbearance, the paramita of effort, the paramita of meditative concentration, and prajna-paramita.(E-2) The meaning of "paramita" is "having crossed from this shore, which has affliction, to the other shore, which has not". (E-3) The goal of practicing Buddhism, regardless of the method or approach used, is to subdue self-clinging, subdue phenomenon-clinging, and end affliction.^(E-4) If it is not for this goal, any method or approach used in the practice will only help us understand the method or approach itself but will not help us eliminate affliction. Hence, the practice of Buddhism is to allow [Buddhist] wisdom to ceaselessly germinate in our minds, or to edify ourselves with paramita. In other words, to practice paramita is the same as to practice prajna-wisdom. A person with prajna-wisdom can cross from this shore of the perplexed to the other shore of the self-awakened. The terms "this shore" and "the other shore" are used in a metaphorical sense. They imply not the physical relocation from a place with affliction to a place without but the state of mind which is free from affliction even when the person is facing an afflictive situation. Such a state of mind is what we meant by having crossed from this shore to the other shore. It is also the meaning of paramita. [The term] "wisdom" is generic and secular. "Prajna", which may also be referred to as "wisdom", is not. A person with secular wisdom is not devoid of self-clinging and therefore cannot be free from affliction since self-clinging can cause affliction. In contrast, buddha-dharma uses praina-wisdom, which is empty of selfclinging, and, when there is no self-clinging, there is no affliction. How can a person with prajna-wisdom be free from self-clinging and affliction? This is because he/she understands that everything in the world can give rise to the feeling of reality but none of them is reality in itself. This is what we meant by the reality of all phenomena.^(E-5) Every phenomenon is impermanent and without self-essence. Everything in existence has its dependent origination. Every bit of change which happens to them will also have its dependent origination. Birth or death cannot occur without causality. Phenomena are empty of selfabsoluteness. Every form of appearance is delusive. Everything which comes into being is like an illusion. Such is the view which Buddhists must hold in order to understand and experience the world and perform self-reflection frequently. Will the insight into prajna-wisdom thus gained correspond to the truth of emptiness? It will depend on the achievement of the practitioner's practice.

THE PARAMITA OF GIVING

Generosity is [a] generic and secular [virtue]. The practice of generosity or giving is endorsed by many religions and cultures and is therefore not unique to Buddhism. What is unique [in the Buddhist practice

of giving] is the element of paramita. Giving can lead to karmic reward but if it is done without prajnawisdom, the inherent self-clinging of a person will hinder our effort to end affliction! In buddha-dharma, giving implies equanimity and benefit. Simply put, the donor must maintain equanimity and the donation must benefit the recipient. If the donor acts without equanimity or if the donation does not benefit the recipient, then such a giving is problematic. Besides the cultivation of karmic merit, giving can also cause karmic merit to be carried over from the present lifetime to the next lifetime. It also helps correct our greed. Thus, giving has multiple meanings. When a bodhisattva practices charity, he/she is not only accumulating merit but also helping other sentient beings and practicing paramita at the same time since a bodhisattva's practice of charity must include the realization of emptiness in three aspects in order for his/her merit to correspond to paramita.^(E-6) As stated above, the virtue of generosity is generic and secular but paramita is not. A bodhisattva cannot accumulate merit by avoiding the secular world but his/her insight into emptiness and no-self is not a secular knowledge. The donor is impermanent and empty of self-essence. The donee is impermanent and empty of self-essence. The donated item is impermanent and empty of self-essence. [Such is the meaning of emptiness in three aspects in this context.] [In the course of making a donation,] every step has its dependent origination and every phenomenon comes into being through causality. They are all unreal and transitory. They cause the feeling of reality but are not reality in themselves. They are just like what it says in the scripture: "Anything with characteristics is illusory."(E-7) However, unreal as they are, we can use them to practice what can lead us to the truth. Buddha-dharma does not separate itself from the mundane. It is like a lotus flower which rises from the mud without being soiled, with the mud being the mundane world which is like an illusion. When practicing charity, a bodhisattva will use his/her wisdom of paramita to maintain serenity regardless of the outcome which can be either positive or negative and he/she will not allow the positive or negative results of his/her giving to induce any emotion, selfclinging, or affliction on his/her part. In the secular world, things may often turn sour for the average person when his/her kind acts are not met by desirable effects and he/she may vow to not help others again as a result. This is not how a bodhisattva works. A bodhisattva will accept any adverse consequence as part of his/her training since any hard feeling on his/her part will imply that he/she has not yet crossed from this shore to the other shore. For a bodhisattya, it is clear that the goal of practicing generosity is the paramita of giving rather than the philanthropic aspect of giving! As for the different types of giving, one may sow seeds in the field of merit [through charitable donations] but there are also dharma-giving and fearlessnessgiving. Dharma-giving is to teach other people buddha-dharma. In a broader sense, it may also refer to the sharing of knowledge or the transfer of technology. Fearlessness-giving is to provide spiritual support to those who are in distress so as to lessen their mental suffering. No matter which type of giving is undertaken and no matter what sort of problem is encountered in the course of practice, a bodhisattva will always maintain the spirit of "crossing from this shore to the other" on his/her path of learning and development.

THE PARAMITA OF MORAL PRECEPTS

From the five precepts for the layperson to the bhikkhu-bodhisattva precepts for the fully ordained monastic, there are different classes of moral precepts in Buddhism. We can define "precept" as a rule for moral behaviour which can help us prevent wrongdoings, eliminate evil qualities, and produce good karma. The scope of Buddhist precepts is quite extensive but, generally speaking, every class of precepts includes the basic precepts of no taking lives, no stealing, no sexual misconduct, and no dishonest utterances. The meaning of "no sexual misconduct" differs between monastics and laypersons but the other three items are more or less identical. These four basic precepts are minimum requirements and their primary purpose is

to allow the follower to be reborn to the human plane after his/her present life even though the resulting merit may not be enough to free him/her from affliction. It is human nature to compare things and the act of comparison may eventually lead to a higher opinion of oneself. The same holds true for practitioners of precepts. Some of those who follow the more stringent precepts may scorn those who do not or may even conceitedly criticize those whose behaviours are in violation of precepts such as making bad mouth karma. Attitudes like this cannot help prevent misconducts despite the practitioner's commitment to observance since when we think that there is a self who observes precepts, when we think that there are others who do not, and when we think that there are precepts to be observed, we have already put ourselves in a mode of self-clinging, phenomenon-clinging, and other forms of affliction which will hinder us from crossing from this shore to the other. Therefore, the practice of precepts must be guided by paramita in order to achieve the goal of self-purification or else the notions of "self", "others", and "precepts" can cause notion-clinging and self-impedance. From here, we can see that the practice of precepts without the practice of paramita is merely a formality, which is inadequate, and the practitioner must seek perfection by integrating the practice of precepts with paramita in order to benefit himself/herself and others.

THE PARAMITA OF FORBEARANCE

With regard to external factors, forbearance may be understood as one's ability to resist unwholesome stimuli such as the temptations of fame, wealth, and sex and to tolerate adverse ambient conditions such as summer heat and winter chill. With regard to internal factors, forbearance may be understood as one's ability to withstand the straining disturbance caused by one's own feelings such as emotions and desires. Forbearance is not to be taken as a sign of weakness. Rather, it must be recognized as a show of calmness and maturity in which the practitioner is well aware of the need to heighten his/her own endurance in order to not give in to the affliction caused by his/her surroundings or other internal sources. Hence, forbearance can be cultivated so long as the practitioner is not afraid of the pain and distress associated with the training. Likewise, to develop the paramita of forbearance and to cross from this shore to the other, it will require the practitioner's equanimity and desireless attitude regardless of the mundane world's right or wrong, virtue or vice, happiness or unhappiness, and fairness or unfairness as such mundane qualities do always exist. With the guidance of paramita, the practitioner will understand that he/she may set a goal to cross to the other shore but should not cling to such a goal like an emotional attachment. When facing the mundane world, he will accept it with a desireless attitude and will tolerate it whether it is good or bad. Like what was said in a dialogue between [the hermit] Hánshān (寒山) and [the Buddhist monk] Shídé (拾得) [of the Táng dynasty]: "How do I handle someone who denigrates me, bullies me, insults me, mocks me, scorns me, brutalizes me, vilifies me, or cheats me? I would only tolerate him, allow him, avoid him, endure him, respect him, ignore him, and see what he will do in a few years." A bodhisattva's practice of the paramita of forbearance is not something which can be accomplished overnight. Rather, it is a multi-lifetime pursuit of perfection in which the paramita of forbearance will eventually become a boon for the practitioner who has been working unremittingly to benefit others.

THE PARAMITA OF EFFORT

Generally speaking, "effort" refers to the cessation of vice, the prevention of vice, the enhancement of virtue, and the cultivation of virtue. Thus, "effort" is not just any type of endeavour but rather endeavours

which can right the wrongs. ["Effort" written in Chinese is the compound term "*jīngjin*" (精進) which is formed by combining the word "*jīng*" (精) and the word "*jîn*" (進).] One of the meanings expressed by "jīng" is "focused" or "specialized". The practitioner must stay focused on his/her study in order to make progress. It may be difficult for a non-genius to become successful by showing an interest in every subject and aiming for excellence in all areas. [The word "jīng" (精) can also link up with the word "*tōng*" (通) to form the compound term "*jīngtōng*" (精通), whose meaning is "proficient" or "proficiency".] Although "jīng" implies specialization, proficiency is equally important since specialization without proficiency will not be effective. "Effort" also does not suggest short-term diligence. It has to be something ongoing, like a steady stream of water running timelessly, in order to achieve the best results. Many people do try hard to make good efforts but the problem is that their efforts are not continual, which is very unfortunate. To sum up, the paramita of effort is not just about being industrious day after day but instead is about correcting the practitioner's misdeeds and acting virtuously. However, correcting misdeeds and acting virtuously are still not enough since the practitioner must break all self-clinging and phenomenon-clinging in order to correspond to paramita. When all these criteria are met, it is a true practice of the paramita of effort.

THE PARAMITA OF MEDITATIVE CONCENTRATION

One may practice meditative concentration [or meditation for short] to attain three different levels of liberation, namely liberation by meditation, liberation by wisdom, and liberation by both meditation and wisdom.^(E-8) The practitioner may choose from a variety of meditative techniques such as ānbānniàn (安般 念), cānchán (參禪), and niànfó (念佛).(E-9) The principle of meditation is to let the deluded mind calm down. In order for the deluded mind to calm down, the first step is to dismiss all the distractive thoughts in the mind. In order to dismiss distractive thoughts, we need to give the mind a supportive-object field. The supportive-object field can be created by counting and feeling one's own breath, recollection of the Buddha, reciting a scriptural mantra over and over again, etc. After picking a supportive-object field, the practitioner will repetitively focus on it without interruption. As the practitioner's mindfulness of the supportive-object field becomes stronger and stronger, his/her distractive thoughts or delusive thoughts will diminish further and further. This means that his/her concentration is also increasing. In brief, the practice of meditation is to free the mind from distractions and delusions. Distractions do normally exist in our minds but they may go undetected for those who do not meditate. Once we have a chance to sit down and meditate, we begin to realize that our minds are always restless, especially after the occurrence of something unpleasant. The discontent caused by these unpleasant events can lead to aversion and anger which can leave us in a bad mood for days. It may still bother us in the future if/when we are reminded of the dissatisfying experience. Therefore, we know how dreadful it is when our ignorance clings us to our own delusive thoughts. For this reason, the practice of meditation requires not only the taming of delusions but also the practitioner's selfcontemplation, meaning that the mind must be able to observe itself. When the mind is able to observe itself and detect the appearance of a delusion, it is not yet the solution since all delusions must be banished from the mind in order for the mind to be wholesome. The practice of meditation enables the practitioner to cultivate concentration and gain insight in an environment which is isolated from the six external sense fields. If the purpose of practice is to perfect concentration only, then the best a practitioner can do is to reach the final stage of a system of meditative absorption known as "sì chán bā dìng" (四禪八定), which is not necessarily tied to the cessation of affliction since these mental states are still generic and secular.^(E-10) In order to seek deliverance from affliction, we must practice meditation and, after securing concentration

through mediation, must gain insight which is the key to self-purification. To gain insight into the mind is the same as to let the mind observe itself. This method of self-observation should not be limited to the time when the practitioner is sitting down to meditate. Rather, it is to continue throughout the day in order to fulfill the higher goal of meditation. Some people may have misconceived the method of meditation by caring too much about a certain meditative experience such as a new dimension, an auspicious sign, and some good feelings. Things like these may show up during meditation but all we need to do is to be aware of their arrivals, let them pass, and refocus on the supportive-object field. The key is to watch the mind, subdue delusions, and subdue any type of clinging. In other words, we detect sources of affliction in our minds during meditation and make them disappear through a gradual process of self-purification. Hence, any practice of meditation which is not aimed at ending delusion and affliction is nothing more than a study of the meditative technique being used. Meditation can give us the feeling of reality but it is not reality in itself. When the mind ceases to make contact with stimuli from the external sense fields, it settles readily. Likewise, if the mind refuses to let anything stain it, it can also become peaceful. The same principle is used by bodhisattvas who practice meditation to comprehend the dependent origination of things. Thus, those who believe that they have developed the power of meditation and pride themselves on it are still on this shore of the perplexed and those who do not may find themselves on the other shore of the selfawakened.

PRAJNA-PARAMITA

Prajna-paramita is often referred to as prajna-wisdom [in Chinese Buddhism]. The prefix "prajna" is to distinguish non-worldly wisdom from worldly wisdom. Any temporal person may have wisdom and may engage in the practice of giving, precept, forbearance, effort, and meditation but he/she cannot cross from this shore of the perplexed to the other shore of the self-awakened without the guidance of prajnawisdom. Hence, the study of prajna-paramita is unique to Buddha-dharma. In other words, prajna-wisdom must be put into effect right from the beginning in the practice of the six paramitas although it is shown as the last item on the list. What is prajna-wisdom anyway? Prajna-wisdom is the ability to realize emptiness in three aspects when practicing generosity, to subdue self-clinging when observing precepts, to have no wants when cultivating forbearance, to subdue self-clinging when making effort, and to stay equanimous and be able to gain insight into the dependent origination of every phenomenon when meditating. Prajnaparamita should be developed in a manner which is like what it says in the Diamond Sutra: "It should be developed without lodging in anything."(E-11) There is another quote from the Diamond Sutra: "Subhūti, as for my attainment of unsurpassed, complete, and perfect enlightenment, I have not in the slightest attained it. It is referred to as unsurpassed, complete, and perfect enlightenment."(E-12) It is also stated in the Heart Sutra: "All buddhas in the past, present, and future rely on prajna-paramita to attain unsurpassed, complete, and perfect enlightenment."(E-13) Therefore, the ultimate goal of studying Buddha-dharma is to let prajnaparamita flow from the practitioner's mind. Of course, this will only occur after a long period of edification and practice. It is like what it says in the Heart Sutra: "When the Bodhisattva of Compassion practiced the profound prajna-paramita, he gained the insight that the five aggregates were all empty [of self-essence] and thus he was able to deliver himself from all kinds of suffering and affliction."^(E-14) Well, this is a good example that some long-term practice of praina-paramita is required to develop the insight that none of the five aggregates is reality in itself.

ENDNOTES

No endnotes were provided for this chapter in the 2014 Chinese edition. The following endnotes have been added by the translator in case readers of the 2020 English edition would like to have more information about certain discussed topics. For the same reasons as mentioned in the endnote section of the last chapter, the two major sources of reference selected for this purpose are the *Fóguāng Dàcídiăn* (佛光大辭典), aka the *Fo Guang Dictionary of Buddhism*, and *The Princeton Dictionary of Buddhism*.

