

Universal Idealism: Metaphysical Engineering for Perpetual Peace

Coping with the Triple Challenges of the Contemporary World:
China's Democratization,
Secularization of Islam,
Democratic Decay of the West,

And beyond

An idealist

For God

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— From Reviewers —

—The author has written a highly original book. Her own summary of her analytical methods captures remarkably well what she was trying to achieve. The result is a real intellectual tour de force.

As a former diplomat and policy adviser, my attention was drawn to what I think of as her “bottom line.” Broadly speaking, she is arguing that societies become increasingly collections of specialized disciplines built around the dominant *raison d’être* of the day. This makes it difficult for cultural values to be perpetuated. Societies thus become victims of their own inward-looking systems and the end result is usually disastrous. I think it is a message that societies need to hear.

—I found this book accessible and fascinating. In it the author examines historical patterns to determine the root causes of large-scale war. By understanding the repeated shifts societies have taken, readers come to understand where ours and other societies may be headed. Her book mines to the core of academic literature in that she teaches us to see with a different perspective. Yet unlike much academic work, which is targeted to those with similar backgrounds, her book can be enjoyed by a general audience. Her intention is first to lessen ignorance and then to motivate activity. By examining ideological historical trends shaping societies, we learn to not simply follow the flow of current trends but to question where they may lead. As importantly, she strives to teach all members of society tools needed to change direction. Her overarching goal is to make each of us aware of our ability to prevent mass-scale violence.

—Uniquely fascinating manuscript, which has many jewels of insight and revelation throughout its pages. I've never read anything quite like it!

I found it fascinating how she tried to construct an endogenous theory of change to explain the evolution from one phase to the next, just like Marx. I lecture to my students about the virtues of this kind of endogenous theory of change, but so few people are bold or creative enough to try it these days.

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CHAPTER 1

INTRODUCTION

All of human history has been plagued with war. Humanity has repeatedly attempted to escape these terrible recurrences. However, as the scale of human communities expanded and technology developed, the degree of devastation also increased. In the last century, we became capable of slaughtering hundreds of millions of people in a single war. In the next global war, there might be no winners. Then, the questions are these: Why do we do this to ourselves? Is there any way we can stop this? So many people must have asked the same questions, but could not find the answers. There may be no answers. But I believe that we must keep asking these questions, and keep looking for the answers. So, this book is one of many such attempts. I do not claim that I have finally found the answers. But I do claim that it is the duty of each one of us to keep trying, and in this I am doing my part.

The ultimate goal of this project is to find a way to establish perpetual peace. While pursuing such a lofty goal, we are facing particular dangers in the 21st century. I identify three such dangers for mass-global violence, which could intertwine to multiply the degree of disaster. The first is the democratization of China, and to a lesser extent at this moment, Russia. The second is the secularization of Islamic nations. The third is the decay of the contemporary democracies. So, the immediate goal of this project is to steer clear of these dangers and avoid what could be the worst disaster in human history.

Where do we begin? We begin by relying on the people who already tried to resolve the overarching issues of war and peace. Even though they may not have been successful in the end, there is much to learn from them. This project starts with Giambattista Vico. He observed a historical cycle in the ancient civilizations, which rose from the barbarian state to the society in which religious leaders held political authority, to the society in which such authority was passed onto the warrior class, and finally to the society in which commoners were awarded such authority. After completing the cycle, the society will return to the barbarian state.

Chapter 2 examines if such a cycle can be observed in the subsequent European history and other civilizations. It concludes that such

a cyclical pattern can be observed in each case. It briefly visits the history of Europe, in which political authority shifted from the Christian Church, to the King, and to the people to achieve contemporary democracy. A very similar process can be observed in Japanese history, in which political authority shifted from the Emperor, who derived authority by claiming to be descendants of the Japanese God, to the Shogun, the leader of the warrior class. When the rule by Shogun was crumbling, it was forced to join Western civilization, and Japan achieved democracy. China and India also show a similar pattern. These civilizations had gone through the cycle already from 5,000 B.C. So, the observation is about their second cycle, which may create some differences from the Western cyclical pattern. The Islamic civilization started the cycle six hundred years after Christendom. It was going through a similar cycle. However, in the middle of the transfer from the religious to secular authorities, it was forced to enter Western civilization in the 19th century. This caused the distortion of the cycle.

In these cases, transfers of authority were never peaceful. In the case of Western civilization, the transfer from religious to secular authority took the form of the Thirty Years War, the most devastating war in European history up to that point. Three hundred years later, the democratization of late European developers and Japan produced two World Wars, the most devastating wars ever in human history.

Reflecting these observations, China's democratization could produce massive global violence if it follows a similar path to Japan or Germany. Islamic transition from the religious to the secular authorities has been disrupted and is now taking place in the framework of Western civilization. If it followed a similar path as Christendom, it could produce massive global violence. These two potentially volatile transitions are taking place simultaneously, and if they were to link, it would increase the degree of disaster even greater. Facing such a historically unprecedented challenge, Western civilization is going through a democratic decay, the same process that ended ancient Athens and the Roman Republic. The worst-case scenario would end human history and must be averted at any cost.

Based on historical observation, Chapter 3 examines what causes such a cycle. In so doing, it first introduces the notion of entropy, which has been applied to biology by Erwin Schrödinger. In short, any objects will disintegrate unless they keep importing negative entropy. In the case of living-beings, it means that if they don't eat, they will die. This notion has two effects on this project. First, this underlines the predatory nature of the natural state of the world, where all living-beings compete for negative entropy or food to keep them alive. Organisms on earth have been

subjected to this state of nature, which has been studied in realism. However, the evolution to mammals made possible another strategy for survival, which has been studied in idealism, where members contribute their negative entropy to or absorb entropy from the environment, creating a protective system around them and a benefit in the end. For humans at this stage of development, both strategies proposed by realism and idealism are valid options.

This has been the underlining cause for Vico's cycle. The state of nature described by realists is the first stage of Vico's cycle. Humans' attempts to escape from this game of survival trigger idealism, starting Vico's Age of Gods. But not everyone agrees to abide by the idealist tenet and realists abuse the goodwill of people. Eventually, people become aware of the abuse, and idealism is discredited, causing actors with the ability to provide physical protection to rise, starting Vico's Age of Heroes. In this world, the realist tenet becomes influential again, in which power concentration is prevented. Decentralization of power proceeds, leading to Vico's Age of Men and then back to barbarism.

Then, it observes that behind this historical cycle exists the rise and fall of idealism and realism. In European history, idealism experienced its heyday when Christianity was dominant. As religious influence declined, realism became influential. This trend was accompanied by the rise of materialism. In addition, what had been a comprehensive and coherent thought system under the leadership of the Christian church became fragmented. Science became an independent field of study. Art also became independent and further fragmented toward more individual orientation. Philosophy also became fragmented. Idealism lost its coherence, and post-modernism makes it impossible to create an overarching system of thought. It is supplemented with a look into the intellectual histories of other civilizations to see if similar cycles could be observed.

The second effect of the notion of negative entropy relates to the issue of free will, that is, whether negative-entropy importing beings are capable of freeing themselves from the rigid law of physics. Here, the question of free will is briefly discussed in the macro-setting, which asks if humans possess free will to control the cycle. Before settling the debate, it makes an assumption that we do have the ability to control; otherwise, there will be no point of continuing the inquiry beyond this point. So, we move on to the next step based on the assumption that it is correct.

Now, then, we must focus on how to control this rise and fall of idealism. More specifically, we must prevent idealism from getting discredited in order to stop Vico's cycle, which produces massive global violence. As the first step, this chapter discusses the two major approaches

to the human condition. One is realism, which insists that humans focus on individual survival. This is close to the natural state of survival of the fittest. But as evolution progressed, mammals developed a limbic system in the brain, which makes us capable of caring about others than ourselves. At this point, idealism became a possible strategy, in which every member of the society made some sacrifices for the sake of the whole and received protection and benefits in return.

Here, this project introduces a paradigm of universal idealism. Unlike idealism, which presents the counter opposite of realism, universal idealism acknowledges the existence of realism and incorporates it into the paradigm. This, we hope, makes it possible to deal with these issues. Rather than being involved in the dichotomous debate on whether or not human nature is evil or good, it presents three kinds of humans: naïve idealists, realists, and universal idealists. At this stage of human development, both idealism and realism should be considered as a viable option, and each person decides which to adopt. Naïve idealists are willing to contribute to the good of all as long as the cost is minimal to them, expecting to receive protection from the whole system. In other words, they are willing to donate negative entropy as long as they receive protection from the system. Realists want to achieve power and glory, and actively pursue them. Universal idealists are to contribute to the idealist tenet no matter what the cost may be to them. When idealism is prevalent, the alliance will be formed between naïve and universal idealists and contain realists' attempts. When idealism is discredited, the cost becomes too high for naïve idealists to hold the ground and they will join realists. This will cause further erosion of idealism and eventually, it will completely disappear, and the society will revert to barbarism.

Chapter 4 introduces metaphysical engineering in order to control the ideational cycle, observed in Chapter 3. In so doing, it makes a series of assumptions. First, there is an infinite ladder of causal relations between physical and metaphysical phenomena. At one level, physical engineering manipulates the laws of physics to produce something helpful to humans. But what these manipulations should be depends on metaphysical engineering. In other words, when we discover nuclear physics, it is the field of metaphysics that examines if humans use it to make bombs or use it for a peaceful energy source. The ladder goes up when we start asking such questions as where human consciousness comes from. It becomes physical phenomenon again. It goes up again if we ask how the universe was created. Is there such a thing as God's will as a creator, which suggests another level of consciousness? Second, there is a reasonable accuracy between ontology and epistemology within the close range of the ladder. Since our physical and metaphysical engineering are right next to

each other, the assumption is made that what you see is what it is. In the future, if we were to conduct engineering between levels further apart, this issue would become much more important. But for now, we shall focus on more immediate issues.

To establish the field of metaphysical engineering, the paradigm of universal idealism starts with another assumption that there is a complete parallel between physical and metaphysical engineering. Based on this assumption, the subsequent section conducts a field survey of physical engineering, which consists of four vertical layers—theory, engineering, mechanics, and operations, and of several horizontal branches, such as electrical engineering, mechanical engineering, chemical engineering and so on. There will be a close communication and cooperation among these divisions in order to produce physical objects, such as an airplane. The larger and more complex the objects are, the broader and closer cooperation will become necessary. The same should apply to metaphysical engineering.

However, at this point, two major differences are observed. The first is the scale. Metaphysical engineering has a much larger scale. What can be generally accomplished in a few years in physical engineering will take centuries. This makes cooperation much more difficult. Not only spatial cooperation among contemporaries, in metaphysical engineering we must find a way to establish cooperation among generations. The second is that while subjects and objects are clearly distinguished in physical engineering, in metaphysical engineering, engineers are also materials used to produce metaphysical objects. So, subjectivity and objectivity merge, which calls for a special training for metaphysical engineers.

After establishing this notion of metaphysical engineering, Chapter 5 goes back to examine the inquiries conducted historically and put their findings into our framework. It begins with the engineering level, and examines historical idealism and religion, and realism to see how these schools try to engineer peace. Then, it examines the problems that exist at three layers: within each school, within idealism and realism in general, and the limit of idealism or realism itself, and argues that their problems mainly come from the fact that idealism and realism try to formulate a solution independently. If you try to design an airplane, you must focus on lift-to-drag ratio. You will fail if you exclusively try to increase lift or to decrease drag. The same applies here, idealism and realism must be synthesized, which universal idealism attempts.

Then, it ventures into the theory level. Currently, it is not possible to present a comprehensive picture at this level. Therefore, Chapter 5 lists a few theoretical issues that future generations might develop in order to help engineers. Three issues are discussed here. The first is the synthesis

between intelligence and emotion. In Western civilization, intellectual factors have been pursued in philosophy, whereas emotional factors have been pursued in religion. This division made it very difficult to formulate a comprehensive theory between intelligence and emotion, which is badly needed for metaphysical engineering to control Vico's cycle. Here, the importance of art as the only field which has the whole shape, the potential contribution that poetry can make, and empirical observation on the interaction between intelligence and emotion through a musical project are discussed.

The second is macro- versus micro-approaches for which there are fundamental and logistical issues. At the fundamental level, macro approach may be more promising. That is, rather than changing all individuals to be good, metaphysical engineers should try to formulate a macro-phenomenon, in which individual actions may not have much effect. Physical engineering uses a macro-approach. That is, rather than following how individual molecules behave, it uses such macro equation as $PV=nRT$. Logistically, there are parallels between macro and micro pictures. This can be helpful to deal with the size issue because micro pictures can be used as a model for the macro pictures. However, even though macro pictures are directly applicable to micro pictures, the opposite is not necessarily true. Therefore, micro pictures cannot be used independently, other than for hypothesis generation or as teaching tools. For example, a tennis ball can be used to show that the earth is a sphere, but if you try to figure out what shape the earth is, you cannot start from daily objects like that. There are simply too many shapes and you cannot tell which one is the same as the earth.

Finally, it presents the observed phenomenon, in which two extremes meet. It can be observed in such examples as Mussolini's conversion from communism to fascism, or Hindu's expression: "Atman is Brahman." The project calls it tentatively as the metaphysical circuit. It lists several observed examples and suggests that in the future, this might be able to be used as a tool for metaphysical engineering. Out of these random observations, some systematic cluster of metaphysical circuits emerged during the proceedings of this project, and is presented here. At the end, Johan Sebastian Bach is discussed as an example of a grand synthesis, containing all these elements.

Chapter 6 briefly examines the layers of mechanics and operation. It lists several general lessons that the above inquiries may derive. In the metaphysical mechanics layer, three issues from Vico's cycle—i.e., democratization of China and Russia, secularization of Islam, and democratic decay of Western civilization, in which parallel views between Plato's and contemporary decay are presented, are discussed.

Contemporary democratic decay is discussed using religious language to highlight a potential link with the Islamic secularization. In the metaphysical operation layer, several issues are presented, which might be of help for contemporary policy makers. These are examples to show how each layer may look like independently and how they may communicate and cooperate. In order to produce specific policy-options and recommend one to fit the individual events, much more detailed knowledge in each event will be necessary. In the end, the beginning of a new cycle is briefly discussed as a possible engineering opportunity to stop Vico's cycle, calling for a concerted effort by universal idealists.

Chapter 7 focuses on how to train metaphysical engineers. At this point, it is not possible to formulate a comprehensive training plan. Especially, the first generation must train themselves because there are no instructors available. As a tentative approach, it first examines the educational plan for the philosopher king proposed by Plato, because the qualifications are very similar between his philosopher king and our metaphysical engineers. Plato's plan has both insights and problems. It is insightful in that it emphasizes the importance of the whole. Each subject he proposes to teach is only a means to obtain deeper knowledge.

On the other hand, there are two problems in his plan. The first is that too close a connection is made between artistic training and character development. He insists that by being exposed to the right kind of art, candidates will develop strong moral characters. The second is his sequential training plan. If students are to focus on one element of the whole at a time, it will be difficult to put together by then highly complex elements. As they learn each element, the skill to put together should be simultaneously taught.

Finally, tentative intellectual and emotional educational proposals are presented. Intellectual education consists of three parts: a two year classroom survey course to understand the whole, practicing art to explore the interaction between intelligence and emotion, and real life internship as an equivalent of laboratory assignments. At this point, emotional training is only available through real life experiences, through which trainees are to leave their surface level consciousness and achieve the state of deep contemplation, where emotion and intelligence converge. Ideally, a more systematic educational system that does not separate intellectual and emotional trainings should be in place. The success of the field depends on if the society can produce first generation metaphysical engineers and get them to work together.

This is an overly ambitious project, especially for an individual to conduct. No concrete solutions can be produced. All I can do is to

propose to get started. However, I would like to believe that this project offers some definite contributions. First, it definitely shows the current inadequacy to deal with the challenges right ahead of us. The society is so fragmented that it cannot perceive the challenges let alone deal with them. Second, it definitely shows that everyone has a role to play. This is not a job just for politicians or scholars. If you are a poet, you have a role to play. You cannot say: “I am just a poet. It is not my job to prevent massive global violence.” I hope that this project at least directs people in each field to think about what kind of contributions they could make. Third, it has presented a world map to help people in this attempt. Granted, it is a Columbus’ map. The entire American continent might be missing. However, it definitely shows the world that people can explore. As more people set out to explore, more information will become available, and the map will become more accurate. Eventually, we will have an accurate world map so we can navigate without getting lost.

Finally, I would like to ask as many people as I can to join this cause. We need everyone, as a matter of fact, to engage what I might dare say is the largest metaphysical enterprise in human history. However, there will be no point of joining us unless your motivation is pure. Participating in this project will not bring you wealth or fame. There is nothing we can offer if that is what you are after. We are utterly useless to you. If you are willing to join, please work constructively with us. Being an emerging paradigm, there are many weaknesses. It can be easily destroyed if exposed to any destructive forces. Please present a way to improve the paradigm, rather than criticizing it. Please bring something positive to the project. Please propose a better alternative.

CHAPTER 2

VICO'S HISTORICAL CYCLE AND THE TRIPLE CHALLENGES IN THE CONTEMPORARY WORLD

Mass violence has been no stranger to our species. From the earliest records of human history, we find humans fighting wars. While we may have learned some lessons after the devastating experiences of World Wars I and II in the 20th century, unfortunately, our acquaintance with mass violence is not over yet. This chapter tries to identify potential sources of mass violence in the contemporary world and begins seeking permanent solutions.

I. THE HISTORICAL CYCLE

Giambattista Vico studied the history of ancient civilizations and concluded that all civilizations rise out of barbarianism to go through three intermediary stages and then collapse back into barbarism. The intermediary stages begin with the Age of Gods. The Age of Heroes follows. Finally, the society enters the Age of Men before it collapses back into a barbarian state.¹ To use more concrete terms, the Age of Gods is characterized by dominance by religious authorities. The Age of Heroes is indicated by dominance by secular, military rulers. The Age of Men is a period of democracy.

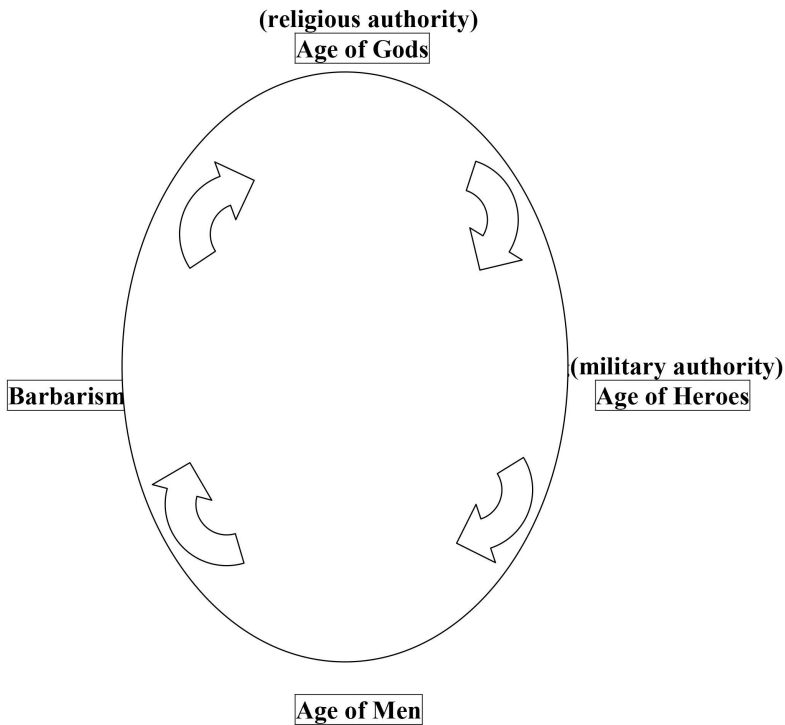
Vico noted this cycle in Hebrew, Chaldean, Scythian, Phoenician, Egyptian, Greek and Roman societies. If we take a quick sprint through Western civilization, we can see this cycle repeat the same stages.

The historical survey further reveals that the transitions from one state to the next have been punctuated with particularly devastating mass violence. Wars observed during this period have specific characteristics. The neorealists' notion is helpful here. Usually, power contenders are rational power maximizers. So, they will fight when benefits outweigh costs, and they will back off when costs outweigh benefits. This should cap the level of violence that any society experiences. However, during a transition, two distinctive social units fight for supremacy; therefore, they will not stop until the other unit is completely defeated; therefore, there is

¹ Giambattista Vico, trans. by Thomas Goddard Bergin and Max Harold Fisch, *The New Science of Giambattista Vico*, Ithaca: Cornell University Press, 1984, p.20.

no limit to the level of violence. Neorealist Kenneth Waltz calls this a selection process.² Therefore, the war punctuating this transition shall be called the unit selection war. The following section observes the transitions and the mass violence that took place during the transitions in the history of Western civilization.

**Illustration 2-1
Vico's Cycle**



1. Western Civilization

After the Greek and Roman civilizations collapsed, Western society descended into the Dark Ages. Out of this barbarian state, Christianity rose and became the dominant power in Europe between the 11th and 14th centuries, denoting the Age of Gods. Then, the State rose with its secular military authority. The State and the Church competed for dominance during the Middle Ages. The dominance of the State was

² Kenneth N. Waltz, *Theory of International Politics*, New York: McGraw Hill, 1979.

established during the Thirty Years War, ending with the Treaty of Westphalia in 1648. In time, the kingship was challenged as the Industrial Revolution proceeded, and new economic social groups emerged. During the 19th and 20th centuries, the Western states established democracy. And all along, levels of global violence have coincided with this cycle. The following section looks at these stages in Western civilization and the related global violence in more detail.

(1) The Collapse of the Greek and Roman Civilizations: To understand the pattern of ancient Greece, let's start with a trot through Athens' history. Ancient Athens had been ruled by the aristocracy. In the 7th and 6th centuries B.C., a couple of lawmakers, Draco and Solon, developed laws to increase the political rights of the commoners. Instability continued and a coup resulted in tyranny, that is, rule by a single, powerful ruler. Then, the Reform of Cleisthenes established the foundation for democracy in 508 B.C. During the Persian War between 500 and 449, B.C., non-propertied citizens made great contributions, and their voice became stronger, further developing democracy. Under the democratic regime, Athens adopted an imperial policy. In 447 B.C., it formed the Delian League, which was a defense alliance among Greek city-states against Persia. But Athens treated its members in a heavy-handed manner by making membership compulsory, collecting cash tributes annually, giving no rights to decide how the money should be spent, and making other rigorous demands.³ Under the statesman Pericles, Athens further expanded its imperial ambition, which had the effect of furthering democracy. Because Athens' naval expansion increased the number of oarsmen, whose political voice had to be heard, democracy expanded. In addition, Athens' sea power fostered trade, which benefited everyone in Athens.⁴

In 430 B.C., the plague decimated Athens, and Pericles died. Around this time, demagogue politicians appeared. They did not have any long-term or coherent policy. Their main concern was to obtain and retain power. Toward this goal, they promised anything to please people to gain their support. Still, decisions were made at the Assembly, and direct democracy matured. People supported war because victory brought more slaves, helping them become richer. As a result, Athens' imperial policy went unchecked. In 431 B.C., the Peloponnesian War broke out, in which Athens' Delian League fought the Peloponnesian League, which was led by Sparta. The war ended in 404 B.C. with Athens' defeat. As a result,

³ Finley, M.I., *The Ancient Greeks*, London: Penguin Books, 1982, p.67.

⁴ Ehrenberg, Victor, *From Solon to Socrates: Greek History and Civilization during the 6th and 5th Centuries BC*, London: Methuen, 1981, p.223.

the empire Athens had created was dissolved. Sparta then replaced democracy with oligarchy by appointing thirty people from the aristocratic party. However, Sparta also was exhausted from the war. It tried to establish hegemony, but it did not have the resources left to do so. Soon, Athens reestablished democracy, but its demagogue tendency continued, killing Socrates in 399 B.C. War-torn Greece was incorporated under the hegemony of Macedonia, led by Alexander the Great in the mid-4th century B.C., and then under the Roman Republic.

In this way, Athenian democracy degenerated into demagogue politics, causing its eventual demise. However, Athens was not Greece. Elsewhere ancient Greece was ruled by tyranny, oligarchies and democracies. According to Thucydides, at one point, most cities were tyrannies, but then Sparta brought down many of them.⁵ Also, while both Peloponnesian and Delian Leagues were defense alliances, they also were concerned with the political systems of their members. The Peloponnesian League supported oligarchies and were against democracies and tyrannies while in the Delian League, Athens showed a pro-democratic tendency. According to the historian M.I. Finley, “[T]here was a growing tendency for the Athenians to interfere in the internal affairs of the member-states, in particular to support and strengthen democratic elements against their oligarchic opponents.”⁶ This suggests that if Athens had won the Peloponnesian War, Greece in general would have become populated with democracies. Historian Finley speculates: “The war was therefore a disaster not only for Athens but for all Greece: it disrupted the one possible road towards some kind of political unification, though admittedly a unity imposed on others by an ambitious city.”⁷ Historian Hatzfeld agrees: “With the Athenian Empire there disappeared the first attempt, perhaps a rough and clumsy attempt, to unify Hellenism in one common organization.”⁸ In fact, Sparta tried to replace democracies with oligarchies. But war exhausted both Athens and Sparta; as a result, the whole area was taken over by a party outside their own political system before the Greek oligarchic and democratic systems had internally run their course.

The Roman Republic followed a similar pattern with just a slight variation. Rome had been ruled by Etruscan kings since 676 B.C. In 509 B.C., Romans deposed the king and established a republic. However, the patrician aristocracy remained in power. Initially, the republic was designed based on the principles of giving people a voice and checks and

⁵ Thucydides, *History of the Peloponnesian War*, London: Penguin Books, 1972, pp. 43 and 45.

⁶ Finley, p. 67.

⁷ *Ibid.*, p. 70.

⁸ Hatzfeld, Jean, revised by André Aymard, *History of Ancient Greece*, W.W. Norton & Company: New York, 1966, p. 170.

balances. The Centuriate Assembly, or the Senate, was created, and they elected two consuls. These consuls were government supervisors who held significant authority. Especially, during emergencies, one of them could be designated as a dictator for a period of up to six months. But the common people (plebeians) were under-represented in this system. The plebeians demanded more participation, and over time they continued to gain political influence. In 494 B.C., the plebeians succeeded in gaining concessions from the aristocracy. They got their own assembly called the *Comitia Tributa*, or the Popular Assembly. They also gained veto power. However, the decisions at the Popular Assembly were not legally binding. In 450 B.C., the Twelve Tablets established a fair legal system, ending the unfair interpretation of unwritten laws by the aristocracy. In 367 B.C., it was decided that one of the two consuls was to be a plebeian. Finally, in 287 B.C., the decisions at the Popular Assembly became legally binding, equal to the Senate. So, at this stage in Roman society, dominance by the secular authority and democracy coexisted. This coexistence is reflected in the subsequent political dynamics.

Externally, the Roman Republic expanded, acquiring many territories. The Punic Wars, in which the Republic fought Carthage over the supremacy of the Mediterranean, were especially difficult. In 146 B.C., the Republic finally defeated Carthage and established supremacy bringing significant wealth to the Republic. The wealthy class bought lands and became large-scale landowners, called *Latifundia*. Smaller farmers could not compete with this, and, forced to sell their lands, migrated to Rome in search of work. These were the same people who fought as soldiers, so this affected the Roman army and caused the Republic to decline in the second century B.C. Several reform attempts were made but did not succeed, and reformers were murdered. The Republic then endured an era of civil war for the next 100 years.

The civil war era started in 107 B.C., when General Marius became consul and reformed the army. He made it possible for people without land to become soldiers. Then, after a war, he distributed newly acquired land to the soldiers. This caused the creation of an army loyal to individual generals rather than to the Republic. Once this happened, the Republic became an arena for power-struggles among the military strongmen. The parallel structure created in the previous era was woven into this struggle. Some generals such as Sulla and Pompey used the conservative senatorial power base to advance their ambitions. They were called *Optimates*. Others such as Marius and Caesar appealed to the common people, who were eligible to vote, to advance their ambitions. They were called *Populares*. These generals gained political influence using their power base and fought each other to gain supremacy.

The first fight was between Marius and Sulla. Sulla managed to get the Senate to designate him as a lifetime dictator, beyond the usual six-month limit. Sulla's rule was harsh. He took revenge ruthlessly on his opponents. At this point, the tradition of rule by fair law was reverted back to a rule of terror. The parallel age of secular authority and democracy degenerated into barbarism. When Sulla died a few years later, his subordinate Pompey took over. Pompey failed to be designated as a dictator, so he compromised with the Senate. But people were not happy with the Senate, and the Senate's prestige declined rapidly. Meanwhile, Caesar, who was Marius' adopted son, entered the political picture. He built up his political influence by working on the common people. Plutarch describes one such tactic:

It was an ancient Roman tradition to pronounce public speeches at the funerals of elderly women; but it was not the usual thing in the cases of young women, and Caesar was the first to do it, when his own wife died. This also was an action which made him popular. It brought him much sympathy from the people, who regarded him as a tender-hearted man, full of feeling, and liked him for it.⁹

Pompey abandoned the powerless Senate and a temporary conciliation was made between Pompey and Caesar in the form of the Triumvirate, but it was short-lived. In the end, the two militarily fought, and Caesar achieved victory. Pompey was murdered in Egypt. In 48 B.C., Caesar was designated as a lifetime dictator, entitled the Imperator. As *Populares*, he distributed land to impoverished citizens. But he was assassinated by those who tried to protect the Republic in 44 B.C. Soon, his adopted son, Octavius seized power, ending the Republic for good, and establishing the Roman Empire. This helped to arrest the Roman society's degeneration for 200 years, and Rome enjoyed its heyday of Pax-Romana. However, it became once again ungovernable in the third century. Between 235 and 284, the empire had 26 emperors, who became puppets of generals, just like at the end of the Republic.

In this way, ancient Western civilization reverted into Vico's barbarism: Greece was destroyed by an external force, and the Roman Republic/Empire, by internal forces.

(2) The Dominance of the Church—The Age of Gods: Christianity began when Jesus Christ began to preach during the reign of Tiberius-Claudius in the Roman Empire. Initially, it was a faction of

⁹ Plutarch, *The Rise and Fall of Athens: Nine Greek Lives*, London: Penguin Books, 1960, p. 248.

Judaism. During the early period, twelve apostles traveled to spread Christianity. Paul went to Rome and made a great contribution. Its impact on the Jewish people is reported to be great. It was accepted by people who took seriously the revealed will of God, and by people who thought that Judaism focused too much on rituals and “missed the central point of religion”¹⁰ However, among the general population, it was rejected. For some people who wanted to revolt against Rome, it was not revolutionary enough. For conservative Jews, its attitude to the Gentiles was too revolutionary.¹¹

For the first three hundred years, Christianity was persecuted by the Roman Empire, even though it was not continual or systematic. The first persecution was by Nero in 64 A.D. He used Christians as a scapegoat when fire caused great damage in Rome. Emperor Domitian (81–96 A.D.) required his subjects to offer divine honors, calling himself “Master and God”¹² Christians refused to follow; as a result, they were persecuted. But Emperor Trajan (98–117) reversed it.

These early persecutions did not stop the spread of Christianity. Rather, it gave Christianity great publicity.¹³ This helped it spread further. “The sporadic nature of persecution, which often depended on local attitudes, and the fact that before the third century the government did not take Christianity seriously, gave the Church breathing space to expand.”¹⁴ During the second century, Christianity also worked to obtain unity by attacking as heresy Gnosticism—a type of dualism which insisted that the spirit is supreme, and body is either nothing or evil. There was also a generational change from apostles to bishops. Churches built by traveling missionaries began to have local bishops.¹⁵ By the fourth century, Christianity began to gain some social influence.¹⁶

Severe persecutions started again under Emperor Diocletian (284–305). However, during the third century, the Roman Empire was going through a period of decay; bankruptcy, political fragmentation and military defeats were the rage.¹⁷ In 312, Emperor Constantine legalized Christianity in order to restore order in the empire. The unity and monotheism of Christianity served his purpose to reunite the fragmented empire.¹⁸ In 325,

¹⁰ Chadwick, Henry, *The Early Church: The Story of Emergent Christianity from the Apostolic Age to the Foundation of the Church of Rome (The Pelican History of the Church, 1)*, New York: Penguin Books, 1986, p.15.

¹¹ *Ibid.*, p. 16.

¹² *Ibid.*, p. 26.

¹³ *Ibid.*, p. 29.

¹⁴ *Ibid.*, p. 31.

¹⁵ *Ibid.*, p. 46.

¹⁶ *Ibid.*, p. 60.

¹⁷ Brown, Peter, *The Rise of Western Christendom: Triumph and Diversity, AD 200–1000*, Malden, Mass.: Blackwell, 1997, p. 19.

¹⁸ *Ibid.*, p.22.

Constantine gathered a conference of Christian leaders, the Council of Nicea, to standardize the doctrine. They decided that those who insisted that Christ the son was one with God the father were called Catholic, and those who insisted that Christ the son was a lesser god adhered to the Arian heresy. Once establishing the distinction between orthodox and heresy, the empire came to have one unified secular/temporal authority and one unified spiritual authority, with the former being superior to the latter. In the Eastern Roman Empire, this system continued, succeeded by the Byzantine Empire until the fall of Constantinople in 1453.

On the other hand, the Western Roman Empire collapsed in 476. In the west, the central political authority broke down. The territory was divided among the non-Roman warlords, representing Vico's military authority, such as the Visigoths, the Ostrogoths, the Vandals, and the Lombards. Instead of persecuting Christianity, these warlords converted to become Christians. Warriors settled and became prominent members of local society.¹⁹ One of them was King Clovis, who established the Merovingian Dynasty. He converted to Roman Catholicism in 496, along with his armies. He declared himself to be the protector of the Catholic Church against heretic barbarians, and extended his territory. This kingdom lasted until 751, when Pippin executed a coup against the Merovingians. This coup was justified by Pope Zacharias. Zacharias also needed protection against the Lombard kings. Pippin took Ravenna and gave the territory to Zacharias. His son Charlemagne continued to invade various areas in Europe and became emperor in 800. Pope Leo III crowned him as the West Roman emperor. Under the protection by the Frankish kingdom, such missionaries as Boniface went out and spread Christianity. With this development, Western Europe once again had one military authority and one religious authority. They enjoyed a symbiotic relationship, in which the kingdom provided physical protection and the Church, in return, provided legitimacy.

This symbiotic relationship eventually turned into a competition for dominance.²⁰ While they needed each other, both military and religious authorities tried to gain supremacy over each other. In the 11th century, the Reform Movement occurred in the Catholic Church led by Gregory VII, creating a centralized government:

[I]t led, almost inevitably, to the contest for supremacy between the Papacy and its counterpart on the secular side,

¹⁹ Ibid., p. 58.

²⁰ One can also get a good sense on this subject in Oliver O'Donovan and Joan Lockwood O'Donovan, ed., *From Irenaeus to Grotius: A Sourcebook in Christian Political Thought, 100–1625*, Grand Rapids: Michigan/Cambridge, U.K., 1999.

the Empire. Those ecclesiastics whom the Pope expected to be his obedient officials in the local government of the Church were already the obedient officials of the Empire both in its central and its local government.²¹

According to historians Tanner, Previte-Orton, and Brooke, “The relative importance of spiritual and temporal considerations in the medieval mind gave an initial advantage to the 5, and in the end the victory.”²² In 1122, in the Concordat of Worms, the imperial authority over the ecclesiastical nobility was limited. The Papal authority enjoyed its supremacy for almost 300 years between the early 11th century and the end of the 13th century. It was during this period, that the Crusades were conducted under the leadership of the pope. The Papal supremacy peaked during the reign of Innocent III (1198–1216).

(3) The Dominance of the State—the Age of Heroes—and the Thirty Years War for the Unit Selection: While states competed for dominance, the empire became fragmented. Within its territory, different political units such as city-states, states, and federations emerged and demanded autonomy. Among these political units, the state eventually became predominant because it was the most efficient war fighting institution. Max Weber defines: “a state is a human community that (successfully) claims the *monopoly of the legitimate use of physical force* within a given territory.”²³ What the State did to the general population was similar to racketeering. That is, states would fight each other, endangering the general population and then offered protection, in exchange for cooperation such as monetary compensation, from the danger, which would not exist without them fighting to begin with. Anyone who refused to cooperate would be threatened or physically harmed. For this purpose, the State gradually disarmed the general population, monopolizing the means for coercion. It also gradually became institutionalized:

A ruler's creation of armed force generated durable state structure. It did so both because an army became a significant organization within the state and because its construction and maintenance brought complementary

²¹ Tanner, J.R. et al. ed., *The Cambridge Medieval History: Vol. 5, Contest of Empire and Papacy*, Cambridge: Cambridge University Press, 1964, p. x1.

²² *Ibid.*, p. xi.

²³ Tilly, Charles, *Coercion, Capital, and European States, AD 990–1992*, Cambridge, Mass.: Blackwell, 1993, p. 70.

organizations—treasuries, supply services, mechanisms for conscription, tax bureaux, and much more—into life.²⁴

England and France became states during the One Hundred Years' War between 1339 and 1453. During this period, the state formation progressed in both countries. The causes were the disputes over the English territory within France and the imperial succession. The House of Capet ended in 1328 with Phillip IV. French Phillip VI—his brother—and English Edward III—his grandson—both claimed to be the king. In France Charles VII established a permanent army in the early 15th century, and Louis XI confiscated feudal lords' territory in the late 15th century. As a result of war, England lost all the territory in France, except Calais, and become a complete island country. The Iberian Peninsula had been ruled by the Islamic Ommiad Empire. When the Islamic Ommiad Empire fell in the 11th century, Christian states emerged. Portugal became independent in 1139. Castile and Aragon merged to become Spain in 1479. They reclaimed the peninsula by taking back Granada in 1492. Through this Reconquista Movement, Iberian countries achieved centralization of the state. The state formation of Germany was delayed until the 19th century, because its territory was ruled by the Holy Roman Empire. The state formation of Italy was also delayed until the 19th century because its territory was populated with powerful city-states.

The Church also failed to remain unified. It suffered the Great Schism between 1378 and 1417, during which time two and later three popes claimed to be the true pope. The cause was political and not about religious principles. This was resolved in 1417 when Pope Martin V was elected to be the only pope by the Council of Constance. The separation became permanent in the 16th century when Pope Leo X began to sell indulgences in order to raise funds for the renovation of St. Peter's Basilica in Rome. Martin Luther issued the Ninety-Five Theses in protest, starting the Reformation. His idea was that the Church was not necessary to understand the will of God but reading the Bible was sufficient. The movement spread and there were rebellions in Germany based on the Lutheran ideals. Initially, Lutherans were persecuted, but in 1555, the Holy Roman emperor, Charles V, who supported the Catholic Church, and the Schmalkaldic League, who were Lutheran supporters, reconciled in the Peace of Augsburg. The agreement allowed the German princes in the Holy Roman Empire to choose either Catholicism or Lutheranism within their territories. The subjects were to follow the religion chosen by their princes, or move to another territory.

²⁴ Ibid., p. 70.

With these developments, European society became populated with several diversified forms of military authorities and two religious authorities. Instead of playing distinctive functional roles, they competed for dominance in one arena. This created complex dynamics in Europe. The Great Schism also involved military authorities. France, Aragon, Castile and León, Cyprus, Burgundy, Savoy and Naples recognized one pope, while Denmark, England, Flanders, the Holy Roman Empire, Hungary, northern Italy, Ireland, Norway, Poland and Sweden recognized the other. The Italian Wars between 1494 and 1559 made European society start to look like the pre-World War modern society, often characterized by the principle of the balance of power. Participants formed and reformed alliances based on the distribution of power. If your ally becomes too strong, you would form a new alliance with your former enemy. In 1494, French king Charles invaded Italy, demanding to be the king of Naples. In the following year, he occupied Naples. In 1501, Louis XII took the offensive. The pope, the emperor, Spain, Milan, Venice and others formed an alliance to counter France. In 1504, France and Spain reconciled, which made Naples and Sicily Spanish territories. Then Emperor Charles V and French king François began to fight. In 1521, Charles V and Pope Leo X invaded Italy, taking back Milan. In 1526, France yielded. In 1526, Pope Clement VII, along with such Italian powers as Venice and Milan, cooperated with France to counter Charles V. In 1529, Charles V and Clement VII reconciled, while Charles V and François continued to fight over Milan. In 1559, Spanish king Phillip II and French king Henry II accepted the Peace of Cateau-Cambrésis, ending the wars.

These complex dynamics continued into the Thirty Years War, devastating to all of Europe. According to the new Cambridge Modern History: “There are not sufficiently accurate statistics to calculate the loss of life and the material damages. A modern historian has estimated that the population of Germany sank 40% in the countryside, and 33% in the cities.”²⁵ This war should be distinguished from wars generally fought by states.