- E-1. The Sanskrit word "pāramitā" has been anglicized and its English spelling is "paramita" (ref. *Merriam-Webster.com*, accessed 2019-11-13, <u>www.merriam-webster.com/dictionary/paramita</u>). "Pāramitā" has multiple Chinese transcriptions. The two most frequently used transcriptions are "*bōluómi*" (波羅蜜) and "*bōluómiduō*" (波羅蜜多). It also has multiple Chinese translations. One of them is "*dù*" (度 or 渡), which literally means "to cross from one side of (something) to the other" when serving as a verb (ref. 慈怡法師 主編, 星雲法師 監修, 《佛光大辭典》2-3 版, 全 7 冊, 另索引 (高雄: 佛光出版社, 1988/1989), 參閱條文: 波羅蜜). Also see endnotes E-2 and E-3 below.
- E-2. The six paramitas are "dāna-pāramitā", "śīla-pāramitā", "kṣānti-pāramitā", "vīrya-pāramitā", "dhyāna-pāramitā", and "prajñā-pāramitā" when written in Sanskrit transliteration; or "布施波羅蜜", "持戒波羅蜜", "老塚凝蜜", "精進波羅蜜", "禪定波羅蜜", and "般若波羅蜜" when written in Chinese (ref. (i) 《佛光大辭 典》, 參閱條文: 六波羅蜜; (ii) Robert E. Buswell Jr. and Donald S. Lopez Jr., *The Princeton Dictionary of Buddhism* (New Jersey: Princeton University Press, 2014), s.vv. "pāramitā", "ṣaḍpāramitā", and, in "List of Lists", s.v. "six perfections"). The Sanskrit word "prajñā", used as a prefix in "prajñā-pāramitā", has multiple transcriptions and multiple translations in Chinese Buddhism. The most widely used transcription is "*bōrē*" (般若) and the most widely used translation is "*huì*" (慧), which is the same Chinese word used to represent wisdom in general (ref. 《佛光大辭典》, 參閱條文: 般若). Like the Sanskrit word "pāramitā", the Sanskrit word "prajñā" has also been anglicized. The English spelling is "prajna" (ref. (i) *Lexico.com* (powered by Oxford), accessed 2019-11-13, <u>https://www.lexico.com/en/definition/prajna</u>; (ii)*Merriam-Webster.com*, accessed 2019-11-13, <u>https://www.merriam-webster.com/dictionary/prajna</u>).
- E-3. According to the *Fo Guang Dictionary of Buddhism* (佛光大辭典), the meanings of the Sanskrit word "paramita" include "having crossed to the other shore", "the state of perfection", and "accomplishment in full". Thus, the Chinese word "du" (度 or 渡) is a good translation of the Sanskrit word "pāramitā" since it can be used as a noun, a verb, or an adjective and it can express the meaning "to cross from one side of (something) to the other" when serving as a verb. Therefore, one of the Chinese translations of the Sanskrit term "şad-pāramitā", whose meaning is "six paramitas", is "liù dù" (六度) with "liù" (六) being the number six (ref. 《佛光大辭典》, 參閱條文: 波羅蜜、六波羅蜜). As for English translations, the most commonly used term is probably "six perfections". For example, authors of *The Princeton Dictionary of Buddhism* do not seem to like the idea of rendering "pāramitā" as "gone to the other side" and their reason is semantic (ref. *The Princeton Dictionary of Buddhism*, s.v. "pāramitā). To many Buddhists, however, the translation of the Sanskrit word "pāramitā" is of secondary importance. What is more important is knowing what the six paramitas are and knowing how to practice them properly in order to achieve enlightenment.
- E-4. According to the Buddhist doctrine of no-self, there is no true self in anything which comes into being through causality, human beings inclusive. When a person sees a self in himself/herself, it is self-clinging. When a person sees a self in any physical or mental phenomenon, it is phenomenon-clinging. The word "self-clinging" is a literal translation of the Chinese compound term "*wŏzhî*" (我執), which in turn is a translation of the Sanskrit word "ātma-grāha" (ref. (i) 《佛光大辭典》, 參閱條文: 我執、二執; (ii) *The Princeton Dictionary of Buddhism*, s.v. "ātmagraha"). "*Wŏzhî*" is an abbreviation of "*rénwŏzhî*" (人我執), whose Sanskrit original is "pudgalātmagraha" (ref. (i) 《佛光大辭典》, 參閱條文: 人我法我; (ii) *The Princeton Dictionary of Buddhism*, s.v. "pudgalātmagraha"). Likewise, the word "phenomenon-clinging" is a literal translation of the Chinese compound term "*făzhî*" (法執), which is an abbreviation of "*fāwŏzhî*" (法我執), which in turn is a translation of the Sanskrit word "dharmātmagraha" (ref. (i) 《佛光大辭典》, 參 関條文: 法執; (ii) *The Princeton Dictionary of Buddhism*, s.v. "pudgalātmagraha"). Likewise, the word "phenomenon-clinging" is a literal translation of the Chinese compound term "*făzhî*" (法執), which is an abbreviation of "*fāwŏzhî*" (法我執), which in turn is a translation of the Sanskrit word "dharmātmagraha" (ref. (i) 《佛光大辭典》, 參 関條文: 法執; (ii) *The Princeton Dictionary of Buddhism*, s.v. "gudgalātmagraha", (zi執), which is an abbreviation of "*fāwŏzhî*" (法我執), which is a translation of the Sanskrit word "dharmātmagraha" (ref. (i) 《佛光大辭典》, 參 関條文: 法執; (ii) *The Princeton Dictionary of Buddhism*, s.v. "dharmātmagraha"). As for the word "affliction", it is a translation of the Sanskrit word "kleśa" as well as a translation of the Chinese compound term "*fānnăo*" (煩惱) (ref. (i) 《佛光大辭典》, 參 閱條文: 煩惱; (ii) *The Princeton Dictionary of Buddhism*, s.v.

s.v. "dharmātmagraha"). If you look up the term "fánnăo" (煩惱) in a Chinese-English dictionary, you may find translations such as "vexation", "bother", "annoyance", etc. but you may or may not see the word "affliction" depending on which dictionary is used. However, one of the meanings of "vexation" is "a cause of trouble: AFFLICTION" (ref. *Webster's New Collegiate Dictionary*, 1981 ed., s.v. "vexation").

Note that *The Princeton Dictionary of Buddhism* has "煩惱" written as "煩腦" under the word "kleśa". The Chinese character "腦", whose meaning is "brain", is likely a misprint.

- E-5. The phrase "reality of all phenomena" is a translation of the Chinese Buddhist term "*zhūfā shixiàn*" (諸法 實相). One may refer to the *Fo Guang Dictionary of Buddhism* for more information about this term (ref. 《佛光大辭典》, 參閱條文: 諸法實相).
- E-6. The Chinese Buddhist term "*sānlún tǐkōng*" (三輪體空) is translated as "realization of emptiness in three aspects" in this chapter. Some have translated it as "threefold wheel of essential emptiness", which is closer to a word-for-word translation.
- E-7. Dharma Master Ji Chuan did not specify the source of this quote but there is an identical passage in chapter 5 of a Chinese version of the *Diamond Sutra* which was translated from Sanskrit to Chinese by the Central Asian Buddhist monk Jiūmóluóshí (鳩摩羅什; *Skt*. Kumārajīva) (344-409/413 CE), hereinafter referred to as "Kumārajīva". In the Chinese text, this passage is written as "凡所有相皆是虛妄".
- E-8. The Sanskrit word "vimokşa" is translated into Chinese as "*jiětuō*" (解脫) and into English as "liberation" or "deliverance". One may refer the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for more information about the various types or levels of liberation in Buddhism (ref. (i) 《佛光 大辭典》,參閱條文: 解脫、二解脫、八解脫、心解脫、俱解脫、薏解脫; (ii) *The Princeton Dictionary of Buddhism*, s.v. "vimokşa").
- E-9. The three techniques named for example here are those commonly practiced by Chinese Buddhists. The term "*ānbānniàn*" (安般念) is an abbreviation of the term "*ānnàbānnàniàn*" (安那般那念), which in turn is a Chinese transcription of the Sanskrit word "ānāpānasmṛti", whose Chinese translation is "*shŭxī guān*" (數息觀) and whose meaning is "mindfulness of breathing" (ref. (i) 《佛光大辭典》, 參閱條文: 數息觀; (ii) *The Princeton Dictionary of Buddhism*, s.v. "ānāpānasmṛti"). The term "*cānchán*" (參禪), in this context, is the same as the term "*zuòchán*" (坐禪), whose meaning is "seated meditation" (ref. (i) 《佛光大辭典》, 參閱條文: 坐禪、參禪; (ii) *The Princeton Dictionary of Buddhism*, s.v. "zuochan"). The Japanese equivalent of "*zuòchán*" is "zazen" and this is why "seated meditation" is translated by some as "Zen meditation". The Chinese term "*niànfó*" (念佛) is a translation of the Sanskrit word "buddhanusmṛti", whose meaning is "recollection of the Buddha" (ref. (i) 《佛光大辭典》, 參閱條文: 念佛; (ii) *The Princeton Dictionary of Buddhism*, s.v. "buddhanusmṛti"). The practice of "niànfó" involves the recitation of the name of a buddha, most commonly the buddha Āmítúofó (阿彌陀佛; *Skt*. Amitābha).
- E-10. The Chinese term "*chán*" (禪) and its longer form "*chánnà*" (禪那) are both transcriptions of the Sanskrit word "dhyāna". The meaning of "*chán*" is "meditation" or "meditative absorption" (ref. (i) 《佛光大辭 典》, 參閱條文: 禪; (ii) *The Princeton Dictionary of Buddhism*, s.v. "dhyāna"). The Chinese term "*ding*" (定) is a translation of the Sanskrit word "samādhi", whose Chinese transcription is "*sānmèi*" (三昧) and whose meaning is "concentration" (ref. (i) 《佛光大辭典》, 參閱條文: 三昧、禪定; (ii) *The Princeton Dictionary of Buddhism*, s.v. "samādhi"). In Chinese Buddhism, "chán" is synonymous with "*dìng*". The Chinese term "*sìchán*" (四禪) refers to the four stages of dhyāna which are associated with the form realm and the Chinese term "*bādìng*" (八定) refers to the four stages of samādhi which are associated with the formless realm. Together, they are called "*sìchán bādìng*" (四禪八定) in Chinese Buddhism, s.v. "dhyāna").
- E-11. Dharma Mater Ji Chuan quoted this passage from chapter 10 of a Chinese version of the *Diamond Sutra* which was translated from Sanskrit to Chinese by Kumārajīva. As can be seen from the longer quote below and its English translation below, this passage (bolded) will be easier to understand when read in context:

是故須菩提,諸菩薩摩訶薩應如是生清淨心:不應住色生心,不應住聲、香、味、觸、法生心。應無所住 而生其心。

Therefore, Subhūti, all bodhisattvas and mahasattvas should seek to develop an undefiled mind in this way: Do not seek to develop it by lodging in sight. Do not seek to develop it by lodging in sound, smell, taste, feel, and mental objects. **It should be developed without lodging in anything.**

Thus, to develop an undefiled mind without lodging in anything is the same as to seek self-purification without self-clinging and without phenomenon-clinging.

The name "Subhūti", as appeared in the above Chinese-to-English translation, is a Sanskrit transliteration. Subhūti was an eminent disciple of the Buddha and the Chinse transcription of his name is "須菩提" (ref. (i) 《佛光大辭典》, 參閱條文: 須菩提; (ii) *The Princeton Dictionary of Buddhism*, s.v. "Subhūti"). The pinyin of "須菩提" is "Xūpútí" but it is not used here although the above quote was translated from Chinese to English. The phrase "bodhisattvas and mahasattvas" refers to all the disciples of the Buddha. The term "mahāsattva", which is transcribed into Chinese as "*móhēsà*" (摩訶薩), is a synonym of "bodhisattva" and it is sometimes linked up with the word "bodhisattva" to denote bodhisattvas of a more advanced level (ref. (i) 《佛光大辭典》, 參閱條文: 大士; (ii) *The Princeton Dictionary of Buddhism*, s.v. "mahāsattva"). Note that the English spelling "mahasattva" and its plural form "mahasattvas" are used here for convenience only since the Sanskrit word "mahāsattva" has not been officially anglicized.

E-12. This is a quote from chapter 22 of the same Chinese version of the *Diamond Sutra* as mentioned in endnotes E-7 and E-11 above. In the Chinese text, it is written as follows:

須菩提, 我於阿耨多羅三藐三菩提, 乃至無有少法可得, 是名阿耨多羅三藐三菩提。

Instead of doing a literal translation, Kumārajīva transcribed the Sanskrit term "anuttarasamyaksambodhi" into Chinese as " $\bar{a}n\dot{o}udu\bar{o}lu\dot{o}\,s\bar{a}nmiǎo\,s\bar{a}np\acute{u}ti$ " (阿耨多羅三藐三菩提) by following some selected rules of translation. "Anuttarasamyaksambodhi" refers to the enlightenment attained by a person at the time when he/she attains buddhahood. Its meaning is "unsurpassed, complete, and perfect enlightenment" (ref. (i) 《佛光大辭典》, 參閱條文: 阿耨多羅三藐三菩提; (ii) *The Princeton Dictionary of Buddhism*, s.v. "anuttarasamyaksambodhi"). In our Chinese-to-English translation, "anuttarasamyaksambodhi" is literally translated so that the average English reader can understand it better.

E-13. Dharma Mater Ji Chuan quoted this passage from a Chinese version of the *Heart Sutra* which was translated from Sanskrit to Chinese by the Chinese Buddhist monk Xuánzàng (玄奘) (ca. 602-664 CE). In the Chinese text, it is written as follows:

三世諸佛,依般若波羅蜜多故,得阿耨多羅三藐三菩提。

Xuánzàng transcribed the Sanskrit term "anuttarasamyaksambodhi" into Chinese as "*ānòuduōluó sānmiǎo sānpútî*" by following the same criteria as adopted by Kumārajīva (see endnote E-12 above). In our Chinese-to-English translation, "anuttarasamyaksambodhi" is literally translated.

E-14. This is a quote from the same Chinese version of the *Heart Sutra* as mentioned in endnote E-13 above. In the Chinese text, it is written as follows:

觀自在菩薩行深般若波羅蜜多時,照見五蘊皆空,度一切苦厄。

The bodhisattva Avalokiteśvara may be better known in the West as the Bodhisattva of Compassion. Thus, this is the name adopted in the Chinese-to-English translation. The name "Avalokiteśvara" has different Chinese translations, incluidng Guānshìyīn (觀世音), Guānyīn (觀音), and Guanzìzài (觀自在) (ref. (i) 《佛 光大辭典》, 參閱條文: 觀世音菩薩; (ii) *The Princeton Dictionary of Buddhism*, s.v. "Avalokiteśvara"). Xuánzàng coined or picked the translation "Guanzìzài" when he translated the *Heart Sutra* from Sanskrit to Chinese. He used the phrase "*zhào jiàn*" (照見) to describe how this bodhisattva discovered that the five

aggregates forming his physical existence were empty of permanence and self-essence. "*Zhào jiàn*" can be translated as "to illuminate and see" or "to look into the mirror (or something which reflects) and see". The latter implies self-contemplation and is therefore a better way to understand this scriptural quote since the bodhisattva was meditating and self-contemplating by using prajna-paramita and, when he discovered that the five aggregates forming his physical existence were empty of permanence and self-essence, he was no longer bothered by anything which could cause suffering and affliction.
CHAPTER 8

DOES BUDDHISM CONFORM TO SCIENCE?

Lung, Tin Yick

This question may seem to suggest that science can serve as the metrics for judging Buddhism. Those who do not accept such metrics may ask: "Does science conform to Buddhism?" In order to be fair and objective, it would be better to rephrase the question this way: "Is Buddhism compatible with science?" Alternatively, we may ask: "Can Buddhism and science corroborate each other's views or theories?" Other religions should be treated with the same level of respect.

RELIGIOUS SENTIMENT UNDER CHANGING CIRCUMSTANCES

It is rather normal for someone in a modern civilization to question whether the doctrines of a certain religion will accord with science. However, the common practice might have been the exact opposite in some earlier times. The 17th century Italian astronomer Galileo Galilie (1564-1642 CE), who advocated the scientific view of heliocentrism (i.e. the earth rotates around the sun), was put under house arrest for life by the Roman Catholic Church on the grounds of heresy.⁽¹⁾ If we were to go back further in time, say, two to three thousand years ago when there was no Scientific Revolution and when scientific thinking existed only in some other branches of knowledge or philosophy, how would people judge religions then? It is conceivable that the majority of religionists would preach by glorifying the magic of their sages or prophets and/or by exalting the miracles of their religions instead of telling people that their faiths were scientific. It is also conceivable that the more powerful the magic and the more astounding the miracles, the more worshippers a religion was likely able to draw during an era when the average person's intellect was underdeveloped. Miracle themes such as turning stone into gold, ascending to heaven, commanding rains and storms, making a lame person walk, healing a terminally ill person, and resurrecting a dead person may be found in religious myths across the world although their plots and characters may vary.