The war began as a religious conflict in the Holy Roman Empire between Catholics and Protestants, along with a power struggle within the empire. The religious conflict soon spread all over Europe. More sovereign states joined due to religious and strategic concerns. Gradually, the focus shifted to be more political and strategic. By the end of the war, the conflict was less religious and more political with rivalry between the Bourbon and the Habsburg dynasties. The War ended with the Peace of Westphalia. During these thirty years of war, there was a fundamental

²⁵ J.P. Cooper ed., *The New Cambridge Modern History: Volume IV, The Decline of Spain and the Thirty Years War, 1609–48/59*, Cambridge: Cambridge University Press, 1970, p.357.

change in European society. Europe had transformed into modern society, in which identical political units—the states—populated society with exclusive territories. Spiritual authorities had lost prominence, and in the following two hundred years they gradually lost their political relevance. England took the lead here by establishing its own Anglican Church in the mid-16th century. It was because the state, being a smaller unit than the empire, did not need a universal unifying principle. It did need some unifying principle because to dominate by coercion alone would be very expensive. Devotion is free after all. So, it chose to use nationalism as a tool of domination, leading to the modern concept of nation-state. When Italy was unified in 1870, the leader is said to have stated: “We made Italy. Now, we must make Italians.” Even though there are countries which contain multiple ethnic and cultural groups, the basic concept is to create an exclusive territory that is occupied with one ethnic and cultural group.

(4) Democracy—the Age of Men—and World Wars I and II as Unit Selection Wars: The state did not remain unchanged as a war-making institution. As the Industrial Revolution proceeded, two new economic social groups emerged. One was the bourgeoisie and the other was labor. This process is called industrialization. Before, the king had to deal with the aristocracy, which demanded more autonomy and tried to take over if possible. That process is called the state formation. In addition to the two military social groups (the aristocracy and the monarchy), there were now four social groups. The two military social groups competed with each other for dominance, but they had a common interest to remain as the ruling class. The two economic social groups fought over distribution of wealth, but they had common interests in making an economically friendly social environment. In general, the military social groups lost over the economic social groups. This took the form of democratization. The process, however, was very different in different places due to the intertwining complex interests. Some states achieved democracy with relatively little violence. Others experienced radical expansionism, while yet others experienced internal violence.

A preliminary investigation suggests that the difference depends on the size of the country, the timing of industrialization, the economic and military environment, and the historical trajectory of the country. The country’s size determined the availability of external violence. Major powers could afford to export violence, while small countries would have been instantly devoured in the international arena if they tried such an option. In between, the mid-size countries could go either way. The timing of the state formation and industrialization determined how many social groups were likely to coexist. The late industrializers had to go through

industrialization rapidly, resulting in more social groups coexisting. The economic and military environment affected the democratizing states. Obviously, the states had a better chance if they went through democratization under favorable economic and peaceful military environments. However, the worst was during fluctuating environments.

Among the major powers, early industrializer Great Britain and militarily secure United States achieved democracy with relatively little violence, while France experienced moderate expansionism. Germany—the late industrializer and state-former— became an extreme expansionist. Small states experienced internal violence. The Latin American states were in this category. But some small states managed to make the transition peacefully under favorable economic conditions. Sweden is one example. In between, among the mid-sized states, Italy joined the example of Germany. But Spain experienced internal violence. This could be from the fact that Spain was historically declining, while Italy was a newly emerging country, eager to obtain the status of a major power. Some, such as Czarist Russia, which was a late-late industrializer, could not achieve democracy and ended with dictatorship. The following section looks at these transitions.

Great Britain: In Great Britain, the state-formation process occurred before industrialization began in the mid-17th century. Before the Glorious Revolution in 1688, King James tried to establish absolutism, as in France, but the attempt failed. As a result, the next rulers, William and Mary, accepted a constitution that gave Parliament the right to control military finances.²⁶ A standing army was not acceptable to the aristocracy, which was reluctant to award too much power to the king. As a result, Great Britain developed a very small military and relied instead on mercenaries. This worked well during the 18th century, when mercenaries were readily available. Besides, thanks to the parliamentary guarantee, international finances were readily available for Great Britain to raise funds for war expenditures.²⁷

Around the 1830s, Great Britain entered a period of confrontation between the bourgeoisie and labor. During this period, internationally it showed some tendency for expansion, but not to the point of radical expansionism.²⁸ Favorable economic and security circumstances prevented Great Britain from becoming a radical expansionist, that is, a

²⁶ John Childs, *The Army, James II, and the Glorious Revolution*, Manchester: Manchester University Press, 1980. Also, J.R. Jones, *The Revolution of 1688 in England*, New York: W. W. Norton & Company, 1973.

²⁷ See Stone Lawrence, ed., *An Imperial State at War: Britain from 1689 to 1815*, London: Routledge, 1994, Chapter 5.

²⁸ Jack Snyder, *Myths of Empire: Domestic Politics and International Ambition*, Ithaca: Cornell University Press, 1991, Chapter 5.

nation which would keep expanding, even if it becomes self-destructive, and antagonize potential enemies stronger than itself, making the cost of expansion greater than the benefit. First, during the Napoleonic Wars, the British Army greatly increased in size. This may have been the opportunity for the British military to develop a large military organization. However, the long-lasting peace that followed took away this opportunity. The total size of the armed forces was kept under 1% of the entire population until the Crimean War.²⁹ Second, during the Chartist movement of the 1830s, in which labor demanded rights against the bourgeoisie, the army may have had another opportunity to grow, with the possibility of a dependent bourgeoisie in the face of a labor threat. However, labor did not radicalize sufficiently to become a real threat to the bourgeoisie. Workers did not demand the abolition of private property rights, which would have directly threatened the bourgeois interests.³⁰

The United States: The United States did not have a king and an aristocracy at the time it underwent industrialization because the War of Independence separated the military and economic social groups. Before the Civil War, the bourgeoisie was free to establish its own society without any influences by the traditional dominant social groups. Labor as a social group did not emerge until the 1860s. Therefore, between the 1780s and 1850s, the United States was a society dominated, with the exception of the farmers, by one social group—the bourgeoisie. Having no common enemy to face in domestic society, the bourgeoisie could not maintain its coherence and began to fight over slavery and tariff issues.³¹

The isolation from the European center made it unnecessary for the United States to develop a large military to catch up with the front-runners. As a result, the army was disbanded immediately after the War of Independence. Before the Civil War, the regular army consisted of only 10,000–20,000 officers and soldiers.³²

After the war between the two bourgeois groups, labor began to emerge and the United States became a two-class society. Entering the 1870s, U.S. society witnessed large-scale labor strikes. As in the other cases, the military was called on to restore order. However, the military could not gain a strong influence because of the favorable economic conditions that followed the Civil War. Therefore, the labor movement was developed within the existing institutional framework without the need for

²⁹ For more details, see Edward M. Spiers, *The Army and Society: 1815–1914*, London: Longman, 1980.

³⁰ For more details, see Pauline Gregg, *A Social and Economic History of Britain: 1760–1970*, London: George G. Harrap & Co., 1971, Chapters 3, 4, 5, and 6.

³¹ Barrington Moore, Jr., *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*, Boston: Beacon Press, 1966, Chapter 3.

³² Maurice Matloff, ed., *American Military History*, Washington, DC: Office of the Chief of Military History, U.S. Army, 1969.

a coalition with the military. Organizations such as the National Civil Federation (NCF) were created to mediate labor-bourgeois disputes. The NCF pressed for the Anti-Trust Law and the Workmen's Compensation Law. This tradition peaked during the Great Depression with the New Deal by President Roosevelt.³³

France: The French experienced moderate external violence. The French state formation and industrialization processes were relatively sequential, and industrialization was relatively slow.³⁴ Before entering the modern age, the king was once ousted by a coalition between the aristocracy and the peasants in 1789.³⁵ However, since there were no other organized social groups existing in France at this time, the king returned and a similar struggle for power among the political elites continued. The challenging elites formed the Orleanist Party in the parliament.³⁶ Meanwhile, the defeat in the Napoleonic Wars cut the ties between the aristocracy and the military, which made the military a more independent social group.³⁷ During the July Monarchy between 1830 and 1848, industrialization began to produce new social groups, with bourgeoisie and labor appearing on the political scene. It was during this period that the Orleanist Party was gradually replaced with bourgeois parliament members. Unorganized workers and the urban poor rioted in 1848 and brought down the aristocracy.³⁸

Regarding its international position, the French industrialization path was somewhere between the British and German cases. Industrialization did not produce the large-scale bourgeoisie that formed in Germany. On the other hand, as a result of its defeat in the Napoleonic Wars, the military was totally disbanded and lost its political influence.

France came to include all four social groups immediately after the 1848 Revolution. Between 1848 and the collapse of the Second Empire in 1870, the international economic and security circumstances were very good. The economy was at the height of international liberalism. The

³³ For more details, see Irwin Yellowitz, *Industrialization and the American Labor Movement: 1850–1900*, Port Washington, N.Y.: Kennikat Press, 1977. See also Marguerite Green, *The National Civic Federation and the American Labor Movement: 1900–1925*, Westport, Conn.: Greenwood Press, 1973.

³⁴ For the French industrialization process, see Caron François, trans. by Barbara Bray, *An Economic History of Modern France*, New York: Columbia University Press, 1979. See also Guy P. Palmade, , trans. by Graeme M. Holmes, *French Capitalism in the Nineteenth Century*, New York: Barnes & Noble, 1972.

³⁵ Theda Skocpol, *States and Social Revolutions: A Comparative Analysis of France, Russia, and China*, Cambridge: Cambridge University Press, 1979, Chapter 5.

³⁶ For more details, see André Jardin, André-Jean Tudesq, and Elborg Forster, trans., *Restoration and Reaction: 1815–1848, Cambridge History of Modern France, 1*, Cambridge: Cambridge University Press, 1983.

³⁷ Skocpol, pp. 190–196.

³⁸ For more details, see Jardin et al. See also N. Peter Stearns, *Paths to Authority: The Middle-Class and the Industrial Labor Force in France, 1820–1948*, Urbana: University of Illinois Press, 1978.

security circumstances were relatively cooperative under the Congress of Vienna. As mentioned earlier, the bourgeoisie and workers cooperated and brought down the July Monarchy in 1848. During the brief existence of the Second Republic, these two social groups tried to cooperate. However, it soon became obvious that they could not work together. Labor became too threatening for the bourgeoisie at this point. Since the bourgeoisie and labor just defeated their common enemy—the king and aristocracy—in the revolution, they began to fight with each other.³⁹

This conflict between the bourgeoisie and labor gave the military an opportunity to return to the political arena. The bourgeoisie now needed the army to check working class aggression. To restore order, the army was invited into the political arena. As a result, General Cavaignac, minister of war, became the head of state in the provisional government and conducted heavy repression of labor demonstrations. Universal suffrage was also retrogressed by the requirements of a three-year residency, which reduced the suffrage from 9.8 million to 6.8 million. As a result, Socialist representation was reduced in the Assembly.⁴⁰

Louis Napoleon took advantage of these entangled relations among the military, the bourgeoisie and labor. He allied with the bourgeoisie, promising to restore order. His coup d'état succeeded because of the acquiescence of the bourgeoisie and the assistance of the army.⁴¹ Also, during Louis Napoleon's pacification effort, the communist wing was wiped out. At the same time, he used the plebiscite to obtain support from the masses. This looks similar to the coalition pattern of Italy⁴² and Germany as we will see. As part of a deal, foreign adventurism began in the Second Empire with the Crimean War, intervention in Italy and the Franco-Prussian War, which ultimately ended the regime.

After the fall of Louis Napoleon, the communist wing very briefly took over the government, which was called the Paris Commune. However, this did not last because Louis Napoleon had wiped out the radical left wing.⁴³ After the radical left was destroyed, the moderate Republicans came to power. Now that the bourgeoisie did not have to worry about the radical left, the Third Republic was acceptable to them. Labor and the bourgeoisie reconciled, so the bourgeoisie no longer needed to ally with

³⁹ For more details, see Maurice Agulhon, trans. by Janet Lloyd, *The Republican Experiment: 1848–1852*, *Cambridge History of Modern France*, 2, Cambridge: Cambridge University Press, 1983.

⁴⁰ *Ibid.*

⁴¹ For more details, see Alain Plessis, trans. by Jonathan Mandelbaum, *The Rise and Fall of the Second Empire: 1852–1871*, *Cambridge History of Modern France*, 3, Cambridge: Cambridge University Press, 1985.

⁴² *Ibid.*, p. 6.

⁴³ For more details, see John Hicks and Robert Tucker, eds., *Revolution and Reaction: The Paris Commune 1871*, Amherst: University of Massachusetts Press, 1973.

the military.⁴⁴ The military lost its political influence and fell under civilian control. Although it tried to resist, without any allies in the civil society, its efforts failed, as can be seen in the example of the Dreyfus Affair.⁴⁵

Germany: The German states rapidly proceeded with industrialization during the 1840s and 1850s.⁴⁶ A united Germany was formed in 1871. The distribution of power was institutionalized in the Reichstag. The kaiser was the sovereign, and the aristocracies and the bourgeois interests were represented in the Reichstag. Labor began to be important politically but was given very limited representation in the Reichstag.⁴⁷

In international society, Germany was in a position to catch up with Great Britain both economically and militarily. This caused Germany to develop concentrated bourgeois interests, along with a middle class that consisted of small bourgeoisie.⁴⁸ A strong military interest had been present in Germany, but it intensified as Germany tried to develop naval capabilities equivalent to that of Great Britain.⁴⁹

Soon after Germany was united, all four social groups were present in the domestic society. During that period, economic and security circumstances were conducive to radical expansionism. The economic circumstances that had been good during the mid-19th century deteriorated in the 1870s. At the same time, this economic downturn triggered a scramble for imperialism, which resulted in instability in European security. As a result, the German bourgeoisie entered a coalition with the military, which was closely tied to the aristocracy, and pressed for naval expansion as part of Kaiser Wilhelm II's policy of Weltpolitik.⁵⁰ Lacking allies in society, the SPD, a labor party, supported war, hoping to win some welfare concessions in return.⁵¹

⁴⁴ For more detail, see Jean-Marie Mayeur, Madeleine Reberieux, trans. by J.R. Foster, *The Third Republic from Its Origins to the Great War: 1871–1914*, *Cambridge History of Modern France*, 4, Cambridge: Cambridge University Press, 1984. Alistair Horne, *The French Army and Politics: 1870–1970*, New York: Peter Bedrick Books, 1984.

⁴⁵ Horne, *The French Army*.

⁴⁶ For more details on the industrialization in Germany during this period, see Helmut Bohme, W.R. Lee, trans., *An Introduction to the Social and Economic History of Germany: Politics and Economic Change in the Nineteenth and Twentieth Centuries*, New York: St. Martin's Press, 1978, Chapters 3, 4, and 5. See also Martin Kitchen, *The Political Economy of Germany: 1815–1914*, London: Croom Helm, 1978, Chapter 4.

⁴⁷ For more details, see Simon Taylor, *Germany: 1818–1933, Revolution, Counter-Revolution, and the Rise of Hitler*, London: Duckworth, 1983.

⁴⁸ For more details, see David Calleo, *The German Problem Reconsidered: Germany and the World Order, 1870 to the Present*, Cambridge: Cambridge University Press, 1978.

⁴⁹ For more details, see Paul Kennedy, *The Rise of the Anglo-German Antagonism: 1860–1914*, London: Ashfield Press, 1987, Part III.

⁵⁰ *Ibid.*, p. 228.

⁵¹ For more details on the coalition-forming process during this period, see William Carr, *A History of Germany: 1815–1985*, London: Edward Arnold, 1968. See also, Robert Herndon Fife, Jr., *The German*

After its defeat in World War I, Germany once again became radical expansionists. The kaiser was gone as a result of the defeat. The military was on the verge of extinction during the revolution in 1918. The SPD, by then a reformist party rather than revolutionary, became the ruling party at the Reichstag. This social group was facing a severe threat from radical labor, which opened its own revolutionary congress and voted to dissolve the traditional military cadet school and to place the supreme command under tight civilian control.⁵²

Meanwhile, Germany's international position had significantly changed. Totally destroyed, Germany had to catch up economically. More importantly, the harsh disarmament terms imposed by the victorious allies caused some radicalization of the military. This was not too severe because the military was badly needed in German domestic society. Facing the imminent threat of labor aggression, the bourgeoisie made a deal with the military through a phone conversation between army official Gröner and SPD leader Ebert, in which the military offered protection of the bourgeoisie from the labor threat in exchange for securing political influence of the military. Germany had been suffering hyperinflation during the 1920s. For example, in December of 1922, the average real weekly wage of skilled railway workers sank to 55.0% of what they had made in 1913.⁵³ And the Great Depression hit very hard in Germany:

The economic situation in Germany was made worse by the enormous debt with which the country had been burdened following the First World War. It had been forced to borrow heavily in order to pay "reparations" to the victorious European powers, as demanded by the Treaty of Versailles (1919), and also to pay for industrial reconstruction. When the American economy fell into depression, US banks recalled their loans, causing the German banking system to collapse.⁵⁴

Between 1929 and 1932, industrial production, wholesale prices, foreign trade decreased by 41%, 29% and 61%, respectively.⁵⁵ In 1929,

Empire between Two Wars: A Study of the Political and Social Development of the Nation between 1871 and 1914, New York: Macmillan Company, 1916.

⁵² John W. Wheeler-Bennett, *The Nemesis of Power: The German Army in Politics, 1918–1945*, London: Macmillan & Co., 1954, p. 32.

⁵³ Gerald D. Feldman, *The Great Disorder: Politics, and Society in the German Inflation, 1914–1924*, Oxford: Oxford University Press, 1997, p. 614.

⁵⁴ "Modern American Poetry: About the Great Depression," <http://www.english.illinois.edu/maps/depression/about.htm>

⁵⁵ Jerome Blum, Rondo Cameron, Thomas G. Barnes, *The European World: A History* (2nd edition, 1970), Mass.: Little Brown and Company, p. 885.

about 1.5 million people were unemployed, and by 1933, the number increased to 6 million, or 26%.⁵⁶

The economic social groups were in disarray. Against this backdrop, an expansionist coalition formed around the National Socialist Party with all segments of the society participating during the election of March 5, 1933. The army supported Hitler's rearmament policy. Hitler also made a deal with the army. He eradicated his own paramilitary group, SA, to secure the independence of the army. The army, in return, did not block Hitler's rise. During the early period of the national socialist history, capitalists, such as von Borsig—a locomotive manufacturer and the leading industrialist in Germany—funded the party.⁵⁷ In 1932–1933, when the party faced financial difficulties, an influential member of the Steel Trust in Western Germany and other industrialists took over most of its debt, responding to the slogan of the party: “If the National Socialist Party collapses, there will be another ten million communists in Germany.”⁵⁸ In October 1930, when a wave of strikes spread in Germany, Hitler supported the strike, explaining to the employers that condemning the strike would let their working members go over to socialism.⁵⁹ In March 1933, the general public—many of them must have been workers—supported Hitler's party, which obtained the most seats in Congress, 288, followed by Social Democrats' 120.

Italy: In Italy, the traditional rivalry between the king and his challenger took the form of regional competition between the Piedmont in the north and the Savoy in the south. The south took over the government in 1876, and the Piedmont tradition was passed on to the Parliament. The Piedmont tradition was characterized as rational power-maximizing. The Piedmontese were willing to expand militarily but not until they were ready to do so. During the 1870s through the 1890s, they made economic and military concessions to France and Great Britain. When the Parliament was established in 1882, King Vittorio Emmanuelle of Savoy sought the army's support as a counterweight to this new political challenger. They adopted an expansionist agenda and advanced it so far as it was possible.

Until World War I, the Italian foreign policy reflected their rivalry and swung back and forth between retrenchment and expansion. First, Italy participated in the Franco-Prussian War, and the result was disastrous. The Parliament cut the military budget, and the military prestige was shattered. In 1887, Francesco Crispi became prime minister and engaged in huge

⁵⁶ “The Great Depression,” <http://alphahistory.com/nazigermany/the-great-depression/>

⁵⁷ For more information regarding the financial sources of the Nazi Party, see Konrad Heiden, *A History of National Socialism*, New York: Alfred A. Knopf, 1935, pp. 100–103 (Original in German. The translator's name is unspecified.)

⁵⁸ *Ibid.*, p. 222.

⁵⁹ *Ibid.*, p. 133.

expansion. This ended with a disaster of the adventurous military operation in Adowa in 1896, and the army was once again discredited. The antimilitary sentiment surged in the society. The officers blamed the civilian government for their low pay and loss of prestige. During this period, Visconti Venosta became foreign minister and tried to implement the Piedmontese foreign policy. Also, Vittorio Emmanuelle III took over the monarchy. He cooperated with restrained foreign policies by supporting mutual understanding with France and Great Britain and other cooperative strategies. At the same time, however, he achieved independence of the military from the War Ministry.⁶⁰

Meanwhile, industrialization took place, creating new social groups. When Italy was unified in 1870, Italy did not have any heavy industry. The Piedmont leadership feared offending great powers by fiercely pursuing heavy industrialization. But in the end, Italy had to proceed with industrialization in order to catch up militarily with these great powers and obtain for itself status of a great power.⁶¹ During the 1880s and 1890s, heavy industrialization proceeded. Therefore, the heavy industry sector had a close tie with the military. Also, the need for rapid catch up created the economic structure where banks, industries and the state were closely related.⁶²

Labor began to emerge in the 1890s. The Socialist Party was established in 1892. Crispi responded with repression. However, increased numbers of workers made it difficult to continue the repressive policy. After the Adowa disaster, Giovanni Giolitti became prime minister and tried to establish an encompassing coalition including all the social groups: the military, bourgeoisie, landowners, Catholics, and socialists, representing labor interest. Giolitti adopted conciliatory policies toward labor and the peasants. The Socialist Party was recognized in 1900. Universal suffrage was introduced in 1912, increasing the number of voters from 3 million to 9 million. Giolitti also offered labor state neutrality in capital-labor disputes. In order to accommodate the military, he significantly increased the military budget and started a war with the Ottoman Empire in 1911.⁶³

However, Giolitti's attempt was too ambitious. In the end, he could not accommodate all the contradictory interests. Socialists took advantage of universal suffrage and launched antiwar movements. The emerging bourgeois class also became militant against Giolitti's policy. White-collar

⁶⁰ For more detail, see Brian R. Sullivan, "A Thirst for Glory: Mussolini, the Italian Military and the Fascist Regime, 1922–1936," Ph. D. diss., Columbia University 1984, Chapter 1.

⁶¹ Richard A. Webster, *Industrial Imperialism in Italy: 1908–1915*, Berkeley: University of California Press, 1975, p. 8.

⁶² Alexander De Grand, *Italian Fascism: Its Origins & Development*, Lincoln: University of Nebraska Press, 1989, pp. 6–7.

⁶³ For more detail, see *ibid.*, pp.11–13.

workers were angry at the state for making so many concessions to labor.⁶⁴

World War I broke out against such a background. After stringent debate, Italy participated in the war. The war gravely affected the Italian society. The military took advantage of the opportunity. General Cardona was engaged in offensive operations. After enormous sacrifices, Italy was victorious. However, the Treaty of Versailles turned out to be bitterly disappointing to the soldiers. Italy was utterly ignored among great powers' interests.

The economic situation also changed significantly during the war. First, during the war, the armament industry grew significantly, causing an even closer relationship between the military and heavy industry. Second, inflation during the war hurt workers and peasants. This caused the eruption of unrests and strikes both in cities and villages during 1920 and 1921. In such a severe economic crisis, the civilian assault on the military intensified. Treasury Minister Francesco Saverio Nitti supported a complete demobilization. He later became prime minister and assaulted the military. First, Nitti made public the official report conducted on the military's fiasco in operation in Caporetto, discrediting the military, which made it difficult for the army to resist demobilization. In 1919, Nitti also shifted some responsibilities from the War Ministry to civilian police forces.

At this point, Italian society was in total disarray. Giolitti came back to the government. He once again tried to form an encompassing coalition. Labor disputes were settled thanks to his effort. However, the bourgeoisie took it as betrayal. In this way, the civilian government lost support from the bourgeoisie and angered the military. Mussolini took advantage of this situation and formed a nationalist coalition. He made a deal with the military. In return for a guarantee of military autonomy, the military did not block Mussolini's rise. Angry bourgeoisie also supported him.⁶⁵

Spain: Spain was in a very similar economic and political situation to Italy; however, it did not become externally violent. Instead, it experienced severe internal violence. First, economically, it lagged behind the European great powers. Economic historian Joseph Harrison describes the economic condition of Spain in the mid-19th century: "At a time when Britain, Belgium, France, and Germany were laying the foundations of modern capitalist economies, the failure of the industrialization process south of the Pyrenees confirmed Spain as a prime example of economic

⁶⁴ Ibid., p. 13.

⁶⁵ For more details about the domestic situation and interactions among the military and other social groups between 1917 and 1922, see Sullivan, "A Thirst for Glory," pp. 102–123.

backwardness.”⁶⁶ Politically, by the 19th century, Spain lost its predominance in international society. Historian Raymond Carr observes: “At the Congress of Vienna the pretensions of Spain were dismissed as those of a *cour secondaire*.”⁶⁷

Unlike Italy, however, Spain did not pursue great power status. It stayed out of the great power politics and remained neutral during World War I. This caused Spain to follow a developmental path quite different from that of Italy, and it resulted in an internal civil war, as opposed to external expansionism. Therefore, no heavy industry with close ties to the military interests emerged in Spain. Slow industrialization also saved Spain from rapid emergence of the labor class. This made the position for traditional military social groups relatively secure. Not facing the challenge from below, they were still concerned with the fact that they were so far behind the European great powers. In order to catch up with more advanced powers, some members of the ruling class felt that changes were necessary. But other ruling elites insisted on maintaining the existing system. The former members were called liberals and the latter, conservatives or royalists. Spain experienced a series of swings between these two elite sectors.⁶⁸

The attempt to reform the society so that Spain would be competitive in the modern world started as early as 1760, under Charles III’s reign. In 1790, a radical movement emerged, responding to the French Revolution. The French Revolution and subsequent developments brought a serious crisis to the traditional absolutist system. As a result, Charles IV was abdicated and Ferdinand VII took over. Then, Napoleon invaded Spain, and Ferdinand VII was taken to France and kept captive. Ferdinand organized resistance, and when Napoleon was defeated, he went back to the throne.

In 1814, absolutism was restored and lasted until the revolution of 1820, which was a royalists coup d’état against Ferdinand, whom they considered too tolerant to the liberals. This movement merged into a power struggle between Ferdinand’s wife Cristina, who tried to make her daughter Isabella a crown, and his brother Don Carlos. The royalists supported Don Carlos, hence were called Carlists. The Carlists became the representatives of staunch conservatives, or ultra-rightists, and continued their attempts on and off until the 1930s. Against this coup attempt, the liberal army supported Cristina. The struggle between the royalists and liberals developed into a civil war. During the war, liberals were divided

⁶⁶ Joseph Harrison, *An Economic History of Modern Spain*, Manchester: Manchester University Press, 1978, p. 42.

⁶⁷ Raymond Carr, *Spain: 1808–1975*, Oxford: Clarendon Press, 1982, p. 38.

⁶⁸ For the detailed process can be found in Carr, here, a brief summary of the process is presented according to Carr’s account.

into moderates and progressives. The former did not accept revolution, while the latter did. An attempt was made to form a coalition between moderates and progressives against the Carlists, but it failed. Progressives rebelled against the moderates' government. This time, the army did not back up the government. As a result, the government fell, establishing the regency of General Espartero, which lasted between 1840 and 1843.

The regime was challenged by the coalition of republicans or democrats—ultra leftists—and the Carlists—ultra rightists, on one end, and the progressives, on the other. The progressives were divided between parliamentary or legal, and revolutionary progressives. This weakened the progressive camp. Here, the moderates formed a coalition with parliamentary progressives and regained hegemony. However, the moderates were not firmly united, but were held together only by the fear of revolution. As a result, it fell apart. So the legal progressives came back to power.

In 1854, the conservative guards launched a coup d'état, or *pronunciamiento*. The liberals fought back and won. The regime was led by General O'Donnell, who formed a coalition with the progressives. In 1856, the new constitution was declared, which was the most liberal in Europe at that time, including a significant increase in suffrage. During the middle of the 19th century, Spain had a period of economic expansion. Catalonians tried to industrialize beyond textile. Accordingly, the first sign of labor also emerged in the region. In 1866, the first workers' organization was formed. But any labor unrest in the 1850s was severely suppressed. On the other end, the merger between aristocracy and generals also took place around this time. Reflecting these social changes, for the first time, the capitalist creed was incorporated into the Spanish constitution.

Under this liberal union, the liberal military interests and bourgeois interest formed a coalition. To satisfy the military interests, the regime showed some foreign adventurism. However, the union did not last. The budget of 1859 revealed that the army's interests were well represented, while the bourgeois interests were not. As a result, O'Donnell was forced to resign in 1863. Then progressives boycotted the government (*retramiento*). Isabella refused to compromise, which led to another *pronunciamiento*, by a progressive general Juan Prim. As a result, the Republic of 1873 was established. However, it could not reconcile competing interests among unionists, progressives and republicans/democrats. So, it fell apart, creating anarchy. This time, the Carlists and the Republicans—once again the ultra-right and ultra-left—formed a coalition and staged a *pronunciamiento*, leading to the Bourbon Restoration. Isabella's son Alfonso XII, who was a Carlist, assumed the throne. The Madrid aristocracy and the Barcelona bourgeoisie supported the regime.

Between 1873 and 1898, Spain was ruled by a stable monarchy by the moderates. The new constitution of 1876 stated that the crown and the Cortes, the parliament, share sovereignty. But in practicality, the crown was subordinate to the Cortes. Conservative and liberal interests were represented in the Cortes. Therefore the power shifts no longer took the form of *pronunciamiento*. Instead, the conservatives and the liberals took turns, which was a custom called *turno*. This regime, however, disintegrated from within. Rather than sharing coherent interests, liberals and conservatives were divided into clans. As a result, the two parties could not maintain union and were disintegrated. In 1898, when Spain lost the Spanish-American War, the regime fell apart. Then, there were a series of attempts to “regenerate” the state, but none was successful.

Then, World War I broke out. Spain remained neutral, but it also experienced crisis. It was mainly because of another economic expansion. During this period, neutral Spain experienced an economic boom and finally managed to come out from the colonial economy. Compared to the amount of export in 1913, in 1917, exports of live animals fell from 100 to 18, raw materials from 100 to 72, while manufacturing went up from 100 to 215.⁶⁹ Spain entered its capitalist phase by this expansion.⁷⁰ At the same time, it experienced severe inflation. Overall, wage increased more than price, so emerging labor also benefited. But, some segments of labor were not so lucky, and labor became revolutionary. The government tried to control the situation unsuccessfully. Also, soldiers suffered a relative decrease in wages, so the military became politicized again. At this point, Catalan industrialists became willing to support the military. Hence, the military reentered politics. The government was exposed to threats from the Catalan separatists, mainly representing the bourgeois interests, the army, the republicans and the proletariat. The army took the stance that democracy failed to regenerate the state and presented itself as a solution, which was accepted by society. In 1919, strikes were suppressed by Catalan industrialists backed by the military authorities. By 1923, revolutionary unionism had lost its momentum.

General Primo de Rivera established a dictatorship in 1923. He repressed anarchism but compromised with radical labor, enacting the corporate Labor Code of Aunós in 1926. Catalonia’s separatist movement was suppressed, driving the bourgeoisie to radicalism. The military was given an opportunity to resolve its main concern of the Moroccan problem with the cooperation of France. In the end, Rivera’s regime lasted as long

⁶⁹ From the table in Joseph Harrison, *An Economic History of Modern Spain*, Manchester: Manchester University Press, 1978, p. 91.

⁷⁰ For more detail on the formation of a capitalist society and the rise of organized labor, see Harrison, Chapters 5 and 6.

as the economic conditions were favorable. However, when the Great Depression hit in the fall of 1929, it collapsed.

In 1936, the Second Republic was born. The main architecture was the Azaña coalition, which was a coalition between reformist sectors of the socialists and the republicans. It was an uneasy coalition between the socialists and the capitalists with interests in private property. This regime also faced severe threats from both the right and the left. The Carlists used Spanish “nationalism” to undermine the regime. It attempted a *pronunciamiento* but failed. But in the election of 1933, the rightists won the election and formed a government. Then, it was the leftists’ turn to rebel. Labor turned revolutionary, and the Azaña coalition fell apart. Labor attempted the October Revolution in 1934, but it was severely suppressed. But in 1936, the left won the election and formed a government. Then the military rose in Morocco, which spread to Spain. In this way, Spanish society was totally polarized, and whichever side lost the political power in the legitimate system violently attacked the winner. The legal system collapsed, bringing Spain down to civil war.

After the civil war, General Franco established a dictatorship. During his reign, Spain experienced great economic growth, which is often called the “Spanish Miracle.”⁷¹ This changed the social structure to an economic-based one. After Franco, the transition was not smooth, but after a struggle within the party, the labor party, PSOE, dropped Marxism from its party principle, making compromise possible with the capitalists.⁷² The military did not go down easily either. It attempted another coup d’état, but it was isolated in society while the economic social groups were solidly united against the military interests. The coup attempt failed, and civilian control was established.⁷³

Latin America: Such Latin American countries as Argentina, Brazil, Chile, Mexico and Peru also experienced internal violence but hardly any external violence during their transition. Should any countries have opted for external violence, they would have followed the path that pre-war Italy had taken. At first glance, the factor that is common to all these countries is the existence of the United States. By declaring the Monroe Doctrine in 1823, the United States established hegemony in the Western Hemisphere. The power discrepancy between the United States

⁷¹ For more details on the economic growth of Spain during this period, see Harrison, Chapter 8.

⁷² For details of this process, see Elizabeth Nash, “The Spanish Socialist Party since Franco: From Clandestinity to Government: 1976–82,” in David S. Bell ed., *Democratic Politics in Spain: Spanish Politics after Franco*, London: F. Pinter, 1983, pp. 29–61. See also Donald Share, *Dilemmas of Social Democracy: The Spanish Socialist Workers Party in the 1980s*, New York: Greenwood Press, 1989, Chapter 5.

⁷³ For details of this process, see Stanley G. Payne, “The Role of the Armed Forces in the Spanish Transition” in Robert P. Clark, and Michael H. Haltzel, ed., *Spain in the 1980s: The Democratic Transition and a New International Role*, Cambridge, Mass.: Ballinger Pub. Co., 1987, Chapter 6.

and Latin American countries was great, making these countries small-powers in relative terms. Any efforts by a country similar to what Italy attempted in the late 19th century would have triggered the intervention of the United States and put the nation in real jeopardy. Here, in order to get a feel of it, let Gary W. Wynia tell us about Argentina with a rare example of attempted external violence, which would become a harsh reminder of the non-availability of exporting violence, even though in this case, it was Great Britain, not the United States, which intervened.

A decade that began with Juan Perón's death ended with Raul Alfonsín's election in 1983. The burial of one president and the selection of another are not unusual events in most places, but seldom are they separated by seven years of military repression and soldiers killing nearly 9,000 citizens as they were in Argentina. Nor have many countries lost a war with Great Britain recently as Argentina did in 1982. No matter how one looks at it, it was an unhappy time for this troubled nation.

Political volatility is not new to Argentina, of course. As far back as 1930 the military was deposing democratic governments. In the 1940s an officer named Juan Perón was elected president, but ten years later he too was evicted by military colleagues. No one managed to govern the country successfully during the next eighteen years, and Perón's return in 1973 ended with another coup there years later.⁷⁴

Sweden: In Sweden, there was a long period of rivalry between the king and the aristocracy. Between 1680 and 1718, the king succeeded in establishing absolutism.⁷⁵ However, because of the loss in the Great Northern War, the king's authority was lost. As a result of a bloodless coup d'état in 1719, a new government was formed, in which power distribution greatly shifted toward the aristocracy, whose interests were expressed through the Riksdag of the Estates, or the Swedish Diet. This government lasted until 1772, and the era was called the Age of Liberty. Between 1772 and 1809, there was another power shift toward the king. The Gustavian Constitution was promulgated in 1772, and Gustav IV eventually established despotism by the Act of Union and Security in 1789. As a result, the Estates lost their independence. The balance once again turned

⁷⁴ Gary W. Wynia, *Argentina: Illusions and Realities*, New York: Holmes & Meier, 1986, p. ix.

⁷⁵ For more details of this process, see A. F. Upton, *Charles XI and Swedish Absolutism*, Cambridge: Cambridge University Press, 1998.

to the aristocracy during the crisis that took place when Russia invaded Finland. In 1809, Gustav IV was arrested and forced to abdicate. Between 1809 and 1821, power was once again in the hands of the aristocracy. The 1809 system, however, did not push liberals' agenda as far as the Age of Liberty had. Rather than taking political initiative, the system was intended to protect against the abuses by the king. During the 1840s liberals' influence increased, and the king's authority further diminished. In the early 1850s, the conservatives regained some momentum, but the tide once again turned to the liberals between 1856 and 1866.

Then, the Rikstag Act of 1866 was enacted. The class-based estates that consisted of the nobility, clergy, burghers, and peasantry were replaced with two chambers. With this reform, the power was now distributed as follows. There was a rivalry between the king and the aristocracy, which was expressed as balance between the king and the Riksdag. Within the Rikstag, the upper house represented the aristocratic interests, whereas the lower house represented the peasant interests. Since Sweden was a pre-industrialized society at this point, the economic social groups could not form coherent political influence; their interests were expressed as minorities in both houses. This political system began to resemble a modern system. Within the lower house, modern political parties emerged. Around 1885, there was a debate over protectionism and free trade, representing agricultural interests and emerging labor interests.⁷⁶

Between 1918 and 1921, there was a revision of the constitution, further restricting the government's authority vis-à-vis that of the Riksdag. The final blow to the king was the transfer of the supreme command from the hands of the king to the Riksdag. In 1914, during the Palace Yard crisis, the king directly appealed to the people and dismissed his own ministry. Despite such desperate effort, by 1920, the constitution was amended, and civilian control was established.⁷⁷

Sweden's industrialization began in the 1850s, though the process was very slow at the beginning. Its industrialization picked up speed in the 1890s. The number of workers in mining and heavy manufacturing doubled between the early 1890s and 1913 (from approximately 55,000 to 111,000).⁷⁸ Therefore, it was during the 1910s that Sweden entered the era of capital-labor confrontation. By then, the rivalry between the king and the aristocracy was decisively settled, and the military fell under the

⁷⁶ For more details of this process, see Michael F. Metcalf ed., *The Riksdag: A History of the Swedish Parliament*, New York: St. Martin's Press, 1987, Chapters 2, 3, and 4.

⁷⁷ For more details, see Per Thullberg, "The Supreme Command of the Armed Forces, 1895–1920," in *The Swedish Armed Forces and Foreign Influences: 1870–1945*, Stockholm: Militärhistoriska Förlaget, 1992, pp. 7–22.

⁷⁸ Erik Dahmén, trans. by Azel Leijonhufvud, *Entrepreneurial Activity and the Development of Swedish Industry: 1919–1939*, Homewood, Ill.: Richard D. Irwin, Inc., 1970, p. 20.

control of the Riksdag, which represented the declining aristocratic and increasing bourgeois interests.

Right after World War I, there was a labor disturbance. This also was stimulated by the Soviet Revolution. Some leftist leaders met Lenin, too. However, in the end, violence did not result. The majority of the left preferred to stick to the parliamentary system. The conservative forces also accepted the reform package by the left, thinking that rejecting it would result in a civil war.⁷⁹

In addition, during the 1920s, after initial difficulties, Sweden experienced a rapid growth in its export sector, providing further favorable circumstances for the capital-labor compromise. This trend might have been reversed upon the Great Depression of 1929. If the effects had been severe, the capital-labor confrontation might have become so serious that the military would have regained some of the momentum that they had lost. However, the effect of the Great Depression on Sweden was less severe than on other states, and its recovery was swift. Economists speculate on the reasons for these mild effects. One reason was that the Swedish currency was undervalued, helping its export sector. Another reason was that Sweden was rapidly expanding its domestic market. Yet another reason was, at least partially, the introduction of protection of its agricultural products.⁸⁰

Saved by this favorable economic condition, a capital-labor compromise was achieved. Gøsta Esping-Andersen summarizes the compromise as follows:

Since the 1920s and 1930s Swedish Social Democracy has been firmly wedded to the principle of full employment through economic growth. Certainly, no one ever believed in an equality of shared poverty. In the accord that was struck between the labor movement and business in the 1930s, labor fully acquiesced to the sanctity of private ownership. On this basis, the Social Democrats' formula for prosperity came to embrace a precarious blend of distributional equality, a productive and flexible labor force, and acceptable profit levels. The Swedish labor movement has been unusually capable of striking a

⁷⁹ For more details, see Andrae Carl-Göran, "The Swedish Labor Movement and the 1917–1918 Revolution," in Steven Koblik, ed., ,trans. by Joanne Johnson, *Sweden's Development from Poverty to Affluence, 1750–1970*, Minneapolis: University of Minnesota Press, 1975, pp. 232–253.

⁸⁰ For more detailed discussion, see Lars Magnusson, *An Economic History of Sweden*, London: Routledge, 2000, pp. 169–170. See also, Dahmén, pp. 41–43.

positive-sum deal between equality and profits, between welfare and efficiency.⁸¹

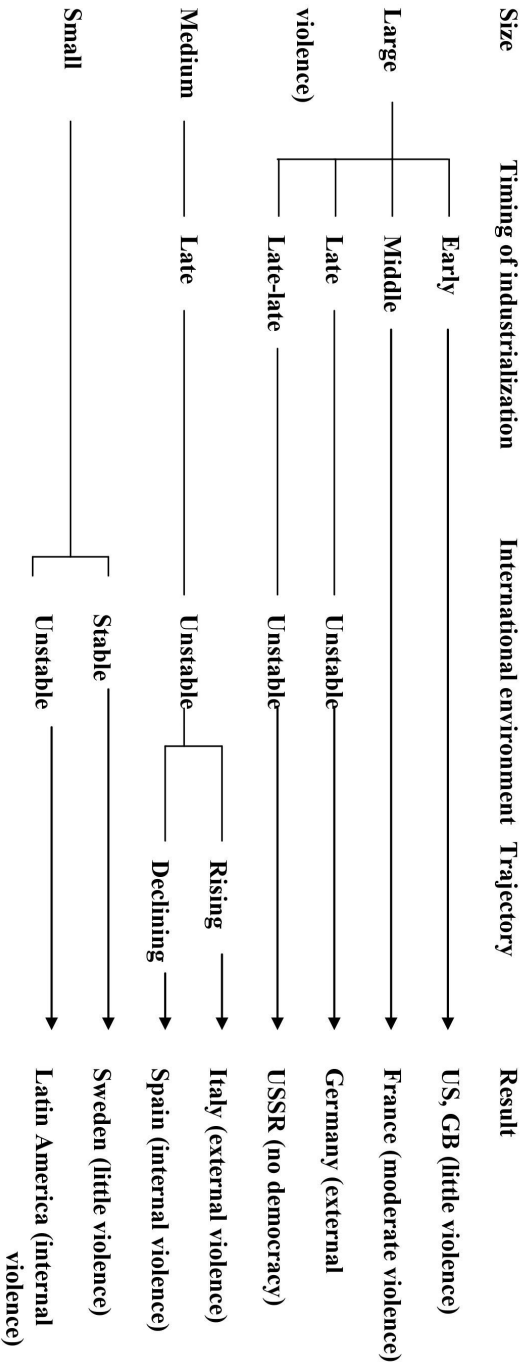
Russia: Czarist Russia showed internal violence during the transformation from imperial rule. It failed to achieve democracy and ended the transformation as another type of dictatorship. Because of Russia's disastrous, continuing defeats in World War I, the aristocracy lost confidence in the czar and wanted to take the military into their own hands. Workers and peasants, recruited as soldiers, were exhausted from the war, and fomented an increasing number of grievances against the czar. The revolution was led by these two social groups, the aristocracy, and workers and peasants, in February of 1917.

Between February and October of 1917, Kerensky and his provisional government, which was a broad coalition of the political spectrum from constitutional monarchist to moderate socialist, tried to establish a liberal democratic government. It also needed support from Soviets, elected by workers, soldiers, and peasants. Therefore, it needed to be sensitive to their needs, too. This created an enormous difficulty for the provisional government. There were too many conflicting interests that they had to be sensitive to. In addition, the fact that they could not end World War I, due to foreign pressure and other factors, totally disillusioned the people. Peasants and workers began to take initiative and attacked the privileged classes, creating an anarchical situation. Peasants were successful in their own revolts in the rural areas, and as a result, the peasants lost interest in revolution and wanted to be left alone. They were suspicious of the national leadership.

In the urban areas, the situation was different. Some kind of order was necessary to maintain city lives. Here, the fact that Russia was a late-late-industrializer, and industrialization had been conducted almost solely by the state, and not the bourgeoisie, affected the course of development significantly. Except for the industrial workers, there was no viable, organizable social group that could take the role of state-building. The military could have played that role, but it had completely deteriorated as a result of the prolonged war.

⁸¹ Gosta Esping-Andersen, "The Making of a Social Democratic Welfare State," in Klaus Misgeld, Karl Molin and Klas Åmark, ed., *Creating Social Democracy: A Century of the Social Democratic Labor Party in Sweden*, University Park: Pennsylvania State University Press, 1988, pp. 37–38.

Illustration 2-2 Democratization Trajectory



The Bolsheviks, the extremist of the socialist parties, took advantage of the situation and mobilized urban workers successfully. Industrial workers needed their factories in operation in order to support their own lives, so they cooperated. Bolsheviks' promise to end the war also helped to increase their support significantly. By October 1917, the provisional government's legitimacy had badly declined. So, the Bolsheviks launched a coup in the name of workers, peasants, and soldiers.

It turned out, however, that they were only a minority party in the Constituent Assembly and faced strong opposition from other branches of socialists. From this point on, the Bolsheviks relied on coercion and political manipulation, and successfully removed the influence of Mensheviks and other socialist revolutionaries.

Force became an important tool for the Bolsheviks. Under Trotsky's leadership, the Red Guard was organized. The Red Guard first recruited workers and then peasants. In order to get reluctant peasants to cooperate, a compulsory conscription was introduced. Officers were recruited from the old regime. In addition, in order to enforce their executive committee's decision, the Bolsheviks also established a political police called the Cheka. With these controls over the people, the Bolsheviks reversed the revolutionary and democratic elements they had adopted to undermine the provisional government.

Then, there was a civil war between the Bolsheviks and its Red Guard, on one hand, and the anti-Bolshevik White Guard on the other. During the civil war, the Bolsheviks furthered centralization, eliminating workers' rights. Its effort included the nationalization of key industries, forced seizure of peasant surpluses and militarized labor discipline. When the civil war was over, the labor class had no political influence.

Once the Bolsheviks eliminated all the rival social groups, the power struggle shifted to internal party organization. During the 1930s, Stalin conducted the ruthless "Great Purge," establishing his personal dictatorship. Stalin eliminated both party and nonparty leaders, including the original Bolshevik leaders.⁸²

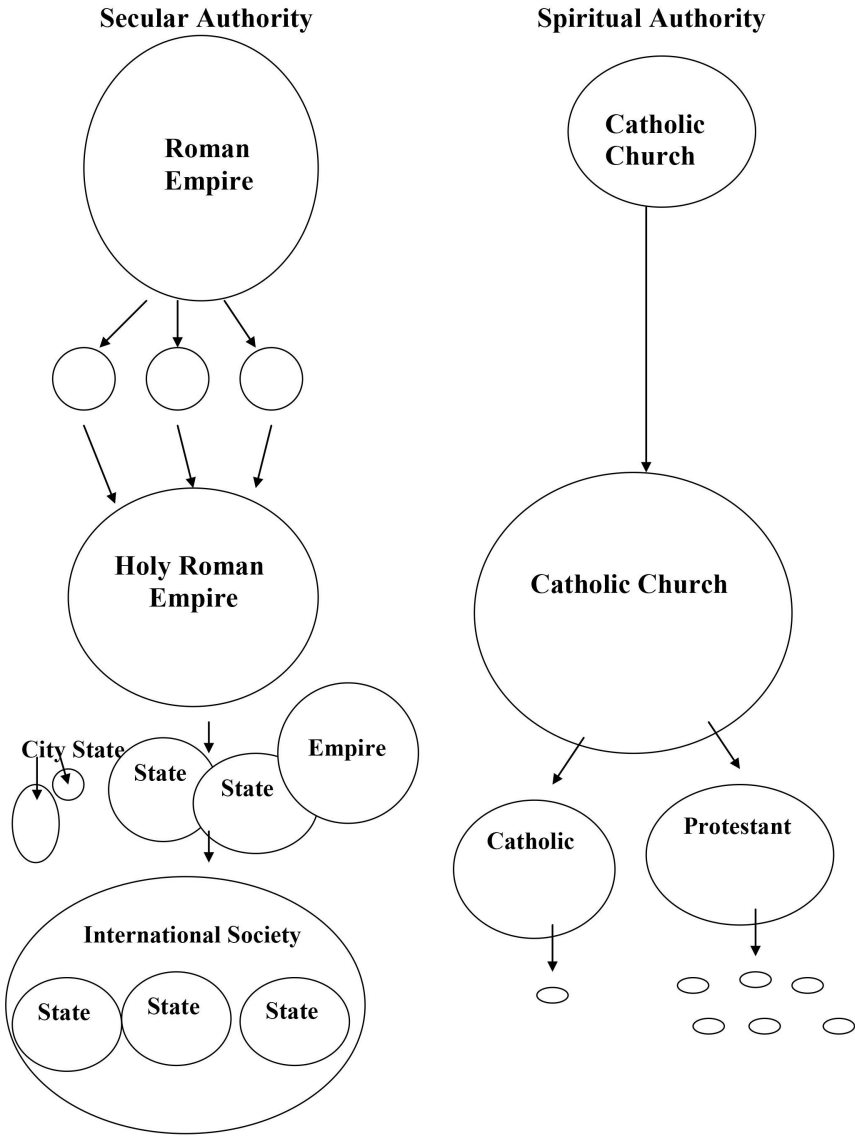
World Wars I and II were caused by states that had taken the path of radical expansionism. Conflict between the successfully democratized states and the fascist expansionist states was facilitated by modern weapons with mass-murdering capability unprecedented in history. The estimated death toll cumulated in 8.5 million people in World War I and 61 million people during World War II.

Communist Russia and China turned into another form of non-

⁸² This process is a summary of Theda Skocpol, *States and Social Revolutions: A Comparative Analysis of France, Russia and China*, Cambridge: Cambridge University Press, 1979, Chapter 6.

expansionist dictatorship, which led to the Cold War. Possibly the existence of nuclear weapons restricted the conflict between capitalist democracies and communist dictatorships. But the steep arms race finally bankrupted the Soviet Union.

Illustration 2-3
European Civilization Cycle



In this way, Western civilization has gone through the cycle observed by Vico, from the barbarian state, to the Age of Gods, to the Age of Heroes, and to the Age of Men. Ancient Greece and Rome represent the transition from the Age of Men reverting back to the barbarian state. The rise of Christianity represented the Age of Gods. The establishment of the modern state system represents the Age of Heroes, and democracy—the Age of Men. All the western states are now democracies, except Russia, which became a communist state. Its communist experiment, however, failed, and it is beginning another round of democratization.

2. Other Civilizations

In the modern world, Western civilization does not exist in isolation. Other civilizations are also going through Vico's Cycle, and are merging with the West. The Japanese, Chinese, Indian, and Islamic civilizations have so far merged with the West. The following describes their processes.

Japan: Japan went through Vico's cycle in a relatively similar manner to Western civilization. First, the religious center was formed around the emperors who derived legitimacy from Shintoism by claiming to be descendants of heaven. Then, secular aristocracies developed and eroded imperial power. In the 12th century, a military social group emerged and formed the Shogunate, taking substantive political power away from the imperial house. By the Tokugawa Shogunate, established in 1600, the imperial house had lost substantive political power. Power was contested between the central government and the local domains, resembling the rivalry between the king and the aristocracies in the West. The central government was successful containing the local challenge until the Meiji Restoration in 1867. There also had been commercial development during the Tokugawa period and large merchants had emerged, which would help Japan to develop heavy industry in the 20th century. Upon entering the modern period, Japan was in a similar situation to such late-industrializers as Italy and Germany, and joined their cycle.

The first Japanese ruling class derived its legitimacy from Shintoism, thus opening the Age of Gods. The first emperor was said to be Emperor Jimmu. During the 7th and 8th centuries, *Kojiki* (Record of Old Matters), and *Nihon Shoki* (Chronicles of Japan) were compiled. According to Eiichi Ishigami, the Japanese myths in these chronicles bore “a highly political nature to show the origin of the imperial authority and its legitimacy.”⁸³ A centralized government was established under this

⁸³ Eiichi Ishigami, “Hashigaki,” *Koza-Zen Kindai no Tenno Vol. 1 Tannno Kenryoku no Kozo to Tenkai—Part I*, Tokyo: Aoki Shoten, 1992, P. 3.

imperial rule. In the 8th century, the Confucian Chinese model of governing was adopted.

Entering the 9th century, the aristocracy began to increase its political power. Especially in the 9th to 10th century, the Fujiwara family became influential. They occupied the regent's position and controlled the emperors. This period had its peak under Michinaga Fujiwara in 966–1027. The imperial family took back some political influence and established the cloistered rule, in which the emperor continued to retain political influence after he retired. Meanwhile, the military class began to emerge. The two families, Taira and Minamoto, became especially influential, weaving themselves into the power struggle among the imperial family. The Hogen Rebellion broke out in 1156, in which Emperor Sutoku tried to overtake Emperor Go-Shirakawa. The Taira clan supported Go-Shirakawa, and the Minamoto clan supported Sutoku. Go-Shirakawa won, and the Taira clan gained significant political influence when Go-Shirakawa appointed them to be the chief minister of the government (Dajo Daijin.)

However, the Taira clan's reign was short. The Minamoto clan destroyed the Taira clan and established the Kamakura Shogunate in 1192, opening the era of the domination by the military class, or the age of Heroes. Naturally, the imperial family tried to regain its political influence. In 1221, Emperor Go-Toba unsuccessfully rebelled against the Kamakura Shogunate. The imperial family once again engaged in its own power struggle, and it was once again woven into the power struggle among the military clans. In 1336, there was a schism between the imperial family, which divided into the North and South dynasties. Some military clans supported the North and others the South. Nation-wide warfare broke out, finally settling down in 1392. During this period, the Kamakura Shogunate was succeeded by another military government called the Muromachi Shogunate, ruled by the Ashikaga clan. The imperial political influence diminished even more after this period. However, the emperor was still the sovereign. Therefore, in order to gain legitimacy, the shogun had to be recognized by the emperor.

As the imperial family decreased in political influence, the military class fought among themselves in order to achieve domination. In 1467, the Onin Rebellion erupted from the succession dispute among the Ashikaga clan. This led to a warring period in Japan, until Hideyoshi Toyotomi reunited Japan in 1590. However, his reign was short. In 1600, the Toyotomi clan and Tokugawa clan fought in Sekigahara, involving many other military clans too. Ieyasu Tokugawa won and established the Tokugawa Shogunate in 1603.

Even though Ieyasu was successful in reuniting Japan, it was not a fully centralized state. There were domains, which retained some

autonomy. Some of them had fought on the side of Toyotomi, so rebellions were a realistic possibility, which Ieyasu took measures to prevent. Sankin Kotai was one such measure. The heads of the domains had to spend time alternately between Edo, the Tokugawa capital, and their own domains. Even when they spent time in their own domains, their families had to stay in Edo as hostages. Thanks to these measures, the Tokugawa Shogunate lasted until the Meiji Restoration in 1867.

In this way, by the 19th century, secularization had progressed deeply into Japanese culture. As a matter of fact, the Meiji government had to restore the prestige of the imperial family in order to cultivate national loyalty among the Japanese people, even though the imperial family was not given any substantive political power.

Meanwhile, during the Tokugawa Shogunate, Japan developed a favorable economic foundation. The merchant class began to grow in the early 18th century. Although it had not grown enough to form its own class as the big bourgeoisie, it had accumulated some wealth. Upon the Meiji Restoration, they developed a symbiotic tie with the Meiji government and became political merchants, such as Mitsui and Mitsubishi, helping Japan's development of heavy industry. This caused the relatively quick development of the bourgeoisie and concentrated labor class after entering the modern world, which made it possible for Japan to join the German and Italian path to democracy, which tragically was the path through radical expansionism.

China: Confucianism established a unique religious realm in the Chinese empire. The relationship between the State and the Church was different from that in Western civilization. In the case of the Chinese empire, the religious influence was incorporated into the state system in the form of the Confucian-educated bureaucrats, who would form a strained relationship with the emperors.

China went through the ancient round of Vico's cycle during the Neolithic period. John King Fairbank describes two ancient Chinese dynasties of Xia and Shang:

We know that in both Xia and Shang the ruling family made use of elaborate and dramatic rituals to confirm their power to govern, especially the rituals of shamanism by which a priest (or shaman), often the ruler himself, would communicate with the spirits of the ancestors to secure their help and guidance.⁸⁴

Fairbank continues: “[the king] was head of a patrimonial state that

⁸⁴ John King Fairbank, *China: A New History*, Cambridge: Harvard University Press, 1992, p. 37.

was not yet fully bureaucratic, a state that was still more theocratic than secular in its institutional activity.”⁸⁵

In 770 B.C., China entered into an era of power struggle among warlords, which lasted until 221 B.C. It was a severe process of the survival of the fittest in the state of Vico’s barbarism, as Fairbank describes:

By the so-called Spring-and-Autumn period (722–481 BC) there were about 170 such states, each centered in its walled capital. These states formed alliances and leagues and engaged in a diplomatic-military free-for-all, some absorbing others. By the era of Warring States (403–221 BC) only seven major states remained in the competition, most of them on the populous North China plain.⁸⁶

This hard experience caused the birth of Confucianism:

During this time of rivalry and warfare, there was a widespread yearning for peace and order. Many people idealized a golden age of earlier times when according to legend all China had lived peacefully under one ruler. Violence inspired the late Zhou philosophers, who acted as what we now call consultants, advising rulers on how to get back to the golden age.

Confucius (551–479 BC) and his major disciple, Mencius (372–289 BC), were members of a considerable group of seminal thinkers in this era.... [T]he Warring States context of sanctioned violence with its killings and its ceremonies, helps us understand how the Confucian teaching rose and why it was eventually embraced.⁸⁷

The power struggle ended with unification by the Qin Dynasty, but it had a short life. Eventually, the Han Dynasty was established in 206 B.C. and lasted until 220 A.D., with a brief interruption in the middle (8–23 A.D.) It was during this period that Confucianism became an integral part of the Chinese civilization. Unlike in Western civilization, however, it did not create an independent religious institution. Rather, it was incorporated into the state structure in the form of bureaucracy. Fairbank describes:

⁸⁵ *Ibid.*, p.39.

⁸⁶ *Ibid.*, p.49

⁸⁷ *Ibid.*, p. 51.

The Confucianists won out over the other schools of Warring States philosophy because they claimed to be, and became, indispensable advisers to the emperor. In its broad historical context this meant as Arthur F. Wright phrased it, that “the literate elite... had entered into an alliance with monarchy. The monarch provided the symbols and the sinews of power: throne, police, army, the organs of social control. The literati provided the knowledge of precedent and statecraft that could legitimize power and make the state work. Both the monarch and the literati were committed to a two-class society based on agriculture.”⁸⁸

Once established, this pattern continued for millennia, with one empire replacing another, except during the 5th and 6th centuries, when China was divided between the North and the South. Mark Lupher studied the power structure of the Ming Dynasty (1368–1644), Qing Dynasty (1644–1911), and the communist regime. He observed the continued relationship and struggle between the ruler and elites. This process bears two characteristics that can also be seen in Western civilization. First, since the elites were educated by Confucianism, this represents the rivalry between the secular and religious authorities. Second, this also represents the struggle between the ruler and the aristocracy in the European states. The religious struggle was not strong, however, due to the nature of Confucianism. Some considered it to be a religion, but Fairbank calls it a “philosophy.”⁸⁹

To this, Lupher adds non-privileged masses to his observation. This is useful because it gives us an opportunity to observe the possibility of the final stage of Vico's cycle—i.e., democratization. If the third social group had won, China would have entered the era of democracy. The following is a summary of his study.

During the early Ming period in the late 14th century, a power concentration process took place. The ruler was facing degree-holding elites and land-holding elites as political rivals. The ruler successfully reduced their political influence by recruiting state officials from the bottom among the unprivileged masses and by confiscating their lands. He also purged the military and established despotism. Starting in the mid-15th century, however, countervailing forces emerged. The system of recruitment from the bottom started to decline. The land-holding local elites also regained ability to collect land taxes. Tax evasion became rampant, and by the mid-16th century, the court lost its dominant political

⁸⁸ *Ibid.*, p.67.

⁸⁹ *Ibid.*, P.51.

influence. At that point, the emperor tried to regain power, which led to violent conflict, ending in the demise of the Ming Dynasty.⁹⁰

The mighty Manchu invaded China and took over for the Ming Dynasty, establishing the Qing Dynasty in 1644. The Manchu ruler also was successful in concentrating political power in his own hands. The ruler had to deal with Chinese degree-holding, land-holding and Manchu aristocrats. At first he promoted all three groups so that no single group might enjoy significant political power. The ruler also concentrated formal decision-making authority in his own hands but gave informal power to these groups. Furthermore, he awarded various privileges to these groups to set them apart from the masses. These were helpful to cultivate loyalties to the ruler among elites. Toward the local land-holding elites, the ruler institutionalized the tax system in such a way as revenue would be concentrated in the rulers' hands. This process was conducted under the pretext of helping the peasants, who were suffering an arbitrary and predatory tax collection by local landowners. However, the Qing rulers could not avoid the fate of power-erosion. The long period of prosperity caused a significant increase in population, and local conditions deteriorated as a result. In the late 18th century, during and after the White Lotus Rebellion (1796–1803), local militia led by local elites began to emerge, and local militarization proceeded. Their political influence gradually increased, and during the Taiping Rebellion (1850–1864), the local militia took over tax collection authority. The Revolution of 1911 manifested the victory of regional and local Chinese over the central state. At that point China was completely decentralized, divided among local warlords. During the period between 1926 and 1937, nationalist China tried to centralize but failed due to its weak fiscal base.⁹¹

This was how China joined modern international society. It followed the pattern of the late-late-industrializers along with Russia. Both failed to democratize and became communist countries. The Chinese communist regime followed a somewhat similar path to the preceding dynasties. Initially, it succeeded in centralizing China under Mao Zedong's leadership. However, the failure of industrialization during the 1950s created a challenge to Mao's dictatorship. A group of technocrats in the party started to advocate the introduction of a market economy. Facing this challenge from the mid-level party officials, Mao mobilized the masses, encouraging the masses in his Hundred Flower Statement to criticize party officials with revolutionary rhetoric. Then, Mao launched the first Leap Forward industrialization plan, bypassing party leaders, and appealed directly to the masses. This turned out to be a total fiasco. Industrial

⁹⁰ Mark Luper, *Power Restructuring in China and Russia*, Boulder: Westview Press, 1996, Chapter 2.

⁹¹ *Ibid.*, Chapter 2.

productivity decreased significantly, causing severe famines. Party officials tried to hold Mao responsible. In return, Mao purged these officials by using such techniques as “re-education through labor.” At this time, however, the fundamental party structure was intact, and the party survived relatively unscathed. During the 1960s, purged experts were restored and rapprochement was achieved between the Communist Party and professional technocrats.

Then came the Cultural Revolution. It started when several university professors attacked the authority and legitimacy of the party organization. Mao endorsed it. This resulted in the initiation of the Red Guard Movement in 1966. Bourgeois experts and other party officials were exposed to this violent attack by the masses. Mao legitimized the movement, putting the party officials on the defensive. In order to defend themselves, party leaders formed a moderate coalition. The military, People's Liberation Army (PLA), was caught in between. Briefly, it supported Mao and the masses, but quickly it turned around and joined the moderate coalition. This was the decisive turning point, and Mao lost. This victory of a moderate coalition eventually led to the decision of bringing a market economy to China during the Third Plenum in 1978.⁹²

With the Soviet Union, it is now abandoning its communist experiment and going through the path to capitalist democracy.

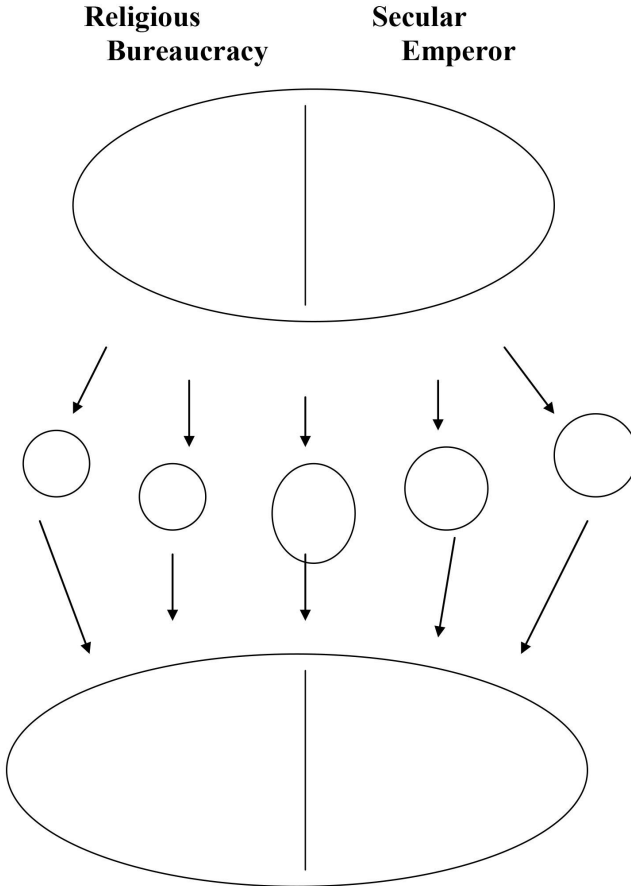
The Chinese example presents several important observations. First, whereas in the ancient Greek and Roman republics, the masses were able to obtain political influence, leading them to democracy, by supporting the effort of the ruling elite in their war efforts or supporting the aristocracy in its effort against the king, in modern China, where the scale is much larger, organized efforts are necessary for the masses to gain political power. All stable contemporary democracies went through democratization after industrialization created two organized groups—the bourgeoisie and labor—as a compromise between capital and labor, which over-powered the military social groups (the aristocracy and monarchy). Second, the Chinese case presents an interesting observation to the traditional school of Western realism, which insists that the concentration of power is impossible because as one actor cumulates power, all the others come together to prevent the monopoly of power. After having gone through a similar pattern in the ancient period, China formed a vast empire. One was replaced with another, but through most of its history, it maintained the integrity of its territory, and fragmentation has been the exception. Fairbank presents two factors, which suggest possible hypotheses.

One is the notion of the Mandate of Heaven, which gives

⁹² Ibid., Chapters 6 and 7.

legitimacy to rule all of China. As mentioned above, the Warring period took a severe toll, and the idea emerged that China was better off being unified and ruled by one benign ruler. The example after the Tang Dynasty suggests that unlike in the West, warlords had a winner-takes-all attitude.

**Illustration 2-4
Pattern in Chinese Civilization**



Fairbank observes:

With the demise of the Tang central power, the ten or so successor states of tenth-century China were in a multistate polity a bit like that of the Warring States era before the Qin unification. In their relations with one another, the rulers fell back on some practices of those

times, such as negotiation through envoys, although their multistate relations were now focused on the question of who would receive the central imperial power.⁹³

The other is the established bureaucracy as counter to local warlords:

But the Ruzhen emperors soon found they had to sustain their central power in competition with their own Ruzhen tribal leaders, military aristocrats from the north who expected to control lands and peoples they had conquered. In self-defense the Jin emperor built up an imperial bureaucracy patterned on Confucian ways of government.⁹⁴

Once established, the bureaucracy helped to sustain continuation when a dynasty was replaced with another by keeping the same personnel, preventing disintegration. For example, when the Qing Dynasty took power from the Ming, "Some Ming officials chose death, but some became high administrators for the Manchus and helped smooth the takeover."⁹⁵ Here, if this is indeed a significant factor, considering that the Roman Empire collapsed, a comparison between the Chinese and Roman bureaucracies may yield useful insight.

India: The ancient Indian civilization goes as far back as 2000 B.C. The period between 1500 B.C. and 600 B.C. is called the historical Vedic period. Around 2000 B.C., the Aryans advanced into Afghanistan and the Punjab region, where they started to engage in agriculture. There were many tribes, and the heads were called Rajas. During this period, the Rig Veda scriptures were compiled, which became the foundation of Hinduism. Around 1000 B.C., the Aryans emigrated down along the Ganges River, looking for more land. There, they settled and developed agricultural society. Around 800 B.C., they began to use iron tools, causing a significant advancement of agricultural technology. The stratification of society also progressed during this time, which would become fixed as the Caste system. The ruling classes were Brahman, which was the priest class, and the Kshatriya, which were the aristocracy and the warrior class. Below them were Vaisya, which consisted of farmers and merchants, and Sudra, the untouchables. Also, the Hindu doctrine, philosophy and ritual became highly complex. Eventually, only the Brahman could understand the ritual,

⁹³ Fairbank, p.113.

⁹⁴ Ibid., p.115.

⁹⁵ Ibid., p.145.

and they monopolized the ritual practice. By claiming that only those who understood the ritual were privileged to be in contact with the god, they achieved the dominant position in the society.

During the 6th century B.C., Hinduism became corrupt. It tried to revitalize itself, and new texts, the *Upanishads*, the Hindu scripture, were compiled. Buddhism was also established around this time in criticism against Hinduism, especially against the Caste system. At the same time, the tribal social system began to be replaced with kingdoms with a bureaucracy and military. The Magadha kingdom became the strongest—causing commerce to develop, and the Kshatriya and Vaisya classes became more influential. During the next few centuries, the trend continued, and in 317 B.C. a military leader named Chandragupta assumed the throne, and the Maurya Empire was established.

The empire had its heyday under King Asoka (268–232 B.C.), who established a despotic rule with a strong military. However, the Hindu priests still enjoyed great influence, as Romila Thaper states: “The authority of the king was linked with divine approval. At the level of daily functioning this connection was expressed by the important position of the brahmans.... The dependence of the king on the brahmans is more clearly indicated...where it is stated that the three factors which bring unqualified success to the king are, the support of the brahmans, the good advice of the ministerial council, and action in accordance with the sastras [specialized knowledge].”⁹⁶ Asoka tried to reduce the religious influence:

It has been stated that the use of the title *Devanampiya* by Asoka was another indication that the king sought the support of the sacerdotal power. But it would appear that it was more than an indication of his wish for priestly support. It was an attempt to emphasize the connection between kingship and divine power, perhaps even to the degree of excluding the intermediaries, the priests.⁹⁷

A part of this effort was to endorse Buddhism. So he launched the politics of Dharma (the rule by the law.), which was preached in Buddhism:

Buddhism was a protest against the malpractices which had crept into Hindu ritual and thought. The latter was largely due to the power of the brahmans, who regarded themselves as God’s elect, and began to enjoy the

⁹⁶ Romila Thaper, *Asoka and the Decline of the Mauryas*, Oxford: Oxford University Press, 1961, pp.95–96.

⁹⁷ *Ibid.*, p. 96.

dominant position to which increasing temporal power had brought them.⁹⁸

However, Asoka did not press hard for Buddhism. He did not adopt Buddhism to be the national religion even though he endorsed and protected it. Later, he became a Buddhist himself, but he did not persecute other religious sects. This is because Asoka had the more fundamental goal of uniting the larger Indian society:

The social transition and the territorial expansion of this time gave it the character of a period of emergency, which made a strong controlling force all the more necessary. Thus the confederacies and republics gave way to kingdoms with a tendency towards the consolidation of smaller units into larger units, until the peak was reached in the Mauryan empire. This political change introduced the idea of a wider citizenship concerned with more than just local happenings. Buddhism was suited to this situation in so far as it emphasized a broader social consciousness, unlike Brahmanism in which social responsibility was significant largely within the confines of each caste.⁹⁹

Thaper compares Asoka with Constantine: “The emperor Constantine, with whom Asoka has been most frequently compared, used Christianity on occasion for political ends.”¹⁰⁰ However, the comparison ends quickly. Whereas the relationship established by Constantine between the temporal and religious authorities continued on for millenniums in Western civilization, here, it collapsed almost instantly. Within fifty years after Asoka’s death, the empire collapsed. Buddhism also failed to continue to be an independent religious authority, as Christianity had after the fall of the Roman Empire. Even though Buddhism was patronized by the Kushan Empire (ca. 45–240), the following Gupta Empire (ca. 320–520), under which the ancient Indian civilization experienced its zenith, patronized Hinduism again. Even though it never recovered the political influence that it had enjoyed before, Buddhism spread among the people under the royal patronage. In the 8th century, India went under Muslim influence. Then, it was incorporated into the British imperial system. Therefore, Vico’s cycle was interrupted before the region could proceed

⁹⁸ Ibid., p. 140.

⁹⁹ Ibid., p. 143.

¹⁰⁰ Ibid., p.145.

with democratization. India went into the modern era as a secular democracy due to British institutional influence. However, it has not gone through democratization through industrialization. Therefore, it behaves differently from the modern industrialized democracies. Also, the Islamic influence remains in Pakistan and Bangladesh, which have become independent of India.

Islam: Islam began its course as a major civilization about 600 years after the beginning of Christianity. Its path was different in that it did not establish two separate poles between the military and religious authorities, such as kings and popes in Christendom, but it was put under unified leadership of the Sultan-Caliph.

Islam was established by Muhammad ibn Abdullah in 610. He received revelations from God, which were collected in the Quran. Between 610 and 622, he spread the religion in Mecca, but he was met with hostility. In 622, he had to flee to Medina. Unlike with Christianity, Muhammad did not need physical protection from the king because he was capable of both being the Prophet and the protector of the faith, as Cleveland describes:

During his ten years in Medina, Muhammad's status rose dramatically. From a scorned prophet with few followers, he became the head of a small state and the dominant figure throughout Arabia. This transformation was achieved through a combination of warfare, negotiation, and preaching, the success of which seemed to confirm Muhammad's right not only to prophethood but to political leadership as well. . . . In the years between the *hijrah* (fled to Medina) and the surrender of Mecca, Muhammad's leadership role became more complex. Medina developed into a small city-state with a treasury, a military, and an ever-increasing number of converts.¹⁰¹

By the end of his life, he was able to consolidate most of the tribes in Arabia. After his death, his combined religious and political authorities became the caliphate, and his successors were called caliphs. The first caliphs were Abu Bakr, Umar, Uthman, and Ali. They were called Rashidun caliphs, who would be nostalgically recalled by later Muslims. In 656, when Uthman was murdered, a succession dispute erupted. Ali, a cousin of Muhammad, was chosen to be the next caliph. But Muawiyah—the governor of Syria—and others contested, and civil war broke out.

¹⁰¹ William L. Cleveland, *A History of the Modern Middle East*, Boulder: Westview Press, 1994, pp. 10–11.

After Ali's death, Muawiyah became the caliph and founded the Umayyad dynasty, which lasted until 750. This dispute eventually evolved into the division of Islam between Sunnis and Shias. When internal disarray caused the demise of the dynasty, it was succeeded by the Abbasid dynasty, which lasted until 1258. The period between 750 and 945 was called the high caliphate of the Abbasid Empire. The Abbasid became an "absolute monarch who exercised the powers of both secular king and spiritual head of the Islamic ummah (community)." ¹⁰² According to Cleveland, this worked for them:

For nearly two centuries following the revolution of 750, this Abbasid formula worked reasonably well and brought to the empire unprecedented prosperity, dazzling intellectual achievement, and general political stability based on the widespread acceptance of the benefits of caliphal absolutism. ¹⁰³

After 945, the Abbasid Empire started to decline. In 945, the Abbasid dynasty was taken over by an Iranian military dynasty. The caliphate lost substantive power and became a mere figurehead. Its fragmentation continued until its demise in 1258. During this period, they compiled the Islamic law, which is called the shariah.

The Abbasid Empire was eventually replaced with three major regional empires—the Ottoman, Safavid and Mugal empires. The Ottoman Empire was an absolute monarch, which was ruled by the sultan-caliph. It had three ruling elites—the military, the civil service and the religious authority called ulama, qadis (judges) and shaykh al-Islam (chief religious dignitary). They were Sunnis. But at this point, the religious influence was put under secular authority:

Despite the influence the ulama exercised on the population at large, despite the importance of the *qadis* in establishing *shariah* norms of justice, and despite the authority of the *shaykh al-Islam*, the entire religious establishment held office at the pleasure of the sultan. The income of the ulama may have been largely independent of the state, but their appointments were not. The *shaykh al-Islam* who dared to issue an opinion that contradicted the sultan's wishes was likely to be dismissed, no matter how

¹⁰² Ibid., p.18.

¹⁰³ Ibid., p.18.

well founded his opinion may have been in Islamic legal theory.¹⁰⁴

During the 16th and 17th centuries, the Ottoman Empire lost its dominance, but the empire lasted until the end of World War I.

The Safavid Empire was located in modern Iran, and lasted from 1501 to 722. The founder of the empire, Shah Ismail, adopted Shiism and created a strong religious influence:

Ismail enforced his proclamation by dissolving the Sunni brotherhoods and ordering the executions of all who refused to accept Shiism. As there was no existing Shia religious establishment in Iran, Ismail created one by importing Shia ulama and legal experts from the Arab lands, especially from Lebanon. These religious officials filled the vacuum at the highest ranks of the religious hierarchy and laid the groundwork for the emergence of a vibrant Shia ulama class.¹⁰⁵

It was initially a tribal military regime, but it transformed itself into an absolutist, bureaucratic empire in the 16th century. It completed the centralization of the government during the reign of Shah Abbas I (1527–1629).

The Sunni Ottoman and Shia Safavid fought over Iraq. In 1508 Shah Ismail occupied Baghdad. While occupying Baghdad, the Safavid Empire imposed Shiism on the population. The Ottoman Empire, as the protector of Sunni Islam, could not tolerate it, especially in the very place that used to be the center of the Abbasid caliphate. In 1534, the Ottoman ruler restored Iraq under Ottoman control, claiming successfully to be the supreme ruler of the Islamic world. But it was taken back by Shah Abbas in 1624, only to be taken back by Ottoman's Murat IV in 1638.

India started to feel an Islamic presence during the 7th century. Islam's spread was helped by Sufism because its similarity to Hinduism made it easy for Hindu followers to practice. Islam attempted to invade India under the Umayyad Dynasty, and at the end of the 12th century, the Delhi Sultanate was established. The Delhi Sultanate was absorbed by the Mughal Empire when it was established in 1526. Initially, it tried to be independent of orthodox Islam by declaring an independent caliphate within its domain; however, in the end, it accepted the orthodoxy:

¹⁰⁴ Ibid., p.48.

¹⁰⁵ Ibid., p.53.

Akbar, however, made a correct analysis of the situation and decided that if he allied himself with the non-Muslims and the heterodox elements [Sufism] in the Muslim population, he could reduce orthodoxy to helplessness. He succeeded, and became virtually a temporal sovereign outside the practice of Islamic kingship. Orthodoxy [Sunnis], however, rallied towards the end of this reign, and gradually built up a power which could not be ignored. Jahangir, therefore, had to restore such institutions of orthodox Islam as had been put in abeyance.... The orthodox reaction did not subside, and ultimately resulted in the policies of Awrangzeb, who was not only personally orthodox like Sha Jahan, but also relied heavily upon orthodox support.¹⁰⁶

The Mughal Empire reached its zenith in the early 18th century, from which time it steadily declined until its final demise in 1862.

During the 17th century, a reform movement began in Islamic India. Then in the 18th century, in central Arabia, the puritanical reform movement called Wahhabism began. More reform movements followed. Cleveland characterized these movements:

During the eighteenth and nineteenth centuries, an increase in doctrinally based Islamic movements occurred among the rural populations in various Islamic regions. The leaders of these movements often were men educated in the classic Islamic tradition who came to believe that the infiltration of decadent popular practices was causing Islamic society to deviate from the tradition of the Prophet. The rural movements they launched for the purification of the faith helped spread the conviction that Islamic society would have to look within itself for the sources of its own regeneration.¹⁰⁷

Fazlur Rahman agrees:

[T]he pre-Modernist reform movements which swept over the larger part of the Muslim world during the seventeenth,

¹⁰⁶ I.H. Qureshi, "India under the Mughals," in P.M. Holt, Ann K.S. Lambton, and Bernard Lewis, ed., *The Cambridge History of Islam: Vol. 2, The Further Islamic Lands, Islamic Society and Civilization*, Cambridge: Cambridge University Press, 1970, pp. 52-53.

¹⁰⁷ Cleveland, p.116.

eighteenth and nineteenth centuries has clearly established that the consciousness of degeneration, and of the corresponding need to remedy social evils and raise moral standards, was generated from the heart of Muslim society itself.¹⁰⁸

These movements were reactionary as Rahman indicates: “All of these movements, without exception, emphasized a ‘return’ to pristine Islam in terms of the Qur’an and the *Sunna* of the Prophet.”¹⁰⁹

In the 19th century, Islamic modernists engaged in a reform movement. Unlike in Western civilization, which went through the natural process from the Reformation and Counter Reformation, followed by the Enlightenment as a path to modernity, Islamic civilization proceeded under Western imperialism, which distorted the process. First, the Islamic modernists tried to implement the Western institutions in order to free them from domination by the West. However, they were unable to import institutions alien to their cultural and spiritual foundation. As a reaction to this problem, the Islamic society experienced a resurgence of fundamentalism. Rahman assesses the problem:

The reasons for this vehement reaction, and the submergence and decline of Modernist thinking, are manifold.... First, the new ideas brought by modern education needed time to ripen in order to produce mature representatives.... Allied to this is the fact that the early exponents of Modernism did not fully grasp the deeper spiritual and moral factors behind the phenomenal flowering of modern Western civilization, and they took mainly into consideration only certain external manifestations of this inner vitality, such as modern democratic institutions, universal education, and the emancipation of women. The deeper foundations of the creative vitality of the West, particularly humanism in its various forms, were not studied properly and given due weight. The result was that an attempt was made to transfer, because of their attractiveness, certain more or less external institutions of the West to a new soil wherein they were not properly adapted to the new conditions. Indeed, the Modernist did not develop traditional Muslim thought from the inside to supply an adequate basis for the

¹⁰⁸ Fazlur Rahman, “Revival and Reform in Islam,” in Holt et al. ed., p. 641.