Since the dawn of civilization, humans have been attracted to things which appear to be paranormal or supernatural. The history of the Buddhist monk Xuánzàng (玄奘) (ca. 602-664 CE) of the Táng dynasty (唐朝), who is better remembered as Táng Sānzàng (唐三藏) among the non-Buddhist Chinese, is one good example. Xuánzàng made a trek from China to the Indian subcontinent in search for sacred Buddhist texts. He published his travel notes as the *Dà Táng Xīyù Jì* (大唐西域記; *lit. Great Táng 's Records on the Western Regions*) after returning to China.^(E-1) However, this work is less known to the many than is the 16th century fiction novel *Xīyóu Jì* (西遊記; *trans. Journey to the West*) by Wú Chéngēn (吳承恩) of the Míng dynasty (明朝). Wú used this trip of Xuánzàng as the main storyline, added stories of prequel nature, and combined the elements of fantasy, adventure, allegory, satire, Chinese folktales, Chinese folk religions, and more by allowing his imagination to run wild. The novel *Xīyóu Jì*, or *Journey to the West*, has been engrossing to the Chinese generation after generation not only because it is a literary masterpiece but also because it has,

in a seemingly unintentional manner, reflected the mentalities of various social strata as well as the typical temperament of governmental bureaucrats in the old China. The protagonist of the *Journey to the West* should, in theory, be Xuánzàng but the most popular character is actually his disciple Sūn Wùkōng (孫悟 空), or Monkey King, who was born from rock and had acquired magic powerful enough to wreak havoc in heaven and to subdue all kinds of demons when escorting his master to India. Even today, when science is far better than it was centuries ago and when humans are far more dependent on science than religion, some people would still show great interest in things which appear to be strange and intriguing. As in the case of the performing art of magic, everyone should know that it is nothing more than illusions but some would happily pay for the entertainment and watch tricks such as anti-gravitation and instant transposition with great fascination.

When discussing the origin of religion in Chapter 5 of this book, I adopted a relatively cautious approach by naming the theories of others but did not include my own observation. In this chapter, I am taking the liberty to speak from my experience and suggest that many religions might have laid their foundations on people's belief in miracles as well as the pride which people may feel by linking themselves to a god or goddess. For instance, those who call the universe a divine creation are in effect making a claim that the universe is a mega miracle. Those who have suffered from injustice and hope for justice in the afterlife are having a desire for miracles. Those who call themselves children of a certain god or goddess are showing a sign of pride. Justice in the afterlife is not necessarily a feature unique to certain Western religions. In some Chinese folk religions, Yánluówáng (閭羅王) and his assistant Pànguān (判官) are also gods in charge of the underworld and they are responsible for passing judgement on all the dead. If the element of miracles is removed in its entirety, many religions may not have much to offer. Therefore, it is not surprising that some religionists will act forcefully to dispute scientific evidence which may seem to disprove the trueness of the miracles described in their scriptures.

There is a profound saying in China: "That was one time, and this is another".^(E-2) Its meaning is similar to that of the English saying "then was then, now is now". There was undoubtedly a time when very many people regarded religion as omnicompetent. In those days, people would use religion to conjecture about the primordial, to predict the future, to explain various natural phenomena, to justify political measures, to define ethics and morals, to judge social values, to set the goals of life, to cure diseases, and to do a variety of things which may be considered laughingstocks today. Perhaps some individuals are still adhering to the old practice but, in a modern society where science, education, and civil rights are well developed and people's freedom of religion is protected, religion is not seen as all-purpose as it used to be. This might have been the reason why the attitudes of some major religious organizations have gradually changed over the past few centuries. Although the Scientific Revolution of the 16th - 18th century, Darwinism of the 19th century, and the Information Explosion of the 20th century should not be viewed as campaigns against any religion, their combined effect was enough to have caused a good portion of the multitude to change their opinions about religious myths. History like the ordeal of Galileo Galilie can hardly repeat itself in today's Western world. Devotees with unwavering faith in religious myths may be left with a limited number of options: (1) to remain conservative and reject scientific knowledge which contradicts their religious beliefs, (2) to practice independently and avoid controversial subjects which may show up the discordance between science and their religions, (3) to keep an open mind and reinterpret their scriptures to suit the general trend of science, and (4) to participate in scientific research in order to seek scientific data which may be used to support their faiths.(E-3)

UNDERSTANDING SCIENCE

Science and religion are not two of a kind. They also differ in functions. As a result, the two can enter into a dialogue at the corresponding level but cannot be compared on the same weighing platform. In order for science and religion to corroborate each other's views or theories, one must have a proper understanding of both subjects. In the last two chapters, we have explored topics concerning the definition, functions, and origin of religion as well as the fundamental doctrines of Buddhism. So, it is time to supplement that discussion with some basic knowledge about the study of science.

(A) The Hallmarks of Science

The word "science" can refer to "natural science" or, in a broader sense, "a department of systematized knowledge as an object of study".^{(2)(E-4)} The academic field of science is characterized by its immensity and diversity. One way to classify scientific subjects is to divide them into four main categories before detailed sub-classification, namely formal science, natural science, applied science, and social science. Among these four main categories, mathematics and computer science are examples of formal science. Physics, chemistry, biology, earth science, and space science are examples of natural science. Engineering and medicine are examples of applied science. Economics, sociology, and political science are examples of social science. There is a certain degree of interdependence between the various branches of science but the relationship between natural science and applied science is probably the closest since the primary purpose of the former is to develop and test theories about natural phenomena while the main objective of the latter is to put the resulting theories and techniques to practical use. Practitioners of science may be collectively referred to as "scientists" but those who practice in the field of applied science are usually named according to their subfields of professional practice, such as medical doctors for medicine and engineers for engineering. Techniques which are based on scientific knowledge are known as scientific technology or technology for short. The research and development of scientific technology are usually led by professionals with applied-science background. As for tradespersons who perform the physical work in accordance with prescribed plans, specifications, and procedures, they are called technicians.

Although the term "science" can encompass a variety of topics, not every branch of systematically organized knowledge can be classified as a branch of science, particularly not in the field of natural science. So, what are the distinguishing characteristics of science? According to some scientists, the three hallmarks of science are as follows:⁽³⁾

- (1) Modern science uses no more than natural causes to explain observed phenomena. (It is important to note that causes deemed supernatural do not fall within the category of natural causes but human causes do since humans are part of nature.)
- (2) Science makes progress through the development and testing of scientific models and it uses the simplest model to explain observed phenomena when two or more viable models are available. The selection of the simplest model is known as Occam's Razor.
- (3) The predictions of a scientific model must be testable and if there is any disagreement between predictions and test results, the model will have to be modified or discarded.

Any branch of knowledge which does not bear all of the three hallmarks stated above cannot be qualified as a branch of science. Knowledge which is outside the sphere of science is not necessarily wrong or useless

since the distinction between science and non-science does not hinge on accuracy or value. Thus, the term "pseudoscience" is not used to denote scientific knowledge with errors. Rather, it expresses the meaning of knowledge which is gained through a process of scientific observation in which the resulting evidence has not been treated in a truly scientific manner.⁽⁴⁾

(B) The Methods of Science

Science is not the only way for humankind to acquire knowledge but it is more reliable than many other methods. What are the basic steps of a scientific method? According to some scientists, a scientific method in its most idealized form consists of the following five steps:⁽⁵⁾

- (1) Observation To repeatedly observe a phenomenon or a certain type of phenomenon.
- (2) Question To question about the cause(s) of the observations.
- (3) Hypothesis To make a supposition or to develop a model based on available evidence in order to explain the observations.
- (4) Prediction To use the formulated hypothesis to predict the future of an observed phenomenon and how it may be affected by certain factors.
- (5) Experiment To test the formulated hypothesis by conducting some experiments or by making further observations. If the hypothesis passes the test, use it to make more predictions and continue with testing. If not, modify the hypothesis or replace it with a different hypothesis and then repeat the steps of prediction and experiment.

The five steps of an idealized scientific method are often used to solve problems in our daily lives. One university text book used the flashlight as an example to illustrate the details:⁽⁶⁾ An observation is made when a person discovers that his/her flashlight is not working. A question is asked when he/she wonders what the problem is. A hypothesis is formulated when he/she suspects that the batteries have gone dead. A prediction is made when he/she guesses that he/she can fix the problem by replacing the batteries. An experiment is done when he/she tries to turn on the flashlight with new batteries. The original hypothesis is abandoned and a new hypothesis is formulated when the flashlight fails to come on with new batteries and when he/she begins to think that the lightbulb has burned out. A second prediction is made when he/she makes the assumption that the flashlight will work after replacing the lightbulb. A second experiment is performed when he/she tries to turn on the flashlight with a new lightbulb after reinstalling the old batteries. If the flashlight does come on after that, then he/she will know that it is not a problem with the old batteries and he/she can proceed with more predictions and more experiments.

The above example has not only demonstrated the five steps of an idealized scientific method but also showed that a scientific hypothesis must be testable and falsifiable. The purpose of testing a hypothesis is not to prove it right but to determine whether it is wrong since other viable hypotheses may exist (e.g. the original lightbulb in the flashlight example could have been good but simply failed to light up due to a loose connection).⁽⁷⁾ In brief, the credibility of a hypothesis increases with the number of tests it has passed.⁽⁷⁾

Many natural phenomena involve a long-duration process, several orders of magnitude longer than the lifespan of a human. It is impossible for humankind to observe them from start to finish despite the human ability to pass on knowledge to future generations. So, how do scientists study them by using a scientific method? Well, it is done on a situation-by-situation basis. For instance, it is impossible for an astronomer

to observe the evolution of the sun from its formation to its death in a single lifetime but he/she can observe similar stars elsewhere in the Milky Way at various stages of evolution.⁽⁸⁾ Likewise, there is no way for a geologist to make the earth repeat its production of a geological formation but he/she can explain it by using the principles of physics and chemistry and by making comparison with other on-going geological events of similar nature. He/she can also estimate the age of the geological formation by using the technique of isometric dating or compare the geological formations in different areas by examining their respective fossil assemblages.⁽⁹⁾ On the whole, all of the five steps in an idealized scientific method are important although the sequence of events may vary due to circumstances as illustrated by the following example:

Example 1: How the Cosmic Microwave Background Radiation Was Found

As mentioned in Chapter 4 of this book, there was a major scientific debate in the 20th century between proponents of the Big Bang hypothesis and advocates of Steady-State Cosmology. The winner was the Big Bang hypothesis and it advanced to the class of theory primarily because scientists discovered the cosmic microwave background radiation (CMB) in the universe, which is a natural component part of the Big Bang framework but can only fit into the steady-state model by making certain ad hoc assumptions.⁽¹⁰⁾ How was the CMB discovered? One scientist recounted the events as follows:⁽¹¹⁾ Arno Penzias and Robert Wilson at the Bell Lab were testing a horn-shaped antenna in New Jersey in 1964, which was designed to rebound satellite signals, but the antenna picked up some unidentified microwave noise no matter which direction the horn was pointing. They tried to eliminate the noise by using various means and even had all the bird droppings removed from the antenna but all attempts failed. Only after a meeting with Robert Dicke, whose team at the Princeton University was in the process of building an antenna to collect data on the CMB, did they come to realize that they had accidentally stumbled across what Dicke's team was trying to prove for years. After some friendly discussions, the two groups of scientists published joint research papers on the CMB in the same scientific journal with Dicke's team covering the theoretical aspects and Penzia and Wilson reporting on their observations. More than a decade later, Penzia and Wilson were awarded the Noble Prize due to the discovery of the CMB but, unfortunately, Dicke was excluded from this great honour despite all the hard work he had done earlier on this topic. This event might have left some people with a sense of regret but it serves well as an example to demonstrate the flexibility of scientific methods.

(C) The Objectivity of Science

When seeking independent verification of something, we are in effect allowing objectivity to supersede subjectivity. A scientific observation must be something which is independently verifiable. It cannot be solely based on the testimony of a certain individual in a certain place at a certain time. The same criterion applies to all kinds of scientific experiments. For example, an eye-witness account of UFO sighting does not qualify as scientific observation regardless of its genuineness and regardless of the number of witnesses since the entire event cannot be substantiated by other members of the public.⁽¹²⁾ Conversely, a scientist's report on the findings of his/her experiment is treated as scientific evidence not because scientists are people of status but because any normal person can become a scientist by going to school and every scientist with the right background and right resources can validate the contents of a scientific report by repeating the experiment.⁽¹²⁾

The objectivity of science does not hinge on the attitude of any individual scientist or the mainstream trend of the scientific community at any given time since scientists can have personal bias like anyone else.

The overall objectivity of science is actually an outcome of the scientific community's long-term practice of using scientific methods to do work in which continuous progress is made by repeating the same steps of observation, question, hypothesis, prediction, and experiment. A scientist may hypothesize based on his/her personal opinion but the scientific community will not accept his/her hypothesis if its predictions contradict with scientific observations or experimental results. As far as observation and experiment are concerned, it is a case of the more the merrier for the scientific community and the results must be identical every time under identical conditions in order for a hypothesis to stay valid. A scientist cannot use gushing eloquence to convince the gainsayers or use inciting rhetoric to earn credibility. He/she can devise a set of experiments to support his/her personal view but other scientists would love to challenge his/her design by performing independent observations and separate experiments. Thus, it is the nature of science to guide humankind from a state of subjectivity to a state of objectivity.

What can potentially undermine the objectivity of science? The two common factors are paradigms and insufficient funding. A scientific paradigm is a set of thought patterns of the scientific community as a whole at any given time which tends to weaken scientists' interest in other valid scientific views which deviate too much from it.⁽¹³⁾ A shift of paradigm can occur but it often requires something drastic to make it happen. Insufficient funding, on the other hand, is just a money matter. These two issues are illustrated separately by the following examples:

Example 2: Quasi-scientist or Quasicrystal

The Nobel Prize in Chemistry 2011 was awarded to Israeli scientist Dan Shechtman for his discovery of quasicrystal. Before Shechtman's time, scientists believed that the atomic structures of solid crystalline materials were symmetric and periodic and it was impossible to have symmetry orders higher than sixfold; however, the quasicrystal identified by Shechtman in 1982 was found to have a tenfold diffraction pattern without periodicity.⁽¹⁴⁾ According to the media, Shechtman's laboratory colleagues in Washington, D.C. not only disbelieved his findings at the time but also requested that he be removed from the team, and the two-time Nobel Prize laureate Linus Pauling ridiculed him by calling him a "quasi-scientist" when his observations were published in 1984 resulting in an uproar in the scientific community.⁽¹⁵⁾ It was not until the year 1987 when larger samples of quasicrystal were successfully grown in France and Japan for repeated X-ray crystallographic examinations did the dust begin to settle.⁽¹⁵⁾ In this example, the occasional bias of individual scientists and the non-objectivity of scientific paradigms are evidenced by the initial rejection of the ground-breaking discovery of quasicrystal.

Example 3: The Publicity and Media Hype for Hubble and COBE

The 20th century astronomer Fred Hoyle, who was known to be outspoken, indicated in his last book of cosmology that agencies in charge of funding scientific projects could have considerable influence over the way scientists do their work.⁽¹⁶⁾ Hoyle used NASA's Hubble space telescope and Cosmic Background Explorer Satellite (COBE) as examples to describe the type of extravagant claims which scientists have to make before and after the mission in order to obtain funding for constructing major instruments.⁽¹⁶⁾ He also criticized NASA's peer-review system for favouring conformists who study phenomena which are already expected while turning away those who can potentially make new discoveries by looking for what may be unexpected or inexplicable at the time since the system requires scientists to explain beforehand what they will find before assigning observing time on the telescopes.⁽¹⁶⁾ Hoyle's complaints are not groundless since

large-scale scientific research programs are very costly these days and they cannot proceed without governmental support or consortium sponsorship. It is quite different from the case of making amino acids in a few glass bottles or dissecting little rabbits in a high school laboratory. Is the world entering an era in which the objectivity of science can be compromised by funding restriction? This should be a concern shared worldwide.