¹⁰⁹ Ibid., p.640.

new values and institutions.... The early Muslim Modernists, the starting point of whose Modernism lay in Westernism, almost deified liberalism, and sought to impose its categories upon Muslim society. The result was that, when their message penetrated into the interior of the society, it was vehemently rejected.¹¹⁰

In this way, the attempt to import modernity without proper grounding triggered fundamentalist and reactionary responses in the Islamic society.

Entering the 20th century, the Ottoman Empire collapsed, and the Islamic civilization was more deeply incorporated into the Western international political system. The Ottoman territories were divided and eventually became occupied with the sovereign states. The fact that the nation-state format was imposed before secularization proceeded at its own pace, as mentioned above, implanted the seeds of fundamentalism. In addition, it complicated the modernization process in terms of the number of existing social groups. In the West, by the time industrialization created the bourgeoisie and labor, the religious influence was no longer politically relevant. Democratization proceeded in the presence of a maximum of four social groups: the king, the aristocracy, the bourgeoisie and labor. This study indicates that the more social groups the process involves, the more complicated it becomes. The Islamic states now have one more, the religious social group, totaling five. This complicates the process more than in the West.

The effects across Islam are not identical. Turkey succeeded in secularization immediately. In 1922, under the Ataturk regime, the assembly separated the caliphate from the sultanate and eliminated the sultanate. In March 1924, Caliph Abdul Mejid was deposed, and the caliphate was abolished. The Islamic shariah law was also abolished in 1926. Turkey then proceeded with democratization in a similar manner to the secular Western states.

On the other end of the spectrum, Saudi Arabia became a kingdom. Its ruling dynasty had deep roots in the region and derived legitimacy from the "Islamic and monarchical foundations."¹¹¹ The rulers believed that modernization "could be undertaken without upsetting the conservative social structure and Islamic value system on which the regimes' authority depended."¹¹² This arrangement has become increasingly uneasy with the

¹¹⁰ *Ibid.*, p.649.

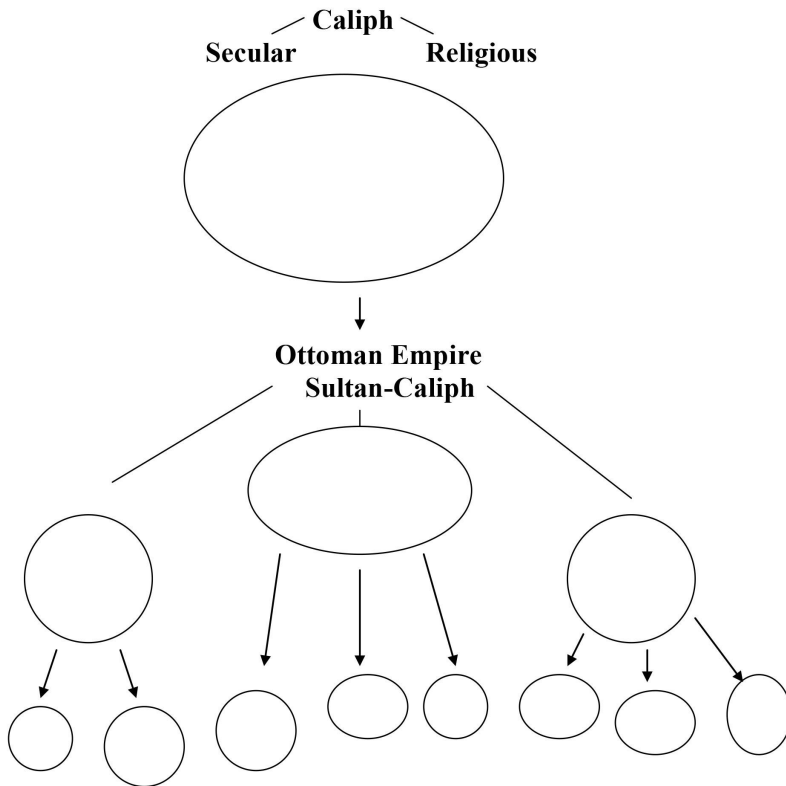
¹¹¹ Cleveland, p. 378.

¹¹² *Ibid.*, p.384.

emerging new middle-class of the modern industrial structure as its industrialization proceeds.

There are also states which are going through industrialization and democratization with a strong religious influence. In Iran, for example, Mosaddiq’s National Front against the Shah was a coalition ranging from supporters of the religious social group of ulama to secular professionals who had been educated in the West. However, this made it very difficult for Mosaddiq to sustain the front. The Iranian Revolution failed because of the foreign intervention, but with this wide ranging coalition, the result might have been the same, even though they might have eventually succeeded after several similar attempts over decades if the developmental course had not been interrupted by external influence.

**Illustration 2-5
Pattern in Islamic Civilization**



It complicated the political process even more by making multiple ideational options available in power politics. In power politics, secular

rulers mostly rely on physical coercion to secure their domination. However, coercion is costly. Therefore, an ideational option, which cultivates the dedication of their subjects, is an attractive option for rulers. It is especially an important option for the power contenders who are materially in inferior positions. In the case of Western civilization, by the time the modern states came into being, Christianity was no longer an ideational option. So, they invented nationalism. This was a convenient option because it mostly coincided with the territory they dominated.

Power contenders in Islam in the 21st century still have religious options, which have potential for fundamentalism due to the 19th century process mentioned above. In addition, they also have secular nationalism as an option, which can be expanded to be Arabism. Their religious options provide the possibility for uniting the region, while their secular options tend to divide them. Both options have been tried by the power contenders in the Islamic region. In Iran, Ayatollah Khomeini adopted religious fundamentalism against the Shah regime. Most recently, such organizations as the Taliban are trying to appeal to people beyond their national borders by appealing to Islamic values. These movements have been so far relatively isolated and failed to become a global trend. The global appeal that the religion provides is not adequate for the power contenders to adopt in their regional rivalries. For example, the Middle East suffers division between the oil-producing and nonoil-producing countries. Some countries also compete for regional dominance. Which option they choose would decide whether Islamic countries unite against the West or fight among themselves.

II. PROBLEM DEFINED

Vico died in 1744, but his cycle has continued throughout Western civilization. One serious concern that this cycle denotes is that each change—from the religious authority to the secular authority, and from the secular authority to democracy—was marked with tremendous violence. Another concern is how the cycle plays out in non-Western civilizations. As shown above, Japan, China, India, and Islamic societies were going through the cycle on their own, but the process was interrupted by Western imperialism, and these societies have incorporated into Vico's cycle in various stages, in some cases, in a severely distorted form.

While all the civilizations examined here have undergone Vico's cycle, there are variations in their processes. In Western and Japanese civilizations, military and religious authorities formed two distinctive units, as the king's monarch and the pope's church, and the shogun and the emperor, respectively, ready for the all-out-confrontation. In China, the two were incorporated into one political unit as the ruler and his

bureaucracy. In historic Islam, the two were also incorporated into one authority as Sultan-Caliph. In historic India, after the first cycle, their first religion Hinduism had been corrupt, and Buddhism emerged. Up to this point, it was similar to corrupt Judaism and Christianity. However, the nature of Buddhism, as discussed in detail later, is passive and lacks the element of “devotion to God.” This made it politically useless for secular rulers, who tried to use the religion to cultivate loyalty for themselves by saying: “To dedicate to me is to dedicate to God.” Therefore, Buddhism had little to offer to the secular leaders unlike in Western civilization, where the king and the pope needed each other and established a symbiotic relationship in the early period, helping both to become socially dominant actors. This was both a blessing and curse. There was no noted mass violence under Buddhist influence on one end, but Buddhism failed to gain political influence, which was necessary to achieve what it aspired to do— i.e., to establish a peaceful and just society. It remained as an advisory body. These variations could influence the level of violence that civilizations experience during Vico’s cycle. Further research on these and other issues could shed insightful light on how to control Vico’s cycle.

These observations have serious implications for the contemporary world because multi-layers of transitions are taking place in three different parts of the world. And this produces the triple challenges for the modern world.

First, the democratization process is now becoming influential to the post-communist transition in China and Russia. Similarly, such countries as India may further their democratization process, which might lead to a radical expansion. While India is a democracy in form, it was a result of the British imperial rule, so it has not undergone the modern democratization process, in which capital and labor emerge as a result of industrialization and take over the political authority from the military class. At first glance, India seems to be undertaking economic modernization through professional and service industries, rather than heavy industries, making it less likely to produce concentrated capital and labor, which might change their dynamics. Specialists on India might wish to study closely the current state of India and similarities to and differences from the historical democratization cases.

Second, in the Islamic world, the transition from the religious authority to the secular authority is now underway. The religious and secular authorities are cooperating and competing for the domination over the population, which is similar to the 10th to 16th centuries in Christian Europe. However, their process has been incorporated into Western civilization and, therefore, distorted. We need to examine how this might affect the world.

Third, Western countries are beginning to experience the disintegration of democracy. In this process, ancient Greece ended democracy by external invasion, while the Roman Republic ended democracy by internally voting for dictatorship. If the decay progresses in the West, it would be next to impossible to deal with the other two challenges.

Each process could produce an enormous amount of violence by itself, but, on top of that, one could link to another, which would amplify the level of destruction. For example, there is a possibility that China and Russia might follow a similar path to Germany and Italy, and become incredibly violent. If it happened, there would be a war between China and Russia on one end, and the U.S., the European Union, and Japan on the other, following the pattern of World War II. Furthermore, if the timing were right, this could link to the anti-democratic movement of the Islamic world. Having an enemy is convenient to both religious and secular power holders, so definitely they would play this card to its maximum. If it happened, the democratic states would face a grand alliance of China, Russia and united Islam. Democracies, undergoing democratic disintegration, would not have the ability to face these challenges. Then, they may well be defeated. Having lost the common enemy, the two remaining camps would then fight. To make things worse, these macro-political processes that could produce system-wide violence are now in tandem with the unprecedented ability of physical destruction. Therefore, this war could cause devastation beyond description.

In this way, because they could be linked, the transition issues in all phases must be addressed simultaneously. Otherwise, a perfect solution to one problem (if there were such a thing) could produce harmful effects on the other problems. This makes it extremely challenging for us to live in the modern world.

This book argues that in order to find an effective solution for the triple challenges of the modern world and eventually to establish perpetual peace, a system of thought called universal idealism must be established. The next chapter will outline how that would work.

CHAPTER 3

UNIVERSAL IDEALISM

In order to cope with the triple challenges (i.e., democratization in post-communist China and Russia, the transition from religious to secular authority in the Islamic world, and the disintegration of democracy in the West), this chapter lays out a paradigm called universal idealism.

At its base, universal idealism starts with the concept of negative entropy, introduced by Erwin Schrödinger. Negative entropy is a controversial concept; however, it teaches us two important points, inducing a way of thinking that can lead societies to break from of Vico's cycle and to find solutions to the triple challenges. In his book, *What is Life?* Schrödinger investigates the differences between organic and inorganic matter.¹ He concludes:

It is by avoiding the rapid decay into the inert state of “equilibrium” that an organism appears so enigmatic; so much so, that from the earliest times of human thought some special non-physical or supernatural force (*vis viva*, entelechy) was claimed to be operative in the organism, and in some quarters is still claimed.

How does the living organism avoid decay? The obvious answer is: By eating, drinking, breathing and (in the case of plants) assimilating. The technical term is *metabolism*. The Greek word (μεταβάλλειν) means change or exchange. Exchange of what? Originally, the underlying idea is, no doubt, exchange of material. (e.g. the German for metabolism is *Stoffwechsel*. That the exchange of material should be the essential thing is absurd. Any atom of nitrogen, oxygen, sulphur, etc., is as good as any other of its kind; what could be gained by exchanging them? For a while in the past our curiosity was silenced by being told that we feed upon energy. In some very advanced country

¹ Erwin Schrödinger, *What is Life?: With Mind and Matter and Autobiographical Sketches*, New York: Cambridge University Press, 1967/1996.

... you could find menu cards in restaurants indicating, in addition to the price, the energy content of every dish. Needless to say, taken literally, this is just as absurd. For an adult organism the energy content is as stationary as the material content. Since, surely, any calorie is worth as much as any other calorie, one cannot see how a mere exchange could help.

What then is that precious something contained in our food which keeps us from death? That is easily answered. Every process, event, happening—call it what you will; in a word, everything that is going on in Nature means an increase of the entropy of the part of the world where it is going on. Thus a living organism continually increases its entropy—or, as you may say, produces positive entropy—and thus tends to approach the dangerous state of maximum entropy, which is death. It can only keep aloof from it, i.e. alive, by continually drawing from its environment negative entropy—which is something very positive as we shall immediately see. What an organism feeds upon is negative entropy. Or, to put it less paradoxically, the essential thing in metabolism is that the organism succeeds in freeing itself from all the entropy it cannot help producing while alive.²

Schrödinger goes on to explain technically what entropy means. For us, the critical points have been expressed already. First, even though organic matter is made of inorganic matter, it distinguishes itself by organizing its molecules to import negative entropy from the environment in order to “avoid decay into the inert state of equilibrium.” This indicates that all living matter must have a built-in predatory nature because it must take what is needed from the environment; therefore, it cannot independently exist. Second, even though organic matter is made of inorganic matter, it can obtain a certain degree of freedom from the laws of physics. As Schrödinger mentions, it violates the law of entropy. Animals also can initiate movement on the earth, which is in violation of Newton’s First Law, the Law of Inertia—which may be the origin of human free will. The following sections explore the effects of these two points, as we introduce the paradigm of universal idealism.

I. EFFECT OF NEGATIVE ENTROPY 1–BUILT-IN PREDATORY NATURE

² Ibid., pp. 70-71.

Even though all organic matter somehow imports negative entropy from the environment, there are many different ways to do so. So, a predatory nature is not required but only potential. Indeed, some organisms such as autotrophs managed to obtain negative entropy from non-organic materials such as sunlight. It is also possible to formulate a structure in which two individuals can both benefit, or at least one does not lose so they can avoid competition. Anthony Martin mentions the co-evolution between plants and insects.³ It was a win-win arrangement. Even among more complex life forms, one can observe inter-species cooperation in the forms of mutualism and commensalism. However, the history of evolution shows that most organisms have been subjected to three kinds of competition.

The first is as the direct source of negative entropy—i.e., food. If they cannot defend themselves from predators, they will be eaten. The second is the competition over available resources. Predators must compete for the limited amount of food. The third is the competition over reproduction among members of the same species. These three kinds of competition embody the world of the survival of the fittest, in which only the strongest can survive and pass their genes to the next generations. In such an environment, some organisms gradually evolved into more complex forms for survival, which ironically required more energy and intensified the predation. Here is a brief selection from the history of evolution relevant to our study.⁴

1. Evolution

The first life on the earth evolved around 3.8 billion years ago. The initial life was a cell called the prokaryote, and almost all of them were unicellular. From the prokaryote evolved bacteria, archaea, and eukarya. A kind of eukarya was called protists, from which animals evolved.

There were four kinds of organisms depending on how they obtain nutrition: photoautotrophs, photoheterotrophs, chemolithotrophs, and chemoheterotrophs. Animals are chemoheterotrophs, which “obtain both energy and carbon atoms from one or more complex organic compounds,”⁵ because “they cannot synthesize [organic molecules] from inorganic chemicals. They acquire these organic molecules by ingesting other organisms or their products, either living or dead, and digesting them

³ Anthony Martin, and John Hawks, *Major Transitions in Evolution, Course Guidebook*, Chantilly, Va.: The Teaching Company, Lecture 15.

⁴ Information here has been obtained from William K. Purves, David Sadva, Gordon H. Orians, and H. Craig Heller, *Life: The Science of Biology, Volume II: Evolution, Diversity and Ecology* (7th Edition), Sunderland, Mass.: Sinauer Associates, Inc., 2004.

⁵ Purves, et al., p. 531.

inside their bodies.”⁶ Purves, et al., summarized: “The evolution of animals has been, and continues to be, a complex ‘arms race’ among predators and prey”⁷

Purves, et al., describes the evolution of animals as follows:

Animals evolved from colonial flagellated protists as a result of division of labor among their aggregated cells. Within the ancestral colonies of cells... some cells became specialized for movement, others became specialized for nutrition, and still others differentiated into gametes. Once this specialization by function had begun, working groups of cells continued to differentiate while improving their coordination with other groups of cells. Such coordinated groups of cells evolved into the larger and more complex organisms that we now call animals.⁸

Scholars speculate that this had an advantage for survival:

The initial advantages of multicellularity may have included: increased resistance to predators, many of which attacked by engulfing; the ability to resist currents by attaching to a firm surface; the ability to reach upwards to filter-feed or to obtain sunlight for photosynthesis;⁹ the ability to create an internal environment that gives protection against the external one;¹⁰ and even the opportunity for a group of cells to behave “intelligently” by sharing information.¹¹

⁶ Ibid., p. 620.

⁷ Ibid., et al., p. 653.

⁸ Ibid., et al., p. 620.

⁹ Butterfield, N. J. (September 2000). “*Bangiomorpha pubescens* n. gen., n. sp.: implications for the evolution of sex, multicellularity, and the Mesoproterozoic/Neoproterozoic radiation of eukaryotes”. *Paleobiology* 26 (3): 386–404. doi:10.1666/0094-8373(2000)026<0386:BPNGNS>2.0.CO;2. <http://paleobiol.geoscienceworld.org/cgi/content/abstract/26/3/386>. Retrieved 2008-09-02.

¹⁰ Bonner, J. T. (January 1999). “The Origins of Multicellularity”. *Integrative Biology* 1 (1): 27–36. doi:10.1002/(SICI)1520-6602(1998)1:1<27::AID-INB14>3.0.CO;2-6. [http://doi.wiley.com/10.1002/\(SICI\)1520-6602\(1998\)1:1%3C27::AID-INB14%3E3.0.CO;2-6](http://doi.wiley.com/10.1002/(SICI)1520-6602(1998)1:1%3C27::AID-INB14%3E3.0.CO;2-6). Retrieved 2008-09-03.

¹¹ Nakagaki, T., Yamada, H. and Tóth, Á. (September 2000). “Intelligence: Maze-solving by an amoeboid organism”. *Nature* 407: 470. doi:10.1038/35035159. <http://www.nature.com/nature/journal/v407/n6803/abs/407470a0.html>. Retrieved 2008-09-03. Originally from https://en.wikipedia.org/wiki/Evolutionary_history_of_life.

This was not a smooth process because not all the cells may agree with the division of labor. So, Butterfield insists that sexual reproduction evolved from this necessity:

Multicellularity with differentiated cells is beneficial to the organism as a whole but disadvantageous from the point of view of individual cells, most of which lose the opportunity to reproduce themselves. In an asexual multicellular organism, rogue cells which retain the ability to reproduce may take over and reduce the organism to a mass of undifferentiated cells. Sexual reproduction eliminates such rogue cells from the next generation and therefore appears to be a prerequisite for complex multicellularity.¹²

This division of labor continued among individual animals after they became physically established. According to Purvey, et al.:

Many colonial sessile protostomes ... are able to grow in the direction of better resources or into sites offering better protection. Individual members of colonies, if they are directly connected, can share resources. The ability to share resources enables some individuals to specialize for particular functions, such as reproduction, defense, or feeding. The nonfeeding individuals derive their nutrition from their feeding associates.¹³

Once multicellular organisms appeared, the unit continued to become more complex, developing such functions as a sensory system. With it, organisms could now detect their immediate environment, which increased the odds for survival. Furthermore, about five hundred million years ago, vertebrates emerged, from which mammals branched out about 200 million years ago. Vertebrates had the central nervous system called the brain. There was a significant development in the structure of brain when mammals emerged:

¹² Originally from <http://www.wikipedia.org> Evolutionary_history_of_life. Butterfield, N. J. (September 2000). "*Bangiomorpha pubescens* n. gen., n. sp.: implications for the evolution of sex, multicellularity, and the Mesoproterozoic/Neoproterozoic radiation of eukaryotes". *Paleobiology* 26 (3): 386–404. doi:10.1666/0094-8373(2000)026<0386:BPNGNS>2.0.CO;2.

<http://paleobiol.geoscienceworld.org/cgi/content/abstract/26/3/386>. Retrieved 2008-09-02.

¹³ Purvey, et al., p. 653.

The cerebral cortex is the part of the brain that most strongly distinguishes mammals from other vertebrates, primates from other mammals, and humans from other primates. The hindbrain and midbrain of mammals are generally similar to those of other vertebrates, but dramatic differences appear in the forebrain, which is not only greatly enlarged, but also altered in structure.¹⁴

In non-mammalian vertebrates, the surface of the cerebrum is lined with a comparatively simple layered structure called the pallium.¹⁵

In mammals, the pallium evolves into a complex 6-layered structure called neocortex or *isocortex*. In primates, the neocortex is greatly enlarged, especially the part called the frontal lobes. In humans, this enlargement of the frontal lobes is taken to an extreme, and other parts of the cortex also become quite large and complex.¹⁶

With this development, consciousness emerged. It significantly increased the odds for survival because now individuals could detect the environment and then make judgements in order to survive. Human brains sit at the pinnacle of earthly brain development so far.

The **neocortex** (Latin for “new bark” or “new rind”), also called the **neopallium** (“new mantel”) and **isocortex** (“equal rind”), is a part of the brain of mammals. It is the outer layer of the cerebral hemispheres, and made up of six layers, labelled I to VI (with VI being the innermost and I being the outermost). The neocortex is part of the cerebral cortex (along with the archicortex and paleocortex, which are cortical parts of the limbic system). It is involved in higher functions such as sensory perception, generation of

¹⁴ Barton, RA; Harvey, PH (2000). “Mosaic evolution of brain structure in mammals.” *Nature* 405 (6790): 1055–8. doi:10.1038/35016580. PMID 10890446.

¹⁵ Aboitiz, F; Morales, D; Montiel, J (2003). “The evolutionary origin of the mammalian isocortex: Towards an integrated developmental and functional approach”. *Behav Brain Sci* 26 (5): 535–52. doi:10.1017/S0140525X03000128. PMID 15179935.

<http://www.bbsonline.org/Preprints/Aboitiz/Referees/>.

¹⁶ <http://www.wikipedia.org/brain>

motor commands, spatial reasoning, conscious thought and language.¹⁷

Here, according to Jeanette Norden, “The limbic system of the brain allows for learning, memory, and emotion, all of which influence executive function.”¹⁸ Among the limbic system, Norden believes: “The *dorsolateral prefrontal cortex* appears to have more of an involvement in executive function in humans, contributing to our ability to prioritize behavior and to adapt to change; because executive function is influenced by emotion, it is included here.”¹⁹

In addition to intelligence, through which humans can collect information from the environment and make decisions about what to do in order to survive, the limbic system also gives humans emotion. Parents care about their off-spring; as a result, mammals in general have a much higher survival rate than other creatures, so they do not have to reproduce hundreds or thousands of offspring. Emotion also helps survival in another way. Among herd animals, families care for each other, so divisions of labor became an available strategy. In a herd of meerkats, some members stay with the babies, while others go foraging. And while foraging, some members watch for predators. At the current-point of this development, humans perform the most complex divisions of labor for survival.

At this stage of brain development, animals face a similar dilemma that single cell organisms faced more than a billion years ago: Should we try to survive as individuals, or as part of a group? For mammals, verdicts are not in yet. Some mammals, such as most cats, choose to live solitary lives, whereas such mammals as wolves, dogs and primates form groups and live social lives. For the species that have chosen to form societies, individuals are required to sacrifice, in varying degrees, individual interests such as the right to reproduce. This dilemma is also reflected in human thinking. Some humans idealistically believe in a strategy of obtaining security through cooperation with others, while others realistically believe in focusing on individual survival. The next section examines these two schools.

2. Idealism and Realism

As mentioned above, at this stage of evolution, both idealism and realism are equally viable options for us humans.

¹⁷ <http://www.wikipedia.org/neocortex>

¹⁸ Jeanette Norden, *Course Guidebook: Understanding the Brain*, Chantilly, Va.: The Teaching Company, p. 89.

¹⁹ *Ibid.*, p. 90

Idealism tries to establish a structure from which humans can derive security to escape the natural law of survival of the fittest. A parallel to the physical body exists here. For any multicellular organism to avoid degeneration, each cell must be healthy and perform its designated function well. By keeping the whole system well, each cell can benefit in return and increase its odds of survival, compared to existing independently. However, there is one crucial difference for humankind. It is not the physical structure that provides our security here. Largely, it is the metaphysical structure that dictates the behavior of humans toward each other. Therefore, it is humans ourselves who are the material needed to build this structure. The metaphysical structure is also subject to the law of entropy. As organisms disintegrate without constantly importing negative entropy, this structure also requires constant import of negative entropy for its maintenance, and we must provide it by either donating negative entropy directly to the system or absorbing entropy into ourselves, which otherwise would go to the system. Traditionally this behavior has been called morality, altruism or self-sacrifice.

What is crucial to build and maintain such a structure is the quality of the materials, namely us. We must be ready to shift our focus from individual survival to the welfare of the structure itself. Idealists make a fundamental assumption that we are capable of this, that human nature is essentially “good.” In other words, people try to attain security by giving up their individual well-being to some extent and contributing to the whole society in exchange for their security and various benefits. Idealists call the behavior that would promote this attempt moral or ethical, whereas any behavior focused on individual survivability immoral or unethical. All religions have been formed within this system of thought and attempted to persuade people to behave according to this tenet. Many religions also adopt the notion of God, instead of an abstract notion of the system, and glorify God to promote the devotion to the whole. Idealists encourage people to do “the right thing,” which means to contribute to the system as a whole, instead of focusing on themselves. This explains why right things are always hard to do because it means to give up and contribute negative entropy to the system, while you need your own to maintain your individual entity. Self-sacrifice and altruism are the name of the game for idealism, but only because you will benefit from it if the system functions properly.

In order to make the system function properly, every member of society must join. This is the goal of idealists. Once this is achieved, there is no danger to the system. No one would pursue his or her individual agenda. Everyone is focused on the welfare of the system, because they all know that by keeping the system healthy, they will benefit. Therefore, for

them, the ideal society would be run by one most competent individual such as a philosopher king (as in Plato) to make decisions for the good of all. In this society, all the power would be concentrated under this individual.

Also, since people's focus is on the structure of the metaphysical system, their main concern naturally will be focused on metaphysics, as opposed to materialism. The system also will far outlive their individual life spans, so idealists tend to have much longer perspectives, to be big thinkers. Also, since it is not possible to achieve and maintain the system individually, they will see others as indispensable collaborators, instead of competitors. This explains the traditional emphasis on "love" in the idealist tenet.

Realism, on the other hand, begins with the assumption that human nature is evil, or at the very least, selfish. However, "evil" is a term migrated from idealism. Realists' assumption is that people are amoral, because it is natural to be self-oriented. In other words, human nature makes us focus on the individual survivability. From this viewpoint, life is a zero-sum game, in which anything that individuals do to survive is legitimate, including harming others. This is the world of the survival of the fittest. Your gain may be directly my loss. In such a world, everyone would try to maximize his/her power because the more powerful you are, the more security you will gain. As a result, societies dominated by realist thought glorify maximization of power. However, there is a safety valve. First, even though in this school of thought, humans will not hesitate to kill, humans will not waste precious energy for killing that will not bring any benefit to them, either. As we can see in the wild, mammals do not kill for the sake of just killing. They kill only to eat, defend their territories, or compete for mates. People would also constantly conduct cost-benefit calculations and will harm others only when the benefit outweighs the cost by doing so. In other words, in the realist world, people will refrain from harming others not because of the moral code, but out of the cost-benefit calculations, which should produce a similar effect in society as a moral code would.

Second, if power became concentrated on one individual, the welfare of all the others would be in jeopardy. Therefore, once it became clear that one were gaining disproportionate power, all the others would get together to prevent further concentration of power. If power distribution changed, the alliance pattern would also change. Since people are amoral in this world, yesterday's enemy can be today's friend easily and vice versa. So power will not be concentrated in this system of thought, making the world "war of all against all" (as in Thomas Hobbes).

In addition, since this school insists that people's main focus is their own physical survival, people tend to focus on their more immediate welfare. This would create two tendencies. First, people will tend to subscribe to materialism based on their concern for physical survival. Materialism as defined here is that all that exists is matter; that all things are composed of material, and all phenomena (including consciousness) are the result of material interactions. In other words, matter is the only substance. Second, people could lose the tendency to be big-thinkers. Because anything beyond their life span would be none of their concern, they would not contemplate on greater issues that go beyond their immediate environment. In the world dominated by realism, therefore, the scale of thinking would become smaller.

This project calls both scholars who subscribe to idealism and actors who behave based on the idealist tenet "idealists," while it calls both scholars who subscribed to realism and actors who behave based on the realist tenet "realists."

At this point, let's go back to Vico's cycle and reexamine it from this observation. What operates behind Vico's cycle is another cycle of idealism and realism. At any point of development, both idealism and realism are viable options for survival with one gaining prominence. Therefore, at any given point of history, there is a group of people who subscribe to idealism and another to realism. However, in some historical eras, idealism is more dominant and in others, realism is more dominant. As a general pattern, in the natural state of war of all against all, people would crave for security and be more willing to give up individual interests. This helps the rise of idealism. During this period, religious authority enjoys dominant influence, hence creating Vico's Age of Gods. People designate all the power to the religious authority. However, normally there is a segment of the population who still subscribes to realism. For these people, it would be a precious opportunity to get a hold of enormous power over the population for their own individual purposes. These people then start to encroach on the religious authority. As time goes by, people begin to see corruption in the religious institutions, which discredits the religious authority and idealism in general. At this point, those who could offer physical security gain authority, entering Vico's Age of Heroes, or the kingship. Even though these exact same people would be the ones causing the danger to begin with, once this becomes the norm, it leaves very few options other than joining one of the powerful groups. Once entering the age of realism, its mechanism for power dispersion would kick in, and it would become very difficult to maintain concentrated power for a prolonged time. If anyone got a hold of significant power, everyone else would try to take it away by getting together temporarily until the

dominant person in power was taken down. Eventually, there would be no center of power, entering Vico’s Age of Men. As it progresses, the world would go back to the state of war of all against all. Now the cycle is complete and the second cycle would start. If this is correct, we should see the corresponding cycle of the rise and fall of idealism and realism behind Vico’s cycle. The next section conducts a brief survey of Western civilization from this point of view.

3. The Metaphysical Cycle in Western Civilization

Illustration 3-1
Summary of Metaphysical Cycle in Western Civilization

AGE	PHOLOSOPHY	RELIGION	ART	SCIENCE	VICO's AGE
400BC	Socrates (b.469BC) Plato (b.428 BC)				
300BC	Aristotle (b.384BC)				Barbarism
		CHRISTIANITY			Age of Gods
300		St. Augustine (b. 354)			
		St. Thomas Aquinas (b. 1225)	Dante (b.1265)		
			RENAISSANCE		
1500	Machiavelli (b. 1469)		Leonardo da Vinci (b.1452) Michelangelo (b.1475)	SCIENTIFIC REVOLUTION Copernicus(b.1473)	
			Shakespeare(b.1564)	Galileo(b.1564)	
1600	Hobbes (b. 1588) Descartes (b. 1596)			Newton(b.1643)	Age of Heroes
			J.S. Bach (b. 1685)		
1700		ENLIGHTENMENT			
	Kant (b. 1724)		NEOCLASSICISM		
1800	Hegel (b. 1770) Marx (b. 1818)				
	Nietzsche (b. 1844)		ROMANTICISM		Age of Men
1900	POSTMODERNISM				

(1) Greek Idealism: When democracy was bottoming out in ancient Greece, the Greeks produced a series of idealists: Socrates, Plato and Aristotle. While Vico's cycle shows us that the end of democracy denotes the transition from the Age of Men to barbarism, we see that as a response to this decay of civilization, the Greeks proposed idealist solutions, but they fell on deaf ears. Athens killed Socrates.

Plato and Aristotle both adhered to idealism as opposed to realism. Both developed theories and prescriptions on ethics. Their directions were, however, opposite: Plato adopted a "top-down" approach, while Aristotle adopted a "bottom-up" approach. Renford Bambrough explains the difference as follows:

The first line of the [Aristotle's] *Ethics* makes clear that Aristotle's own approach is fixed by his biological, teleological standpoint. Every human activity has some good as its end or object; but different human activities have different ends. Although Plato was right when he related these ends together as forming a hierarchy, he was wrong in supposing that knowledge or the highest end was sufficient for virtue. We must start at the other end of the scale: just as the doctor treats *individual* patients, so must the moralist remember that human actions are particular responses to particular situations. Even though Aristotle accepts the traditional view that happiness is the highest good for man, he insists that that proposition is too vague to guide us in our detailed choices.²⁰

This difference reflects their general underlining philosophical approach. Plato was also an idealist as opposed to materialist. According to Frederick Copleston, S.J.: "In Plato's view the objects which we apprehend in universal concept, the objects with which science deals, the objects corresponding to universal terms of predication, are objective Ideas or subsistent Universals, existing in a transcendental world of their own—somewhere 'out there'—apart from sensible things, understanding by "apart from" practically spatial separation."²¹

Aristotle, on the other hand, did not seem to have separated the ideal approach from the material approach:

²⁰ Renford Bambrough, trans. by J.L. Creed and A.E. Wardman. *The Philosophy of Aristotle*, New York: Signet Classic, 2003, pp. 308-309.

²¹ Frederick Copleston, S.J. *A History of Philosophy. Volume II. Augustine to Scotus*, New York: Image Books, 1985, p. 166.

We ... see the closeness of the connection between Aristotle's metaphysical doctrine and his concern with biological investigation.... Aristotle does not abandon the Platonic conviction that knowledge is of what is universal, but what his distinction between what is most knowable *in itself* and what is most knowable *to us* enables is formal theory to give to the concrete individual substance the important place that it must necessarily have in the researches of the biologist.²²

Democracy in Athens was destroyed soon after, and the idealist philosophy of Plato and that of Aristotle were not utilized in their society.

(2) Christianity: Christianity emerged in Western civilization. During Vico's barbarism, it was persecuted, but eventually it became an influential carrier of idealism. During its ascendancy and heyday, attempts were made to synthesize Christianity with Greek idealism.

During the second century, St. Justin Martyr tried to incorporate Platonism into Christianity:

Justin's words concerning Platonism in the *Dialogue* show clearly enough the esteem in which he held the Platonic Philosophy. He prized its doctrine of the immaterial world and of the being beyond essence, which he identified with God, though he became convinced that the sure and safe and certain knowledge of God, the true "philosophy", is to be attained only through the acceptance of revelation.²³

Two centuries later came St. Augustine, whose contribution was summarized by Denise, Perfreund, and White:

His *Confessions*, although they contain abundant autobiographical detail, are primarily a eulogy of God and a declaration of devotion and love for Him. *The City of God*, on the other hand, is an extensive philosophy of history in the framework of the Christian religion, and it functions as an elaborate theodicy—a justification of the ways of God to humans. The *Enchiridion*, work of his later years, is a manual in which he sets forth the meaning of the virtues of faith, hope, and love....

²² Bambrough, p. xxx.

²³ Copleston, p. 17.

The teachings of Augustine dominated Christian belief almost exclusively for more than nine centuries, after which the scholastic philosophy of Saint Thomas Aquinas (1225–1274) shared domination with them.²⁴

Copleston explains how St. Augustine reconciled Platonism with Christianity:

[St. Augustine's] outlook is markedly Platonic in character. There is the same depreciation of sense-objects in comparison with eternal and immaterial realities, the same almost grudging admission of practical knowledge as a necessity of life, the same insistence on "theoretic" contemplation, the same insistence on increasing purification of soul and liberation from the slavery of the senses to accompany the epistemological ascent. Yet it would be a mistake to see in Augustine's attitude a mere adoption of Platonism and nothing more. Platonic and neo-Platonic themes are certainly utilized, but Augustine's interest is always first and foremost that of the attainment of man's supernatural end, beatitude, in the possession and vision of God, and in spite of the intellectualist way of speaking with which he sometimes uses and which he adopted from the Platonic tradition, in the total scheme of his thought the primacy is always given to love.... It is true that even this has its analogy in Platonism, but it must be remembered that for Augustine the goal is the attainment, not of an impersonal Good but of a personal God. The truth of the matter is that he found in Platonism doctrines which he considered admirably adapted for the exposition of a fundamentally Christian philosophy of life.²⁵

According to R. W. Dyson, the political theory derived from Platonic foundation was bleak:

For St. Augustine and those who wrote under his inspiration, earthly politics is on the whole a regrettable and squalid business. At best, it is a necessary evil. Political arrangements are inseparable from the sinful

²⁴ Theodore C. Denise, Sheldon P. Peterfreund, and Nicholas P. White, *Great Traditions in Ethics* (9th edition), Belmont, Calif.: Wadsworth Publishing Company, 1999, p.70.

²⁵ Copleston, p. 58.

condition of fallen man. Government would not have come into existence at all had the Fall not occurred. It originates in human greed and in the desire which men have to dominate one another. Its redeeming feature is the sinful and to test the faith of the righteous. Earthly peace and justice are uneasy, transient and unstable. They are pale copies of the true peace and justice laid up in heaven, which will be realized only after the end of earthly history, when the City of God enters into its inheritance of eternal bliss. Meanwhile the world grinds on through the war, greed, strife and pain generated by the ceaseless attempts of fallen men to triumph over on another.²⁶

Entering the 13th century came St. Thomas Aquinas, and the heyday of idealism in Western civilization. St. Aquinas reconciled Aristotle with Christianity. R.W. Dyson explains:

St. Thomas became convinced that it is possible to reconcile the teachings of Aristotle with those of the Church. Aristotle, though he lacked the advantage of divine revelation, and though his understanding of truth was to that extent defective, had carried intellectual investigation as far as unaided reason can go....

The “recovery” of Aristotle equips St. Thomas to forge a new kind of political theory: a political theory which we may characterize as milder and more optimistic precisely because it lacks Augustine’s stringent insistence on the unworthiness of this world and its ends.... He never explicitly disagrees with Augustine; but he sees no irreconcilable tension between the acquisition of present goods on earth and the achievement of eternal ones in heaven, provided that the former are directed toward the latter and the latter are not neglected in favour of the former. The interests of this world and the next can coexist. St. Thomas quotes with approval the famous maxim of Aristotle, that “man is by nature a political animal”.... To be sure, man has a true and final end of which Aristotle knew nothing. His true destiny is eternal beatitude with God in heaven. But earthly well-being, as far as it goes and as long as it is valued at its proper worth, is both possible

²⁶ R.W. Dyson, ed., *Aquinas: Political Writings* (Cambridge Texts in the History of Political Thought, New York: Cambridge University Press, 2005, p. xxiv.

and desirable, and the political means by which it is secured are valid. Even the rule of unbelievers over the faithful is legitimate provided that it is not scandalous or dangerous to the faith.²⁷

In this way, philosophy and religion interacted during the periods of strong idealist influence in Western civilization. While philosophy emphasized reason, religion emphasized love and divine revelation. Within Christianity, Plato's top-down approach and Aristotle's bottom-up approach were both pursued.

(3) Rise of Realism: The idealist trend, however, turned after this and Western civilization experienced a rise of realism in the following few centuries. In the 16th century, Machiavelli came along. Facing divided Italy, he insisted that “the ends justify the means.”²⁸ In order to unify Italy, any underhanded means should be allowed. Darren Staloff summarized his philosophy:

As a premier work of political realism, Machiavelli's *The Prince* marks a sharp departure from the classical idealist tradition associated with Plato. The book's “hero,” Cesare Borgia, is a cold-hearted, unscrupulous, calculating despot. The word “Machiavellian” has come to refer to a sinister, cunning person who ruthlessly pursues personal power in the manner described in the *Prince*.²⁹

A century later, Thomas Hobbes further develops realism. Dennis Dalton explains:

[Hobbes'] social-contract theory of government rejected the medieval idea that the monarch derives his authority from God and the Platonic idea that justice is objectively rooted rather than a matter of convention. Hobbes discovered the roots of justice in individual's fear of domination by others, and he held that government should be based upon the rational self-interest of its constituents.... Hobbes's analysis of human nature, his

²⁷ Dyson, pp. xxiv-xxv.

²⁸ Peter Bondanella and Mark Musa, ed., trans. *The Portable Machiavelli*, New York: Penguin Books, 1979, p. 18.

²⁹ Denis Dalton and Darren M. Staloff, *Course Guidebook: Great Minds of the Western Intellectual Tradition, Part II: The Age of Faith to the Age of Reason*, Springfield, Va.: The Teaching Company, 1998, p. 14.

theory of leadership, and his concept of sovereignty surpass those of Machiavelli. Hobbes further develops Machiavelli's realism.³⁰

Hobbes did not believe that human nature was evil; however, fear of death created the same effect. Staloff explains:

Humans in the state of nature fear each other as potential murderers; they are driven by fear to seek ever more power, which frightens others into seeking power for their own self-defense. The inability to attain total security arises from this vicious cycle of fear-defense-fear, not from any innate human aggressiveness or avariciousness.³¹

Realism became a dominant school in the modern academic society. In the 20th century, Hans Morgenthau developed a realist theory of international politics, which is based on a balance of power theory, in his *Politics among Nations: The Struggle for Power and Peace*.³² Nowadays, political scientists are struggling to explain altruism.

This move from idealism to realism can be also observed in the field of literature. Around the time of St. Thomas Aquinas, Dante wrote *The Divine Comedy*, which is a categorically idealistic Christian work. According to William R. Cook and Ronald B Herzman:

It is a remarkable, indeed unmatched, literary achievement from any point of view. It is a journey to the three parts of the Christian afterlife: hell, purgatory, and heaven, giving the afterlife a huge scope. It is cosmic in scale: Dante travels through the entire universe, from the deepest, coldest pit of hell to the very summit of heaven, where God dwells in endless glory.³³

By the time Machiavelli and Hobbes appeared, Shakespeare came into the picture. Much of his work deals with the head-on battle between realism and idealism.

³⁰ Ibid., p. 26.

³¹ Ibid., p. 24.

³² Hans Morgenthau, revised by Kenneth W. Thompson, *Politics among Nations: The Struggle for Power and Peace* (Sixth edition), New York: Alfred A Knopf, 1985.

³³ William R. Cook and Ronald B. Herzman, *Course Guidebook: Dante's Divine Comedy*. Chantilly, Va.: The Teaching Company, 2001, p. 4.

In *Othello*, Shakespeare presents a world in which good and evil directly confront. In this play, good and evil are presented as clearly distinguishable separate entities. On one hand, Desdemona represents pure good. On the other hand, Iago represents pure evil. And the protagonist, Othello, travels quickly from the world of Desdemona to that of Iago. Othello was tested and failed. Even though he was a good man, he made a mistake and the price was his soul. In this play, Shakespeare uses the medieval Judeo-Christian framework. The medieval imagery of devils—pure evil—catching people’s souls and bagging in the net is used. The Christian notion of polarization can be also found throughout the play, such as black and white, light and dark, and good and evil.

In *Macbeth*, Shakespeare also presents a world in which good and evil meet. However, in this play, good and evil are not easily distinguishable, and the world is much grayer, in which “fair is foul and foul is fair.” Macbeth had to live in the world in which realism and idealism coexisted. There, two tenets were completely mixed up and impossible to be separated. In this world, kings wanted to dominate but did not want to face the inevitable fate of being replaced by the stronger through the law of the survival of the fittest. So, they “borrowed” the idealist tenet and made his subjects believe in sacrifice for the greater good—the kingdom in this case. Macbeth bought into it. There, Macbeth had to fight a two-front war. If he had lived in a purely realist’s world, although he would have to be constantly on guard against the next challenger, there would be at least no need for remorse or cover-up. If he had lived in a purely idealist’s world, the idea of rebelling would not have occurred to him. He would have been truly happy to “serve the greater good,” although not for the king or the kingdom, but for humanity itself. As a result of this two-front attack, he turned into a killing machine, worse than the realist’s natural state of war. Realists would neither kill those who are not a threat to their domination, nor create unnecessary enemies, which are a waste of their valuable resources. Yet Macbeth started to destroy anything and everything around him, making enemies bigger than he could fight back, had expensed all resources, and was destroyed in the end. In this way, the transitional world described by Shakespeare was hell on earth.

In *King Lear*, Shakespeare presents the all-out confrontation in the polemic world between good and evil. This is similar to the worldview of *Othello*. However, Lear’s structure is much more complex because, unlike *Othello*, the play begins with a gray world, where good and evil are mixed up—much like the worldview of *Macbeth*.

Cordelia, like Desdemona, represents pure good, while Edmund, like Iago, represents pure evil. However, they are not presented as monolithic images of two distinguishable poles here. There are other

characters—Kent/Fool, Gloucester, Edgar, and Albany on the good pole; and Oswald, Goneril, Regan, and Cornwall on the evil end. These characters are distributed not at two separate poles, but randomly. Goneril, Regan, and Cordelia are sisters. Goneril is married to Cornwall, and they have an evil servant Oswald. But Regan is married to Albany. Edmund and Edgar are both sons of Gloucester.

As the play progresses, however, this landscape changes, and toward the end, two distinguishable poles form, flowing into the battle scene. First, Cordelia separates from the two evil sisters. Kent and Fool, following King Lear, also separate from them. Then, Edgar separates from Gloucester and Edmund. Later, Gloucester separates from Edmund. Initially, the good are not together but gradually they find one another. Kent and Fool find Edgar. Gloucester then joins them. Eventually, they get together with Cordelia. Albany stays with Regan until much later, but he, too, eventually separates and joins the good. Meanwhile, Edmund gets together with Goneril, Regan, Cornwall, and Oswald.

The battle, therefore, takes the form of the war of “Armageddon” between good and evil. In secular terms, France loses Lear’s kingdom, but this does not mean that evil wins the battle. A closer examination in symbolic terms shows that this battle produces no winner. Each side is successful in inflicting severe damage to the other. Edmund succeeds in killing Cordelia—the centripetal force of good. On the other hand, good also succeeds in destroying the centripetal force of evil, when Edgar slew Edmund. It is a draw. Is this the end? Are both sides completely destroyed, leaving nothing for humanity to go on? Many people die in this play but not everyone. Kent and Albany survive on the good end, while the two sisters and Cornwall survive on the evil end. They are lesser powers, which have lost their core, but they will regroup, regain their momentum, and will confront each other again when they are both strong enough. And this battle will go on.

Finally, King Lear is depicted as a benign but unwise character. King Lear represents the vast majority of people, who do not grapple with issues of good and evil in their daily lives. They are not even aware that this enormous battle is going on around them. Instead, they focus on their own comfort in their immediate surroundings. Inadvertently, they empower evil, which emptily promises to give them comfort, and then they suffer from the consequences. In their sufferings, they may finally become aware of the battle and realize the value of the good. But unfortunately, it is often too late.

Denise, Peterfreund and White claims that Hamlet also deals with the same issue:

“To be or not to be?” is at its heart a question of ethics. And “Whether ‘tis nobler in the mind to suffer the slings and arrows of outrageous fortune, or to take arms against a sea of troubles, and by opposing end them”—this is, indeed a difficult decision. In this, Hamlet’s dilemma is typical of the problems that confront the ethical theorist and the sensitive lay person alike.³⁴

(4) Decline of Religion: Once realism gained momentum, Christianity was put on the defensive. As mentioned in the previous chapter, it suffered an internal division. During the 150 years after the Thirty Years War, it encountered a serious attack, leading to the Enlightenment movement. It started in the 1680s, when French King Louis XIV revoked the Edict of Nantes, which had granted French Protestants limited tolerance. More than 200,000 fled the country.³⁵ The refugees began to attack absolute kings and Catholic Church:

Whenever the refugees went, the educated among them gravitated to presses and engraver’s studios. In the 1690s, they began an unprecedented propaganda battle against French absolutism. Louis XIV became a tyrant; his Catholic clergy were portrayed as persecutors, and the exiles were heralded as martyrs for the cause of religious toleration. After the 1680s, English Protestants, unhappy with their own Catholic king, made a political alliance with French Huguenot refugees to defeat absolutism, which they associated with Catholicism. This international alliance of Protestants remained a political force into the 1720s. The ensuing decades of crisis revealed the need for a radical break with the traditions that justified absolute monarchies and established churches. A consensus emerged in enlightened circles: The generally Catholic clergy had, for far too long, enjoyed the power to incite their monarchs to persecute at will. Soon all clerical privileges were scorned.³⁶

This political campaign targeted both the Church and the absolute monarch, hence the “Gods” and the “Heroes” simultaneously in Vico’s

³⁴ Denise, Peterfreund and White, p. 1.

³⁵ Margaret C. Jacob, *The Enlightenment: A Brief History with Documents*, Boston: Bedford/St. Martin’s, 2001, p. 4.

³⁶ Jacob, p. 4.

terms. On the former attempt, through such figures as Locke and Rousseau, the Enlightenment paved the way for democracy.

As to the Church, the movement caused its decline, not just politically but also intellectually. Here Immanuel Kant made a great contribution. Kant provided an invaluable tool to achieve rationalism in his *The Critique of Pure Reason*. Kant also presented a moral theory based on reason, which could replace faith in *Foundations of the Metaphysic of Morals*, introducing the categorical imperative,³⁷ which is defined as an unconditional moral law that applies to all rational beings and is independent of any personal motive or desire.³⁸

As a result, the Church lost its great influence in society. Gerald R. Craig summarizes the general trend as follows:

The authority of the church was challenged in many spheres, but nowhere so seriously as in the intellectual realm. The new psychology, which described the human mind as a blank sheet of paper on which experience inscribed knowledge, was an attack on the view long current in the church. The veiled suggestion that ethical culture was an adequate substitute for Christian faith was an indirect assault on the church's authority. People wanted freedom to think and act as they pleased. To Voltaire and those who shared his views, the Enlightenment offered emancipation from "prone submission to the heavenly will". Liberty was interpreted in many ways, but it was assumed that it conferred at least the right to take your religion moderately....

At the outset the new thought was cordially disposed toward the Christian faith. Gradually the balance shifted from what God has revealed to what man has discovered. In due course the sufficiency of reason was confidently affirmed, and the whole content of Biblical theology was relegated to a marginal status of comparative insignificance.³⁹

³⁷ For more details, see Ernst Cassirer, trans. by James Haden, *Kant's Life and Thought*, New Haven and London: Yale University Press, 1981.

³⁸ <http://www.thefreedictionary.com>

³⁹ Gerald R. Craig, *The Church and the Age of Reason: 1648–1789 (The Pelican History of the Church. 4)*, New York: Pelican Book, 1970, pp.12–13.

In this way, Christianity, once the center of idealism, lost much of its influence in Western civilization.

(5) The Rise of Materialism: Along with the rise of realism, materialism also began to rise. When idealism began to decline, alternative approaches began to appear. René Descartes emphasized mind-body dualism, which means that both mind and body exist; however, the mind and the body are composed of distinct substances.⁴⁰ Hobbes went further to insist that only matter exists as in materialism. Fast forward to the 19th century, Karl Marx built on Hegel, a German idealist, and presented social materialism. Some called young Marx a “philosopher,”⁴¹ and mature Marx a “social historian.”⁴² Louis Althusser, a communist philosopher explains, “[Y]oung Marx and the mature Marx were worlds apart, separated by ... an ‘epistemological break’ in which ideological Hegelianism was left behind completely for a scientific theory of historical materialism.”⁴³ And from this point on, in the field of political science, materialism became the dominant school of thought.

In the field of art, a change can be observed in the 13th century. According to Fred S. Kleiner, and Christin J. Mamiya, “Throughout the Middle Ages, the Byzantine style dominated Italian painting.”⁴⁴ They describe the Byzantine style as follows:

The frontal figures of the Byzantine mosaic... hover before viewers, weightless and speechless. Their position in space are ... uncertain.... Tall, spare, angular, and elegant, the figures have lost the rather squat proportions characteristic of much Early Christian work. The garments fall straight, stiff, and thin from the narrow shoulders. The organic body has dematerialized, and, except for the heads, some of which seem to be true portraits, viewers see a procession of solemn spirits gliding silently in the presence of the sacrament.... Blue sky has given way to heavenly gold, and matter and material values are disparaged. Byzantine art is an art without solid bodies or cast shadows, with blank golden spaces, and with the

⁴⁰ <http://www.wikipedia.org/dualism>.

⁴¹ Sidney Hook, *From Hegel to Marx: Studies in the Intellectual Development of Karl Marx*, New York: Columbia University Press, 1994, p. xvii.

⁴² *Ibid.*, p. xvii.

⁴³ *Ibid.*, p. xxiv.

⁴⁴ Fred S. Kleiner and Christin J. Mamiya, *Gardner's Art through the Ages, Volume II* (12th edition), Belmont, Calif.: Wadsworth/Thomson Learning, 2005, p. 523.

perspective of Paradise, which is nowhere and everywhere.⁴⁵

Entering the 13th century, there was a movement away from this and to naturalism. The paintings once again began to have more physical characteristics, or three-dimensionality, paving the way to the humanism of the Renaissance.

(6) Fragmentation of the Thought System: In tandem with the move toward materialism, the system of thought, once coherent under the Church leadership, began to disintegrate. First, science became a separate field. Science, or natural philosophy, was not very prevalent during the period between 400 and 800 in the Christian world, and scientific knowledge was primarily imported from the Islamic world.⁴⁶ In the 12th century, it started to have Latin influences.⁴⁷ Aristotle became influential. However, Principe notes: “In the Middle Ages, natural philosophers and theologians were frequently the same people.”⁴⁸ “[T]he Franciscans and Dominicans developed new natural philosophical outlooks and programs as part of their theology.”⁴⁹ Even though Principe is cautious about the periodization, he notes that customarily the period roughly between 1450 and 1550 is called Renaissance, and the period roughly between 1550 and 1700 the Scientific Revolution. He believes that the periodization is problematic because there were several continuing factors between the Middle Ages and Renaissance, but he also accepts that there was a significant break between 1450 and 1550. One of such developments was the Reformation movement (1518), which “fractured Western Christianity, altering the institutional framework in which natural philosophy had been previously pursued.”⁵⁰ Also, there was now a practical reason to pursue science: “Science and technology were needed to get to the new lands more quickly and reliable and for the exploitation of what was found there.”⁵¹ During the Renaissance, however, science did not seem to be a closed field, occupied by specialists like today. Such Renaissance giants and Leonardo da Vinci and Michelangelo were both artists and engineers/scientists simultaneously. Even though Leonardo was more famous for engaging both artistic and scientific projects, Michelangelo was

⁴⁵ Ibid., p. 336.

⁴⁶ Laurence M. Principe, *Course Guidebook: History of Science: Antiquity to 1700, Part II*, Chantilly, Va.: The Teaching Company, 2002, p. 7.

⁴⁷ Ibid., p. 17.

⁴⁸ Ibid., p. 29.

⁴⁹ Ibid., p. 34.

⁵⁰ Ibid., p. 49.

⁵¹ Ibid., p. 48.

also a competent engineer. For example, when Florence was under siege between 1527 and 1534, he was appointed to be governor general of the fortifications of Florence, and engineered the city's fortification.⁵²

Then along came the Scientific Revolution, which is said to have begun in 1543 with the publication of *On the Revolutions of the Heavenly Orbs* by Copernicus.⁵³ Then, Galileo tried to establish new physics.⁵⁴ As one of these developments, Principe mentions mechanical philosophy. It came as a serious threat to the Church:

One of the major new concepts of seventeenth-century natural philosophy was the “mechanical philosophy.” An expressly anti-Aristotelian system that envisioned the world as a great machine functioning like a clockwork. The revival of ancient atomism was a related development. Although the mechanical philosophy seemed to provide comprehensible explanations of natural phenomena, it was not without problems—perhaps most crucially, in terms of its theologically unacceptable potential consequences.⁵⁵

It was in the middle of this tension between science and the Church when Isaac Newton came along. There is no doubt that he laid a solid foundation for modern science with the invention of calculus and other contributions. Walter Karp describes his achievement as follows:

The nature of Isaac Newton's vast achievement is easier to state than to grasp, but a singular lexical fact may suggest its magnitude. During Newton's lifetime, what we know as modern science was known to many simply as “the Newtonian Philosophy.” It seemed to be his own personal doctrine, and to a remarkable extent it was. He did not himself “discover” science. No one man could have done that. Science was not some compact instrument simply waiting to be used. It was rather a complex invention that men had painstakingly to put together out of quite disparate elements. Physical science is an abstruse meld. It unites, for one thing, the abstractions of mathematics, which have no physical meaning, with concrete physical phenomena, which have no inherent mathematical form. It

⁵² William E. Wallace, *Course Guidebook: The Genius of Michelangelo*, Chantilly, Va.: The Teaching Company, 2007, Lecture 23.

⁵³ Principe, *Part III*, p. 8.

⁵⁴ *Ibid.*, p. 19.

⁵⁵ *Ibid.*, p. 28.

employs a skeptical and exacting experimental method but combines that method with the most sweeping assumptions about the mechanical nature of reality. Being empirical, it assumes that truth will emerge from the investigation of things as they are; being mathematical and mechanical, it also assumes that things as they are, are never what they seem to be. How these elements might be combined is not readily apparent, but their combination and synthesis was Newton's. If modern science and its methods can be likened to a machine, then it was Newton who assembled its parts and demonstrated its awesome power.⁵⁶

One note of caution must be inserted. Even though he laid the foundation for modern science, Newton himself was not a modern figure. He did not believe in reason as opposed to faith. James Gleik states:

[Newton] believed in God, not as a matter of obligation but in the warp and weft of his understanding of nature. He believed in God eternal and infinite; a living and powerful Lord holding say over all things; omnipresent, in bodies and filling *the space that is empty of body*. He believed in God as immovable—and this belief fused with his vision, still not quite defined, of absolute space. Newton's God had established the rules by which the universe operates, a handiwork that humans must strive to know....

If God was immutable, religion was not. Close study fed both his faith and his heresy. He researched and wrote the history of the church again and again. He read the Scriptures literally and indulged a particular fascination with prophecy, which he saw as complex symbolism to be unraveled and interpreted. He considered this a duty. He set down a catalogue of fifteen rules of interpretation and seventy figures of prophecy. He sought the facts, dates, and numbers. He calculated and then recalculated the time of the Second Coming, which he understood to be the restoration of primitive uncorrupted Christianity.⁵⁷

⁵⁶ Walter Karp, "Makers of Modern Thought: Sir Isaac Newton," in *Horizon (Autumn, 1968)*, pp. 17–26), pp. 17–18.

⁵⁷ James Gleick, *Isaac Newton*, New York: Vintage Books, 2003, p. 108.

In this way, Newton did not separate physics and metaphysics. However, he laid the foundation for modern science, and subsequent generations would separate it from metaphysics. Thus, science, which used to be an integral part of Christian scholarship, became a completely independent system of thought.

To illustrate this general trend, I will present three approaches to light: one from the medieval era, one by Werner Heisenberg in the 1940s, and the last from a physics textbook from the contemporary era.

First, Martin Kemp explains the medieval approach to light:

Many medieval philosophers had devoted what seems to be an extraordinary amount of intellectual effort to the study of optics, but we must take into account the reasons for the power which light held over their minds. Light was, traditionally, the manifestation of divine power and glory; few self-respecting Christian visions were complete without a grand display of miraculous radiance. Light was regarded by a group of influential philosophers during the thirteenth century as the primary metaphysical component of all being. And in their resulting studies of optical forces they found that the exalted absolutes of classical geometry moved into uniquely close conjunction with the actual processes of the natural world. Light, travelling in straight lines appeared to obey geometrical laws in such a way as to reflect the divine order of God's creation. Thus it was that such major intelligences as Alhaen, Roger Bacon, John Pecham, and Witelo realised the science of optics to a revered place in medieval natural philosophy. And thus it was that light, at once rigorously geometrical and incomprehensibly transcendent, came to provide the supreme manifestation of divinity in Dante's Paradiso.⁵⁸

Second, Nobel Laureate physicist Werner Heisenberg has one chapter in his *Philosophical Problems of Quantum Physics*, called "The Teaching of Goethe and Newton on Colour in the Light of Modern Physics." After examining how Goethe and Newton each approached the problem of light, Heisenberg concludes:

Dividing reality in this way into different aspects [chemical and organic spheres] immediately resolves the

⁵⁸ Martin Kemp, *Leonardo da Vinci: The Marvelous Works of Nature and Man*, New York: Oxford University Press, 2006, p. 12.

contradictions between Goethe's and Newton's theories of colour. In the great structure of science, the two theories take up different positions. It is certain that an acceptance of modern physics cannot prevent the scientist from following Goethe's way of contemplating nature too. It would of course be premature to hope, on this basis, for an early return to a more direct and unified attitude to nature. It appears to be the task of our time to grasp, by experiment, the "lower reaches" of nature and, through technology, to make them our own. In our advance in the field of exact science we shall, for the time being, have to forgo in many instances a more direct contact with nature such as appeared to Goethe the precondition for any deeper understandings of it. We accept this because we can, in compensation, obtain an understanding of a wide range of interrelations, seen with complete mathematical clarity. This must, undoubtedly, also be the basis and precondition for a proper understanding of the "higher reaches". Those who regard this as too great a sacrifice will, for the time being, be unable to devote themselves to science. They will only grasp that sense of science where, at the outer limits of present-day methods of research, science discovers its relations to life itself.⁵⁹

Third, in the contemporary physics textbook, the problem of light is handled within the realm of science only, without contemplation as done by Heisenberg:

Light is basic to almost all life on the Earth. Plants convert the energy transferred by sunlight to chemical energy through photosynthesis. In addition, light is the principal means by which we are able to transmit and receive information to and from objects around us and throughout the Universe.

The nature and properties of light have been a subject of great interest and speculation since ancient times. The Greeks believed that light consisted of tiny particles (*corpuscles*) that were emitted by a light source and that these particles stimulated the perception of vision upon

⁵⁹ Werner Heisenberg, "The Teachings of Goethe and Newton on Color in the Light of Modern Physics," in *Philosophical Problems of Quantum Physics*. Woodbridge, CT: OX Bow Press, 1952, pp. 60–76.

striking the observer's eye. Newton used this particle theory to explain the reflection and refraction (bending) of light. In 1678, one of Newton's contemporaries, the Dutch scientist Christian Huygens, was able to explain many other properties of light by proposing that light is a wave. In 1801, Thomas Young showed that light beams can interfere with one another, giving strong support to the wave theory. In 1865, Maxwell developed a brilliant theory that electromagnetic waves travel with the speed of light... By this time, the wave theory of light seemed to be firmly established.

However, at the beginning of the twentieth century, Max Planck returned to be particle theory of light to explain the radiation emitted by hot objects. Einstein then used the particle theory to explain how electrons are emitted by a metal exposed to light. Today, scientists view light as having a dual nature—that is, light exhibits characteristics of a wave in some situations and characteristics of a particle in other situations.⁶⁰

(7) Fragmentation of Art: Art also became independent of religion. It started in northern Europe, partly because “the prevailing Calvinism demanded puritanical rejection of art in churches.”⁶¹ Also, the economic development in the region created a new type of patron: “With the new prosperity, an expanding class of merchant patrons emerged, and this shift led to an emphasis on different pictorial content. Dutch Baroque art centered on genre scenes, landscapes, portraits, and still lifes, all of which appealed to the prosperous middle class.”⁶²

Within the field of art, there is a fluctuation in emphasis between emotion and intelligence. Paul Henry Lang describes the Baroque style:

THE High Renaissance embodies calm, assured, and mature human clarity. The strong, happy, and intelligent man who assimilated in himself classical culture was the ideal measure of all things. Proportion, harmony, clarity, comprehensiveness, and unity in diversity were the aesthetic doctrines ruling the era. While the first half of the cinquecento as still occupied mainly with the problems of

⁶⁰ Raymond A Serway, and John W. Jewett, Jr., *Physics for Scientists and Engineers with Modern Physics, Vol. 2* (6th edition), Belmont, Calif.: Thompson Brooks/Cole, 2004, p. 1093.

⁶¹ Kleiner and Mamiya, Volume II, p. 718.

⁶² *Ibid.*, p. 718.

space, with the application and development of perspective, and with the representation of the human body, the second half of the century was more and more interested in the emotional side of action, from which the spatiotemporal unity of the composition develops. What was earlier a pure form of existence, with the artistic problems centering about spatial definition, developed here into a vividly felt phenomenon of action.⁶³

The artistic trend swung back to one of rationalism in the Enlightenment. Just before that, however, the field of music managed to produce J.S. Bach, whose work is simultaneously intelligent and emotional, as Christoff Wolff describes as “principled yet moving, scientific yet human.”⁶⁴ Wolff describes his scientific side:

A paradigm shift had taken place and gradually took hold, comparable to what happened in philosophy (which included mathematics and physics) as a result of Newton’s work. Certainly by coincidence but exactly a month after Bach’s death, in an article dated August 28, 1750, Bach’s former student Johann Friedrich Agricola, who had become a respected composer, performer, and theorist in Berlin, drew an analogy for the first time between Newton and Bach, pointing out their deep involvement with the “profound science” of their respective fields. And it appears utterly appropriate to see Bach’s musical advances in the light of Newton’s philosophical achievements. The two men reached pinnacles of a very different kind, but they lived, thought, and worked in the same intellectual climate of scientific discovery and empirical testing of fundamental principles.⁶⁵

Albert Schweitzer brings out Bach’s artistic side:

It goes without saying that Bach seizes the poetic mood in its finest nuances. We can fully apply to it Wagner’s remark that music should express the inexpressible, the very root of the poetic idea, the expression of which is

⁶³ Paul Henry Lang, *Music in Western Civilization*, New York: W.W. Norton, 1941, p. 321.

⁶⁴ Christoph Wolff, *Johann Sebastian Bach: The Learned Musician*, New York: W.W. Norton, 2000, p. 462.

⁶⁵ Wolff, p. 462

beyond the power of verbal speech, that is too intellectual for the purpose.

His conception of the Bible words is not always the customary one; it comes from a profound and very personal emotion. The music he has given to the sacramental words of the Last Supper in the *St. Matthew Passion* is astounding. There is not a trace of grief. The music breathes peace and majesty; the nearer it draws to the end, the more stately becomes the quaver-movement in the basses. Bach sees Jesus standing before the disciples with radiant face, prophesying of the day when He will again drink from the cup at the heavenly supper with them in His father's kingdom. Bach has thus emancipated himself from the conventional idea of the scene, and, by means of his artistic intuition, has attained a juster sense of it than theology has ever done.⁶⁶

In order to describe Bach's achievement, Lang cites Schweitzer: "THUS Bach is the end. Nothing comes from him; everything merely leads up to him."⁶⁷

The Enlightenment brought Neoclassicism, which put emphasis on rationalism once again. In the 19th century, there was another reaction, leading to Romanticism, which once again emphasized emotion. Kleiner and Mamiya explain:

[W]hereas Neoclassicism's rationality reinforced Enlightenment thought, particularly that promoted by Voltaire, Jean-Jacques Rousseau's ideas contributed to the rise of *Romanticism*. Rousseau's exclamation, "Man is born free, but is everywhere in chains!" summarizes a fundamental premise of Romanticism.... Romanticism emerged from a desire for freedom—not only political freedom but also freedom of thought, of feeling, of action, of worship, of speech, and of taste, as well as all the other freedoms....

The transition from Neoclassicism to Romanticism was manifested in a shift in emphasis from reason to feeling,

⁶⁶ Albert Schweitzer, trans. by Ernest Newman. *J.S. Bach Volume Two*, New York: Dover, 1966, pp. 34–35.

⁶⁷ Lang, p. 512.

from calculation to intuition, and from objective nature to subjective emotion.⁶⁸

Therefore, when emotion came back in Romanticism, it was about individual feelings. Then art declared independence with “art for art’s sake”

It is the usual English rendering of a French slogan, from the early 19th century, “*l’art pour l’art*”, and expresses a philosophy that the intrinsic value of art, and the only “true” art, is divorced from any didactic, moral or utilitarian function. Such works are sometimes described as “autotelic”, from the Greek *autoteles*, “complete in itself”, a concept that has been expanded to embrace “inner-directed” or “self-motivated” human beings.⁶⁹

With this step, art has marginalized itself and become irrelevant to the rest of the world.

(8) Fragmentation of Philosophy: Kant was a great contributor to the Enlightenment. He also tried to synthesize metaphysics and physics. Cassirer gives us the list of subjects Kant taught at the University of Königsberg:

In the first semester, the winter of 1755–56, he lectured on logic, mathematics, and metaphysics; the next term added, along with the repetition of his previous lectures, a course on physical geography and on the foundations of general natural science. And from now on the scope of his academic activity grew wider and wider; the winter of 1756–57, which introduced ethics into the cycle of his lectures.... If we move some years further along, we find announced—for instance in the summer semester of 1761—as well as logic and metaphysics, mechanics and theoretical physics; besides physical geography, arithmetic, geometry, and trigonometry.⁷⁰

⁶⁸ Kleiner and Mamiya *Volume II*, p. 827.

⁶⁹ [http://www.wikipedia.org/art for art’s sake](http://www.wikipedia.org/art%20for%20art%27s%20sake)

⁷⁰ Ernst Cassirer, trans. by James Haden *Kant’s Life and Thought*. New Haven: Yale University Press, 1981, pp. 41–42.

Therefore, facing the rise of physical sciences, the initial reaction was to reconcile, not to separate, at least by such philosophers as Kant.

At the same time, he planted a seed for disintegration of philosophy in the succeeding centuries. In his *Critique of Pure Reason*, he proposed what is called the “Copernican revolution.”⁷¹ Basically, this means to reverse the conventional idea that truth is in the world outside of us, which we are to go out to find; instead, he claims that the truth is in our minds, like Copernicus claimed that it was not the Sun going around the Earth, but the earth going around the Sun. To be more specific:

Hitherto it has been assumed that all our knowledge must conform to objects. But all attempts to ascertain anything about them *a priori* by concepts, and thus to extend our knowledge, came to nothing on this assumption. Let us try, then, whether we may not make better progress in the tasks of metaphysics if we assume that objects must conform to our knowledge. This at all events accords better with the possibility which we are seeking, namely of a knowledge of objects *a priori*, which would determine something about them before they are given to us.⁷²

This would mean that the truth is subjective. However, Kant did not mean that every individual would have his or her own reality, as Cassirer explains:

This “subjectivity” means nothing but what Kant’s “Copernican revolution” implies: it signifies the result not of the object but of a specific lawfulness of cognition, to which a determinate form of objectivity (be it theoretical, ethical, or aesthetic in kind) is to be traced back. Once this is grasped, that secondary sense of “subjective,” which infects it with the appearance of individuality and arbitrariness, immediately vanishes. In the relation we are establishing here, the concept of the subjective expresses a foundation in a necessary procedure and a universal law of reason.⁷³

⁷¹ Frederick Copleston, S.J., *A History of Philosophy, Book Two, Volume VI: Wolff to Kant*, New York: An Image Book, Doubleday, 1985, p. 207.

⁷² *Ibid.*, p. 224.

⁷³ Cassirer, p. 151.

However, the succeeding generations took it in a different direction. Roger Scruton summarizes Kant's fundamental approach as follows:

“[T]he principles of pure understanding can apply only to objects of the senses... never to things in general without regard to the mode in which we are able to apprehend them” [*Critique of Pure Reason*, First edition, p. 246, Second edition, p. 303] There is no description of the world that can free itself from the reference to experience.⁷⁴

Once you say, “the truth depends on experience,” the next step would be “my experience is different from anybody else’s.” This paved the way to Existentialism:

Existentialism... is a ...philosophy that is centered upon the analysis of existence and of the way humans find themselves existing in the world. The notion is that humans exist first and then each individual spends a lifetime changing their essence or nature. In simpler terms, existentialism is a philosophy concerned with finding self and the meaning of life through free will, choice, and personal responsibility. The belief is that people are searching to find out who and what they are throughout life as they make choices based on their experiences, beliefs, and outlook. And personal choices become unique without the necessity of an objective form of truth. An existentialist believes that a person should be forced to choose and be responsible without the help of laws, ethnic rules, or traditions.⁷⁵

Søren Kierkegaard laid the foundation for this school:

While admitting the usefulness of objective knowledge, Kierkegaard denies that such knowledge can satisfy our hunger for self-understanding: “What I really need is to get clear about *what I must do*, not what I must know.... The

⁷⁴ Roger Scruton. *Kant: A Very Short Introduction*, New York: Oxford University Press, 2001, p. 131.

⁷⁵ <http://www.allaboutphilosophy.org/existentialism.htm>

crucial thing is to find a truth which is a truth *for me*, to find *the idea for which* I am willing to live or die.”⁷⁶

Nietzsche follows, as Shelley O’Hara explains: “Throughout his writing, Nietzsche stresses the individual—the individual over the herd, the individual striving to be something more, the individual seeking knowledge of him- or herself, the individual creating his or her own morals.... Nietzsche writes, ‘All our actions are altogether incomparably personal, unique, and infinitely individual’ (*The Gay Science*).”⁷⁷

Nietzsche’s work also involves elements of realism, which would go smoothly with any individually focused system of thought. According to Kaufmann, Nietzsche is “one of the first thinkers with a comprehensive philosophy to complete the break with religion.”⁷⁸ He first declares: “The God is Dead,”⁷⁹ and then develops an approach which comes very close to what realism holds, suggesting that the transition may be taking place where people’s focus shifts from self-preservation to self-glory as modern amenities were making life safer and more comfortable.

An important element of Nietzsche’s philosophical outlook is the “will to power” (*der Wille zur Macht*), which provides a basis for understanding motivation in human behavior. This concept may have wide application, as Nietzsche, in a number of places, also suggests that the will to power is a more important element than pressure for adaptation or survival.⁸⁰ According to Nietzsche, only in limited situations the drive for conservation is precedent over the will to power: namely, when life is reduced to a condition of poverty and limitation. The natural condition of life, according to him, is one of profusion.⁸¹ In its later forms Nietzsche’s concept of the will to power applies to all living things, suggesting that adaptation and the struggle to survive is a secondary drive in the evolution of

⁷⁶ Denise, Peterfreund, and White, Chapter 13, p. 184.

⁷⁷ Shelly O’Hara, *Nietzsche within Your Grasp: The First Step to Understanding Nietzsche*, New Jersey: Wiley Publishing, Inc., 2004, p. 21.

⁷⁸ Walter Kaufmann, *The Portable Nietzsche*, New York: Penguin Books, 1968, p. 17

⁷⁹ It first appears in *The Gay Science* (*Die fröhliche Wissenschaft*), section 108 (New Struggles), in section 125 (The Madman), and for the third time in section 343 (The Meaning of our Cheerfulness). It is also found in Nietzsche’s classic work *Thus Spoke Zarathustra* (*Also Sprach Zarathustra*). ([http://www.wikipedia/god is dead.](http://www.wikipedia/god%20is%20dead))

⁸⁰ Beyond Good & Evil 13, *Gay Science* 349 & Genealogy of Morality II:12

⁸¹ Twilight of the Idols; Skirmishes of an untimely man; §14

animals, less important than the desire to expand one's power.⁸²

However, he did not mean anything political as Friedrich Ritschl, a professor at Leipzig testifies: "Nietzsche is not at all a specifically political nature. He may have in general, on the whole, some sympathy for the growing greatness of Germany, but, like myself, no special *tendre* for Prussianism."⁸³ It was the succeeding generations who politicized his philosophy to be used in the Nazi regime.

In the 20th century, this trend led to post-modernism, which is defined as "a tendency in contemporary culture characterized by the rejection of objective truth and global cultural narrative."⁸⁴ According to this tenet, post-modernists "deconstruct" historical, cultural, social, intellectual and other inquiries into smaller and smaller units and categories. That is to say: "Are you examining the American culture? There is no such thing as the American culture." So, you break it down to the culture of the East Coast. Then, they would say "There is no such thing as the culture of the East Coast. Of New York? Of New York City? Of Harlem? Of male population in Harlem? Of male population between age 12 and 25 in Harlem? Of male population between age 12 and 25 in Harlem in the 1990s?" Once you start to deconstruct, where do you stop? Post-modernists are idealists, and present themselves as a competing school of materialism. However, it is often criticized that the school is useful in terms of critically evaluating other schools, but it cannot create its own paradigm. As a result, contemporary academia is occupied by materialists and fragmented idealists, which makes it impossible to create a coherent idealist system of thought.

In this way, the thought system which was once comprehensive and coherent under the leadership of the Christian Church has become fragmented. It is true that the Church leadership became corrupt. The solution chosen was to eliminate it. As a result, Western civilization moved from bad leadership to no leadership.

In this way, the oscillation between idealism and realism coincides with the patterns predicted by Vico's cycle. Before moving on to the next section, however, two issues remain.

First, in any age in history, there is always a variety of ideas ranging from idealism to realism. Therefore, it will be possible to construct a completely opposite pattern by using less prominent figures. The issue

⁸² <http://www.wikipedia.org/Nietzsche>

⁸³ Kaufmann, p. 8.

⁸⁴ <http://www.wikipedia.org/Postmodernism>

here, then, is not whether or not other thinkers might have influenced the pattern, but whether or not these colossal figures who have survived the test of time and obtained long-lasting, if not eternal, status might have been able to do what they did if placed in another time in history. If St. Thomas Aquinas, for example, had been born in 1850, would he have compiled *Summa Theologica*? If he had, would it have been influential? Would another great thinker have emerged in the 13th century, or 14th or 15th, to unite reason and theology? No, the influences are fixed where they are and cannot be moved around in history if they were to accomplish what they have.

Second, even though Vico's cycle of power structure and the cycle of ideas coincide, the issue remains as to which is leading which. The relationship between the idea and the phenomena is complex. They go hand in hand. Scholars observe the world and theorize about it, which in turn gives legitimacy for a particular movement to go forward. The repetitious cycle will solidify the direction. At this point, it is enough to note that the two cycles coincide.

4. Metaphysical Cycles of Other Civilizations

Here, ideally, Western intellectual history should be counter-referenced with the intellectual histories of the other civilizations. However, in lieu of separate historical investigation, I will use one book, titled *Great Thinkers of the Eastern World: The Major Thinkers and the Philosophical and Religious Classics of China, India, Japan, Korea and the World of Islam* (edited by Ian P. McGreal.)⁸⁵ This is a collaboration of forty-one specialists, compiled in the form of an encyclopedia of major thinkers presented chronologically for each civilization. China has 31 entries; India has 30; Japan has 26; the world of Islam has 16. While going over each thinker's profile, I recorded the large trends below.

In the case of China, the entries are concentrated on six historical periods. The most entries come from the period of the "Hundred Schools" (c. 771–221 B.C.) This corresponds to the period of destabilization of the Eastern Zhou dynasty, leading into the Warring period (403–221 B.C.) In the 500s B.C., Confucius and Laozi established Confucianism and Taoism, respectively. Almost all entries are some variations of either one of the two philosophies or religions. Even though the overtone during this period is dominantly idealistic as a response to the naked world of realism, I found one entry that somewhat resembles the idea of Hobbes. Han Fei (c. 280 B.C. –c. 233 B.C.) claimed: "Human beings are selfish, but they respond to

⁸⁵ Ian P. McGreal, ed., *Great Thinkers of the Eastern World: The Major Thinkers and the Philosophical and Religious Classics of China, India, Japan, Korea, and the World of Islam*, New York: Harper Collins, 1995.

reward and punishment,” and “Political power should be held by the king alone and not be shared with either the aristocracy or the ministers.”⁸⁶ Right after this period, Dong Zhongshu (c. 195–c. 115 B.C.) “establish[ed] Confucianism as the theoretical foundation of the inchoate imperial state during the Han dynasty (206 B.C. –220 A.D.)”⁸⁷ Although the thinkers during this period were overwhelmingly concerned with restoring social order, there is one thinker who conducted more abstract metaphysical speculation. Gongsun Long (c. 320–c. 250 B.C.), according to McGreal, adopted a notion somewhat similar to Plato’s universalism in his metaphysical investigation.⁸⁸

Second, between the first and third century, three Taoist thinkers are recorded. James D. Sellmann explains:

After the period of the “Hundred Schools” during the late Eastern Zhou (Chou) dynasty (c. 771–221 B.C.), the next great flourishing of Daoist (Taoist) philosophy developed at the end of the Later Han dynasty and into the period of political decentralization during the Northern and Southern dynastic period (third to fifth centuries A.D.). Although a blend of Legalist and Confucian philosophies remained the dominant state ideology, there was a resurgence of Daoist religion and philosophy, possibly because of the trying times and political chaos.⁸⁹

China then experienced another era of destabilization between the 5th and 6th centuries.

The third period comes in the mid-6th century. Between 549 and 700, there is a cluster of Buddhist thinkers, indicating that Buddhism became influential in China during this period. Chinese Buddhism experienced its “Golden Age” during the Tang dynasty (618–907 A.D.)⁹⁰ The fourth period starts in the early 12th century. During the next hundred years or so, there are four entries of thinkers. These thinkers are labeled as Neo-Confucians. According to James D. Sellmann:

Zhou Dunyi ... is often considered the “father of Song (Song) dynasty (960–1279 A.D.) Neo-Confucianism.” The philosophy of the Song is highly eclectic and syncretic. Zhou’s success as a Neo-Confucian philosophy is found in

⁸⁶ Wing-Chat Lee, “Han Fei,” in McGreal (pp. 44–49), p. 44.

⁸⁷ Russell Kirkland, “Dong Zhongshu (Tung Chung-Shu),” in McGreal (pp. 67–70), p. 67.

⁸⁸ Ian P. McGreal, “Gongsun Long (Kung-Sun Lung),” in McGreal (pp. 31–34), pp. 31–34.

⁸⁹ James D. Sellmann, “Guo Ziang (Kuo Hsiang),” in McGreal (pp. 80–83), p. 80.