(D) The Self-Renewal of Science

Self-renewal is another important feature of science. As scientific research continues to accumulate data and experience for humankind, there are only two possible destinies for any scientific hypothesis or scientific theory: (1) becoming more and more valid when its predictions are repeatedly confirmed by the ever-increasing amount of scientific data and practical experience, or (2) becoming less applicable or even a candidate for modification or refutation when its predictions do not correspond to new observations or new experimental results. If a scientific hypothesis continues to be supported by a vast accumulation of compelling evidence, it may be elevated to the status of scientific theory as in the case of Darwin's theory of evolution and Einstein's theory of relativity. If a scientific theory is found unassailable after a very long time, people may call it a scientific law. However, a "scientific law" thus named is not necessarily forever applicable as illustrated by the following example:

Example 4: From Newton's Law of Gravitation to Einstein's Warped Spacetime

Isaac Newton (1642-1727 CE) believed that any two particles of mass in the universe were mutually attracted by equal and opposite forces known as "gravity" and the magnitude of gravity depended on the individual mass of these particles and the distance between them. He developed a mathematical model for the calculation of gravitational forces and this model later became the Newton's law of gravitation.⁽¹⁷⁾ The reason that scientists accepted Newton's model as a scientific law was that it was supported by repeated experimental observations for more than two centuries.⁽¹⁸⁾ It was not until Einstein published his general theory of relativity (aka general relativity) in 1915 that the world was exposed to a whole new idea about gravity. According to Einstein, gravity is not some kind of force which two material objects exert on each other but rather a distortion of the spacetime surrounding a massive object such that the straight geodesic path of an object entering the distorted spacetime will become a curve, making it look like the incoming object is being pulled towards the massive object.⁽¹⁹⁾ Scientists tested the accuracy of both models by measuring the precession of the perihelion of the planet Mercury as well as the deflection of starlight caused by the sun and found the predictions of general relativity right on the mark in both cases but the calculations of Newtonian gravity were not as accurate.⁽²⁰⁾ As a result, the paradigm set by Newton's law of gravitation was gradually superseded by Einstein's general relativity in the field of gravity study.⁽²⁰⁾

Einstein's theory of relativity includes the special theory of relativity (aka special relativity) and the general theory of relativity, published in 1905 and 1915 respectively.⁽²¹⁾ Both involve concepts which are fundamentally different from those of Newtonian physics. Newtonian physics is like this:⁽²²⁾ Space and time are infinite, absolute, linear, and independent. Mass and energy are not interchangeable. Gravity can instantly act across the vacuum of space. Mass generates the force of gravity while the force of gravity directs the motion of mass. These concepts are consistent with our perceptions and everyday experience since a person cannot show up in two different places at the same time, causing us to think that space and time are utterly separate. Time seems to pass perpetually and space looks boundless to us, leading us to

believe in their infinity. What goes up must come down or else like a space rocket which must overcome gravity to blast off, making us feel that gravity is indeed a force acting upon us. Conversely, it is more difficult to comprehend things in Einstein's world of physics:⁽²²⁾⁽²³⁾ Space and time are indivisibly linked in a four-dimensional construct known as spacetime which can be finite or infinite, linear or non-linear. Mass can cause spacetime to warp or convert itself into a huge amount of energy under certain conditions. Time can be relatively slower for an object which travels faster, meaning that someone who travels in space for several decades at a speed equal to a large fraction of the speed of light can come home much younger than his twin brother living on earth. Einstein's concepts, as strange as they may seem, have been put to use for quite some time. Nuclear weapons such as atomic bombs and hydrogen bombs are probably the most visible testament to special relativity.⁽²⁴⁾ The relativistic time correction required to make the global positioning system (GPS) accurate is a good example that general relativity is at work.⁽²⁵⁾ It is possible that the theory of relativity will one day suffer the same fate as Newton's law of gravitation. For now, we can use the contrast between them to show the impermanence of science and to also prove that our perception and experience are not always reliable.

(E) The Progress of Science

Chinese writers often use the idiom " $ri x \bar{n} yue yi$ " (日新月異) to describe the progress of science. The meaning of this idiom is "innovating every day, every month" or "renovating every day, every month". Thus, it may be felicitous to use this idiom when referring to the pace at which new models of consumer electronics are introduced into the market but it can be overexaggerating when depicting the progress of science as a whole. In reality, the advancement of science can sometimes happen on a fast track but it can also be in slow motion depending on numerous factors. The most important factor is, without a doubt, the exigencies of humankind. The following two examples are intended to provide a comparison in this regard:

Example 5: The Outbreak of AIDS

Acquired immunodeficiency syndrome (AIDS) is a disease caused by human immunodeficiency virus (HIV), whose person-to-person transmission mainly occurs when certain body fluids of an infected person enter the blood stream of another person. Some common ways of human body fluid transfer are blood transfusion, unprotected sexual intercourse, sharing of contaminated hypodermic needles, and mother-tochild transmission during pregnancy, delivery, and breast feeding.⁽²⁶⁾ When the epidemic of AIDS started in the United States in 1981, there were all kinds of rumours and speculations about its cause and route of spread and very few medical professionals recognized it as infectious. The public was baffled and terrified as the disease continued to spread without cure. Medical professionals urgently did their utmost to find the pathogen, leading to the discovery of the AIDS virus in France in 1983 and the United States' approval of the first AIDS antibody test in 1985 for screening the nation's blood supply.⁽²⁷⁾⁽²⁸⁾ The Surgeon General of the United States issued a landmark report on the epidemic of AIDS in 1986 to call for public-health measures and pertinent sexual education, hoping that this would help slow down the rate of infection in that country.⁽²⁸⁾ Although there is still no cure for AIDS at the time of composing this book, knowledge about its source and mechanisms of transmission has enabled humankind to take necessary precautions against the virus and make the patients of AIDS live longer and healthier. What we can learn from this example is that problems which make people feel pain will be given priority in scientific research, much like what people would normally do when assigning priority in their daily lives.

Example 6: The Long Pause in Black Hole Research

Space is decorated with twinkling and dazzling stars but there are also regions of spacetime known as black holes, which show up as total darkness when viewed by a faraway observer since they do not pass, reflect, or emit light. One of the scientific explanations for the black hole is that when a massive star dies from the depletion of nuclear fuels, it will undergo a gravitational collapse and the resulting gravity is so intense that not even light can escape.⁽²⁹⁾ The idea that light could be trapped within a gravitational field can be dated back to the year 1783 when the English geologist John Mitchell performed some calculations to show that a star five hundred times bigger than the sun, but with the same density, would have an escape velocity (velocity required to break free from gravity) equal to the speed of light.⁽³⁰⁾ Despite Mitchell's findings, scientific research of black holes did not start until the early 20th century when the German astrophysicist Karl Schwarzschild performed the initial theoretical analysis based on Einstein's general relativity.⁽³¹⁾ It was not until the 1960's that the term "black hole" was coined and it was not until the advances in radio and X-ray astronomy in the 1960's and 1970's that scientists were able to see the effects of a black hole on its neighbouring interstellar objects.⁽³²⁾ If one compares this example of black holes with the above example of AIDS, it is not difficult to see that the progress of scientific research can be sluggish or stagnant if the topic is too remote from people's everyday lives or if pertinent theoretical basis and/or measurement technology is relatively immature.

(F) The Application of Scientific Knowledge

Science is a form of knowledge. In order for scientific knowledge to see a wider application in people's everyday lives, it has to give rise to the invention of products or technologies. The amount of research and development which is required for modern technological invention is expensive and time consuming. Thus, there must be some socioeconomic benefits to serve as the incentive. A socioeconomic benefit can be more than just the positive return on a certain commercial investment. It can take the form of public well-being, political bargaining chips, military advantages, or anything which adds value so long as it can be quantified in financial terms. As science progresses with time and socioeconomic factors change perpetually, many technologies or technological products will be phased out in the course of time. Also, what is deemed safe and reliable today may later prove to be dangerous or ineffective or may even have damaging effects in the long run. However, people's attitudes towards a certain technology or a certain technological product is dependent on a myriad of factors. Things considered controversial may still be put to use after weighing the pros and cons. The following example is to illustrate this point:

Example 7: The Merits and Demerits of DDT

Diochloro-diphenyl-trichloroehtane, commonly known as DDT, was once a popular agricultural and household insecticide of the 20th century. Some countries still use it after entering the 21st century. The chemical formula of DDT was developed in the 19th century but it was not until the year 1939 when its insecticidal properties were discovered by the Swiss chemist Paul Muller.⁽³³⁾ During the Second World War, samples of DDT were provided to both the Allies and the Axis powers for evaluation but only the United States was not concerned about potential long-term risks and went ahead to use it widely in Europe and the Southern Pacific to prevent or control the epidemics of malaria and typhus by killing off insect vectors responsible for their transmission.⁽³⁴⁾ As a result, the lives of many civilians and military personnel were saved and Paul Muller was awarded the Nobel Prize in Physiology and Medicine 1948.⁽³⁴⁾ Continuing

along the same path, the World Health Organization (WHO) launched its Global Malaria Eradication Program (GMEP) in 1955 to rid the world of malaria by using DDT to exterminate the anopheles mosquito, which is the only mosquito genus known to transmit human malaria, but this campaign was suspended in 1969 as anopheles mosquitos had gradually developed resistance to the once powerful chemical.⁽³⁵⁾ Three years later, the United States banned the domestic use of DDT after repeated protests by environmentalists, allowing only export of the product and its use in public health programs overseas; many other countries followed suit.⁽³⁶⁾

DDT has proven to be highly toxic to many species of fish and marine animals. Its detrimental effects are so far-reaching and long-lasting that even sea lions in some remote areas are still being threatened by its environmental impacts decades after the implementation of restricted use by most nations.⁽³⁷⁾ DDT can also cause eggshell thinning among certain species of wild birds such that cracking of the shell can occur before hatching, leading to an acute decrease in their reproductive rates.⁽³⁸⁾ As for adverse effects of human exposure, there is suggestive evidence that DDT can be the cause of pancreatic cancer, neuropsychological dysfunction, and reproductive outcomes while its role in a number of common diseases has yet to be determined pending the availability of high-quality evidence.⁽³⁹⁾ So, it is possible that DDT has done more harm than good but the details will not be known until all the data become available. Although some statistics collected in the mid-1970's seemed to suggest that malaria mortality had made a dramatic rebound in certain part of the world after the suspension of the DDT spray program, one historian has pointed out that such a simplistic view is misleading since it does not reflect certain important aspects of history, such as the people who contrived the eradication program, the mosquitos which developed DDT resistance, the ecological interconnections between DDT and the environmental web, the politics of the American-Soviet Cold War, the short-sightedness of technological modernists, and the limits of national regulation.⁽⁴⁰⁾ The example of DDT has demonstrated that the use of technology is not necessarily as neat and beneficial as it may seem but, rather, it can be messy, problematic, and harmful to future generations. If readers do not find this example illustrative enough, another telling example may be the deployment of nuclear plants in the past half-century and the resulting controversies.

THE PITFALLS OF RECONCILIATION

The lengthy discussion in the previous section was meant to provide an overview of what science is all about rather than offering insight into any particular branch of science. Science only studies natural phenomena which can be independently observed and verified. This characteristic alone is good enough to help distinguish science from the vast majority of religions since religions in general do involve things considered supernatural, such as god(s), goddess(es), and devil(s) who can transcend nature and intervene with nature as well as heaven(s) and hell(s) which are not part of nature. These supernatural features do not fit into the scope of science because they can never be observed or tested by using scientific means. So, why would science be seen as competing with some religions if these apparent competitors do not belong to the same world? The answer to this question is actually quite simple. Some religions which are rich in content would attempt to explain everything in the universe and predict their futures but, incidentally, a task like this has a large overlap with what science is supposed to do. Consequently, any difference in opinion between the two sides can cause disagreement and if any one side wants to displace the perceived opposition, it can potentially develop into a situation of unhealthy competition.

The Galileo affair is an infamous case of conflict between science and religion. Galileo had never disputed the existence of the Christian God but his scientific observation was unacceptable to the Roman Catholic Church at the time. More than three hundred years later, not that many religionists would debate the scientific view of heliocentrism and Pope John Paul II had apologized in the last century for the unfair treatment of Galileo.⁽⁴¹⁾ However, some ancient religious convictions are so deeply ingrained that their adherents would consider any scientific theories which seemingly contradict their faiths to be heretical. Darwin's theory of evolution, which was proposed in the 19th century, has been under attack for religious reasons until today. In the United States, for example, lawsuits have been filed in the past few decades by Christian creationists who oppose the teaching of evolution in public schools.⁽⁴²⁾⁽⁴³⁾ In order for the public to gain a clearer understanding of biological evolution, the United States National Academy of Sciences published a booklet titled *Science, Evolution, and Creationism* in 2008 to explain in detail what biological evolution means and why anti-evolution beliefs are wrong. The same booklet also stressed on the need for providing students with a high-quality science education in which the science of evolution is a core component due to its role in the broader scientific enterprise and the strategical policy-making regarding many social, cultural, and political issues with long-term global implications.⁽⁴⁴⁾

Besides an abundance of scientific evidence for biological evolution, the booklet *Science, Evolution, and Creationism* has also included excerpts from the statements of certain religious leaders who see no discord between their respective faiths and science. Some of these statements were made by Christians, including the one from the writings of Pope John Paul II in 1996 which stated that his predecessor Pius XII had already affirmed that there was no conflict between evolution and the Catholic faith.⁽⁴⁵⁾ Therefore, it can be seen that Christians do not necessarily take an unanimous stand when it comes to the acceptance of evolution and the Roman Catholic Church's attitude towards science has changed considerably since the days of the Galileo affair. Such a trend towards compatibility may remind us of the English idioms "roll with the punches" or "trim your sails" but a more reasonable and respectful explanation for the shift in attitude is that people who believe in the same religious scripture can have different interpretations thereof. As a matter of fact, creationism and mythical narratives are common features of many religions and even adherents of the same religion may disagree between themselves on these subjects. The Galileo affair and biblical creationism are used here for illustration not because I want to cause anyone embarrassment but because they are widely known and pertinent references are readily available in the public domain.

Many religions have identified themselves as the only truth and the eternal truth. So, how can it be up to the adherents of a religion to create more than one version of the truth through different interpretations of the same scripture? If the various denominations of a religion are allowed to hold diverse views on the same set of doctrines, can any of these views be called the "only truth"? If different versions of the truth can be taught at different times, can they still be qualified as the "eternal truth"? Difficult as these logical questions may seem, there is a simple way to formulate an answer. Religious scriptures were composed by human authors for perusal by human readers. Therefore, whether the intent was to record some divine revelations or to keep notes of the discourses of some sages, the author had to exercise his/her mental faculties such as understanding, comprehension, and memory in order to recite or write down what was heard. Likewise, checkers, editors, and compilers who did the subsequent work did so by exercising their mental faculties and readers must decipher and digest these religious texts by using similar means. As understanding and comprehension are mental faculties cultivated by external factors such as education, information, and experience, it should not be surprising that people raised in dissimilar environments do not always derive the same concept from the same piece of writing. If a scripture is allegorical, then, of

course, it is meant to be open to interpretation. Moreover, linguistic evolution (e.g. changes in semantics and phonetics), the ravages of time, and the translation from a source language to a target language can potentially contribute to the loss or distortion of information. Thus, even some obvious factors such as the ones just mentioned can account for many interpretational variations. If a more complex explanation is necessary, we will have to study the history of the religion being investigated.