⁹⁰ Alan Fox, “Fazang (Fa_Tsang)” in McGreal (pp.99–103), p. 99.

his ability to draw in elements of Daoist (Taoist) and Buddhist thought under a chiefly Confucian agenda.⁹¹

Neo-Confucianism continued to be influential. However, there is a difference between the Neo-Confucianism of the Song dynasty and the Ming dynasty. The dominant school during the Song dynasty was the “School of Principle,” while that during the Ming dynasty was called the “School of Mind” or “Ideationist School.”⁹²

The next entry is not until the 18th century during the Zing dynasty, and according to Ann-Ping Chin, China by then seemed to have become somewhat similar to the post-Enlightenment Western civilization dominated by positivism:

Within the intellectual world of the eighteenth-century China... scholarship based on evidential research had been considered an end in itself.... [T]he majority of Qing (Ch’ing) scholars deemed the study of philosophy or any attempt to understand the reason and meaning of things as empty and self-indulgent.⁹³

In the 19th century, China was being incorporated into Western civilization under Western imperialism. In search of gaining independence, it chose communism.

In India, the first three entries are made around 600–500 B.C. These are the foundations of the three religions. The first entry is *The Upanishads*, the foundation of Hinduism. The second is Buddha, the founder of Buddhism. The third is Māhāvira, the founder of Jainism. The subsequent entries are all either Hindu or Buddhist thought. The entry of Patanjali (200 B.C.–450 A.D.) suggests that there were attempts to synthesize the two schools of thought. The Buddhist entries end with one in the 4th century A.D. There is a cluster of Hindu entries during the 8th and 9th centuries. There is one entry that stands out in the whole selection of India in this period. Jayarāsi Bhatta (7th century A.D.) is the one and only materialist entry. But the materialist root apparently goes back to 600s B.C. by the name of the Cārvāka School, which “is said to have taught that man ought to enjoy his life in this world, as there is nothing beyond.”⁹⁴

⁹¹ James D. Sellmann, “Zhou Dunyi (Chou Tun-I),” in McGreal (pp. 104–107), p. 104.

⁹² Randall L. Nadeau, “Wang Yangming (Wang Yang-Ming),” in McGreal (pp. 120–123), p. 120.

⁹³ Ann-Ping Chin, “Dai Zhen (Tai Chen),” in McGreal (pp. 124–127), p. 124.

⁹⁴ Narayan Champawat, “Jayarāsi Bhatta,” in McGreal (pp. 202–206), p. 202.

Then, India was influenced by Islam in the 13th century. During the 13th and 15th centuries, Hinduism was persecuted by the Muslim rulers, though Hindu studies seem to have continued. Madhva (1197–1278) founded the Dvaita School of Vedānta, which was perfected by Jayatīrtha (1365–1388). When India went under rule by the Mughal Empire, which adopted a permissive policy toward Hindu, situation was not very orderly. Under this climate, the subsequent three entries suggest that there were efforts made to synthesize these religions. Nānak (1469–1539) founded Sikhism:

Deeply disturbed by the Hindu-Muslim strife that resulted in unmitigated chaos, religious bigotry on both sides, and exploitation of the poor masses, Nānak attempted to regenerate Indian society by propounding a new faith. This faith was called Sikhism.⁹⁵

Then, there are two entries in the 17th century. These two entries seem to be the extremist interpretation of Hindu, claiming that Brahman is the only reality and the world is false. During this period, Great Britain started to advance to India. It established the East India Company in 1600 and strengthened imperialistic control over the territory. So, these interpretations were possibly escapist attempts to deal with the harsh reality of imperialism.

The remaining six entries are from the 19th and 20th centuries. These entries seem to encourage idealism to counter the Western materialism. Rabindranath Tagore, for example, is explicit on this point, insisting, “Modern civilization has gathered its wealth and missed its well-being.”⁹⁶ Gandhi’s major ideas are also summarized along this line: “Truth is God; Man’s chief goal is self-realization; Love is the supreme value of life; Satyāgraha (civil disobedience) is the only sure way to fight injustice; Essence of all religions is ethical action; All principal religions are equal and are all true; Politics cannot be separated from spiritual values; All men are brothers because they possess the same soul.”⁹⁷

In the case of Japan, the first entry is Shōtoku Taishi (574–622 A.D.). Even though he was related to the imperial family, he adopted Buddhism in running the state: “Buddhism provides the ideal basis for a universal state, complemented by Confucian precepts to promote harmony, the course of sound social organization.”⁹⁸ The successive nine entries,

⁹⁵ Nandi Bhatia, “Nānak,” in McGreal (pp. 240–243), p. 240.

⁹⁶ Narayan Champawat, “Rabindranath Tagore,” in McGreal (pp. 260–264), p. 260.

⁹⁷ Narayan Champawat, “Mohandas Karamchand Gandhi,” in McGreal (pp. 265–268), p. 265.

⁹⁸ Robert E. Morrell, “Shōtoku Taishi,” (McGreal, pp. 291–294), p. 291.

spanning from the 8th to 13th centuries, are all Buddhist ideas. In the 14th century, during the strife between the military class and the imperial court, Chikafusa Kitabatake, from an elite family in the court, advanced Shinto to assert the imperial court's political influence. In 1600, Ieyasu Tokugawa, the military leader, founded the Edo Shogunate. During this period, there are clusters of entries, suggesting that active debate took place as to what should be the ideological foundation for the new dynasty. Shōzan Suzuki (1579–1655) tried to get Zen Buddhism adopted in vain. The majority of entries are Neo-Confucian scholars. There existed a parallel to Chinese Song and Ming Confucianism. The former was called Shushigaku, and the latter, Yōmeigaku. During this time, Sokō Yamaga (1622–1685) tried to legitimize the Edo Shogunate, using Shinto, which had been used to legitimate the imperial court.

Entering the 18th century second-generation scholars who started to criticize Neo-Confucianism appeared. Sorai Ogyū (1666–1728) called for a return to classical Confucianism. Norinaga Motoori (1730–1801) advanced Kokugaku, or National Learning, which “was a Shinto movement that attempted to reclaim Japan’s spiritual past from the overlay of foreign, especially Buddhist and Confucian, ideas.”⁹⁹ Atsutane Hirata (1776–1843) further advanced this trend: “Hirata Atsutane was a Kokugaku (National Learning) scholar and an ardent nationalist, who led the Shinto movement known as *Fukko Shintō* (“return to antiquity” Shinto), which sought to reclaim a pristine Shinto purged of foreign, especially Buddhist and Confucian ideas.”¹⁰⁰ Japan entered the world dominated by Western civilization at this point. The nationalist trend was picked up by the Japanese military in the 20th century. Kanji Ishiwara, a high-ranking military officer, forwarded the idea that there would be Armageddon between the materially superior West and the spiritually superior East.

In the case of the world of Islam, the sixteen entries suggest that there was a general shift from the earlier scholars, who deemed philosophy and religion equally important, to the later thinkers, who took rather hostile attitudes to philosophy. There are six entries of early thinkers. Al-Kindī (801–866) asserts: “prophetic knowledge is superior to human reason,” while also asserting that studying Aristotle and mathematics can lead to true knowledge.¹⁰¹ Abū Bakr Al-Rāzī (865–925) asserts: “nothing in revealed religion prohibits philosophical inquiry.”¹⁰² Al-Fārībī (870–950) insists: “The prophet who has mastered both philosophy and spirituality is the perfect ruler for the state.”¹⁰³ Avicenna (980–1037) studied logic and

⁹⁹ William E. Deal, “Motoori Norinaga,” in McGreal (pp. 375–379), p. 375.

¹⁰⁰ William E. Deal, “Hirata Atsutane,” in McGreal (pp. 380–383), p. 380.

¹⁰¹ Charles E. Butterworth, “Al-Kindī,” in McGreal (pp. 439–442), p. 439.

¹⁰² Charles E. Butterworth, “Abū Bakr Al-Rāzī,” in McGreal (pp. 443–445), p. 443.

¹⁰³ Mehdi Aminrazavi, “Al-Fārībī,” in McGreal (pp. 446–448), p. 446.

mathematics, physics, metaphysics, and medicine. He “was at the same time a statesman, philosopher, and physician.”¹⁰⁴ Shahrastānī (1076–1153) asserts: “Religious and philosophical ideas can and should be studied in a critical, comparative manner.”¹⁰⁵ Averroes (1126–1198) asserts: “Philosophy does not contradict the revealed Law of Islam.”¹⁰⁶

The first entry of anti-philosophical thinkers is Al-Ghazālī (1058–1111), who asserts: “Rationalistic philosophy fails to bring about certainty.”¹⁰⁷ Shrawardī (1153–1191) asserted that mysticism and philosophy are not irreconcilable. According to Aminrazavi, “Suhrawardī lived at a time when the two schools of philosophy and mysticism were perceived to be irreconcilable.”¹⁰⁸ Mullā Sadrā (1571–1641) was a Shiite and intensely studied philosophy. However, according to Aminrazavi, “his intense studies of philosophy intimidated some of the orthodox jurists who held much political power and who regarded philosophy as a heretical activity. Due to the hostility of the orthodoxy to his serious pursuit of philosophy by the studying and teaching of it, Mullā Sadrā was forced to leave Isfahan.”¹⁰⁹ By the time Shāh Walī Allāh (1703–1762) came into picture in India, the fragmentation proceeded. According to Seyyed Vali Reza Masr:

Shāh Walī Allāh lived during that period in the development of the Islamic tradition known as the “wisdom” period, when a synthesis of the traditional religious sciences of philosophy, theology and mysticism had been effected. In pre-modern times, however, this classical synthesis was showing signs of breaking down under various sectarian, political, and social pressures.¹¹⁰

Entering the 19th century, Islamic ideology was under heavy pressure from Western civilization. Muhammad Iqbal was born in India (now Pakistan) According to Nasr:

Sir Muhammad Iqbal was born in 1873 in Sialkot, in the Indian province of Punjab. He was born shortly after the Great Mutiny of 1857 and grew up at a time when Muslim power was on the decline before the rise of British

¹⁰⁴ Mehdi Aminrazavi, “Avicenna (Ibn Sīnā),” in McGreal (pp. 449–462), p. 459.

¹⁰⁵ Michael A. Sells, “Shahrastānī,” in McGreal (pp. 461–464.), p. 461.

¹⁰⁶ Charles E. Butterworth, “Averroes (Ibn Rushd),” in McGreal (pp. 465–467), p. 465.

¹⁰⁷ Mehdi Aminrazavi, “Al-Ghazālī” in McGreal, (pp. 457–460), p. 457.

¹⁰⁸ Mehdi Aminrazavi, “Suhrawardī” in McGreal (pp. 469–474), p. 469.

¹⁰⁹ Mehdi Aminrazavi, “Mullā Sadrā” in McGreal (pp. 484–488), p. 484.

¹¹⁰ Seyyed Vali Reza Masr, “Shāh Walī Allāh,” in McGreal (pp. 489–492), p. 489.

colonialism. Throughout his life Iqbal grappled with the religious, social, and political implications of the occlusion of Islam in his homeland. His rich literary and philosophical corpus was unique in its time—it introduced a most serious effort directed at both understanding this development and charting a way for restoring Islam to its due place in the temporal order.¹¹¹

The last entry is Sayyid Muhammad Husain Tabātabā'ī from Iran. He is the only thinker classified as realist of all the Islamic thinkers entered here. Masr insists that it was the Western influence:

By the time Tabātabā'ī settled in Qum he was also gravely concerned with the marginalization of Islam and its ever-more minor role in defining national culture and personal identities, and shaping intellectual discourse in Iran.

Tabātabā'ī soon concluded that the most important element of Western philosophy—what accounts for its hold on educated Muslims—is its rooting in realism and its reliance on the realist method.¹¹²

There are four entries of Sufi thinkers, which represent the mystical branch of Islam: Rabi 'a al-Adawiyya (717–801), Quashayri (986–1074), Ibn 'Arabī (1165–1240), and Shaykh Ahmad Shrhindī (1564–1624). According to Michael A. Sells, there were three developmental stages in Sufism:

Ibn 'Arabi's ideas represent and culminate the third major phase of Sufi thought. In the first phase, thinkers such as Rabi 'a, Junayd, and Bistami articulated the Sufi concept of mystical experience as the passing away of the human ego-self (*nafs*) and a Sufi way of life centered in that experience, and a Sufi affirmation of divine union as the immersion of human consciousness in one divine beloved to the point of obviousness to all other things. In the second phase, represented by Sulami, Sarraj, Makki, Qushayri, and Al-Ghazālī, the Sufi experience of mystical

¹¹¹ Seyyed Vali Reza Masr, "Muhammad Iqbal," in McGreal (pp. 493–497), p. 493.

¹¹² Seyyed Vali Reza Masr, "Sayyid Muhammad Husain Tabātabā'ī," in McGreal (pp. 498–502), p. 499.

union and the Sufi way of life were more explicitly integrated with ritual Islam and Islamic theology.

With Ibn ‘Arabi, mystical union becomes not only the central moment in the affirmation of divine union and in the life of the Sufi, but it becomes the central event within mystical language as well, an event that fundamentally transforms all language concerned with ultimate reality, reconfiguring and sometimes shattering the normal dualism of subject and object, human and divine, before and after, self and other.¹¹³

Sirhindī, who was from India, tried to reformulate major Sufi ideas. Since his life time was dated 971–1034 in the Islamic calendar, he was called the “Renewer of the Second Millennium.”¹¹⁴

The above observation shows very few realist thinkers. This might suggest a unique age in Western civilization, where physical science brought such material wealth and overpowered the ideational elements. Japan adopted the westernization policy after the Meiji Restoration, so its thought system merged to Western civilization. Islam is still undertaking the transition from the age of gods to that of heroes, and India went under the influence of Western civilization. For them, the final verdicts have not been in yet.

Along with the Soviet Union, China persecuted religion under the communist regime. However, Huston Smith asserts that realism rose during ancient China’s Warring Period, which was their second barbarian period.¹¹⁵

The old mortar that had held society together was chipping and flaking. In working their way out of the “cake of custom,” individuals had cracked that cake beyond repair. The rupture did not occur overnight; in history nothing begins or ends on time’s knife-edge, least of all cultural change. The first individualists were probably wild mutants, lonely eccentrics who raised strange questions and resisted group identification not out of caprice but from the simple inability to feel themselves completely one with the gang. But individualism and self-consciousness are contagious. Once they appear, they

¹¹³ Michael A. Sells, “Ibn ‘Arabi,” in McGreal (pp. 475–479), p. 475.

¹¹⁴ Marcia K. Hermansen, “Sirhindī,” in McGreal (pp. 480–483), p. 480.

¹¹⁵ Huston Smith, *The World’s Religions*, San Francisco: Harper, 1991, pp. 163–167.

spread like epidemic and wildfire. Unreflective solidarity is a thing of the past...¹¹⁶

But none of these thinkers made it to the survey in *Great Thinkers*. This may be because realism deals with the state of nature. So long as we go with nature, there is not much to theorize. For example, it does not require much engineering to bring water down. It is moving against nature that requires theorizing and engineering, like trying to bring water up against gravity. It is probably true that if a similar book of great thinkers were to be compiled in the year 3,000, Western civilization during the 19th to 21st centuries might have no entries. But for the final verdict, further studies will be necessary. Based on these observations, it is now time to present the paradigm of universal idealism.

5. Universal Idealism

Universal idealism makes the following assumptions:

1) At any point in history in any society, there are certain segments who subscribe to idealism and others, to realism.

2) Realists are likely to be those who believe that they are strong enough to come out as a winner in the struggle for survival. Therefore, they believe that they will not have to make any compromises as to their individual pursuits.

3) Idealists believe that people should set aside individual needs and contribute to the whole, from which society can derive security for their citizens.

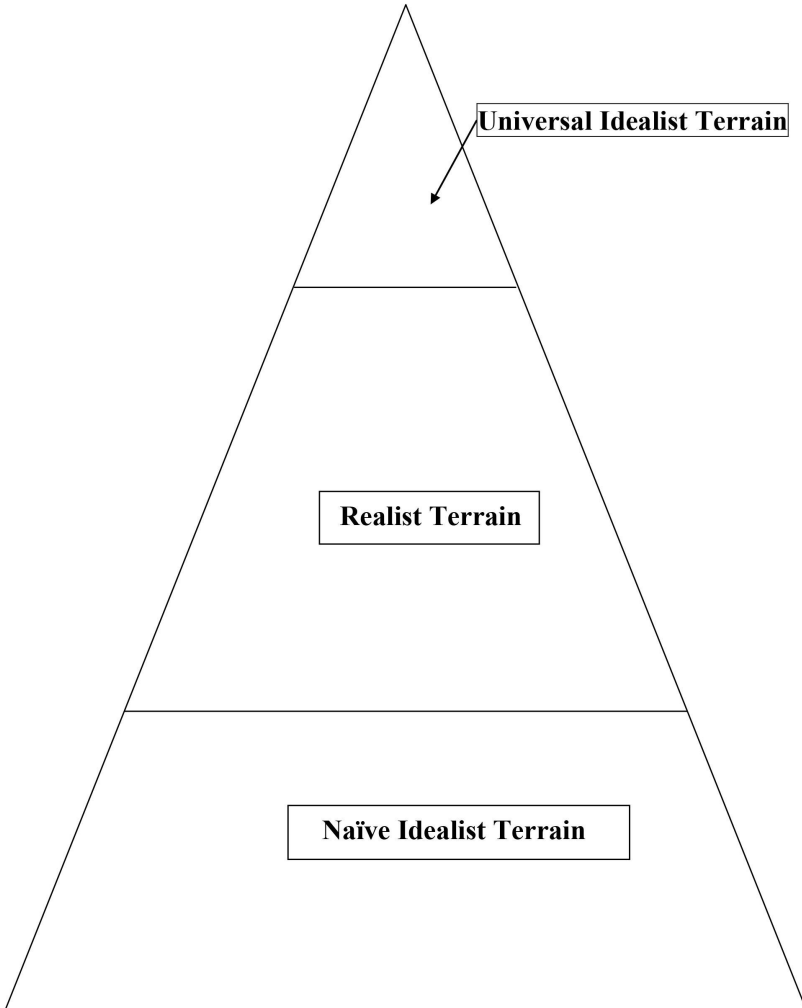
4) There are two kinds of idealists: One is unconditional, or universal, idealists. They will pursue their idealist mandate regardless of what others do. They are willing to make ultimate sacrifices if needed. The other is naïve idealists. They are willing to adhere to the idealist tenet only if others will do, or only if the cost of doing so is minimal. If the cost becomes too high for them, they will abandon the idealist cause.

5) In a default society, most numerous will be naïve idealists. Less numerous will be realists. The least numerous will be universal idealists. (These assumptions are shown in Illustration 3-2.)

However, Vico's cycle changes the incentive structure. At some point in the cycle, the cost of contribution is low, so more naïve idealists remain in the idealist terrain. At other times, the cost of contribution is too high for most of the people, so they abandon idealism and join the realist terrain. As a result, the number will fluctuate:

¹¹⁶ Ibid., p. 163.

Illustration 3-2 Universal Idealist Pyramid



1) The Age of Gods: This is when idealism is the strongest, or negative entropy is plenty in the system. This stage rises out of the state of barbarism, where the natural law of survival of the fittest prevails. People are tired of having to constantly guard themselves or worry about their bare survival every day. So, they are more willing to make individual sacrifices if that helps the society rise above the survivalist situation. Out of naïve idealists, strong ones set out and journey toward universal idealism. In so

doing, they must pass through the realist terrain. Many will perish physically or spiritually during the journey but some will arrive at the realm of universal idealism. Then, there will be an alliance between naïve and universal idealists, which will contain the middle layer of realists, even though it will not completely disappear. In this ideal society, universal idealists will hold political power. Without abusing it, they will set the structure which rewards “good,” or unselfish behavior and punishes “bad,” or self-centered behavior. This reduces the cost of doing the “right thing”; therefore, most people are willing to remain in the idealist terrain. This further narrows the middle layer, making it easier for potential universal idealists to travel through. This creates dynamics that reinforces idealism.

2) The Age of Heroes: As realists see the idealist leaders enjoy a concentration of power, they will see cost-effective ways to establish domination or to steal negative entropy from the system. Usually, coercion is necessary to establish dominance; however, if they can get people to believe that they are one of universal idealists, people will support and obey them. Also, they can drag people into the power struggles among themselves. By just indicating the evilness of their rivals, they can inspire people to join them in attacking their rivals. In other words, instead of focusing on the construction of good, people can shift their focus on the destruction of evil, ending up with fighting a proxy war for another evil. It’s a free army for realists. So, they begin to encroach idealists by pretending to be universal idealists, which this project calls “false idols,” even though the term should be updated to fit the scientific age. Once they attain the position of power, they will begin to demand loyalty to their personal needs and desires, or release entropy into the system, which is usually harmful to the whole. Here, those contributing to the whole will be punished. Over time, naïve idealists will notice what is happening and be disillusioned, so they will leave the idealist terrain and join the realists. Two mechanisms are at work here. One is through fear. As standing up against wrong becomes too costly under the fist of the tyrant, they will leave the idealist tenet for self-preservation. The other is through desire. As people see others rewarded by supporting the tyrant, it will become too tempting to remain in the idealist terrain. As more people join the realist world, it becomes increasingly costly for universal idealists to travel through the realist terrain to reach their destination of the universal idealist terrain. More potential universal idealists will perish either physically or spiritually. As a result, the mid-layer of realism will grow, setting off the dynamics that reinforce the growth of realism.

3) Age of Men: At this point, most people are in the realist world. Through the mechanism of realism, in which anyone becoming powerful will be counted by temporary alliance with the others to prevent further

concentration of power, the concentrated power center will be gradually dismantled. People will not have a tyrant to deal with but they will individually struggle for their own survival against smaller threats, leading to war of all against all, where all the negative entropy is used for individual survival.

Sometimes, this process goes through a temporary phase of power concentration. People will become desperate at this point and try to hang onto anything. Then, a realist “false idol” will come along, saying all the soothing things to people, unrealistic or contradicting to each segment of the society. Out of desperation, people will support him, forming the alliance between the weak and the evil. This is a Faustian deal. Once a realist obtains power, he will start to abuse people, ripping off any remaining protection. When this happens, the society will experience a brief period of dictatorship. However, concentration of power only through manipulation and coercion will not last long, and the society will collapse.

4) When the idealist terrain completely vanishes, the society will return back to barbarism.

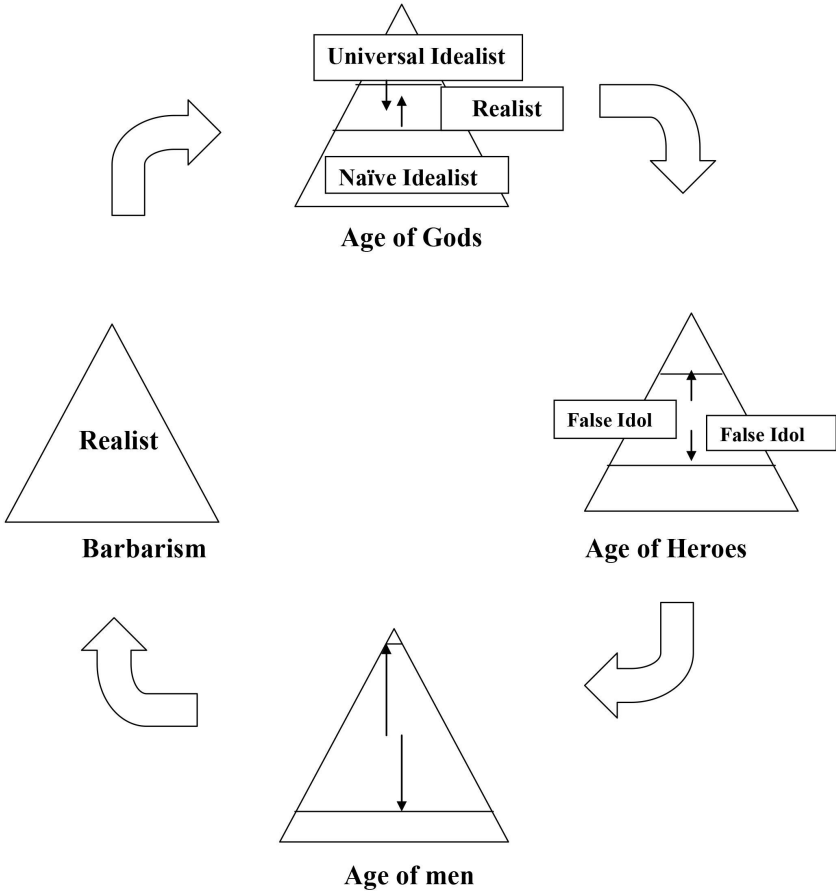
In this process, politics, international or domestic, is defined as a process in which who should donate how much negative entropy or absorb how much entropy is decided. This cycle is shown in Illustration 3-3.

The goal of universal idealism is to prevent this fluctuation and find a way to reassure enough negative entropy exists in the system, where the number of realists is reasonably contained to limit the entropy released or the negative entropy absorbed. Before we move on to the next step, it is necessary to examine whether such an enterprise will be possible or not. The final section of this chapter deals with this problem. In so doing, we will go back to the notion of negative entropy by Erwin Schrödinger, and examine its second effect.

II. EFFECT OF NEGATIVE ENTROPY 2—VIOLATION OF PHYSICAL LAWS

Even though both organic and inorganic matters are made of the same physical elements, organic matter produces an entity that can partially violate the physical law by creating a mechanism for importing negative entropy. As a result, organic matter has attained some degree of freedom from the deterministic physical law in Newton’s system of physics. For example, on the earth, organic matter can initiate and stop movement, and change directions voluntarily in violation of the Newton’s First Law, or Law of Inertia. Organic matter can also choose what comes into their entity and what not, by choosing, for example, what to eat.

**Illustration 3-3
Idealist-Realist Cycle**



This means that there are areas where the laws of physics cannot regulate. This leads to a series of questions: Are there laws to regulate the area free from the laws of physics, or is it completely chaotic? If there are such laws, who writes them? The conventional debate over free will becomes relevant here. Shaun Nicols defines the problem of free will as follows:

When we try to make a difficult decision, it usually seems like we have genuine options open to us. After we make our decision, it seems like we could have decided

differently. However, when we think about the world more generally, it seems things happen *because* of previous factors. We tend to think there has to be an explanation for every event, and perhaps this applies even to our decisions. The threat to free will comes from the idea that our options happen of necessity; that is, they are inevitable. These considerations are the heart of the problem of free will and determinism.¹¹⁷

This conventional approach to the problem of free will, which focuses on individual actions and events, does not really serve our inquiry. Therefore, universal idealism redefines the issue into the following questions:

- 1) Is Vico's cycle predetermined, or do humans have control or influence over the cycle? In other words, do humans have free will in regards to Vico's cycle?
- 2) If the answer is no, is it because humans have not achieved the stage of evolution in which idealist strategies are viable? In other words, has our limbic system, which allows us to have deeper intellectual and emotional ability, not yet developed enough to overcome instinct for individual survival? If so, do humans have control over the course of evolution to achieve the goal of universal idealism?

The second question has been dealt with in the field of science fiction. I found two scenarios in terms of the evolutionary direction. One is the *star child* depicted in *2001: A Space Odyssey*,¹¹⁸ in which humans obtain complete freedom from physical laws by making their consciousness independent of their bodies. The other is *Solaris*, the planet which by itself is a huge brain, depicted by Stanislaw Lem.¹¹⁹ Following this scenario, as single cell organisms managed to get together and become one multi-cellular organism several hundred million years ago, humans, or successive organisms, would manage to come together to become one unit billions of years from now. Indeed, it is safer to assume that we are at the very early stage of evolution, considering that there are hardly any life-forms in our universe, and that our life expectancy is less than 100 years, while everything else in the universe, we must use millions and billions of years to count. This would be an equivalent of something that breaks apart as soon as it comes together. Current life forms are still incredibly unstable

¹¹⁷ Shaun Nichols, *Course Guidebook: Great Philosophical Debates: Free Will and Determinism*, Chantilly, Va.: The Teaching Company, 2008, p. 1.

¹¹⁸ Arthur C. Clarke, *2001: A Space Odyssey*, New York: The New American Library, 1968.

¹¹⁹ Stanislaw Lem, *Solaris*, San Diego: A Harvest Book, 1970.

in this universe, leaving much room to evolve into stable life forms, which would last for millions of years.

There is some indication that evolution may not be linear. John Hawks observes that the size of the human brain has been decreasing, after having increased progressively.¹²⁰ What it means is far from clear at this point. However, we must acknowledge the dilemma that increased brain size required more energy and intensified the predatory nature. And we must contemplate whether or not this strategy has been successful. Many complex organisms such as dinosaurs became extinct. However, such primitive forms as bacteria are surviving fine because they require so little energy to survive. Is nature giving up the strategy of more complex organic forms requiring more energy and trying to go back to simple forms requiring little energy? So, can we choose which way to go and steer through the evolutionary process? However, this line of inquiry is too ambitious at this point. Therefore, we shall focus on the first question.

Can we have control over Vico's cycle? Oswald Spengler, who observed a similar cycle as Vico's in *The Decline of the West*, says that these cycles are inevitable:

[The soul as the idea of an existence entails the certainty that the actualization of the possible, that life itself, must be regarded as irrevocable, fateful in every line. Such organic logic is opposed to the logic of the inorganic, and is beyond the scope of systematists like Aristotle and Kant.

The word "destiny" expresses an indescribable inward certainty: causality carries the notion of law. The physiognomic flair, by which it is possible to read a lifetime, a fate, from a face, operates without deliberate effort of any system. It is far removed from cause and effect. Still the inward feeling of certain destiny is the foundation of the recognition of cause and effect, as becoming is to the become. Causality could be described as destiny made inorganic and modeled in reason-forms. The idea of destiny governs the world-picture of history, for destiny is the true existence-mode of the prime phenomenon.¹²¹

¹²⁰ Anthony Martin and John Hawks, *Course Guidebook: Major Transitions in Evolution*, Chantilly, Va.: The Teaching Company, 2010, Lecture 24.

¹²¹ Oswald Spengler, *The Decline of the West* (An Abridged Edition), New York: Oxford University Press, 1991, p.76.

So, according to Spengler, just like every human must grow old and die, civilization must run its course and end.

On the other hand, Vico says we do have control:

By these principles of metaphysics ... brought down into physics and thence through morality carried into family government and thus into their own education ..., let the young be guided into good politics, and with their minds so disposed let them finally move on into jurisprudence. Wherefore in [the dedication of] the first [edition of the] *New Science* [in 1725] we proposed to the universities of Europe that jurisprudence would be treated in the whole context of human and divine erudition, and on that account we put it above all the other sciences. It is by being prepared in this way that the youths to be taught will learn the practice of this Science founded on the eternal law that providence has established for the world of nations. This is that nations are secure and flourish in felicity so long as the body in them serves and the mind commands. And the youths will thus be brought to the true crossroads of Hercules, who founded all the gentiles.... Namely, whether they will take the road of pleasure, with baseness, scorn, and slavery for them and for their nations, or the road of virtue, with honor, glory, and happiness.¹²²

So, the verdict is not in yet on this matter. The position that universal idealism takes is: We ought to try. If we accept determinism, we all must give up now. If we try, in the worst case, it would prove that we don't have free will. But we might just succeed in preventing the next human caused disaster, along with proving that we have free will. Therefore, universal idealism makes an assumption that we have free will and we can control Vico's cycle, and therefore can handle the triple challenges in the immediate terms, and eventually establish perpetual peace. How, then, did Vico's cycle continue after he presented his solution? Universal idealism picks up where Vico left off in search of the means to control the cycle. In so doing, it is necessary to establish a field called metaphysical engineering. The next chapter sets up the field.

¹²² Vico, p. 430.

CHAPTER 4

METAPHYSICAL ENGINEERING—FIELD SET-UP

What is metaphysical engineering? To answer this question, think about physical engineering. For the last two hundred and fifty years or so, remarkable progress in the field of science and engineering, including such field as medicine, has significantly increased human survival. We are now not helplessly dependent on natural condition, but we can protect ourselves from many of the threats that nature poses. So, why don't we learn from physical engineering and try to establish an equivalent system in the field of metaphysics in an attempt to control Vico's cycle? In so doing, this chapter starts with defining relations between physics and metaphysics. Then based on the starting assumption that there exists a parallel between physical and metaphysical engineering, it conducts a survey on physical engineering as a model for metaphysical engineering. Finally, it begins to examine if there are differences between the two fields that require adjustments.

I. PHYSICAL-METAPHYSICAL ENGINEERING INTERACTION

Before starting the discussion, our project uses the definition by Staloff, et.al. and defines physics as “the ‘theory of nature’; the study of the material world of space and time,” and metaphysics as “ ‘above or beyond nature’; the study of things independent of space and time (e.g., pure ideas and spiritual essences.)”¹ Also, from the viewpoint of this project, metaphysics is also understood as a set of laws that dictate negative-entropy importing objects. This project makes an assumption that there is a ladder of interaction between physical engineering and metaphysical engineering, as shown in illustration 4-1.

The following discussion begins with the most immediate level of physical engineering and goes up the ladder.

1) Physical Engineering, Level 0: The definition given to physical engineering here is the manipulation of the natural environment

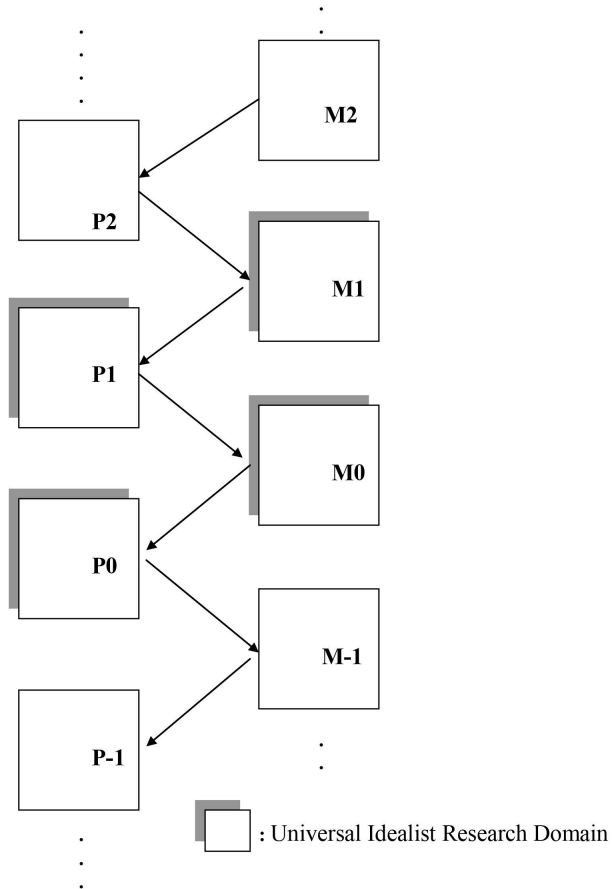
¹ Darren M. Staloff, Michael Sugrue, Robert Oden, Elizabeth McNamer, and Dennis G. Dalton, *Course Guidebook: Great Minds of the Western Intellectual Tradition, Part I—Ancient Philosophy and Faith: From Athens to Jerusalem*, Springfield, Va.: The Teaching Company, 1998, p.8

by humans, within the boundaries of the laws of physics, in order to improve human lives. In this project, this level is called P0 for physical engineering level 0. The concerns of physical engineering at this level are for the immediate survival of humanity. Engineering at this level started very early in human history. Pulling water up with a bucket from a well, using wheels, and so on. Irrigation technology made it possible for humans to live in the desert. Throughout history, humans used the physical laws to build ships and churches, to print, and to make weapons such as bows and arrows, and guns and cannons. This area has advanced remarkably in the past two hundred years or so. Transportation technology has made it possible for humans to live in remote areas. Air conditioning has made it possible for humans to live in very hot or cold climates. Refrigeration has made it possible for humans to preserve food to avoid famines. These are some examples of what physical engineering has achieved, and most achievements have been well within Newton's deterministic physical laws. In the 20th century, however, humans started to venture beyond Newtonian physics into the world of quantum physics, and invented such devices as GPS systems and cell phones.

2) Metaphysical Engineering, Level 0: The definition given to metaphysical engineering here is the manipulation of human environments, according to the laws of metaphysics, in order to improve human lives. In this project, this level is called M0 for metaphysical engineering level 0. The projects at this level would concern human survivability for 5,000 years or longer. This level is the most crucial in our attempt to control *Vico's* cycle, which lies outside of the laws of physics. That is, the laws of physics cannot tell humans how to manipulate the cycle or what to do with it. Judgments must be made. Realists would call for the use of technology to increase the survival of individuals, hence, leading to the invention of arms. Idealists emphasize the production of a healthy system from which everyone benefits. Technology should be used within this context. They would definitely call for refraining from producing objects harmful to long-term human interests beyond immediate individual survival. This level dictates what will be produced in the P0 plane. When successful, we have been able to produce products that enhance our survival such as refrigeration. At the same time, we have also produced such products as weapons of mass destruction, which seriously threaten our survival, and products such as automobiles, which make our lives easier but cause serious pollution. This area has made hardly any progress at all since Plato and Aristotle, and it has certainly regressed in the past two hundred years. It is because the examination of this field was conducted in the field of religion and philosophy, often formed as moral and ethics studies. I believe that Kant was referring to the general law of metaphysics, parallel to the

general law of physics, when he mentioned subjectivity. As all physical objects must obey the law of physics, all metaphysical objects, even though free from the laws of physics to some extent, must obey the laws of metaphysics. I wonder if Kant's Copernican revolution were to be operationalized, we just might be able to find out what kind of relations exist between the general laws of physics and the general laws of metaphysics, or between objects and subjects. There must be relations between his universally subjective laws and objective laws. However, this quest has been interrupted by the subsequent scholars who applied subjectivity to individual organisms, not as general laws to bind all negative entropy importing objects.

Illustration 4-1
Physical-Metaphysical ladder



3) Physical Engineering, Level 1: We now know that it is human intentions (M0) that decide what results physical engineering will produce. But when we look at where these intentions come from, it becomes physical again. When the examinations are conducted at sub-atomic levels, all physical existences are just combinations of protons, neutrons and electrons, which can be further reduced by more advanced science. Then, why do some kinds of combinations develop intentions and others don't? In the mid-20th century, quantum physicists understandably stumbled onto this question. Some philosophers joined in this query and worked on the problem of where consciousness came from. However, they are going nowhere. This is understandable, considering how backward the field of metaphysics is. Plato's physics is incapable of handling quantum mechanics. It has taken thousands of years for physics to develop to this level. If metaphysics has made hardly any progress since Plato, we cannot simply expect it to handle the issue now. We must start working on developing M0 metaphysics to catch up with the current level of physics. When it happens, we would have a good grip to tackle such issues as the origins of consciousness.

This level of engineering could play significant roles when we must face the survivability for a million years or longer. Once humans can figure out what combination of sub-atomic substances will create what kind of consciousness, humans can use it to produce "desirable" human consciousness. Also, in terms of physical engineering, within that duration, such problems as climate change of the earth and the crush of meteors would be a real concern.

4) Metaphysical Engineering, Level 1: This area becomes relevant when we ask such questions as whether or not the universe was intentionally created. Religions explore God as a creator and maintainer of the universe. Just as it would be hard for a Neanderthal to imagine our modern human society, it is hard to imagine what this field might be like from where we are. It would be at this level to decide what "desirable" human consciousness might be. In so doing, the relations between the P0 plane and M0 plane will become clearer. In other words, "in the eyes of God," these two kinds of laws do not exist independently of each other, but instead they have close connections. Therefore, this level would be the level to deal with such issues as whether or not the mind can exist by itself, independent of a physical existence. So, at this level, we might finally be able to address issues of mind-body duality. For us, this would mean survivability as long as the universe exists.

Here, bringing back the free-will debate, if humans had free will, M0 level would be sufficient to control over Vico's cycle. If humans don't have free will, everything should be decided at this level. Then, M1

inquiry will become necessary for universal idealists. As we observe the evolutionary process, we can see whatever is making a plan for us is taking an awful lot of trouble. If all this were for survival, we see earlier life forms such as bacteria are still surviving on the earth. So, there would be no reason for evolution. Life forms are also very unstable. In the universe time, we disintegrate almost as soon as we are formed. The universe seems to be doing fine without conscious beings existing everywhere else than here. If that is the case, should we be wrong to surmise that the M1 intentionality, which we perceive as God, is trying hard to make conscious being a part of this universe?

To achieve the optimal society, physical and metaphysical fields must develop in tandem. However, in the modern world, there has been significant progress in the P0 plane, and regression in the M0 plane. This has created serious problems for human survival, where we have acquired capabilities to do harm to each other in an unprecedented manner, while losing our ability to control such capabilities. We have witnessed that the technologies, which should help us to improve our survival, are harming us, in such forms as weapons of mass destruction and pollution. These problems are not coming from nature but are created by us humans. This is an indication of serious problems in the field of metaphysical engineering, because it is this field that determines how the resources in nature are used, once made available by physical engineering.

Further development in the field of physical engineering into P1 could do harm for humanity. For example, a breakthrough at this point in the research on where consciousness comes from could open a Pandora's Box for us. If we could create or manipulate human consciousness, who would decide what kind should be created, or how and by whom the mind should be manipulated? What if such evil beings as Adolph Hitler and Saddam Hussein got a hold of this technology? Humans would be better off without this technology until metaphysics catches up and we can handle these questions. There are also concerns regarding our survival in millions of years. But we have time to deal with this. Right now, we face a far greater possibility to become extinct by the problems created within the M0 metaphysical engineering. It would be wise to wait on this and focus on the development of metaphysics so that we can secure our survivability for 5,000 years before worrying about our survivability for a million years.

If the first set (P0-M0) of physical and metaphysical engineering together will give us a map of the metaphysical world, the second set (P1-M1) of physical and metaphysical engineering together will give us a map of the metaphysical universe. However, there are more layers outside of

these two sets of P-M planes, which should be recognized because in the future when we need to focus on longer-term survival of human society, these areas might become relevant.

Universal idealism builds on the assumption that there is an infinite ladder of physical and metaphysical causation. There is no ground to make this argument. However, based on what we have experienced in previous generations, it is safe to assume that we are a part of something common, rather than something special. The earth used to be believed to be the center of the universe, but now it appears to be just a dinky planet at the edge of a very common galaxy. So, it is not outrageous to believe that we are a common part of an infinite physical-metaphysical ladder. The number should go up to P2, M2, P3, M3 to infinity in this direction and P-1, M-1, P-2, M-2..... to infinity to the opposite direction, too, as shown in Illustration 4-1.

From this, universal idealism asserts that it is reasonable to believe that there is absolute knowledge, but it is not at all possible for humans to reach. However, for our modest goal of achieving a stable social and intellectual system, thorough knowledge of P0, M0, P1, and M1 will be sufficient. Therefore, we shall call this the universal idealist domain, which is also marked in Illustration 4-1.

Based on this observation, universal idealism makes another assumption regarding epistemology and ontology. That is, between the close planes of physics and metaphysics, epistemology, that is, what it seems, is reasonably close to ontology, that is, what it is. It makes this assumption only because it is more reasonable to believe that things created with the same materials in the same environment would be closely related, rather than radically different. Evolution would have eliminated those whose perceptions were drastically different from the outside environment. This does not mean epistemological and ontological issues are completely irrelevant to us. No matter how small the difference may be from the M1 plane, if it affects our lives, adjustments must be made. However, we should not start with it only to be bogged down with the technicality for the sake of technicality itself. The debate must always revolve around how the difference will affect us. More significant adjustments would become necessary if we ever needed to handle a project that involves physical and metaphysical planes further apart, for example, P1 and M78. Just even between physical planes, some are four-dimensional, which our human brains cannot grasp. So, some kind of adjustment to perceive phenomena there will become necessary. Scholars already begin to talk about multiverse, as oppose to universe.² So, one day,

² Mark Shittle, *Course Guidebook: The History and Nature of Our Universe*, Chantilly, Va.: The Teaching Company.

this may become a realistic necessity. However, until we achieve our first goal, we will not expand our project to require such adjustments. Physical engineers are already doing this. Newtonian physics is fine for most engineering projects, but discrepancies become too much when the objects are very small, close to the atomic level, or moving close to the speed of light. For these projects, quantum mechanics and the special theory of relativity must be used. But for the projects for which Newtonian physics works well, there is no reason to make things unnecessarily complicated by introducing these theoretical physics.

All these are working assumptions. And they may give the impression that we have hardly any concrete ground to stand on. However, these are helpful assumptions. First, they get us started, and we must start somewhere. Second, these assumptions are helpful by preventing us from being unnecessarily bogged down by technicalities because they let us keep the big picture in sight. Especially, due to the advancement of physical science, positivist thinking, which requires empiricism and falsifiability in its inquiry, has become dominant. But the above series of assumptions cautions us not to be completely invested in such a system of thought. After all, what we can see is so little. Ignoring everything else is a very dangerous thing. We must at least acknowledge the existence of things we cannot perceive, even though we may not be able to do anything with them for now. Also, these assumptions are helpful to counter such thinking as that represented by Leon Kass, which Lee M. Silver summarizes: “Leon Kass does not believe that anything higher or greater than the human soul is possible. He says, ‘The story of the ascent of soul may already be complete.’”³ Our approach makes us feel that our human soul to absolute knowledge is like the intelligence of a single cell organism to the human soul. As Socrates put it, knowing our own ignorance is important. It gives us room to grow. Third, these assumptions are not harmful because they are not dogmatic and allow us to make adjustments flexibly. So, as we discover differences, adjustments will be made.

Metaphysical engineering rests on these assumptions and begins with yet another assumption that there is a complete parallel between physical and metaphysical engineering. This is also groundless, but since we must start somewhere, this is a good place to start. Metaphysical engineering starts with modeling physical engineering as much as possible. When definite differences surface, adjustments will be sought. For this reason, we now conduct a survey on the field of physical engineering.

³ Lee M. Silver, *Course Guidebook: The Science of Self*, Chantilly, Va.: The Teaching Company, 2009, p. 74.

II. FIELD SURVEY—PHYSICAL ENGINEERING

The world of physical engineering consists of a pyramid, made of the three sub-fields—mechanical engineering, electrical engineering and chemical engineering, and four tiers—theory, engineering, mechanics, and operations as shown in Illustration 4-2.

Any engineering works we witness—airplanes, buildings, bridges, automobiles and so on—are possible because of the integration of these divisions. This section illustrates this point, using the design and production of the airplane. The explanation here is necessarily oversimplified and uneven. However, I hope that it is enough to make the point that any sub-fields or layers cannot achieve the final product without being integrated into the whole pyramid.

1. Horizontal Integration

In order to design and manufacture a modern airplane, all three sub-fields must be fully integrated. No one field alone can produce the airplane, as we know it now. This section looks at the horizontal integration among the three major sub-fields of physical engineering.

The modern commercial airplane consists of several prioritized factors. The first is flight. The airplane must go up in the air. The second is stability and control. Once it goes up, it must stay in the air stably. The third is navigation and communication. The pilot must know where s/he is and must be able to navigate the plane to a destination. Communication with the ground crew is also a necessity. Finally, a commercial airplane must provide passenger comfort (see Illustration 4-3.)

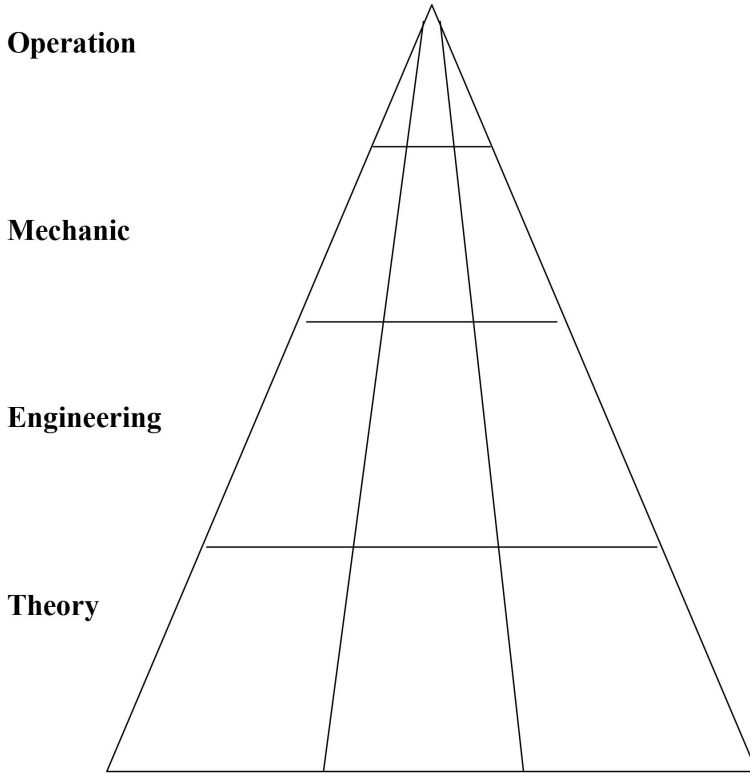
Each factor is discussed below in terms of the relevant engineering sub-fields.

1) Flight: The most fundamental part of flight is the wing design. What makes heavier-than-air flight possible is an adequate lift-to-drag ratio. Lift is defined as a force equal or greater than the weight that acts in the opposite direction to gravity.⁴ Drag is defined as the resistance to airflow.⁵ In other words, lift is the force that helps an airplane to fly and drag is the force that is the obstacle to flying. Therefore, wings must be designed so that they can achieve lift as high and drag as low as possible. This belongs to the branch of aerodynamics in the sub-field of mechanical engineering. Secondly, the airplane must have enough thrust. For this purpose, the engine comes into the picture. The engine must achieve adequate weight-to-power ratio. In other words, it must be as light and as powerful as possible. Initially, a steam engine was used. Later, it was replaced with a combustion engine, which achieved far greater weight-to-power ratio.

⁴ H.C. “Skip” Smith, *The Illustrated Guide to Aerodynamics*, New York: TAB Books, 1992, p. 12.

⁵ *Ibid.*, p. 56.

Illustration 4-2 Physical Engineering Pyramid



Mechanical Engineering Electrical Engineering Chemical Engineering

The combustion engine was also improved from a piston to a jet engine, which gives far more thrust and reliability. The combustion engine is based on thermodynamics, which is in the field of mechanical engineering. In order to improve the weight-to-power ratio, lighter materials that are strong enough have been devised. During the development of Boeing 747, the engine manufacturer Rolls-Royce attempted to replace the engine blade with a light-weight composite material made of fiberglass and glue meshed

in steel,⁶ even though it was dismissed. This type of inquiry requires examining bonding of materials at ionic level, which belongs to the sub-field of chemical engineering.

Illustration 4-3

Airplane—Design/Production Horizontal Integration

- | | |
|--|-----------------------------------|
| 1. Flight | |
| • Wing design | Mechanical Engineering |
| • Engine | Mechanical Engineering |
| • Material | Chemical Engineering |
| 2. Stability and Control | |
| • Airframe design | Mechanical/Chemical Engineering |
| • Empennage | Mechanical Engineering |
| • Cable and Pulley | Mechanical Engineering |
| • Fly-by-Wire | Electrical Engineering |
| • Hydraulics | Mechanical Engineering |
| • Material | Chemical Engineering |
| 3. Navigation and Communication | |
| • Rader | Electrical Engineering |
| • Computer | Electrical Engineering |
| • Radio | Electrical Engineering |
| • GPS | Quantum Mechanics |
| 4. Passenger Comfort | |
| • Pressurized cabin | Mechanical Engineering |
| • Air conditioner | Mechanical/Electrical Engineering |
| • Lighting | Electrical Engineering |
| • Entertainment | Electrical Engineering |

2) Stability and Control: For the airplane to remain stable in the air, the airframe design is essential. To avoid breaking into pieces in the air, all forces applied to the body and their distribution must be calculated. For this, vector mechanics is used, which is in the field of mechanical engineering. To control the rotations about the three axes called yaw (tail slide left and right), pitch (nose up and down) and roll (left wing up and right wing down, and vice versa),⁷ several stabilizers must be added to the fuselage. These are called the empennage, or tail. Their design requires the principles of aerodynamics, which is in the field of mechanical engineering. The materials must be strong and long-lasting. The stress tests and fatigue

⁶ Sutter, Joe with Jay Spenser, *747: Creating the World's First Jumbo Jet and Other Adventures from a Life in Aviation*, New York: Smithsonian Books in association with HarperCollins Publishers, 2006, p. 208.

⁷ Smith, pp. 159–160.

tests are conducted to make sure that the materials will be strong enough and will last long enough. The field of chemical engineering contributes here. The empennage must be controlled. Cables and pulleys were used for this purpose, which came from the sub-field of mechanical engineering. Then, hydraulic actuators were introduced to make it easy to control. It comes from the principles of fluid dynamics, which belongs to mechanical engineering. In the 1990s, when Boeing was developing its 777, cables and pulleys were replaced by the system called the Fly-by-Wire, along with a sophisticated computer, which uses the principles of electrical engineering. To reduce weight is a serious concern here, too. New materials that are light but strong have continued to be sought after. The fuselage changed from wood to aluminum. Other lighter materials, such as titanium, aluminum-lithium, and carbon fiber materials, have been introduced. In the 777, 9% of its weight came from non-metal materials.⁸ Continuing efforts in chemical engineering contribute here.

3) Navigation and Communication: Once the airplane can stay in the air, it must then be able to arrive at its destination. Initially, there were no navigation and communication devices on the airplane. Pilots relied on their sight and sense of balance. Then, instrument flying was pursued in the 1920s. Initial instruments included altimeter and gyrocompass. A radio also was installed so that a pilot could communicate with the ground controller.⁹ These instruments became increasingly sophisticated. By the time the 777 was designed in the 1990s, highly sophisticated computer systems, such as Honeywell air data and inertial reference system (ADIRS), became available.¹⁰ They became possible due to developments in the field of electrical engineering. To the GPS (global positioning system), the newly developed field of quantum mechanics contributes.

4) Passenger comfort: As the commercial flights became common, passenger comfort began to share importance. First, the cabin was pressurized, which was based in mechanical engineering. Then, the cabin was air-conditioned, which used thermodynamics from the field of mechanical engineering and electrical circuits from the field of electrical engineering. Lighting and entertainment also used electrical engineering. However, all these added significant weight to the airplane, so new technologies were also introduced to deal with the weight problem. During the development of the Boeing 747 in the 1960s, a renovation in electrical engineering created a system called Multiplex, which reduced the number

⁸ Bill Yenn, *Inside Boeing: Building the 777*, St. Paul: MBI Publishing Company, 2002, p. 45.

⁹ Smithsonian National Air and Space Museum, *Flight: 100 Years of Aviation*, New York: DK Publishing, Inc., 2002, p. 122.

¹⁰ Guy Norris and Mark Wagner, *Boeing 777: The Technological Marvel*, Osceola, Wis.: MBI Publishing Company, 2001, pp. 40–41.

of electrical wires by enabling one wire to “time-share” signals.¹¹ In the 1990s, during the development of the Boeing 777, a highly sophisticated system called CMS (cabin-management system) was introduced. It can automatically process such tasks as cabin interphones, lighting, temperature control, passenger address, and some in-flight entertainment systems.¹²

2. Vertical Integration

To design and manufacture the modern airplane, all four tiers must be fully integrated. No one tier alone can produce the airplane. This section looks at the vertical integration among the four tiers of physical engineering. In so doing, it focuses on one branch of mechanical engineering called aerodynamics. It would take tens of volumes of books to deal with each single branch of the three sub-fields, which will divert our attention from the main point. I hope that this will be just enough to show its importance without submerging the readers under a sea of details.

Illustration 4-4 Airplane —Design/Production Vertical Integration Aerodynamics

1. Theory

- Bernoulli’s Principle

$$P + 1/2 \zeta \times V^2 = \text{constant}$$
 P= pressure,
 ζ = density
 V= velocity
- Law of Continuity

$$\zeta \times A \times V = \text{constant}$$
 ζ = density
 A= area
 V= velocity

2. Engineering

- Calculation of lift-to-drag ratio

$$\text{Lift Coefficient } (C_L) = \frac{\text{lift}}{1/2 \zeta V^2 \times S}$$
 *S= wing area

$$\text{Drag Coefficient } (C_D) = \frac{\text{drag}}{1/2 \zeta V^2 \times A}$$

3. Mechanics

- Manufacturing and Maintenance

4. Operation

- Pilot

¹¹ Irving, Clive, *Wide-Body: The Triumph of the 747*, New York: William Morrow and Company, Inc., 1993, 241.

¹² Norris et al., p. 41.

1) Theory: The fundamental theoretical foundation of aerodynamics consists of Bernoulli's Principle, and the Law of Continuity. The mathematical equations are presented in Illustration 4-4, but it is not essential for us to understand their meanings here. Daniel Bernoulli was a Swiss mathematician in the 18th century. H.C. Smith describes his contribution to aviation as follows: "Daniel Bernoulli never heard of an airplane. He died in 1782, the year before the Montgolfier brothers put the first balloon into the air. His work had absolutely nothing to do with flying at the time of his investigations. He was trying to explain, mathematically, the variation in pressure exerted by a moving mass of fluid, and was concerned mostly with flowing streams of water"¹³ Therefore, if there had been no dialogue integrating the theory and engineering, the Bernoulli principle would have stayed there, never to be applied to aviation.

2) Engineering: George Cayley (1773–1857) of England was the first to make progress practically and theoretically toward heavier-than-air flight, which required the Bernoulli principle. He dealt with the issue of lift and drag by observing birds, experimenting systematically, and using mathematical calculations,¹⁴ paving the way to the contemporary engineering. Entering the 20th century, manufacturers such as Boeing and Douglas used thousands of engineers to develop bigger and faster airplanes, using essentially the same principle of lift and drag.

But communication is not just one way. Sometimes, theories are invented independently and applied later for originally unintended purposes. Other times, however, engineers encounter problems and look into theory in order to find or invent solutions. Later, the jet engine made it possible for the airplane to fly at close to the speed of sound. Approaching the sound barrier caused a problem called compressibility, which Sutter explains: "As an airplane approaches the speed of sound, the air can no longer get out of its way fast enough, so it bunches up and shockwaves begin to form."¹⁵ The Germans began to study this problem as early as the 1930s. The U.S. began its research in the 1940s. Scientist Max Munk studied the airflow around a hull of airships and came up with a mathematical formula to analyze it. Robert Jones later applied the Munk formula and discovered that the delta wing seemed to produce very low drag.¹⁶ These studies eventually led to the introduction of swept wings on high-speed airplanes.

3) Mechanics: Once the design is completed, manufacturing begins. Here, the communication is not one-way, either. Once the

¹³ Smith, p. 13.

¹⁴ Smithsonian, p. 12.

¹⁵ Sutter, p. 54.

¹⁶ Irving, pp. 68–69.

production begins, mechanics sometimes find that the parts don't fit. Then, they are sent back to the engineers for redesign.

4) Operation: Once the prototype is made, a test pilot flies it to see if everything works. Any problems will be reported back to the engineering team for redesign. Bob Robbins was a test pilot for Boeing, who tested XB-47, a bomber Boeing was developing for the military. Robbins reported that the bomber had a Dutch roll problem. In the next few weeks, the Boeing team worked with academician Charles Stark Draper at MIT, and came up with a device called yaw damper.¹⁷

Once the airplane goes into the market, there will be close communication between commercial pilots and mechanics for the daily maintenance of the airplane.

3. Working as a Whole

To design and manufacture a large-scale airplane like Boeing's 747 and 777, tens of thousands of people are involved. It is remarkable that something involving that many people can produce such a coherent whole. Several factors seem to contribute to this achievement.

1) Shared background: Most people who go into the engineering career share a similar training and background. They usually go to college, taking calculus, physics, chemistry and various engineering classes before going into their specialized field. There, they develop a common language. Many test pilots also hold an engineering degree so that they can communicate the problems to engineers in their language. If not a formal engineering degree, pilots are required to acquire at least some engineering knowledge during their flight training. Some mechanics may not have formal training. However, they would be encouraged to learn physical principles. The more they know, the more valuable they become. So, even if they become highly specialized later in their career, they are capable of understanding what others are doing when explained. This helps horizontal integration among different branches of engineering.

2) Organizational overlap: There are overlaps among the divisions and organizations. Engineers are trained at academic institutions and many hold a doctorate or at least a master's degree. So, there are fairly strong connections between theory and engineering. The airlines, which are responsible for the operation of the aircraft, have their own engineers in-house so that they can communicate with the manufacturers effectively. In the 1990s, during the development of the 777, Boeing introduced a new concept called DBTs (design/build teams). Under this system, such people

¹⁷ Ibid, pp. 100–101.

as maintenance mechanics were brought into the design process.¹⁸ These movements seem to be a general trend in engineering.

3) Close communication: There is a close network of communication among the different design teams. During the pre-computer era, the most important was the mock-up. Irving describes:

The engineering mock-up's decisive moment was called the "mock-up buyoff." There was always a bells-and-whistles celebration for this, when every design engineer turned up and each one checked out his own piece of the airplane. If a particularly tricky piece of tubing was a good fit, the engineer responsible might take it out of the mock-up, then and there, and walk off with it to make sure it was duplicated in production. If something didn't fit, then it was back to the drawing board, and a change order would have to be issued for new drawings. If it did fit, that was supposed to be sign-off time.¹⁹

This practice was replaced during the 1990s as a highly sophisticated computer system became available. The system called CATIA (computer-aided, three-dimensional interactive application) was introduced. For the Boeing 777 project, 2,200 CATIA workstations were connected, along with suppliers in Australia, Brazil, Japan and the U.K. They made it unnecessary to build traditional mock-ups in certain cases.²⁰

4) Grasping the whole: Joe Sutter, an engineer who led the 747 project at Boeing repeatedly emphasizes the importance of understanding the whole.

Through practical experience—always the best teacher—I learned that the whole of airplane design is more than the sum of its parts. It isn't just aerodynamics, structures, or propulsion—you have to make them all work together.²¹

Engineers love to dive right in and analyze the hell out of reams of data. Very often, though, they can't see the forest for the trees because they haven't done the simple work up front to be sure they're starting down the right path. The

¹⁸ Norris et al., pp. 21–22.

¹⁹ Irving, p. 281.

²⁰ Norris, et al. p. 23.

²¹ Sutter, p. 50.

time for detailed work with mass computing power is *after* the basic concept has been properly defined.²²

And he made the effort to make sure that his people saw the whole picture.

I realized that all of us on that incredibly complex and demanding program were so close to our own problems that we probably couldn't see the forest from the trees. I decided to fix that starting immediately. From that point forward, I worked hard to keep my 747 engineering team as broadly informed as I was myself.²³

His experience also betrays an interesting human nature. That is, humans can function better if they know what part of the whole they are working on, if they cannot do the whole thing by themselves.

I had something I wanted Al Webber to see as soon as he came in the next morning, so I walked over to his office. I was surprised to find Al still at work. He was pondering a problem with the titanium beam that supported the wing-mounted landing gear. I gave him the data and started to leave, when I noticed he seemed down in the dumps. He admitted that although he could see resolving the design problems he was wrestling with, he thought he was working on a loser.

It was late in the evening. My first thought was to let it go and just go home. But then it occurred to me that if Al saw the big picture, he might not be so down, so I decided to take the time to discuss the program with him. After filling him in on what I thought was the real situation, he told me he felt *a lot* better.²⁴

5) Sense of Balancing Forces: In this field, to identify all the conflicting forces and elements and to balance them out are particularly important. Engineers all know that. And this sense of balance prevents polemic positions from developing, and helps the integration. I will present testimonies by the engineers to that effect below.

²² Ibid., p. 79.

²³ Ibid., p. 134.

²⁴ Ibid., p. 134.

The new comer to aircraft design usually experiences a common emotion: frustration. No matter how he tries to improve the performance of the airplane in one area, it ends up detracting from the performance in others. For example, high cruise speed demands low drag, so the designer chooses a small wing area to keep drag down; however, he finds that this wing stalls at a very high speed, resulting in long takeoff and landing distances. He can remedy this by adding more power for takeoff and extending full flaps for landing; however, both moves add weight to the airplane, which reduces speed, as well as detracting from nearly all other performance—to say nothing of added cost.

Starting over from another standpoint, the designer then chooses a wing large enough to give him good takeoff and landing performance. Now when he calculates cruise speed, he finds it much lower than desired. Again he considers a large engine, but finds the engine weight—plus the added fuel required by the larger engine—to add so much weight that his field length requirement has increased once more.

What usually happens in the end is the choice of a wing somewhere in between—one that will give reasonable speed and reasonable takeoff and landing performance. It is a compromise. In the profession of design, this action is known as *tradeoff*. We trade performance in one area to gain performance in another.²⁵

Airplane design is the ultimate exercise in compromise. If you increase the fuel load, for example, you need a stronger, roomier structure to house it, so airplane weight and drag go up. You also need more powerful engines to lift it all, which means higher fuel consumption. The design team's job is therefore to define the optimal balance between these elements that yields the best results.²⁶

This field survey lays the foundation for the establishment of metaphysical engineering. It starts with copying this structure as much as possible. The two fields are similar, but there are also inherent differences.

²⁵ Smith, pp. 214–215.

²⁶ Sutter, p. 156.

Therefore, once the basic structure is established based on this model, the adjustment must be made.

III. METAPHYSICAL ENGINEERING

As in the structure of physical engineering, metaphysical engineering also has four vertical divisions—Theory, Engineering, Mechanics, and Operation. There are also two horizontal divisions—Intelligence and Emotion, as shown in Illustration 4-5.

1) Theory: In Western civilization, theories for intelligence have been traditionally studied in the field of philosophy, and those for emotion or soul have been dealt with in the field of religion.

2) Engineering: At this level, using the integrated theory of intelligence and emotion, an actual metaphysical system to control Vico's cycle should be produced. Currently, such an attempt has not been made regarding political systems. However, art has been carrying the active metaphysical engineering projects, even though it has declined over the past few centuries. This suggests that at this level, we need to look into the field of art, and then extract the essence to be used to establish the field of metaphysical political institution.

3) Mechanics: At this level, general engineering principles are adjusted to fit into specific historical and geographical situations. Currently, policy research institutions and government bureaucracies are taking this responsibility.

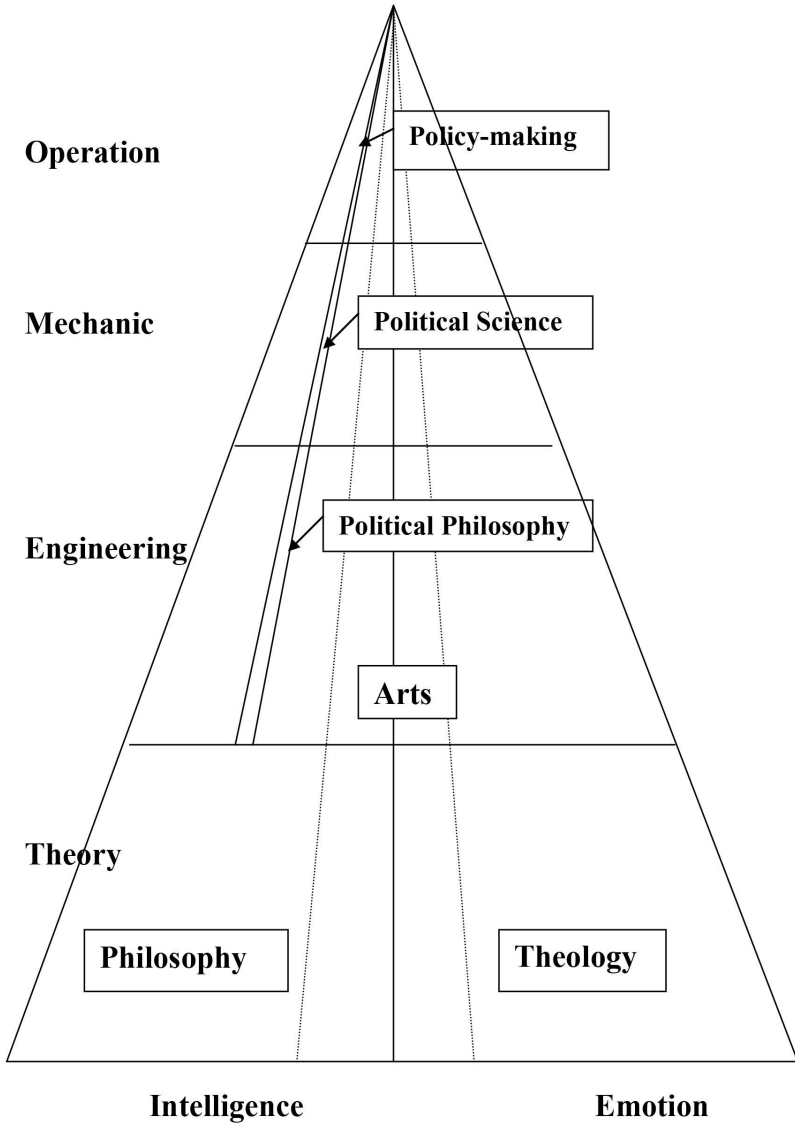
4) Operation: At this level, specific policies for specific occasions are produced. The administrative branch of the government is taking this responsibility.

As in the field of physical engineering, there must be close communication and constant feedback between these horizontal and vertical divisions.

Here, it should be noted that in the field of physical engineering, the level of generalization expands as the field goes deeper from operation/mechanics, to engineering, to theory. For mechanics, Honda's parts are totally different from Ford's parts. At the engineering level, all conventional cars use internal combustion engines. Therefore, the difference between Honda's parts and Ford's parts is not essentially important for engineering. At the theory level, the combustion engine is an application of the law of thermodynamics. Therefore, for theory, not only all conventional cars, but also refrigerators, air-conditioners and other equipment can be considered in one framework.²⁷

²⁷ For the details, see, Raymond A. Serway, and John W. Jewett, Jr., *Physics for Scientists and Engineers* (6th edition) Vol. 1, *Thermodynamics*, Calif.: Thompson, 2004, pp. 579–702.

Illustration 4-5 Metaphysical Engineering Pyramid



The same principle applies to the field of metaphysics. Therefore, the post-modernists' approach, emphasizing the differences, can become an important tool at the level of mechanics. It is the matter of a division of labor. The deeper down in the field you move, the more abstract and general the focus will shift. Post-modernists' approach is adequate at the mechanical level; however, it cannot claim that it should be the universal approach to be used, cutting across the whole hierarchy. It is that each level requires its own level of abstraction and generalization, and everyone in the field must respect that.

Once the parallel between the physical and metaphysical engineering fields is established, it is time to look at metaphysical engineering to see if the parallel requires any adjustments. Here, at this moment, I find two differences between physical and metaphysical engineering. One is the size. Metaphysical engineering projects are much bigger than physical engineering. For example, just in terms of time, it usually takes several years for physical engineering projects to go through their planning, research and development, testing, and production process. In metaphysical engineering, it takes from generations to centuries to complete projects. We have just witnessed the failure of the communist experiment. This has taken a quarter of a century to show the test results. So, trying to complete any metaphysical engineering project would be like trying to complete a physical engineering project when human life expectancy is only a few months. How difficult would it be for a physical engineering project to be completed under such a condition? A serious adjustment must be made here. Because of this sheer size, metaphysical engineering can be conducted only within the idealist paradigm. Any individual contribution is too small to add up to something significant, so a pursuit for self-glory will never be satisfied. In this regard, the mentality that the employees of Boeing developed gives us hope. When it comes to manufacturing a huge product such as the jumbo jet, individual contributions are tiny. For example, I read that one engineer was assigned to design a door. But I also read that Boeing mechanics feel so proud every time they see their planes flying overhead in the sky.

Unfortunately, however, for metaphysical engineering, even that may not be enough. The time frame exceeds far beyond individuals' life span, so most people will not be able to see the results. Therefore, a similar mentality to "the dedication to God" becomes necessary. Everyone performs his/her role and devotes it to God. Then, the next generations pick it up and add their part, and devote it to God. Without such a unifying force as God, fragmentation will be inevitable. So, the medieval mentality would have to be reintroduced. I heard that back then, people willingly

contributed to the construction of the church, which would take centuries to complete.

Second, in the field of metaphysical engineering projects, engineers are simultaneously the materials they deal with. In other words, engineers are not only engineers conducting research, but they are also molecules in the test tube in which they are conducting the research, or they are also metallic molecules in the wing on which they are conducting the stress test. So, there is no distinction between subject and object. This will cause another complexity that will require significant adjustment. These issues will be discussed in later chapters.

Now, in order for metaphysical engineering to be complete, it cannot be independent of physical engineering. Therefore, these two must be incorporated, as shown in Illustration 4-6.

One way to show this connection will be through $E=mc^2$. This is the famous equation by Einstein, where E is the amount of energy, m is mass, and c is the speed of light. In order for this equation to complete for us to use, the left side must have a metaphysical equation:

$$\text{Intelligence} * \text{Emotion} \rightarrow E = mc^2$$

Here, E is the amount of energy available in nature. Intelligence determines how much of it we can extract from nature, and emotion determines how these energies are used. In modern society, the amount of energy we can extract from nature has significantly increased because of the advancement of scientific knowledge. However, somehow we have created weapons of mass destruction by which we could wipe out the entire world many times over, suggesting that unless there is a harmonious and close connection between the two fields, the result could be devastating.

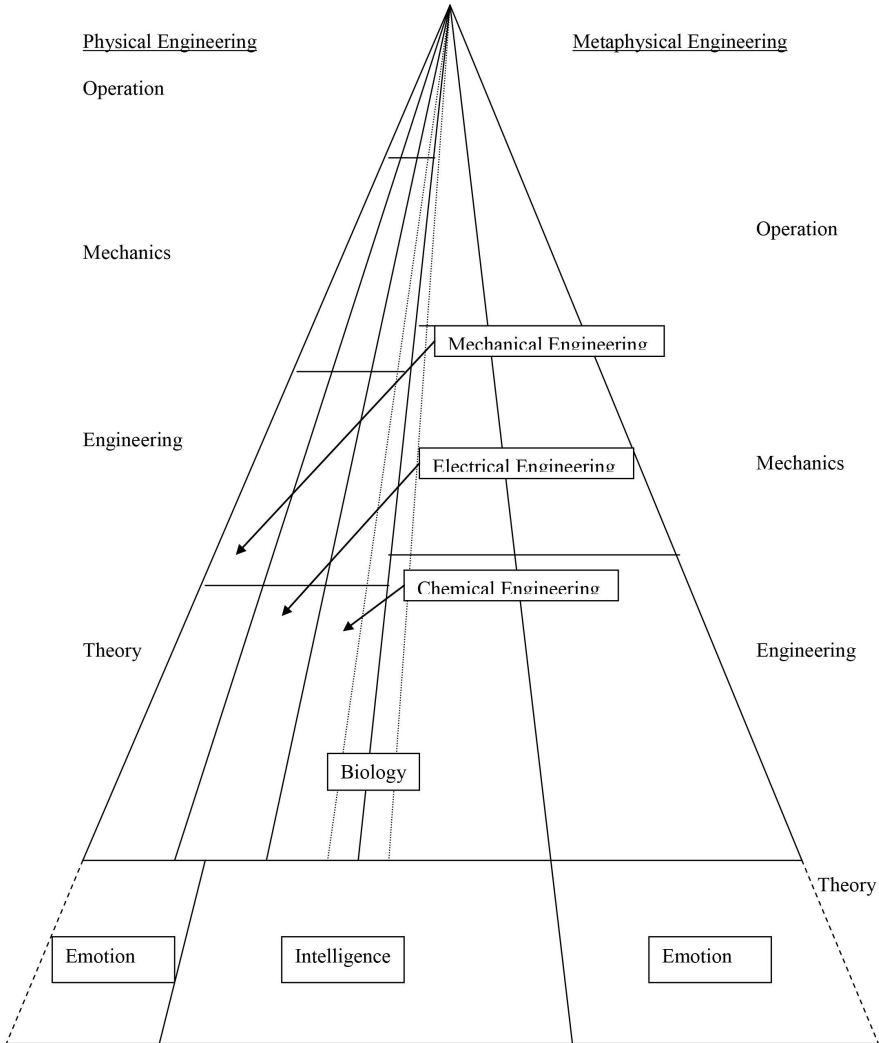
Finally, the field cannot be isolated from the society. The whole field should fit in where universal idealists are located. The final integrated picture is shown in Illustration 4-7.

It is urgent to set up a well-functioning field of metaphysical engineering. But, then, what should we do? The next two chapters conducts a field survey of metaphysical engineering in terms of what has been done so far, and what else needs to be done to establish a stable political institution that can control Vico's cycle to cope with the triple challenges of the modern world and then eventually establish perpetual peace.²⁸

²⁸ Even though the main purpose of this study is to prevent mass violence from recurring in history, once the metaphysical engineering system is established, there will be spillover benefits to all the social issues. The system can be applied to find optimal solutions for such problems as global warming, health care, debt problems, civil liberty and all the other serious problems that we face, as the physical

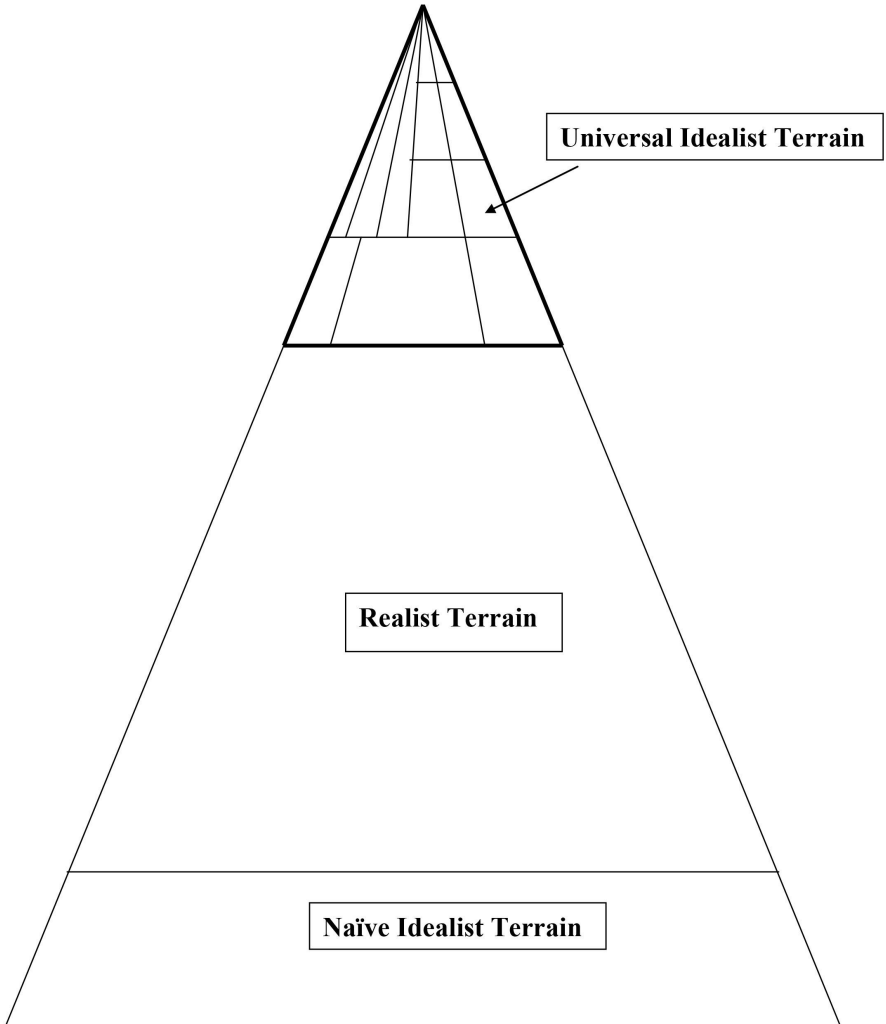
Chapter 5 discusses the layers of metaphysical engineering and theory, which should be primarily the focus of academia, while Chapter 6 discusses the layers of metaphysical mechanics and operation, which should be primarily the focus of policy-makers, even though there should not be any disconnection among these layers.

Illustration 4-6 Physical and Metaphysical Pyramid



engineering system can be used to develop airplanes, dams, refrigerators, cars, bridges, buildings and so on.

Illustration 4-7
Universal Idealist Pyramid



CHAPTER 5

METAPHYSICAL ENGINEERING—FIELD SURVEY (1) METAPHYSICAL ENGINEERING/THEORY

The next two chapters will conduct a survey regarding what has been done and what needs to be done in each layer of the metaphysical engineering project—i.e., metaphysical engineering, metaphysical theories, and metaphysical mechanic and metaphysical operations. This is an impossible task for an individual to reach a full-achievement. What is attempted here would be an equivalent of proposing, in the field of physical engineering, to design, manufacture and operate a jumbo jet in the 15th century. Back then, there was no calculus, no aerodynamic principles, no electricity.... The list would go on and on. Even with these tools available, it will require thousands of engineers to design and tens of thousands of mechanics to manufacture an airplane of that scale. The previous chapter observed that metaphysical engineering would have much bigger scale than physical engineering. So, millions of people would have to be working for this to work in any meaningful way. The goal of these chapters, therefore, is modest, as unachievable as it is. It is to lay out an outline to show who can make what kind of contributions to achieve our goal of controlling Vico's cycle and establishing perpetual peace. It was an impossible task in 1500 to fly a jumbo jet. But humanity has achieved the task. Especially, once everything became on board in the 20th century, we became from the Wright Brothers' airplane at the beginning of the century to sending Voyager to Jupiter toward the end of the century. If it is possible to do it in the field of physical engineering, we ought to try the same in the field of metaphysical engineering. The following sections will start with the metaphysical engineering layer and continue to the metaphysical theory layer. The examination of the mechanics and operation will be conducted in the next chapter.