While science and religion may still be at odds over certain major issues, some religionists would love to use scientific knowledge to prove their religions. Sometimes they do it to assist themselves in religious learning, sometimes they do it to show people that their religions can adapt to the trend, and sometimes they do it for other valid reasons. From time to time, adherents with science background may testify on television or in religious gatherings. Although their faiths may differ, their presentations often follow one of two set patterns: (1) to stress on the fact that there are still myriads of natural phenomena which science cannot explain and then move on to say that the universe is full of wonders and mysteries which can only be the work of some creator god/goddess or to say that the truth of such a universe can only be represented by their respective religions, and (2) to pick a topic to which their professional qualifications are relevant and then magnify pertinent scientific information which seems to sustain their respective faiths but deflect or downplay scientific evidence which does not. These two types of testimonies may be quite agreeable and reinforcing if delivered from one believer to another but to the non-believer, the former may give the impression of old stuff with a new label while the latter may bear resemblance to partial truth, strained interpretations, and farfetched analogies.

The use of scientific knowledge as religious propaganda will not necessarily bring desirable results. Sometimes, it can even backfire on the preacher. One may expect less of a conflict between science and new religions which emerged in recent years since the founders of these new religions have the opportunity of learning modern science before developing their religious doctrines. On the other hand, it is nothing to get excited about if there is a passage in some older religious text whose literal interpretation may seem to concur with the concept of a modern scientific theory since this can be a case of coincidence rather than a prophecy being fulfilled. If we are to accept a particular religion as truth based on a scriptural statement which resembles a scientific statement of our time, then what are we supposed to do when there are other scriptural statements of the same religion which contradict our scientific knowledge? And how do we treat other religions with scriptural passages which match exactly or reasonably well with our current scientific thinking? Turning to science itself, it is in a perpetual process of self-renewal. So, if the scientific model used to exalt a religion is later refuted by the scientific community, do we also reject the corresponding scripture at that time? In light of these dilemmas, it may be more advisable for people to use science as a tool to support religious learning at the personal level or to debunk religious misconceptions such as flat Earth and geocentricism rather than making science an instrument for furthering one's attempt to seek a complete confirmation or disconfirmation of some time-honoured religions.

THE RIGHT VIEW ON BUDDHISM

Buddhism may be viewed as a form of education with multiple functions and multiple characteristics. It shows the characteristics of religion and it can function as a religion also. As well, it is legally recognized as a religion in many countries. Therefore, there is nothing obviously wrong in treating it like a religion when seeking its parallels with science.

Scientific knowledge is not a prerequisite for studying Buddhism. Just like anyone else, a scientific illiterate can fully purify his/her consciousness by practicing buddha-dharma such as the five precepts of morality, the ten guidelines for virtuousness, the noble eightfold path, and the six paramitas. However, science can be a useful tool for Buddhists since it can help them improve their understanding of the reality of nature and since it is an important step in the practice of Buddhism to free the practitioner from his/her own ignorance, which can be understood as the greed, anger, and delusion arising from a person's lack of understanding of reality. For Buddhists who have vowed to benefit the world with their loving-kindness and compassion, science can also help them develop necessary skills to fulfill this goal. As stated in Book 38 of the Yúqiéshīdì Lùn (瑜伽師地論; *Skt. Yogācārabhūmiśāstra*), bodhisattvas are supposed to master five branches of knowledge in order to benefit other sentient beings: (1) linguistics and composition, (2) arts and crafts, (3) medicine, (4) logic, and (5) inner knowledge.^(E-5) A good portion of these five branches of knowledge, if not all, were traditional sciences in ancient India.

In order to reconcile a religion with science, one must first look for the spirit of science in the religion in question is devoid of the spirit of science, any attempt to seek reconciliation may end up with sophistry. The scientific spirit of Buddhism is evident in the fact that Buddhism has attached great importance to causality but little importance to miracles as stated in Chapter 6 of this book. The reason that causality is important in Buddhism is not just that good karma will lead to a better next-life as the average person may have perceived; rather, Buddhists must understand reality within the framework of causality. To understand reality in the world is the same as to understand the general role of causality in all worldly phenomena and, agreeingly, one of the key objectives of science is to investigate the causality between various natural phenomena. The Buddhist way to seek deliverance from suffering is to self-purify one's consciousness instead of turning to the supernatural for salvation and, agreeingly, it is the fundamental principle of modern science to not seek supernatural answers to questions concerning nature. The Buddha held the view that every sentient being could achieve buddhahood by practicing self-purification and he shared with others his method and experience in this regard so that everyone could experiment with it and achieve the same results. Such an openness to learning and testing is similar to the objectivity of science since any observation or experiment in a scientific method must be independently verifiable.

As can be seen from the *Evolution and Ethics* of Thomas Huxley, the scientific spirit of Buddhism was already known to Western scientists during the Victorian era. According to Huxley, who was a good friend of Charles Darwin and a prominent advocate of Darwin's theory of evolution, the doctrine of transmigration (samsara) and the doctrine of evolution are both based on reality and transmigration is viewed by Buddhism as a cosmic process in which every sentient being reaps what it has sown.⁽⁴⁶⁾ Also as pointed out by Huxley, the Western notion of supernatural is excluded from the concepts of karma and causality since no external power can affect the chain of cause and effect which leads to karma;⁽⁴⁷⁾ and, while accepting the Brahminical doctrine of transmigration featuring the celestial, the terrestrial, the infernal, sentient animals, and gods and devils, Buddhism has developed a self-reliant method of deliverance from transmigration in which material existence is utterly eliminated and the cosmos is simply reduced to a flow of sensations, emotions, volitions, and thoughts.⁽⁴⁸⁾ In brief, Huxley called Buddhism a marvelous success and underscored its difference from the Western tradition of believing in God, soul, prayer, and sacrifice.⁽⁴⁹⁾

China may have started late on the development of modern science when compared with the West but some Chinese scientists have offered remarkable insights into the compatibility of Buddhism and science. The *Fófă Yǔ Kēxué De Bǐjiào* (佛法與科學的比較; *lit. A Comparative Study of Buddhism and Science*) of

Wáng, Jìtóng (王季同), first published in 1932, and the Yīgè Kēxuézhě Yánjiū Fójīng De Bàogào (一個科學 者研究佛經的報告; lit. A Scientist's Report on the Study of Buddhist Scriptures) of You Zhibiǎo (尤智表), first published in 1946, were probably the two best known works on this subject produced in the Hànlanguage region (漢語區) of China during the first half of the 20th century.^(E-6) Yóu's work, written in the format of a scientific report, is selected for discussion here for two reasons. First, as declared in section 3 of his report, he was non-religious and did not have any interest in arts, literature, philosophy, and religion prior to reading Buddhist texts on his uncle's recommendation.⁽⁵⁰⁾ Therefore, we can quickly rule out the possibility that his report was written by a Buddhist in defence of Buddhism. Second, the quality of his work did meet or exceed the standard of scientific research papers of his time, which makes it very much suited for scientific reference. Yóu graduated from Chiao Tung University (交通大學) of China with a degree in electrical engineering and he had worked as an editor at the Commercial Press (商務印書館), the first modern publishing organization in China, before doing graduate studies at Harvard University. After returning to China, he started his campus career by teaching at Zhèjiāng University (浙江大學).⁽⁵¹⁾ Prior to writing his report, Yóu had performed an in-depth study on a total of eight important scriptures of Hàn Buddhism (漢傳佛教), including the Lényán Jīng (楞嚴經; Skt. Śūramgamasūtra), the Heart Sutra, the Diamond Sutra, the Lotus Sutra, the Zhōng Lùn (中論; Skt. Mūlamadhyamakakārikā), the Bǎifǎ Míngmén Lùn (百法明門論; Skt. (Mahāyāna-śatadharma-prakāśamukha-śāstra), the Chéng Wéishí Lùn (成唯識論; Skt. Vijñaptimātratāsiddhi-śāstra), and the Yīnmíng Rù Zhénglǐ Lùn (因明入正理論: Skt. Nvāvapraveśa). Unlike some authors who are happy to make their arguments based on bits and pieces of interpretational similarities between selected Buddhist concepts and scientific theories, Yóu analyzed in detail the format, style, language, contents, and translation of these scriptures as well as the Buddhist theories, experimental method, and experimental results recorded therein before drawing his conclusions. He found Buddhist scriptures highly scientific in many aspects. One example he used to illustrate this point is that Buddhist scriptures typically start with an introductory statement which includes the elements of place, time, the lead person, other participants, the source of information, and a declaration of faithfulness, which is similar to what scientists do when writing reports on their scientific experiments. You was particularly impressed by the accuracy and consistency of Chinese translations of Buddhist terminology as well as the sophisticated annotations included with many Chinese translations of Buddhist scriptures. He even went as far as saying that his colleagues in the technical world could not have done it better.⁽⁵²⁾ In addition to a general evaluation of Buddhist scriptures, Yóu used modern-world examples to explain certain important Buddhist concepts and made them easy to understand, such as the threefold view, the principle of causality, the theory of dependent origination, the three natures of things, the Buddhist worldview, and the Buddhist life-view.⁽⁵³⁾ In my opinion, however, the most perspicacious observation reported by Yóu is that Buddhism does not deny the objective existence of the material world and the Buddhist concept of "consciousness only" or "mind only" is different from the metaphysical philosophies of idealism which view reality as immaterial or mentally constructed.⁽⁵⁴⁾

In his report, Yóu heavily used the atomic bomb and related physics of his time to expound on certain doctrines of Buddhism. This is understandable since his report was written only one year after the United States used atomic bombs to bring the Second World War to its conclusion. Some of these examples may seem a bit outmoded today but the overall report still provides a lot of good reference materials. If one really wants to look for flaws in this report, it can be said that the hypothetical example of an observer travelling faster than light is invalid since Yóu might have forgotten that the speed of light is absolute in the model of special relativity. As for the parallel he drew between Einstein's mass-energy equivalence

and the *Heart Sutra* quote "[f]orm is emptiness and emptiness is indeed form", it appears that the latter was taken out of context since if one accepted such a parallel, there would be a disconnect between the quoted sentence and the following sentence in the sutra which reads: "The same applies to sensation, cognition, formation, and consciousness."^(E-7) Besides, such an interpretation of the word "emptiness" cannot help explain the emptiness view in the context of the threefold view in which the word "emptiness" obviously does not express the meaning of "energy" or "energy conversion".

Entering the second half of the 20th century, the American-Soviet Cold War began to escalate. At the same time, a new round of rapid social transformation started in China whose scale was the largest since the Revolution of 1911. It surely was not a priority for Chinese scientists to study religions then. As a result, works which could match the quality of You's report were hard to find on Chinese soil in the next few decades. Fortunately, there were scientists elsewhere in the world who showed an interest in ancient Eastern systems of philosophy, including Buddhist philosophies, and they looked for information in ancient Eastern religious scriptures and philosophical texts which might correspond to modern science. The Tao of Physics by Fritjof Capra, first published in 1975, was probably the most representative work on this topic produced during the Cold War era. Published in many different languages, it is such a bestseller that a total of five editions have been published in the English language alone over a period of thirty-five years. Capra used the term "Eastern mysticism" to denote traditional Eastern religions and philosophical systems such as Buddhism, Hinduism, and Taoism.⁽⁵⁵⁾ He claimed that he had found multitudes of congruities between Eastern mysticism and modern science. In the chapter on emptiness and form, he discussed the physical phenomenon in which a proton, an anti-proton, and a pion can be formed out of nothing and disappear again into the vacuum, called it the closest parallel between quantum field theory and the Void of Eastern mysticism, and supported his own view by using the well-known *Heart Sutra* quote "[f]orm is emptiness and emptiness is indeed form."⁽⁵⁶⁾ It appears that this quote was also taken out of context in Capra's work and Capra has assigned a different meaning to the word "emptiness" when compared with the discussion of Yóu. If we want to accept the opinions of both Capra and Yóu, then we must equate a physical vacuum (Capra's interpretation) to some form of energy (You's interpretation). Can a physical vacuum be equated to energy? It will require some extensive scientific research to find an answer to this question. From here, we learn that it can potentially generate more questions than answers when scientists quote scriptures out of context in order to draw a parallel between Buddhism and science.

In the two and half decades after the end of the American-Soviet Cold War, many new titles were published on the subject of Buddhism and science. If I were asked to arbitrarily pick three as samples, I would name *The Evolving Mind* by Robin Cooper,⁽⁵⁷⁾ *Buddhism and Science: Breaking New Ground* by B. Alan Wallace (editor),⁽⁵⁸⁾ and *The Zen in Modern Buddhism* by Chi-Sing Lam⁽⁵⁹⁾ since these titles involve topics such as biological evolution, cognitive science, quantum theory, and modern cosmology which are some of the more common topics for the discussion of Buddhism and science these days and their authors include Buddhist(s) and non-Buddhist(s) or perhaps Buddhists of different divisions. Other than that, I have no specific criteria to follow and I do not think that it really matters if the book's content is right or wrong since a book can serve as either a good example or a bad example. It must be noted, however, that not every one of the authors in the *Buddhism and Science: Breaking New Ground* is a scientist by training and some of the essays therein may contain information which reads more like political statements than scientific expressions. Therefore, I must maintain my political neutrality by not supporting any of their political views or political claims.

"Buddhism and science" is a wide-ranging and highly inspiring field of multidisciplinary research. It can be more complex and intricate than the comparative study of religions. Research in this field does not have to abide by any guiding principle or technical standard. The practice itself and the practitioner's professional qualification are not legally regulated. The resulting academic freedom may foster a multitude of innovations but it can also be a constant source of controversy. Take *The Tao of Physics* by Capra for example, one physicist criticized Capra for having failed to update his discussion of quantum physics to the latest standard-model quantum field theory in the later editions of his work.⁽⁶⁰⁾ Another physicist who was a Nobel Prize laureate condemned him for having ignored the meticulousness required to weave theory and experiment together as well as the amount of painstaking efforts behind every single step of advancement in scientific research.⁽⁶¹⁾ In addition to peer denunciations, Capra also met disapproval outside the scientific community. One critic described his comparison of Buddhist concepts with quantum physics as being too narrow and too selective to represent the whole of Buddhism, let alone the totality of all Eastern thought or all mysticism.⁽⁶²⁾

In addition to making criticisms about a certain author or a certain publication, some practitioners of religious studies may also question the merit of investigating the compatibility of Buddhism and science. Among them is Donald Lopez, Jr. who specializes in Buddhist studies and Tibetan studies in the United States. Lopez has firmly admitted in his Buddhism and Science: A Guide for the Perplexed that he does not have a scientific background.⁽⁶³⁾ He nevertheless has the courage to employ a different kind of tactics to embarrass those who look for compatibility. Lopez asserted that Mount Meru, mentioned in a number of Buddhist scriptures, was a form of flat-Earth theory,⁽⁶⁴⁾ and he claimed that it was not until the colonial era did Asian Buddhists learn from Christian missionaries about the truth that the earth was not flat.⁽⁶⁵⁾ He doubted if the historical Buddha who lived in Iron Age India could have understood modern scientific theories such as relativity, quantum physics, and the Big Bang.⁽⁶⁶⁾ He argued that the compatibility of Buddhism and science was just a European idea of the Victorian era created by European scholars who studied Buddhism with their scientific minds.⁽⁶⁷⁾ According to his analysis, the reason that modern Asian Buddhists are showing keen interest in science is to seek to elevate themselves by making their faith look scientific and to counter the attacks by Western missionaries.⁽⁶⁸⁾ Several prominent Asian Buddhists were disparaged in this title of Lopez including Dharma Master Tàixū (太虛大師) of China who was portrayed as foolish and overconfident enough to have written to Hitler in Nazi Germany to persuade him to convert Europe to Buddhism and then to missionize China.⁽⁶⁹⁾ In writing a book like this, Lopez has probably forgotten certain important facts, including the fact that a flat-Earth theory can also be found in the Bible when interpreted literally,⁽⁷⁰⁾ including the fact that it was not until the 16th century did European sailors prove that the earth was not flat, and including the fact that gunpowder technology used by European colonialists to colonize many parts of Asia was originally a Chinese invention. Some of the errors in this work of his are very obvious indeed. For instance, he said that the discourse on Buddhism and science was relatively inactive during the two decades of 1940 and 1950 except for the parallels drawn by some between psychoanalysis and Zen which were largely due to the inspiration of D.T. Suzuki.⁽⁷¹⁾ What this means is that Lopez was either unaware of You's 1946 report, which is a major milestone in the history of Chinese Buddhism, at the time when he wrote this book of his or he had deliberately excluded You's work from his discussion in order to make his points. I am using Lopez's work here as a negative example to remind Buddhists or those who study Buddhism that some due care and serious thought are required when they attempt to link Buddhism to mysticism and/or science or else there may be another exposure to attacks by despisers of Buddhism.

THE THEORETICAL AND THE SITUATIONAL

Is Buddhism a science? Did the historical Buddha have foreknowledge of modern scientific theories? Can Buddhist myths be compatible with science? Detractors of Buddhism may love to use questions like these to deride Buddhists but there is no need for Buddhists to evade these questions which are actually not difficult to answer.

(A) Is Buddhism a Science?

Scientific hypotheses and scientific theories may be in a process of constant renewal but the definition of science is not. The two sets of key elements underlying the definition of science are the properties of science and the functions of science. So long as the definition of science remains the same, we can decide whether Buddhism can qualify as a science by examining its properties and functions. The properties of science have been well explained in the earlier sections of this chapter which covered the hallmarks of science, the methods of science, and the formulation and testing of a scientific hypothesis. In order for any given doctrine to be classified as a scientific hypothesis or scientific theory, it has to be falsifiable. Since certain Buddhist concepts or Buddhist philosophies are not falsifiable, much like the case of most other religions, this particular feature will distinguish Buddhism from science. From a functional point of view, science generates knowledge through reasoning and experimentation. It is in effect a system of methods and methodologies and a huge collection of data, theories, and hypotheses which, unlike Buddhism, do not teach humankind how to live morally, how to set life goals, how to handle their ever-changing sentiments, how to manage their endless desires and cravings, and how to liberate themselves from the affliction and unhappiness of life. Thus, Buddhism can do what science cannot and Buddhism excels science in terms of this aspect of functionality. Unless some revolutionary changes are made to the properties and functions of science, one may always expect some differences between Buddhism and science.

(B) Did the Historical Buddha Have Foreknowledge of Modern Scientific Theories?

Some people may call it a supranormal ability if someone can tell us something about the unknown past or something about the uncertain future. Such a view is debatable since it is not too difficult to use some normal means to achieve similar effects. For example, a background check can reveal the past of a person. A research in history can uncover the past of a society. A geological survey can expose the past of the earth. Likewise, our knowledge in physics enables us to predict tidal times and range at any given locale. Our knowledge in chemistry allows us to predict the rusting of ferrous objects exposed to moisture. Our knowledge in biology enables us to predict the shedding of deciduous foliage in subarctic climate regions. The crux of the matter is how much we know and how far in time our knowledge goes? For example, some people are able to tell the stories of a large number of their own past lives and some psychics are able to see into the past of others for many reincarnations. In Buddhism, the *Běnshēng Jīng* (本生經; *Skt. Jātaka*) is a collection of hundreds of the tales of the Buddha's past lives before he achieved buddhahood. But what is so astonishing after all? Assuming a lifespan of one hundred years each, the total amount of time required for a sentient being to be reborn five hundred times will be merely fifty thousand years. If one compares this amount of time with the age of the earth, which is over four billion years, the period of five hundred rebirths may be equivalent to something shorter than the blink of an eye in a 24-hour day. So, if someone claimed to have psychic or clairvoyant power, would he/she be able to vaticinate future events for the next one million years or one billion years? If he/she predicts rainfalls within the next few days, it is just a weather forecast. If he/she predicts the outbreak of a war or the outbreak of an epidemic in the next one hundred years, these are things which will happen sooner or later. In Buddhist doctrine, nothing in the world is bound to happen in an absolute sense since everything has its dependent origination which involves one or more contributing factors. If these contributing factors include the doings of one or more sentient beings, then the process which gives rise to a certain outcome or phenomenon may, at a certain stage, be dependent on the mind(s) of one or more sentient beings which can change on a whim and which is not predictable by using any model of physics. Therefore, the longer the forecast period, the harder it is to project the future. The development of a scientific theory is no exception since it is an extremely complex process involving many human beings and their ever-changing consciousnesses. So, in theory, it is difficult for an ancient who lived two and half millennia ago to foretell the postulations of modern-day scientists. Some ancient sages might have described certain natural phenomena in a manner which is similar to the statement of a modern scientific theory but such a congruity should not be construed as their prescience in anticipating the proposal of any given scientific model by any given scientist in any given place at any given time in the modern world.

In some Western traditions, there is the concept of omniscient god(s) or goddess(es). Perhaps this is the reason why some Western scholars in the field of religious studies are much interested to find out if the Buddha has a similar quality. However, their efforts in this regard can potentially be self-misleading since the ultimate goal of practicing Buddhism is not to predict the future but to effectively use one's time to seek liberation from samsara. If one is successful in reaching this goal, then no matter what the future holds, it cannot harm him/her. Thus, it will make no difference whether he/she has the ability to predict the future or not. Furthermore, the concept of an omniscient god as in the case of some Western traditions may be hard to defend. To illustrate my point, I shall quote from the Bible with due respect:

And God saw that the wickedness of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually." (Genesis 6:5) "And it repented the LORD that he had made man on the earth, and it grieved him at his heart. (Genesis 6:6) (KJV)

If one interprets the above verses from Genesis literally, then it is the Bible which tells us that the Christian God did not know how humans would behave when he created them. It was only after the fact that he discovered it and he regretted this creation of his own. So, if the Christian God, who is widely accepted in the West as omniscient, is not truly omniscient in a literal sense, why should theologians and practitioners of religious studies in the West bother making a guess at the Buddha's ability to prophesy the future?

Whether the historical Buddha had foreknowledge of today's scientific theories has no bearing on our efforts to use modern science to explain Buddhist philosophy or vice versa if our objective is to illustrate a certain Buddhist principle rather than demonstrating the precognition of the Buddha. The basic doctrines of Buddhism will not vary with the progress of science. One may use 19th century chemistry to explain the Buddhist concept that things in the material world are impermanent or use 20th century quantum physics to do the same. Regardless of how many giant strides science will take in the future, the material world is always impermanent. If one must find out whether the Buddha or any buddha is omniscient, the best way to do it is to practice Buddhism and become a buddha himself/herself. Before attaining buddhahood, one

may refer to the below excerpt from the Diamond Sutra for a hint:(E-8)

The Buddha told Subhūti: "The variety of minds of all sentient beings in these worlds are known by the Tathagata. And for what reason? What are called minds are not minds but are referred to as minds. And why is this so? The mind of the past cannot be grasped. The mind of the present cannot be grasped. The mind of the future cannot be grasped."

If we interpret the above scriptural quote literally, the Buddha was referring to a quality of the mind rather than the specific contents therein when he made that statement. This quality is that everything in the mind has its dependent origination and is hence empty of self-essence. The sentence "[w]hat are called minds are not minds but are referred to as minds" is a typical example of the Buddhist threefold view or Buddhist threefold contemplation as analyzed in Yóu's report.

(C) Can Buddhist Mythology Be Compatible with Science?

At first glance, some Buddhist scriptures do seem to have a mythical aspect which may not agree with today's scientific knowledge. This makes us wonder if the compatibility of Buddhism and science is merely a selective correspondence. But like what Huxley had pointed out in the *Evolution & Ethics*,⁽⁴⁸⁾ many of the mythical conceptions referenced in the Buddha's discourses were adopted from Brahminical doctrines. Things like "Mount Sumeru" (Mount Meru) and the associated "four continents" were not inventions of the Buddha but were used by the Buddha in his dharma lectures as traditional or familiar knowledge for discussion purposes. This is somewhat similar to the Chinese tradition of using the word " $x\bar{n}$ " (ψ), whose meaning is "heart" when referring to human organs, to idiomatically represent the mind or the thoughts of a person even though the Chinese are well aware of the fact that the heart is not the organ which does the thinking. As stated in Chapter 6 of this book, the Buddha would sometimes illustrate his points by using cultural examples familiar to his audiences in ancient India while correcting some crucial misconceptions in their traditional beliefs. So long as his audiences were able to understand his teachings well enough to practice his method of self-purification and self-liberation, whether Sumeru, the four continents, and other geographical views alike would form an accurate picture of the physical world is a question of secondary importance.

As explicated by Dharma Master Chuk Mor (竺摩法師) in his *Fójiào Yǔ Rénshēng De Quánxì* (佛教與 人生的關係; *lit. The Connection Between Buddhism and the Human Life*), the Buddha had used two different types of methods to teach buddha-dharma: (1) the theoretical, and (2) the situational. In a typical theoretical method, the truth (e.g. the principle of causality) is stated in a straightforward manner without incorporating the lecturer's opinions. In a typical situational method, the teachings are tailored to best suit the needs of the student after taking into consideration his/her background, potential, and readiness. In order to clarify his point, Dharma Master Chuk Mor drew an example from book 11 of the *Confucian Analects* (論語) wherein Confucius (孔子) was asked separately by his students Zhòng Yóu (仲由) and Rǎn Yǒu (冉有) the same question as to whether one should immediately carry into practice what one heard but he gave them different answers after considering their individual aptitudes and personalities.^{(72)(E-9)} Judging from this example, the Buddha's method of situational teaching is similar to Confucius' method of aptitude-based teaching. Thus, it makes sense that the Buddha delivered his discourses in ancient India in a manner which would suit the cultural background of his audiences. For the same reason, we, citizens of the modern world, can use modern scientific knowledge to comprehend buddha-dharma. If we consider the cosmology and geography of ancient India too mythical, those who evaluate our science two and half millennia later may also find it crude and primitive.

Although the narratives in some Buddhist scriptures do read like mythology, the messages which they try to send are actually not difficult to comprehend after the mythical elements have been filtered out. For instance, there is a tale in the *Yúlánpén Jīng* ($\pm \overline{B} \pm Skt$. *Ullambana-sūtra*) about how Mùjiānlián ($\exists \pm \overline{S} kt$. Maudgalyāyana), an eminent arhat and close disciple of the Buddha, rescued his mother who died and was reborn to the plane of hungry ghosts due to too much evil deeds.^(E-10) Mùjiānlián tried to feed her by using his supranormal powers but all attempts failed since a hungry ghost by its very nature could not eat. Finally, at the advice of the Buddha, Mùjiānlián invited all the Buddhist monks to jointly use their good karma to free his mother from her suffering and the liberation was successful. A story like this would definitely be viewed as a myth by some but what can we learn from its ending? The ending of this story tells us that karma is produced by one's own doings and one cannot be magically delivered from the ugly consequences of one's wrongdoings since bad karma can only be offset by good karma. Thus, with a proper understanding that Buddhism is against the use of supranormal power as a shortcut for seeking liberation and that parables or allegories of educational themes can be written in mythological style, we should not despise Buddhist scriptures of such a style simply because of our scientific advancements over the past two and half millennia.

Narratives and allegories of mythological style may be useful to those who are able to extract proper information therefrom. However, if a scripture is too rich in mythical content, then the messages it is supposed to convey may not manifest readily. For instance, the Shìjì Jīng (世記經), which formed the last part of the Cháng Āhán Jīng (長阿含經; Skt. Dīrghāgama), has certain sections which depict the formation of the world and the lives of its early human inhabitants. Some of the passages therein read like ancient Indian mythology and may be useful in calling our attention to the impermanent nature of things but should the readers use them as some kind of scientific reference, then they may reach an unrealistic conclusion. As a more specific example, there is a passage in the Shiji Jing which may seem to suggest that the ancestors of humankind were celestial beings from a heaven known as Quāngyīntiān (光音天; Skt. Ābhāsvarāloka) who landed on earth for tasty produce.^(E-11) Depending on how this passage is interpreted, some may use it as the basis for arguing that Buddhism is an anti-evolutionist religion. But in truth, the theory of evolution and hypotheses such as biogenesis, abiogenesis, and panspermia are not incompatible with the Buddhist principle of causality. Whether these theories or hypotheses will stand or not should strictly be a matter of scientific research. There is no conflict between them and the Buddhist concept of samsara since they apply to the body of a living organism while the Buddhist concept of samsara applies to a sentient being's rebirthbound consciousness which does not die with the body. In his Fóxué Wèndá (佛學問答; lit. Buddhist Studies - Questions and Answers), Dharma Master Chuk Mor answered a question from someone who wanted to know the Buddhist explanation of the origin of the human species. After providing a brief summary, the dharma master pointed out that this question was not important in Buddhism and that the most important Buddhist goal was to seek liberation from the endless cycles of life and death.⁽⁷³⁾

A FEW SCENARIOS FOR TESTING BUDDHIST DOCTRINES

Science is far-reaching. From the organs inside our bodies to galaxies billions of lightyears away, from the tiny subatomic particles which can only be discerned by sophisticated laboratory instruments to the

boundless universe, from the extremely short instant whose passing can hardly be detected by our physical senses to the infinite past or infinite future which can only be represented by mathematical symbols, there are things which can potentially become topics of scientific research. Science is also narrow-ranging. Any doctrine which is not testable by scientific means will not qualify as a branch of science. While Buddhist doctrines do not disconnect themselves from the laws of nature, they do involve concepts which presently cannot be tested by using scientific methods. Thus, from this perspective, Buddhism may not be seen as that much different from religions which worship the supernatural. Those who try to corroborate Buddhist beliefs by using modern scientific theories, then it is just as stupid as embellishing Buddhism by composing myths and legends during an era when people had blind faith in magic and miracles. Any injudicious effort of making inapposite links between Buddhism and science can potentially become a source of controversy or a laughingstock of the learned ones instead of helping people gain insight into Buddhism.

If we want to end any skepticism towards Buddhism by conducting scientific experiments, the source of skepticism must be identified beforehand. Since we know that some of the terms and notions used in the Buddha's dharma lectures were borrowed from Indian mythology, we can skip such items and concentrate on topics in the fundamental doctrines of Buddhism. For example, we can seek candidates for scientific experimentation from the following questions: (1) How do we prove the concept of samsara? (2) How do we prove that the fully purified consciousness of a sentient being can break free from samsara? (3) How do we prove the existence of karmic causality? (4) How do we prove that karmic causality can work beyond a single lifetime? (5) How do we prove that karmic merit is transferrable?

The Buddhist belief of samsara has been discussed in Chapter 6 of this book. In order to seek proof for samsara, we must first demonstrate the existence of rebirth-bound consciousness and its ability to travel from a deceased body to a new body. An indirect proof can be obtained by making a person tell us about his/her previous life or lives for verification by others. Such a proof is, at the most, applicable to the type of rebirth which occurs in human form. It is also less convincing to critics because the farther memories go back in time, the more difficult it is to seek confirmation and because we cannot rule out the possibility of memories copied from a natural source. In order to obtain some stronger and more direct evidence, it is necessary to track the rebirth-bound consciousness when it is in transit. For instance, we may prefer to put some trackable markings on a person's rebirth-bound consciousness and search for the person or animal which carries such markings after the death of the original person, or to use some scientific instruments to track any suspicious matter or energy which exits a person's body upon his/her death and see if it will enter the zygote or embryo of a different person or animal to start a new life. However, like the limits faced by the aforementioned indirect approach, such scenarios of experimentation will only work for samara on earth involving humans and animals and it is not doable with our current technology after all. In addition to the challenge of having to put physical markings on a person's consciousness, which is something very elusive, the assumption that a sentient being's migrating rebirth-bound consciousness will take the form of trackable matter or energy is not necessarily valid since it may exist in a different form, or it may disappear too fast to be detected, or it may transfer itself from the body of the deceased host to an unknown dimension before returning to our world.

The principle of causality has been discussed at length in the earlier chapters of this book. Causality involving known forms of matter and energy in the physical world is usually more discernible. Other than certain features of quantum physics which may seem weird to us, natural phenomena observed in our daily

lives can be explained by tracing their respective dependent origination step by step. As a result of his own enlightenment, the Buddha discovered the karmic relationship between a person's deeds and his/her wellbeing and this type of formless and less traceable causality will not be interrupted by the individual's death and rebirth. In other words, it works from one's past lifetimes to one's present lifetime to one's future lifetimes. This is what Chinese Buddhists refer to as "sānshì yīnyuán" (三世因緣; lit. causality of multiple lifetimes). If this Buddhist theory is to be tested by a rigorous scientific experiment, the experiment will have to be conducted in four steps: First, we define a system of universal, absolute moral standards to judge the good and bad of a person's mental activities and physical activities. Second, we develop a system of universal, absolute well-being standards to evaluate the person's quality of life by taking into consideration all relevant factors such as mental health, physical health, fame, wealth, career, love life, social status, feelings of happiness and satisfaction, etc. Third, we recruit volunteers from all over the world to form a useful statistical sample so that we can observe and record everything they do in a lifetime, grade their individual moral performance and individual well-being according to the established criteria, and produce a comprehensive lifelong report card for each of them. Last, we repeat the same type of observation as outlined in the last step for the same group of volunteers for a statistically meaningful number of lifetimes and calculate the cumulative scores in the moral category as well as the cumulative scores in the well-being category to see if there is proportionality between the two. If proportionality can be confirmed for the entire sample at the end of the experiment, then we may use it as scientific evidence to support the Buddhist theory of karmic causality of multiple lifetimes. An experiment like this is, of course, easier said than done since, in reality, a project of this nature may not even pass the first hurdle due to the endless philosophical debates which are bound to occur with respect to the criteria for morality and the criteria for well-being, let alone the other obstacles associated with volunteer recruitment, lifelong continuous surveillance, monitoring of mental activities, tracking of rebirth-bound consciousness, and samsara outside the human plane.

Out of the five topics identified as potential candidates for scientific experimentation, three have been eliminated by the brief discussion in the last two paragraphs due to our current inability to observe things beyond the current lifetime. Thus, the more doable topics may be limited to present-life karmic causality and present-life transfer of karmic merit. In simple terms, the transfer of karmic merit can be understood as the fruits of one person's cultivation being enjoyed by another designated person or group of persons. In the physical world, the transfer of merit can be seen as happening all the time if one considers the following examples: Our farmers grow crops so that we have food on the table. Our factory workers manufacture a variety of products so that we have domestic articles. Our taxpayers pay taxes so that we have infrastructures and welfare programs. Buddhists believe that the transfer of merit can also be invisibly intangible and that they may dedicate their merit to friends and relatives.^(E-12) Some Mahayana Buddhists may petition their most respected buddhas or bodhisattvas for assistance in a helpless situation and hope to borrow some of their immeasurable merit. In Chinese Buddhism, the bodhisattva Guānshìvīn (觀世音), or the Bodhisattva of Compassion, is probably the most glorified bodhisattva for her compassion in sharing merit with those in distress, as reflected by the often cited verse: "Every call for help is she answering, like a rescue boat crossing over the sea of suffering."(E-13) Since gravity fields and electromagnetic fields in the physical world are also invisible and powerful, perhaps invisible present-life karmic causality and invisible present-life transfer of karmic merit can one day become candidates for scientific experimentation. Prior to designing experiments in this regard, we need to have a clear understanding of three basic concepts: (1) The transfer of merit may be a supplement to, but not a substitute for, a person's own efforts. (2) The merit of a buddha or bodhisattva, however rich it is, must not be perceived as a supernatural source of power

since anyone who practices buddha-dharma with fortitude and perseverance can potentially achieve the same result. (3) Those who appeal to the various buddhas or bodhisattvas for grace will need to decide beforehand what exactly they are praying for. Do they want favour and protection or do they want wisdom which will enable them to maintain composure and deal with a crisis effectively? There is a big difference between these two scenarios.

It is not absolutely necessary to use large-scale or sophisticated scientific experiments to verify the doctrines of Buddhism. If your proposed experiments are beyond current technological limits, the simplest way to test Buddhism is to practice it yourself. When you reach the state of enlightenment, you will know it all. My discussion of Buddhism and science ends here. The following is my concluding poem for this chapter:

Buddhism and Science

Have you ever seen, Not as a physical scene, The light of emptiness Silently shine through darkness?

The world is like a foundry smelter. The mind is like the shaft of a rotor. Sentiments are like water flowing by. Circumstances are like clouds in the sky.

Enlightenment is the other shore. All sentient beings can come ashore. The academic sea is shoreless, For research is endless.

Those who pursue the goal of buddhahood Have left the debate for good. Those who seek scientific parallels May value it above all else.

-Lung, Tin Yick -

ENDNOTES

Endnotes carried over from the 2014 Chinese edition are numbered numerically as before, with some reformatting and typo corrections. Supplementary endnotes for the 2020 English edition are numbered alphanumerically with the prefix "E-".

Part 1: Endnotes Carried Over From the 2014 Chinese Edition

- 1. Maurice A. Finocchiaro, ed. and trans., *The Galileo Affair: A Documentary History* (Berkeley: University of California Press, 1989), pp. 287-291, 306.
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閱條文:科學。

- 3. Jeffrey Bennett and Seth Shostak, *Life in the Universe*, 3rd ed. (San Francisco: Pearson / Addison-Wesley, 2012), pp. 34-35.
- 4. Ibid., p. 38.
- 5. Ibid., p. 33-34.
- 6. Jane B. Reece et al, *Campbell Biology: Concepts & Connections*, 7th ed. (San Francisco: Pearson / Benjamin Cummings, 2012), p. 10/fig. 1.9A.
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- 19. Ibid., pp. 23-25.
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- 21. Michael M. Woolfson, *Time, Space, Stars & Man: The Story of the Big Bang*, 2nd ed. (London: Imperial College Press, 2013) pp. 42.
- 22. Chris Impey, *How It Began: A Time-Traveler's Guide to the Universe*, pb. ed. (New York: W.W. Norton, 2013), p. 103.
- 23. Woolfson, Time, Space, Stars & Man, pp. 42-44.
- 24. Adam Frank, *About Time: Cosmology and Culture at the Twilight of the Big Bang*, pb. ed. (New York: Free Press, 2012), pp. 177-178.
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- 30. Al-Khalili, Black Holes, p. 60.
- 31. Levin, *Calibrating the Cosmos*, p. 96.
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- Juan José Alava et. al., "DDT Strikes Back: Galapagos Sea Lions Face Increasing Health Risks", AMBIO, 06/2011, Vol. 40, Issue 4, pp. 425-430.
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- 51. 同上, 王季同 序文 p. 1。
- 52. 同上, 正文, pp. 5-11。
- 53. 同上, 正文, pp. 14-15, 18-21, 21-23, 29-32。
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- 56. Ibid., pp. 222-223.
- 57. Robin Cooper (Ratnaprabha), *The Evolving Mind: Buddhism, Biology, and Consciousness* (Birmingham: Windhorse, 1996).
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- 65. Ibid., pp. 39-43, 45, 53, 59-60.
- 66. Ibid., p. 3.
- 67. Ibid., pp. 10-11, 153-155.
- 68. Ibid., pp. 24, 32-33.
- 69. Ibid., pp. 73-75.
- 70. Raymond E. Grizzle, *Science and Religion in Dialogue: Two Histories of Discarded Images* (Lanham, MD: University Press of America, 2012), pp. 28-29.
- 71. Lopez, Buddhism & Science, p. 25.
- 72. 釋竺摩,《佛教與人生的關係》(檳城:三慧講堂出版,佛曆 2520年(1976 CE)9月香港 3 版), pp. 12-13。
- 73. 竺摩法師 (釋竺摩),《佛學問答》 (香港: 香港佛經流通處印行, 佛曆 2510 年 (1966 CE) 7 月編, 佛曆 2519 年 (1975 CE) 6 月重印), pp. 100-102。

Part 2: Supplementary Endnotes for the 2020 English Edition

E-1. The *Dà Táng Xīyù Jì* (大唐西域記) by Xuánzàng (玄奘) and the "*Xīyóu Jì*" (西遊記) by Wú Chéngēn (吳承 恩) are both historical and have been reprinted many times. The two versions of the *Dà Táng Xīyù Jì* used for reference here are the *Dà Táng Xīyù Jì Jiàozhù* (大唐西域記校注) annotated by Jì Xiànlín (季羨林) et.

al. and the *Dà Táng Xīyù Jì Jīnyì* (大唐西域記今譯) translated from literary Chinese to modern Chinese by Jì Xiànlín et. al. (ref. (i) [唐] 玄奘、辯機 原著,季羨林等 校注,《大唐西域記校注》 (北京:中華書局, 1981); (ii) 季羨林、張廣達、李錚、謝方、蔣忠新、王邦維、楊廷福,《《大唐西域記》今譯》 (西安: 陝西人民出版 社, 1985)). The version of *Xīyóu Ji*" used for reference here is the 1961 edition published by the Shāngwù Yinshūguǎn (商務印書館), or Commercial Press, in Hong Kong, China (ref. [明] 吳承恩,《西遊記》, 共 2 冊 (香港: 商務印書館, 1963)). One may also refer to the *Fóguāng Dàcidiǎn* (佛光大辭典), or the *Fo Guang Dictionary of Buddhism*, and *The Princeton Dictionary of Buddhism* for more information about Xuánzàng and the *Dà Táng Xīyù Jì* (ref. (i) 慈怡法師 主編, 星雲法師 監修,《佛光大辭典》2-3 版, 全 7 冊, 另索引 (高 雄: 佛光出版社, 1988/1989), 參閱條文: 玄奘; (ii) Robert E. Buswell Jr. and Donald S. Lopez Jr., *The Princeton Dictionary of Buddhism* (New Jersey: Princeton University Press, 2014), s.v. "Xuanzang"). The title "*Dà Táng Xīyù Jî*" (大唐西域記) is sometimes abbreviated to "*Xīyù Jî*" (西域記), which is somewhat similar to the title of Wú's fiction novel "*Xīyú Jî*" (西遊記). Some people may confuse one for the other because of such similarity. In *The Princeton Dictionary of Buddhism*, the title of Wú's novel is shown as "XIYU JI" instead of "XIYOU JI". This is most likely a misprint rather than a confusion.

- E-2. This old saying in China can be traced to the Chinese classic *Mencius*. The original passage and James Legge's translation are as follows:
 - 曰、彼一時、此一時也。

Mencius said, 'That was one time, and this is another ...' (bk. 2, pt. 2, chap. 13, para. 2)

(Source: James Legge, *The Chinese Classics: with a translation, critical and exegetical notes, prolegomena, and copious indexes*, vol. 2, *The Works of Mencius* (2nd ed., Oxford: Clarendon Press, 1895; rpt. Hong Kong: University of Hong Kong Press, 1960), p. 232; citations refer to the reprint edition.)

- E-3. In his *Science and Religion in Dialogue*, Raymond Grizzle discussed four options for relating science and religion: "conflict", "independence", "dialogue", and "integration" (ref. Raymond E. Grizzle, *Science and Religion in Dialogue: Two Histories of Discarded Images* (Lanham, MD: University Press of America, 2012), pp. 14-18). I cited this work of his a few times in the 2014 Chinese edition of my book but not this particular discussion. In hindsight, the four options discussed here are similar to the four options discussed in his work. Therefore, I am citing his work in this endnote.
- E-4. Webster's New Collegiate Dictionary, 1981 ed., s.v. "science". (In the 2014 Chinese edition of my book, the 1998 reprint edition of the Chinese dictionary Ci Hai (辭海) was cited for the dictionary definitions of the term "kexue" (科學), which is the Chinese equivalent of the word "science". The cited information is consistent between these two dictionaries. This is why the original endnote (endnote 2 in the last section) is still relevant.)
- E-5. If we go by the translation in *The Princeton Dictionary of Buddhism*, then the meaning of the Sanskrit term "pañcavidyā" is "five sciences" (ref. *The Princeton Dictionary of Buddhism*, s.v. "pañcavidyā", and, in "List of Lists", s.v. "five sciences"). The Chinese translation of "pañcavidyā" is "*wŭ míng*" (五明) (ref. (i) 《佛光大辭典》, 參閱條文: 五明; (ii) *The Princeton Dictionary of Buddhism*, s.v. "pañcavidyā", and, in "List of Lists", s.v. "five sciences"). I translated it into English as "five branches of knowledge" since the definition of "science" can vary depending on the context. As for the term "inner knowledge, it can be understood as a person's knowledge of Buddhist doctrines in this context.
- E-6. Both Wáng's essay and Yóu's report were written in Chinese. Their names are shown in pinyin here due to some uncertainty regarding the official anglicization. Yóu's report, which is much richer in content, was first published in a newspaper in China in 1946. Since then, it has been reprinted in the form of a separate booklet many times by various Buddhist organizations in China. It was Wáng who wrote the foreword for the first reprint edition to introduce Yóu and this foreword has been included in all subsequent reprints I have ever come across. The Chinese reprint used for reference here was produced in Hong Kong, China during the 1970's (see endnote 50 above for the particulars). I also have a bilingual edition (Chinese and

English) which was printed in 1996 by "Gigantic Printing and Design Co." in Hong Kong, China and the English translation therein was provided by "P. E. Wei" (韋伯興) but the surname of the author was misprinted as "Wang" on the title page of the English section.

E-7. The *Heart Sutra* used for reference here is a Chinese version translated from Sanskrit to Chinese by the Chinese Buddhist monk Xuánzàng (玄奘) (ca. 602-664 CE). In the Chinese text, these two consecutive sentences are written as follows:

色即是空,空即是色。受、想、行、識,亦復如是。

E-8. The *Diamond Sutra* used for reference here is a Chinese version translated from Sanskrit to Chinese by Jiūmóluóshí (鸠摩羅什; *Skt.* Kumārajīva) (344-409/413 CE). The quoted passage is part of chapter 18 of this sutra. In the Chinese text, this passage is written as follows:

佛告須菩提: "爾所國土中,所有眾生,若干種心,如來悉知。何以故?如來說諸心,皆為非心,是名為心。 所以者何? 須菩提! 過去心不可得,現在心不可得,未來心不可得。"

E-9. Dharma Master Chuk Mor did not include in this work of his an excerpt from the original when he drew this example from the *Confucian Analects* to explain the similarity between Confucius' teaching style and the Buddha's teaching style with regard to situational teaching. For the ease of reference, a translation of the passage in question is shown below which is an excerpt from *The Chinese Classics* of James Legge (ref. James Legge, *The Chinese Classics, Vol. I: Confucian Analects, the Great Learning, and the Doctrine of the Mean* (2nd ed., Oxford: Clarendon Press, 1893; rpt. Hong Kong: Hong Kong University Press, 1960), pp. 244-245; citations refer to the reprint edition):

Tsze-lû asked whether he should immediately carry into practice what he heard. The Master said, 'There are your father and elder brothers *to be consulted*;— why should you act on that principle of immediately carrying into practice what you hear?' Zan Yû asked the same, whether he should immediately carry into practice what he heard, and the Master answered, 'Immediately carry into practice what you hear.' Kung-hsî Hwâ said, 'Yû asked whether he should carry immediately into practice what he heard, and you said, "There are your father and elder brothers *to be consulted*." Ch'iû asked whether he should immediately carry into practice what he heard, and you said, "Carry it immediately into practice." I, Ch'ih, am perplexed, and venture to ask you for an explanation.' The Master said, 'Ch'iû is retiring and slow; therefore, I urged him forward. Yû has more than his own share of energy; therefore, I kept him back.' (bk. 11, chap. 21)

Note that only four persons were involved in the quoted conversation although a total of seven names had been mentioned: (1) Confucius was referred to as "the Master"; (2) "Tsze-lû" (子路), aka "Yû" (由), was the first student who asked Confucius whether he should immediately carry into practice what he heard; (3) "Zan Yû" (冉有), aka "Ch'iû" (求), was the second student who asked the same question; and (4) "Kunghsî Hwâ" (公西華), aka "Ch'ih" (赤), was the student who was a bystander and became curious as to why Confucius gave different answers to the same question. Legge used his own system of romanization when transcribing their names. In pinyin, "Tsze-lû" is "Zǐlù" (子路), "Yû" is "Yóu" (由), "Zan Yû" is "Rǎn Yǒu" (冉有), "Ch'iû" is "Qiú" (求), "Kung-hsî Hwâ" is "Gōngxī Huá" (公西華), and "Ch'ih" is "Chì" (赤).

E-10. For more information about the Yúlánpén Jīng (盂蘭盆經; Skt. Ullambana-sūtra) and the arhat Mùjiānlián (目犍蓮; Skt. Maudgalyāyana), aka Móhēmùjiānlián (摩訶目犍蓮; Skt. Mahāmaudgalyāyana), refer to pertinent entries in the Fo Guang Dictionary of Buddhism and The Princeton Dictionary of Buddhism (ref. (i) 《佛光大辭典》, 參閱條文: 目犍蓮、盂蘭盆經; (ii) The Princeton Dictionary of Buddhism, s.vv. "Mahāmaudgalyāyana", "Yulanben jing"). According to The Princeton Dictionary of Buddhism, many people believe that the Yúlánpén Jīng is an indigenous Chinese composition since not much about its origin is known. This view can, of course, change quickly upon the discovery of a Sanskrit recension. Take the Dīrghāgama as an example (see endnote E-11 below), it was believed to have survived only in a Chinese translation produced in 413 CE until extensive fragments of a Sanskrit recension were discovered in Afghanistan in the 1990's. Note that The Princeton Dictionary of Buddhism has the pinyin of "盂蘭盆"

shown as "Yulanben" instead of "Yulanpen". This is most likely a misprint.

- E-11. One may refer to the Fo Guang Dictionary of Buddhism and The Princeton Dictionary of Buddhism for more information about the Cháng Āhán Jīng (長阿含經; Skt. Dīrghāgama) and the Quāngyīntiān (光音天; Skt. Ābhāsvarāloka) (ref. (i) 《佛光大辭典》, 參閱條文: 光音天、長阿含經; (ii) The Princeton Dictionary of Buddhism, s.vv. "ābhāsvarāloka", "Dīrghāgama").
- E-12. One may refer to the *Fo Guang Dictionary of Buddhism* and *The Princeton Dictionary of Buddhism* for more information about the process of dedication of karmic merit (*Chi.* 迴向; *Skt.* pariņāmanā) (ref. (i) 《佛光大辭典》, 參閱條文: 迴向; (ii) *The Princeton Dictionary of Buddhism*, s.v. "pariņāmanā").
- E-13. In its original language, this Chinese Buddhist verse is written as "千處祈求千處應, 苦海常作度人舟". As discussed in endnote E-14 in Chapter 7, the bodhisattva Avalokiteśvara is better known to the West as the Bodhisattva of Compassion. His name has been literally translated into Chinese as "Guānshìyīn" (觀世音), "Guānyīn" (觀音), "Guanzìzài" (觀自在), etc. This bodhisattva has different manifestations which can be gender male, gender female, genderless, or other forms of being but the female manifestation seems to be more popular in traditional China. The feminine pronoun "she" is used in the translation since the quoted verse was written in Chinese.

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CROSS-REFERENCE TABLES FOR PINYIN WORDS

All pinyin words in this book are provided with tone marks with the exceptions of those which are quoted from other sources such as the title of a referenced work. The more important pinyin words are tabled below with and without tone marks so that readers who are not familiar with tone marks can still use the English keyboard of a computer to find some keywords. Once they have found the pinyin word without tone marks in one of the following tables, they can use the pinyin word with tone marks or the corresponding Chinese character(s) to continue with the search and find the right information. Tone marks are important for pinyin words. For example, one may confuse the word "*wùli*" (物理), which means "physics", with the word "*wúli*" (無理), which means "nonsense", if both are written in pinyin without tone marks as "*wuli*".

Part 1 - Pinyin Words for Buddhist Terms

Pinyin with Tone Marks

Pinyin without Tone Marks

Chinese Characters

ālàiyēshí	alaiyeshi	阿賴耶識
Āmítúo Jīng	Amituo Jing	阿彌陀經
āmóluóshí	amoluoshi	阿摩羅識
ānbānniàn	anbannian	安般念
ānnàbānnàniàn	annabannanian	安那般那念
ānòuduōluó sānmiăo sānpútí	anouduoluo sanmiao sanputi	阿耨多羅三藐三菩提
Āpídámó Jùshè Lùn	Apidamo Jushe Lun	阿毘達磨俱舍論
bā kŭ (or bākŭ)*	ba ku (or baku)*	八苦
bā shí (or bāshí)*	ba shi (or bashi)*	八識
bā zhèngdào (or bāzhèngdào)*	ba zhengdao (or bazhengdao)*	八正道
Băifă Míngmén Lùn	Baifa Mingmen Lun	百法明門論
Běnshēng Jīng	Bensheng Jing	本生經
bōluómì	boluomi	波羅蜜
bōluómìduō	boluomiduo	波羅蜜多
bōrĕ	bore	般若
cānchán	canchan	參禪
cángshí	cangshi	藏識
Chán (as a division of Buddhism)	Chan (as a division of Buddhism)	襌
Cháng Āhán Jīng	Chang Ahan Jing	長阿含經
chánnà	channa	禪那
Chéng Wéishí Lùn	Cheng Weishi Lun	成唯識論
dìng	ding	定
Făjù Jīng	Faju Jing	法句經
fánnăo	fannao	煩惱
făwŏzhí	fawozhi	法我執
făzhí	fazhi	法執
Fóguāng Dàcídiăn	Foguang Dacidian	佛光大辭典
Guānshìyīn	Guanshiyin	觀世音
Guānyīn	Guanyin	觀音
Guanzìzài	Guanzizai	觀自在
guŏ	guo	果
Hánshān	Hanshan	寒山
Huáyán (as a division of Buddhism)	Huayan (as a division of Buddhism)	華嚴
huì	hui	慧

jiăguān	jiaguan	假觀
jídí	jidi	集諦
jiĕtuō	jietuo	解脫
Jílè	Jile	極樂
jīngjìn	jingin	精進
Jingtŭ (as a division of Buddhism)	Jingtu (as a division of Buddhism)	淨土
Jiūmóluóshí	Jiumoluoshi	鳩摩羅什
kōngguān	kongguan	空觀
Lényán Jīng	Lenyan Jing	楞嚴經
liù boluómi (or liùboluómi)*	liu boluomi (or liuboluomi)*	六波羅蜜
liù dào (or liùdào)*	liu dao (or liudao)*	六道
liù dù (or liùdù)*	liu du (or liudu)*	六度
liù gēn (or liùgēn)*	liu gen (or liugen)*	六根
liù jìng (or liùjìng)*	liu jing (or liujing)*	六境
liù qù (or liùqù)*	liu qu (or liuqu)*	六趣
liù shí (or liùshí)*	liu shi (or liushi)*	六識
liù yīn (or liùyīn)*	liu yin (or liuyin)*	六因
móhēsà	mohesa	摩訶薩
mònàshí	monahsi	末那識
Mùjiānlián	Mujianlian	目犍蓮
niànfó	nianfo	念佛
nièpán	niepan	涅槃
Quāngyīntiān	Quangyintian	注来 光音天
Sān Huì Jiăntáng (or Sānhuì Jiăntáng)*	San Hui Jiantang (or Sanhui Jiantang)*	三慧講堂
sān jiè (or sānjiè)*	san jie (or sanjie)*	三界
sānlún tikōng	sanlun tikong	三輪體空
sānmèi	sanmei	三昧显工
		三世因緣
sānshì yīnyuán	sanshi yinyuan	三進四隊
sān yè (or sānyè)*	san ye (or sanye)*	二来 三千大千世界
sānqiān dàqiān shìjiè	sanqian daqian shijie shi	三 八 世外 識
shí		
shí shàn (or shíshàn)* shí 'èr chù	shi shan (or shishan)*	十善 十二處
	shi'er chu	→ 一処 十二因緣
shí'èr yīnyuán	shi'er yinyuan	1 — 四綱 拾得
Shídé	Shide	
shífāng chà	shifang cha	十方刹
Shìjì Jīng	Shiji Jing	世記經
shŭxī guān	shuxi guan	數息觀
sì chán bā ding (or sìchán bāding)*	si chan ba ding (or sichan bading)*	四禪八定
sì dà (or sìdà)*	si da (or sida)*	四大
sì dì (or sìdì)*	si di (or sidi)*	四諦
sì shèfă (or sìshèfă)*	si shefa (or sishefa)*	四攝法
sì shèngdì (or sìshèngdì)*	si shengdi (or sishengdi)*	四聖諦
sì wúliàng (or sìwúliàng)*	si wuliang (or siwuliang)*	四無量
sì yuán (or sìyuán)*	si yuan (or siyuan)*	四緣
suíxĭ	suixi	隨喜
Tàixū	Taixu	太虛
Táng Sānzàng	Tang Sanzang	唐三藏
Tiāntái (as a division of Buddhism)	Tiantai (as a division of Buddhism)	天台
tòngshì	tongshi	同事
wŏzhí	wozhi	我執
wŭ guŏ (or wŭguŏ) *	wu guo (or wuguo) *	五果
wŭ jiè (or wŭjiè) *	wu jie (or wujie) *	五戒
wŭ míng (or wŭmíng) *	wu ming (or wuming) *	五明
wŭ yùn (or wŭyùn) *	wu yun (or wuyun) *	五蘊

wúcháng wúliàng xīn	wuchang wuliang xin	無常 無量心
wúwŏ	wuwo	無我
wúyú nièpán	wuyu niepan	無餘涅槃
wúzhù nièpán	wuzhu niepan	無住涅槃
wúzhùchù nièpán	wuzhuchu niepan	無住處涅槃
xīn	xin	心
Xuánzàng	Xuanzang	玄奘
Xūpútí	Xuputi	須菩提
yè	ye	業
yīn	yin	因
yīnguŏ	yinguo	因果
Yīnmíng Rù Zhénglĭ Lùn	Yinming Ru Zhengli Lun	因明入正理論
yīnyuán	yinyuan	因緣
yìshí	yishi	意識
yŏuyú nièpán	youyu niepan	有餘涅槃
Yóu Zhìbiăo	You Zhibiao	尤智表
yuán	yuan	緣
Yúlánpén Jīng	Yulanpen Jing	盂蘭盆經
Yúqiéshīdì Lùn	Yuqieshidi Lun	瑜伽師地論
Zá Āhán Jīng	Za Ahan Jing	雜阿含經
Zēngyī Āhán Jīng	Zengyi Ahan Jing	增壹阿含經
zhào jiàn	zhao jian	照見
Zhōng Lùn	Zhong Lun	中論
zhōngguān	zhongguan	中觀
zhūfă shíxiàn	zhufa shixian	諸法實相
Zhúmó	Zhumo	竺摩
zuòchán	zuochan	坐禪

* Line items denoted by an asterisk "*" are pinyin words that can be written separately or linked together to form a compound term without changing the meaning.

Part 2 - Pinyin Words for Confucian Terms and Other Chinese Terms

Pinyin with Tone Marks	Pinyin without Tone Marks	Traditional Chinese Characters
bĕnjì	benji	本紀
Biăo Jì	Biao Ji	表記
bìrán	biran	必然
chén	chen	臣
Chūn Qiū	Chun Qiu	春秋
Dà Táng Xĩyù Jì	Da Tang Xiyu Ji	大唐西域記
dàtóng	datong	大同
Dà Xué	Da Xue	大學
Dà Yă	Da Ya	大雅
Dài Shèng	Dai Sheng	戴聖
Duō Fāng	Duo Fang	多方
Eastern Hàn	Eastern Han	東漢
Former Hàn	Former Han	前漢
Fúxī	Fuxi	伏羲
Guī Cáng	Gui Cang	歸藏
Guó Fēng	Guo Feng	國風
Hàn dynasty**	Han dynasty**	漢朝
Hàn Shū	Han Shu	漢書

Hūn Yì	Hun Yi	昏義
jìzhuàn tĭ	jizhuan ti	紀傳體
jūn	jun	君
Jūn Shì	Jun Shi	君奭
Later Hàn	Later Han	後漢
lĭ	li	禮
Lĭ Jì	Li Ji	禮記
Lĭ Yùn	Li Yun	禮運
Lián Shān	Lian Shan	連山
Liènǚ Zhuàn	Lienu Zhuan	列女傳
lièzhuàn	liezhuan	列傳
Liú Xiàng	Liu Xiang	劉向
Liú Zhījī	Liu Zhiji	劉知機
Lŭ Sòng	Lu Song	魯頌
Lún Yŭ	Lun Yu	論語
Luó	Luo	羅
Măwángduī	Mawangdui	馬王堆
Míng dynasty**	Ming dynasty**	明朝
Míng Táng Wèi	Ming Tang Wei	明堂位
Nůwā	Nuwa	女媧
ŏurán	ouran	偶然
Pángŭ	Pangu	盤古
Qián	Qian	乾
Qīng dynasty**	Qing dynasty**	清朝
Qū Lĭ	Qu Li	曲禮
rén	ren	仁
sān gāng (or sāngāng)*	san gang (or sangang)*	三綱
Shāng dynasty**	Shang dynasty**	商朝
Shàng Shū	Shang Shu	尚書
Shàng Shū Zhèng Yì	Shang Shu Zheng Yi	尚書正義
Shāng Sòng	Shang Song	商頌
Shào Gào	Shao Gao	召誥
Shào Gōng	Shao Gong	召公
Shénnóng	Shennong	神農
Shī Jīng	Shi Jing	詩經
shìjiā	shijia	世家
Shĭ Tōng	Shi Tong	史通
Shū Jīng	Shu Jing	書經
Shùn	Shun	舜
sì wéi (or sìwéi)*	si wei (or siwei)*	四維
Sīmă Qiān	Sima Qian	司馬遷
Sòng	Song	頌
Sòng dynasty**	Song dynasty**	宋朝
suíjī	suiji	隨機
Tán Gōng	Tan Gong	檀弓
Tāng	Tang	湯
Táng dynasty**	Tang dynasty**	唐朝
tiān	tian	天
tiānmìng	tianming	天命
Tiānyăn Lùn	Tianyan Lun	天演論
tiānzé	tianze	天擇
Wén Tiānxiáng	Wen Tianxiang	文天祥
Western Hàn	Western Han	西漢
wŭ cháng (or wŭcháng)*	wu chang (or wuchang)*	五常
Xì Cí	Xi Ci	繋辭

Xiàng Zhuàn	Xiang Zhuan	象傳
xiào	xiao	孝
Xiào Jīng	Xiao Jing	孝經
xiăokāng	xiaokang	小康
Xiǎo Yǎ	Xiao Ya	小雅
Χῖγόυ Jì	Xiyou Ji	西遊記
Yán Fù	Yan Fu	嚴復
Yáo	Yao	堯
yì	yi	義
Yì	Yi	易
Yî Jīng	Yi Jing	易經
Yí Lĭ	Yi Li	儀禮
Yŭ	Yu	禹
Yuán dynasty**	Yuan dynasty**	元朝
yuè	yue	樂
Yuè Jīng	Yue Jing	樂經
Yuè Lìng	Yue Ling	月令
yuénshén	yuenshen	元神
yŭzhòu	yuzhou	宇宙
Zhànguó Cè	Zhanguo Ce	戰國策
Zhèng Qì Gē	Zheng Qi Ge	正氣歌
Zhèng Xuán	Zheng Xuan	鄭玄
zhì lĭ	zhi li	制禮
Zhōng Yōng	Zhong Yong	中庸
Zhōu dynasty	Zhou dynasty	周朝
Zhōu Gōng	Zhou Gong	周公
Zhōu Lĭ	Zhou Li	周禮
Zhōu Sòng	Zhou Song	周頌
Zhōu Yì	Zhou Yi	周易
zuò yuè	zuo yue	作樂
Zuŏ Zhuàn	Zuo Zhuan	左傳

* Line items denoted by an asterisk "*" are pinyin words that can be written separately or linked together to form a compound term without changing the overall meaning.
** The English word "dynasty" is not a pinyin word but is included here for the ease of a complete search.

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Lung, Tin Yick, whose Buddhist name is Wén Chéng (文程), was born in Hong Kong, China in 1957. He immigrated to Canada during his teenage years. He is a poet, an amateur writer, a professional engineer, a lay Buddhist, and a disciple of Dharma Master Chuk Mor (竺摩法師).

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Dharma Master Ji Chuan (繼傳法師) (Photographed in 2018, courtesy of the Buddhist Triple Wisdom Hall)