I. FIELD SURVEY—METAPHYSICAL ENGINEERING

The ultimate goal of metaphysical engineering to establish a sustainable system is the entropy management. Borrowing theoretical terms from the field of physics, the issue of right and duty could be

described in terms of entropy. Here, pursuing individual rights would be an equivalent of either releasing entropy into the system or taking negative entropy from the system. Performing duty to society would be an equivalent of either absorbing entropy from the system or yielding negative entropy to the system. There would always be entropy coming into the system or negative entropy taken from the system, while there would be negative entropy donated to the system and entropy absorbed out of the system. If too much entropy were released into the system or too much negative entropy were taken out of the system, the system would collapse. Therefore, the fundamental goal here should be to limit the amount of entropy and negative entropy flowing into or out of the system within the permissible range. Here, idealism tries to eliminate entropy or convert entropy to negative entropy, while realism accepts the existence of entropy and tries to prevent its concentration to limit the damage. This section will examine the solutions proposed by the two schools, using primarily conventional religious and philosophical languages, and then, analyze the problems in these solutions.

1. Idealist paradigm

In the idealist paradigm, philosophers and religious scholars approached the problem. The main difference between the two is that philosophy believes the human reason to be the fundamental devise, while religion finds the human reason to be limited and believes the divine revelation to be necessary. Our examination begins on the philosophical approach, and goes onto various religious approaches.

(1) Philosophical Approaches:

Plato: Plato laid out the idealist state and how to achieve it in *The Republic*. He starts out with presenting the question: What is Justice? While investigating this question, he presents parallel between the man and the state. He asserts that both consist of three parts. In the case of the state, there are the rulers, the soldiers, and the craftsmen. In the case of the man, there are reason, desire, and the spirit. In the state, the rulers can make decisions for the good of all, while craftsmen can be caught up with selfish desire. When this happens, the soldiers keep the craftsmen in line. The same happens to the man. Reason can make a decision good for the man, while his desire may want something that is not really good for him. This is an internal strife and when it happens, the spirit will side with the reason and keep man's unhealthy desire in check.

Then, Plato goes into the Four Cardinal Virtues: wisdom, courage, discipline, and justice. He allocates each in the state and the man. Wisdom belongs to the rulers in the state and reason in the man. Courage belongs to

the soldiers and the spirit. Discipline means that rulers or reason keeps craftsmen or desire in check. Then, justice is achieved when each part, either the state or the man, functions its supposed role without meddling with other parts.

Then, Plato asserts that in order for this ideal state to be achieved, the rulers must be philosophers. He goes into details on how to educate philosopher kings. At the elementary educational stage, the main focus is to build character. The right types of arts, poetry and music should be taught here. However, he is cautious about this, and warns against the wrong kind of art, which would stir up wrong kind of passion. The next state is physical education. After that, the fittest will be chosen to study mathematics and logic. At the end, the most suited ones are chosen to have internship for 15 years to have real life experience. Then, they will take turns to rule as philosopher kings. The rulers, however, are not the privileged class. They have a decision-making authority but they are not given wealth in Plato's ideal state.

Then, he goes into details explaining what the philosopher is. His core philosophical concept of the Form is explained here. Frederick Copleston, S.K. explains:

In Plato's view the objects which we apprehend in universal concepts, the objects with which science deals, the objects corresponding to universal terms of predication, are objective Ideas of subsistent Universals [Form], existing in transcendental world of their own—somewhere “out there”—apart from sensible things, understanding by “apart from” practically spatial separation. Sensible things are copies of participations in these universal realities, but the latter abide in an unchanging heaven of their own, which sensible things are subject to change, in fact, are always becoming and can never truly be said to *be*. The Ideas exist in their heaven in a state of isolation one from another, and apart from the mind of any Thinker.¹

A philosopher is someone who can understand the Form, as explained above, or who can see the Form from its inferior copies. Among all the Forms, he asserts that the Form of Goodness is the most special like the Sun makes it possible for all of us to see. To explain further the philosopher king, he introduces the Allegory of the Cave here. Ordinary

¹ Frederick Copleston, S.J., *A History of Philosophy: Volume I, Greece and Rome (Part of Book One: Volume I, Greece and Rome; Volume II, Augustine to Scotus; Volume III, Ockham to Suárez)*, Garden City, New York: Image Books, 1985, p. 166.

people are chained in the cave and seeing shadows on the wall, believing that they are real. A philosopher manages to free him/herself from the chain and gets out of the cave. Under the gleaming sunlight, s/he sees the real world, and understands the truth. Once out, however, a philosopher king must go back into the cave and save the others. This is the sacrifice that the philosopher king is asked to make for the sake of good of all.

Then, Plato turns to the real version of state corresponding man and how the ideal state and man can decay. In the order of the degree of degeneration, he lists four types: timocracy and timocratic man, oligarchy and oligarchic man, democracy and democratic man, and tyranny and tyrannical man. In timocracy, the soldier class becomes ambitious and rivals the rulers. In oligarchy, the elite class starts to pursue wealth.

In the last section, Plato once again refers to the utility of art and this time attacks art vehemently. His assertion is based on his belief that it should be reason that leads the way to achieving the ideal state, not emotion. However, at the crucial moments, Plato has to introduce two myths to make the system effectively work. One is Myth of Metal, in which the citizens are to believe that there are three kinds of people: gold, silver, and bronze, each of which has a particular role to play in society. If people believed it, the unhealthy ambition would be checked. The second one is Myth of Er, which comes very close to religion. It suggests that those who lived well in this life would be rewarded in the afterlife, while those who lived badly would be punished. It also suggests that the life you live in now is the one you chose before you were born. So, whatever happens, you cannot avoid your responsibility.

Aristotle: Aristotle agrees with Plato that reason should be the fundamental guiding force to achieve ideal life and state. However, his method is diametrically opposite of the Plato's, which takes the top down approach. Instead, Aristotle adopts the bottom-up approach. According to Denise, Peterfreund, and White:

Historically, Aristotle's *Nicomachean Ethics* is the first systematic treatment of ethics in Western civilization. It belongs in the tradition begun by Socrates and advanced by Plato, a tradition that stresses both the supremacy of our rational nature and the purposive nature of the universe. Nevertheless, within this broad framework, the ethical theories of Aristotle and those of this teacher, Plato, stand in sharp contrast. This difference stems from conflicting conceptions of the nature of the ultimate moral principle and is a consequence of different metaphysical positions. Aristotle takes issue with Plato's thesis that individual

objects are intelligible only in terms of immutable forms or ideas that exist in and of themselves. According to Aristotle's doctrine, the forms that make objects understandable cannot exist apart from particular objects. That is, individual objects, for Aristotle, are *unity* of a universal, repeatable form and a unique content or matter: "no form without matter, no matter with form." Consequently, Aristotle rejects the Platonic view that the moral evaluations of daily life presuppose a "good" that is independent of experience, personality, and circumstances. Rather, he insists that the basic moral principle is immanent in the activities of our daily lives and can be discovered only through a study of them.²

In pursuit of the ultimate, instead of looking at Form, something out there, Aristotle begins with what surrounds us and traces the chain of original materials until it gets to the primary matter. Preceding matters are altered by an agent to become something else, unless it can turn by itself. And the first agent is the First Mover:

We have already said in our discussions about substance, that everything that comes to be comes to be something and comes from something; also that it comes to be through the agency of something that is the same in form as itself.³

The conditions under which a thing may, after existing only potentially, come into being in fully realized form as a result of thought are as follows: someone must wish it to come into being; there must be no external obstacle; and as far as the thing being brought to health is concerned, there must be no obstacle inside it.⁴

Nothing is moved just by chance; there must always be something there to move it, just as things in fact are moved by nature in one way and by violence of through the agency of mind or something else in another.... But since

² Theodore C. Denise, Sheldon P. Pettefreund, and Nicholas P. White, "Moral Character: Aristotle: Selections from the *Nicomachean Ethics*, Books i–ii, iv, vi–vii, and ix", in *Great Traditions in Ethics*, Belmont, Calif.: Wadsworth Publishing Company, 1998, p. 24.

³ Aristotle, trans. by J.L. Creed and A. E. Wardman, *The Philosophy of Aristotle*, London: A signet Classic, 2003, p. 107.

⁴ *Ibid.*, pp. 104–105.

that which is moved, as well as moving things, is intermediate, there must be something that moves things without being moved; this will be something eternal.... The First Mover, then, must exist.⁵

Aristotle then speculates on the First Mover:

That there is an eternal and immovable substance separate from sensible substances is, then, clear from what we have said.... There are certain problems that arise in connection with the supreme mind. It seems to be more divine than anything else that has come to our notice, but there are some difficulties in knowing what kind of state it must be in to be like this....

Further, whether its substance is mind or thought, what does it think of? It must think either of itself or of something else; and if it thinks of something else, it must either think of the same thing always or of different things at different times. Then, does it make any difference or not whether it thinks of what is good, or of just anything that turns up? Would it not be strange for it to think about some things? Plainly, it thinks of what is most divine and most valuable, and plainly it does not change; for change would be for the worse, and would anyway already be a movement. Firstly, then, if it is not actual thought but a potency for it, one would reasonably expect the continuity of its thought to be laborious for it; secondly, there would clearly be something else more valuable than mind, namely, the object of its thought. For both thinking and actual thought will belong even to what is thinking of the worst of things; so that if this is something to be avoided (and it is, for it is better not to see some things than to see them), thought will not be the best of things. The mind, then, must think of itself if it is the best of things, and its thought will be thought about thought.⁶

Following the lengthy investigation, Aristotle proposes his moral prescription, which is the rule of the golden mean. Denise, Peterfreund, and White explain:

⁵ Ibid., pp. 121, 122, 123.

⁶ Ibid., pp. 124–126.

Aristotle turns his attention to the task of explaining moral virtue. He analyzes human personality into three elements: “passions, faculties, and states of character.” Because passions (for example, anger and fear) and faculties (for example, the ability to feel anger and fear) are not in and of themselves blameworthy or praiseworthy, virtue must be a state of character. Experience shows that the states of character [sic] that enable a person to fulfill his or her proper function aim at an intermediary points between the opposing extremes of excess and deficiency. The morally virtuous person, then, always chooses to act according to the “golden mean,” but, Aristotle points out, the mean is not the same for all individuals.⁷

This position is also reflected in his idea on politics. Bambrough explains:

Aristotle followed Plato in thinking that the Greek *polis*, if properly planned and governed, constituted the most natural and therefore the ideal form of human society, perfectly fitted to the nature of the individual man at his best. He neither foresaw nor would have been prepared to tolerate the larger community that was built up by the conquests of his pupil Alexander.

But Aristotle differs from Plato as soon as he comes to consider more specific questions about the nature of the city-state, and much of the interest of this treatise is centered on the reasons that he gives for rejecting some of Plato’s main proposals. It is true that he shares Plato’s belief in the necessity for specialization and division of function, and he recognizes that the art of government requires native gifts and acquired skills; but he rejects the Platonic conception of moral and political virtue as branches of knowledge, like medicine and navigation.

His most fundamental objection to Plato’s ideal republic is based on his conception of happiness as an activity of the *individual* human being. Plato had concentrated on producing a happy *community* and had not given due weight to the overriding claims of individual men. Aristotle thought that the state existed for the sake of the citizen and not the citizen for the sake of the state;

⁷ Denise, et al., pp. 31–32.

accordingly, he rejects the scheme for the communal ownership of wives, children, and property that Plato had prescribed for his guardians...

This contrast between Plato and Aristotle is seen at its plainest when we consider Plato's revised blueprint for human society in the *Laws*, in which he explicitly maintains that all private concerns must be subordinated to the good of the community as a whole. Aristotle, on the other hand, believed that too much unity was as damaging as too little unity to the well-being of a city, and that *complete* unity would be tantamount to the annihilation of the city.⁸

Marcus Aurelius: In addition to these theorists, there was a practitioner of idealism. Roman Emperor Marcus Aurelius was probably one of the close approximations of Plato's philosopher king. He wrote down his perceptions in his *Meditations*. William Kaufman calls him "one of the wisest and noblest of Roman emperors"⁹ Kaufman explains that Marcus Aurelius was a subscriber to Stoicism, which "stressed the search for inner peace and ethical certainty despite the apparent chaos of the external world by emulating in one's personal conduct the underlying orderliness and lawfulness of nature."¹⁰ The followings are some of the thoughts by Marcus Aurelius:

14. From my brother Severus, [I learned] to love my kin, and to love truth, and to love justice; and through him I learned to know Thræsea, Helvidius, Cato, Dion, Brutus; and from him I received the idea of a polity in which there is the same law for all, a polity administered with regard to equal rights and equal freedom of speech, and the idea of a kingly government that respects most of all the freedom of the governed; I learned from him also consistency and undeviating steadiness in my regard for philosophy, and a disposition to do good, and to give to others readily, and to cherish good hopes, and to believe that I am loved by my friends; and in him I observed no concealment of his opinions with respect to those whom he condemned, and

⁸ Renford Bambrough, trans. by J. L. Creed and A.E. Wardman, *The Philosophy of Aristotle*, New York: A Signet Classis, 2003, pp. 426–427.

⁹ Marcus Aurelius, *Meditations*, Mineola, New York: Dover Publications, 1997, with introduction by editor William Kaufman, p. viii.

¹⁰ *Ibid.*, p. vi.

that his friends had no need to conjecture what he wished or did not wish, but it was quite plain.¹¹ (Book I)

3. ... But perhaps the desire of the thing called fame torments you. See how soon everything is forgotten, and look at the chaos of infinite time on each side of the present, and the emptiness of applause, and the fickleness and lack of judgment in those who pretend to give praise, and the narrowness of its domain, and be quiet at last. For the whole earth is a point, and how small a nook in it is this your dwelling, and how few are there in it, and what kind of people are they who will praise thee.¹² (Book IV)

(2) The Religious Approaches: All religions are to be regarded belonging to the idealist paradigm. They all try to get people to set aside individual need or desire and contribute to the good of all. In other words, religions aim to produce negative entropy in the system. But there are variations. The following section presents rough sketches of Judaism, Christianity, Islam, Confucianism, Taoism, Hinduism and Buddhism.

Judaism: Judaism holds that humankind has issued from something other than itself, and that human power is limited. The Jews recognize the human physical frailty. More importantly, they recognize the human moral weakness. Smith explains

[T]hey saw the basic human limitations a moral rather than physical. Human beings are not only frail; they are sinners.... The word sin comes from a root meaning “to miss the mark,” and this people... manage continually to do. Meant to be noble, they are usually something less; meant to be generous, they withhold from others. Created more than animal, they often sink to begin nothing else.

Finally, it followed from the Jewish concept of their God as a loving God that people are God’s beloved children.... Even in this world, immense as it is and woven of the mighty powers of nature, men and women can walk with the confidence of children in a home in which they are fully accepted.¹³

¹¹ Ibid., p. 3.

¹² Ibid., p.20.

¹³ Huston Smith, *The World’s Religions*, San Francisco: Harper, 1991, pp. 281–282.

Judaism holds that the human insights were revealed by the God, not gained by themselves. The Jews believe that they have entered into the covenant with their God:

Revelation means disclosure.... As a theological concept revelation shares this basic meaning, while focusing on disclosure of a specific sort: God's nature and will for humankind.

[Citing the Exodus] Given these three basic disclosures of the Exodus—of God's power, goodness, and concern for history—the Jews' other insights into God's nature followed readily. From the goodness of that nature it followed that God would want people to be good as well; hence Mount Sinai, where the Ten Commandments were established as the Exodus's immediate corollary. The prophets' demand for justice extended God's requirements for virtue to the social sphere—institutional structures, too, are accountable. Finally, suffering must carry significance because it was unthinkable that a God who had miraculously saved his people would ever abandon them completely.

The entire gestalt, when it burst upon the Jews, took shape around the idea of the covenant. A covenant is a contract, but more. Whereas a contract (to build a house, for example) concerns only a part of the lives of those who enter into it, a covenant (such as marriage) involves the pledging of total selves. Another difference is that a contract usually has a termination date, whereas a covenant lasts till death. To the Jews, God's self-disclosure in the Exodus was the invitation to a covenant. Yahweh would continue to bless the Israelites if they, for their part, would honor the laws they had been given.¹⁴

The moral laws were given by God in the form of the Ten Commandments:

What the Ten Commandments prescribe... in these areas are the minimum standards that make collective life possible. In this sense the Ten Commandments are to the social order what the opening chapter of Genesis is to the natural order; without each there is only a formless void.

¹⁴ Ibid., pp. 303–306.

Whereas Genesis structures (and thereby creates) the physical world, the Ten Commandments structure (and thereby make possible) a social world.¹⁵

The Ten Commandments are directed toward the ordinary citizens of the community, which this project calls naïve idealists. However, the Old Testament began to address to universal idealists. The first kind is expected to lead the society under the guidance of God. The most obvious example is King David:

David had a desire to build a shrine for the ark in Jerusalem. **Nathan**, the Jerusalem royal court prophet, received word from Yahweh that David should not build Yahweh a house. With a divine double entente, Yahweh said that in stead he would build a house for David, meaning a perpetual dynasty. Then, in what is termed the **Davidic covenant**, Yahweh pledged his enduring support for the line of David:

7:16 Your house and your kingdom will be established firmly forever before me. Your throne will be established forever.¹⁶

The second is expected to bear special responsibility, ready to make individual sacrifices for the good of all. Such prophets as Jeremiah are examples of this kind:

7 YHWH, you have seduced me, and I fell for it, you have overpowered me, and you have won, I have become a perpetual laughable clown, everybody mocks me. 8 Whenever I speak up and cry out I feel compelled to shout, “Bloody murder!”¹⁷

The second kind of self-sacrifice cumulated into the story of Jesus Christ in Christianity.

Furthermore, the Jews believed in monotheism. Yahweh was the only God. The monotheism set the Jews apart from other ancient religions. Smith explains:

¹⁵ Ibid., p. 287.

¹⁶ Taken from Barry L. Bandstra, *Reading the Old Testament*, Belmont, Calif.: Wadsworth Publishing Company, 1995, p. 264.

¹⁷ The Bible 20: 7–13, taken from Bandstra, p. 337.

Where the Jews differed from their neighbors was not in envisioning the Other as personal but in focusing its personalism in a single, supreme, nature-transcending will. For the Egyptians, Babylonians, Syrians, and lesser Mediterranean peoples of the day, each major power of nature as a distinct deity. The storm was the storm-god, the sun the sun-god, the rain the rain-god. When we turn to the Hebrew Bible we find ourselves in a completely different atmosphere. Nature here is an expression of a single Lord of all being.¹⁸

The Old Testament shows that people with other faith were treated as enemies and were not intended to be treated in the same manner as the people in this community. It uses the term as worshipers of Baal, and they are treated brutally in the Old Testament:

2:11 The Israelites acted wickedly in the eyes of YHWH. They served the Baal gods. 12 They abandoned YHWH, the God of their fathers, the one who brought them out of the land of Egypt. They followed other gods, including the gods of the people living around them. They worshiped them and made YHWH angry. 13 They abandoned YHWH and served Baal and Ashtaroth. 14 The anger of YHWH erupted against Israel and he handed them over to marauders who plundered them, and he sold them to the enemies in their vicinity. They were not able to stand up against their enemies. 15 No matter what they tried to do, the power of YHWH was against them resulting in misfortune—just as YHWH had sworn to them—and they were in dire straits.¹⁹

A general picture emerged from this is that there is one absolute authority and humans are to follow it without question. However, idealism applies only to the people inside the community; outsiders or people with other faith are brutally regarded as enemies.

Christianity: Christianity emerged as a reaction to Judaism in a desperate situation. There were four options. One was the Sadducees, who tried to accommodate the reality. The remaining three wanted a change by Yahweh. The Essenes thought that the society was too corrupt and opted for dropping out. The Pharisees stayed in the community and tried to

¹⁸ Smith, p. 273–274.

¹⁹ Taken from Bandstra, p. 235.

renew Judaism by strictly following the Mosaic Law. The Zealots tried to change by rebelling, leading to the second destruction of the Temple.²⁰ Jesus Christ came to present the fifth option.

Unlike the Sadducees, he wanted change. Unlike the Essenes, he stayed in the world. Unlike the advocates of the military option, he extolled peacemakers and urged that even enemies be loved. It was the Pharisees that Jesus stood closest to, for the difference between them was one of emphasis only. The Pharisees stressed Yahweh's holiness, while Jesus stressed Yahweh's compassion; but the Pharisees would have been the first to insist that Yahweh was also compassionate, and Jesus that Yahweh was holy. The difference appears at first to be small, but in actuality it proved to be too large for a single religion to accommodate....

[T]here was an important feature of the holiness program he found unacceptable: the lines that it drew between people. Beginning by categorizing acts and things as clean or unclean..., the holiness code went on to categorize people according to whether they respected those distinctions. The result was a social structure that was riven with barriers: between people who were clean and unclean, pure and defiled, sacred and profane, Jew and Gentile, righteous and sinner. Having concluded that Yahweh's central attribute was compassion, Jesus saw social barriers as an affront to that compassion. So he parleyed with tax collectors, dined with outcasts and sinners, socialized with prostitutes, and healed on the Sabbath when compassion prompted doing so. This made him a social prophet, challenging the boundaries of the existing order and advocating an alternative vision of the human community.²¹

Christianity inherits the main characteristics of Judaism, including the divine revelation and monotheism. However, Smith suggests that shifts were made in the field of compassion. It was no longer selectively applied but was to be universal. Instead of treating people outside the community as enemies, Jesus Christ preached to love your enemies (Luke 6:27-36).

²⁰ Smith, p. 321.

²¹ *Ibid.*, pp. 321–322.

Islam: Islam inherits the main characteristics of Judaism and Christianity, and respects them as “people of the Book.” It criticized the Old and New Testaments as revealing only portion of the truth and partially corrupted in transmission. Islam seems to push further the emotional elements as opposed to human reason:

From the outside things look otherwise, for from without the Koran is all but impenetrable. No one has ever curled up on a rainy weekend to read the Koran. Carlyle confessed that it was “as toilsome reading as I ever undertook; a wearisome, confused jumble, crude, incondite. Nothing but a sense of duty could carry any European through the Koran.” ... How are we to understand the discrepancy of the Koran as read from within and from without?

The language, in which it was proclaimed, Arabic, provides an initial clue. “No people in the world,” writes Philip Hitti, “are so moved by the word, spoken or written, as the Arabs. Hardly any language seems capable of exercising over the minds of its users such irresistible influence as Arabic.” Crowds in Cairo, Damascus, or Baghdad can be stirred to the highest emotional pitch by statements that, when translated, seem banal. The rhythm, melodic cadence, the rhyme produce a powerful hypnotic effect. Thus the power of the koranic revelation lies not only in the literal meaning of its words but also in the language in which this meaning incorporated, including its sound. The Koran was from the first a vocal phenomenon; we remember that we are to “recite” in the name of the Lord! Because content and container are here inseparably fused, translations cannot probably convey the emotion, the fervor, and the mystery that the Koran holds in the original.²²

Sufism, which is a mystic or esoteric Islam, pushes this further. While mainstream Islam respects distance between the created (human) and the uncreated (Allah), Sufis insist that the distance can be shortened through love. It also emphasizes intuition and direct realization of the readings, which cannot be logically explained.

Confucianism: Confucius lived in the era of turmoil, when the stability provided by the ancient Chou Dynasty was being collapsed.

²² Ibid., pp. 233–234.

During the few hundred years called the Period of the Warring States, things got really savage. And the old time chivalry had been disappeared. Huston Smith also insists that people had become more self-interest oriented during this period. In other words, Confucius faced in the situation which Vico would describe as the state of barbarism, in which people lived in the naked world of the survival of the fittest. In his effort to reestablish a social stability, he chose to reintroduce the ancient custom and tradition. However, according to Smith, people were already different. After the spread of individualism, people would not be so willing to follow the customs any more. Smith explains:

Confucius was all but obsessed with tradition, for he saw it as the chief shaper of inclinations and attitudes. He loved tradition because he saw it as a potential conduit—one that could funnel into the present behavior patterns that had been perfected during a golden age in China's past, the Age of the Grand Harmony. Because morals were then compelling, people conformed to them; because they were finely wrought, the conformation brought peace and happiness. Confucius may have idealized, even romanticized, this period when China was passing from the second millennium into the first and the Chou Dynasty was at its zenith. Unquestionably, he envied it and wished to replicate it as faithfully as he could. Tradition appeared to him to be the device for appropriating from this glorious past prescriptions that could serve his own troubled times...

His regard, even reverence, for the past did not make him an antiquarian. He knew that changes had occurred that precluded the possibility of returning literally to the past. The year 500 B.C. was separated from the year 1000... by the Chinese having become individuals. They were not self-conscious and reflective. This being the case, spontaneous tradition—tradition that had emerged without conscious intent and had ruled villages without dissent—could no longer be counted on. Its alternative was deliberate tradition. When tradition is no longer spontaneous and unquestioned, it must be shored up and reinforced through conscious attention.²³

²³ *Ibid.*, pp. 168–169.

In other words, Confucius first created the mold that would represent the tenet of idealism, and then tried to fit people into it. For this, education played an important role. His education was to apply both to the rulers and the subjects. Smith lists five core concepts: Jen (Ren), Chun Tzu, Li, Te, and Wen.

1) Jen (Ren): “Ren (jen) or human-heartedness is the highest virtue an individual can attain and this is the ultimate goal of education.”²⁴

2) Chun Tzu: “It has been translated the Superior Person and Humanity-at-its-Best... The *chun tsu* is the opposite of a petty person, a mean person and small-spirited person.”²⁵

3) Li: There are two meanings. Smith explains:

The first meaning is propriety; the way things should be done. Confucius thought it unrealistic to think that people could wisely determine on their own what those ways should be. They needed models, and Confucius wanted to direct their attention to the finest models their social history offered, so all could gaze, and memorize and duplicate.²⁶

Then, Smith offers five examples:

- The Rectification of Names, which is “the call for a normative semantics—the creation of a language in which key nouns carry the meanings they should carry if life is to be well ordered,”²⁷

- The Doctrine of the Mean, which is “the way that is ‘constantly in the middle’ between unworkable extremes,”²⁸

- The Five Constant Relationships, which are “those between parent and child, husband and wife, elder sibling and junior sibling, elder friend and junior friend, and ruler and subject.”²⁹ In each relationship, the former is given a superior position and take care of the latter, while the latter is supposed to respect and obey the former. They are intended to be “a frame within which you may achieve the maximum selfhood without damaging the web of life on which your life depends,”³⁰

- The Family, which is “the basic unit of society,”³¹ and

²⁴ Joseph S. Wu, “Confucius (Kongfuzi/F’ung Fu-Tsu),” in Ian P. McGreal, ed., *Great Thinkers of the Eastern World: The Major Thinkers and the Philosophical and Religious Classics of China, India, Japan, Korea, and the World of Islam*, New York: HarperCollins Publishers, 1995, p. 3.

²⁵ Smith, p. 173.

²⁶ *Ibid.*, p. 174.

²⁷ *Ibid.*, p. 175.

²⁸ *Ibid.*, p. 175.

²⁹ *Ibid.*, p. 175.

³⁰ *Ibid.*, p. 176.

³¹ *Ibid.*, p. 176.

- The Respect for Age, which is based on Confucius' belief that "years bring not only experience and seasoning, but a ripening of wisdom and mellowing spirit."³²

The second meaning is ritual. According to Smith: "There is a pattern for every act, from the way thrice-yearly the Emperor renders to Heaven an account of his mandate, right down to the way you entertain the humblest guest in your home and bring out the tea."³³

4) Te: Te means power. However, it is quite different from the way the realist defines, which usually means the ability to coerce. Confucius means "the power of moral example."³⁴ Smith explains:

No state, Confucius was convinced, can constrain all its citizens all the time, nor even any large fraction of them a large part of the time. It must rely on an acceptance of its will, an appreciable confidence in what it is doing. Noting that the three essentials of government were economic sufficiency, military sufficiency, and the confidence of its people, Confucius added that popular trust is by far the most important, for "if the people have no confidence in their government, it cannot stand."

This spontaneous consent from its citizens, this morale without which nations cannot survive, arises only when people sense their leaders to be people of capacity, sincerely devoted to the common good and possessed of the kind of character that compels respect.³⁵

5) Wen: It means art. According to Smith, Confucius believed: "It was art's power to transform human nature in the direction of virtue that impressed him—its power to make easy (by ennobling the heart) a regard for others that would otherwise be difficult."³⁶

In this way, initially, Confucianism contained very little religious element. Smith observes: "His philosophy was a blend of common sense and practical wisdom. It contained no depth of metaphysical thought, no flights of speculation, and no soul-stirring calls to cosmic piety."³⁷ Later, however, it incorporates elements of Buddhism and Taoism, and became Neo-Confucianism. During the Song and Ming Dynasties, it created two

³² Ibid., p. 176.

³³ Ibid., p. 177.

³⁴ Ibid., p. 178.

³⁵ Ibid., p. 176.

³⁶ Ibid., p. 179.

³⁷ Ibid., p. 185.

branches, one intellectually oriented and the other more mystical. Randall L. Nadeau explains:

The most fundamental difference between Song and Ming Neo-Confucianism, the “School of Principle” [established by Zhu Xi] and the “School of Mind,” is the method of self-cultivation leading to sagehood... [A]ttentive reflection upon “the principles of things and affairs” through the study of books, the modeling of wise and virtuous individuals, and engagement in public service... serves to “rectify the mind,” that is, to master and control feelings or emotions that lead to subjectivity and selfishness.

Wang Yangming rejects the idea that self-cultivation requires the discovery of external principles.... This implies a fundamentally positive evaluation of feelings, which are not only natural and appropriate, but even basic to the process of self-cultivation. Whereas for Shu Xi the feeling must be controlled by an external Principle, Wang insists that the feelings are “self-righting” and inherently well-balanced.³⁸

Taoism: Unlike Confucianism, Taoism does not call for cultivating rulers to lead a just society. Instead, it focuses on individual internal quest.

Taoism focuses on the way and its power with tao (dao) meaning way. Taoism starts with the idea that there are three meanings of tao. The first is way or ultimate reality, which is ultimately transcendental and eternal. It is too vast for human rationality to fathom. The second is the way of the universe, which is the norm, the rhythm, and the driving power in all nature, and the ordering principle behind all life. The third is the way of human life, which defines the ideal human being.

There are three basic expressions of Taoism. The first is philosophical Taoism, which takes an intellectual approach. It holds that in universe and nature, energies are supposed to flow in a particular way, and that human beings are a microcosm of universe. In other words, there is this flow called nature, and humans are part of it. It sees human body mechanically. Individuals are organizations of chi (vital force) channels. We should conserve chi by expending it efficiently. Avoid certain emotional state such as anger and hate because these activities are waste of energy. When the energy flow is disrupted, people will get sick. It teaches

³⁸ Randall L. Nadeau, “Wang Yangming (Wang Yang-Ming),” in Magreal (pp. 120–123), p. 120.

us to move with nature because it is our own nature. The second is religious Taoism. It takes mystical approach, including magic. The third is vitalizing Taoism, which goes beyond conserving chi. In order to increase the flow of chi, we should work with matter, movements and minds, in other words, eating healthy, getting exercise for body and mind.

Hinduism: Hindu addresses to naïve and universal idealists. It aims personal liberation from all the desires, which would make people go astray. “The *Upanishads* advise the inward journey into the self, rather than the outward movement to the world.”³⁹ Then, the stronger will bear governing responsibilities.

First, it asserts that there are four basic aims of human beings. The first two are called paths of desire, which are Pleasure and Success. As people pursue these goals, they will find them unsatisfactory. Pleasure will be too trivial to satisfy human mind. Also, it may lead to addiction, in which they will need more and more and find no end to it. The drive for success is also insatiable. Also, you cannot share the fruits with others. Once people realize that there must be something that goes beyond self-centeredness, people move to the paths of renunciation, which are Duty and Moksha. There are two kinds of the sense of duty. One is extrinsic, which comes out of self-respect, or reward oriented. The ultimate sense of duty is intrinsic, which comes out of nature. This does not require any reward. The final aim of the human beings is Moksha. Smith explains:

A distinctive feature of human nature is its capacity to think of something that has no limits: the infinite. This capacity affects all human life.... Mention any good, and we can imagine more of it—and, so imagining, want that more. Medical science has doubled life expectancy, but has living twice as long made people readier to die? To state the full truth, then, we must say that what people would really like to have is infinite being, infinite knowledge, and infinite bliss. They might have to settle less, but this is what they really want. To gather the wants into a single word, what people really want is liberation (*moksha*)—release from the finitude that restricts us from the limitless being, consciousness, and bliss our hearts desire.⁴⁰

When people achieve Moksha, they realize that under what they thought they were lies what they really are, which is called Atman. This,

³⁹ Lawrence F. Hundersmarck, “Upanishads,” in McGreal (pp. 155–160), p. 156.

⁴⁰ Smith, p. 21.

Smith calls the “infinite center of every life, or hidden self.”⁴¹ When people find Atman, they will also realize that Atman is identical to Brahman, which is the objective reality—the ground of what we can sense, or the Godhead.

Then, Hinduism lays out four paths to choose from in order to achieve Moksha. Different people require different paths. So, people are to choose one of the paths that suit them. The first is Jnana yoga, which is to achieve Moksha through knowledge. It is an intellectual approach, which recommends people to learn and reflect until they achieve the separation of infinite self and transient finite self. Second is Bhakti yoga, which is to achieve Moksha through love. It is an emotional approach, which recommends people to adore a god of your choice until they deepen the intimacy with the god to the point where the sense of subject and object will disappear. The third is Karma yoga, which recommends people to devote themselves to work without expecting any personal rewards. The fourth is Raja yoga, which is to achieve Moksha through psycho-physical exercise. Through breathing exercises, concentration and meditation will emerge a different state of consciousness, and the subject-object distinction will be dissolved.

These paths are to be taken through four stages of life. The first is the student stage, in which people learn traditions and occupations. The second is the householder stage, in which people become adults and have families. By the end of this stage, people must have gone through the first three aims of human-beings, pleasure, success, and duty. The third is the stage of the forest dweller, in which people, especially males, go into forest in order to discover their true self. The final stage is wondering, at which people relinquish pleasure and success and become free.

In Hinduism, people are different and should find their place in society. Everyone is born with a certain disposition and temperament, which determines the role s/he should play in society. That leads to the caste system. There are mainly four castes: the priest classes, the administrator classes, the producer classes, and the labor classes. Ideally, without corruption, this was to protect the weak, as Smith asserts: “Between castes there was no equality, but within each caste the individual’s rights were safer than if he or she had been forced to fend alone in the world at large. Each caste was self-governing, and in trouble one could be sure of being tried by one’s peers. Within each caste there was equality, opportunity, and social insurance.”⁴² Also, duties are to be distributed proportionately to the privileges:

⁴¹ Ibid., p. 21.

⁴² Ibid., p. 37.

In salary and social power, therefore, the second caste, the administrators, rightly stood supreme; in honor and psychological power, the *Brahmins*. But only (according to the ideal) because their responsibilities were proportionately greater. In precise reverse of the European doctrine that the king could do no wrong, the orthodox Hindu view came very near to holding that the shudras, the lowest caste, could do no wrong, its members being regarded as children from whom not much should be expected. Classical legal doctrine stipulated that for the same offense “the punishment of the Vaishya [producer] should be twice as heavy as that of the shudra, that of the *kshatriya* [administrator] twice as heavy again, and that of the *brahmin* twice or even four times heavy again.” In India the lowest caste was exempt from many of the forms of probity and self-denial that the upper castes were held to.⁴³

Buddhism: Buddhism came as a reaction to corrupt Hinduism. There is a similarity in its bottom line. But it does not call for a leadership to rule a just society. Rather, it takes an inward approach to overcome unwanted desires.

Buddhism begins with the Four Noble Truths. The first is that life is suffering. The second is that the cause of life’s dislocation is *tanka*, or desire for private fulfillment. It teaches that when you are selfless, you are free. The third is the remedy to overcome selfish cravings and release yourself from the narrow limits of self-interest. The fourth is the actual process to take, which is called the Eight Folds Path:

- 1) Right views, which is to know the truth about suffering as a condition, and start looking at things in fundamentally different way, such as world of scarcity being created by people.
- 2) Right intent, which calls for doing no harm and avoiding conflicts.
- 3) Right action, which is to develop a particular practice with moral component, including not to kill, not to steal, and not to lie.
- 4) Right speech, which considers speech as a special type of action because of its power.
- 5) Right livelihood, which is to avoid certain harmful occupations, the one which can take advantage of other people.
- 6) Right effort, which is to know your life’s priorities.

⁴³ Ibid., pp. 57–58.

7) Mindfulness, which is to always scrutinize your thoughts and feelings and look for their sources. Through self-examination, we are to know our obsessive patterns of mind and realize that our mental and physical states are always in flux and that we have little control over our own mind and body.

8) Right concentration, which is to realize that you are not what you thought you were. When you get to this stage, you achieve Nirvana, which means to extinguish that set of identities at the center of individual psycho-physical existence. When you achieve this, like when you achieve Moksha, you feel unconditional joy or bliss. Environmental happiness is conditional and nothing external makes you really happy. But the source of your happiness is you.

Buddhism branched out to be two main sects. One is Theravada, and the other, Mahayana. Theravada takes an intellectual approach, which is characterized as individualistic, literal (to accept the teachings of Buddha word by word), emphasis on wisdom, downplaying ritual, and considering Buddha as the supreme sage. Mahayana takes emotional approach, which is characterized as socialistic, figurative (emphasis on interpretation because everyone doesn't understand the teaching in the same way), emphasis on compassion, ritualistic, and considering Buddha as the savior.

2. Realist paradigm

While idealists try to get people to set aside their own individual interest for self-preservation, or even self-glory, and contribute to the welfare of the overall system, from which they can derive security, realists formulate their prescription based on the assumption that humans do go after their needs for self-preservation, or even self-glory. In other words, realists accept the existence of entropy in the system. This section examines their approaches.

Machiavelli: Machiavelli was responding to very specific historical circumstances when he formulated his prescription within the realist paradigm. It was the situation that Florence was in, internally divided and externally threatened. Machiavelli was a republican and preferred a republican government. However, in the emergency situation like the one Florence was facing, in order to maintain political stability, which was his highest priority, one strong individual should lead the way. For this specific purpose, he wrote *Prince*: “a handbook for tyrants advocating the pernicious doctrine that ‘the ends justify the means’ and presenting the infamous Cesare Borgia (murderer, incestuous lover of his own sister, Lucrezia, and tyrant) as a model for the new prince.”⁴⁴ Here

⁴⁴ Peter Bondanella, and Mark Musa, ed. Trans., *The Portable Machiavelli*, New York: A Penguin Book, 1979, pp. 17–18.

his end was “the establishment of the most durable and powerful republican government in human history by an admittedly violent (and unavoidable) action performed in the public interest rather than for private advantage.”⁴⁵ His assertion shows that there is a fundamental realist element in his system of thought. The first is the human nature, which is constant and unalterable. Bondanella explains:

Machiavelli defines man as a selfish animal ruled by the insatiable desire for material gain and driven by the principle of self-interest. A man is not to be trusted (unless his trust is based upon fear rather than love), and he is easily fooled and deceived by appearances. As he notes in *The Prince* (XVII): “One can generally say this about men: that they are ungrateful, fickle, simulators and deceivers, avoiders of danger, greedy for gain... men are less hesitant about harming someone who makes himself loved than one who makes himself feared because love is held together by a chain of obligation which, since men are sorry lot, is broken on every occasion in which their own self-interest is concerned; but fear is held together by a dread of punishment which will never abandon you.”⁴⁶

The second is that he sees politics as conflict. According to Bondanella:

[T]here is a universal principle of economic scarcity in operation in the world, and man’s hopes simply outrun the potential of this world’s goods. There is not enough material wealth to satisfy the boundless human desire to acquire more wealth. When such an acquisitive, aggressive human nature is combined with severely restricted resources, political conflict is the inevitable result.

In Machiavelli’s view of both domestic and foreign affairs, as well as in his conception of the political hero, armed conflict will often determine the ablest, most versatile government or ruler, and he has little sympathy for the governments which do not defend themselves with resolution and foresight or rulers who prefer a policy of temporizing to one of decisive action. The place of

⁴⁵ Ibid., p. 22.

⁴⁶ Ibid.

military affairs in his political theory is, therefore, fundamental.⁴⁷

Third, in the conflicting world like this, power becomes the most important element. Bondanella explains:

In all Machiavelli's works, military strength is a decisive criterion in the evaluation of a state's independence. In *The Prince*(X), for example, the strength of a principality is primarily measured by the ruler's military self-sufficiency and his ability to field an army against any of these potential enemies. In both a principality and a republic, moreover, good laws and good armies provide the "principal foundations," but it seems clear that Machiavelli gives priority to arms over laws "since there cannot exist good laws where there are no good armies, and where there are good armies there must be good laws" (*The Prince*, XII).⁴⁸

Based on these assumptions, Machiavelli provides a prescription. According to Bondanella, Machiavelli believed:

Such conflict might, in fact, produce beneficial result in a properly organized government controlled by stable political institutions....

But political stability, in Machiavelli's view, is not achieved by the absence of conflict or by a static social structure where no change or movement is permitted. On the contrary, a healthy body politic is one characterized by social friction and conflict.... Machiavelli...propose[d] a dynamic equilibrium between political forces rather than upon their suppression in order to create a false stability.⁴⁹

In creating a new political order, Machiavelli recommends to take a decisive action, one way or the other, and not to adopt the middle way:

Other diplomatic mission of consequence required Machiavelli to visit Pope Julius II (1506) and the Emperor Maximillian (1507–1508). The first mission eventually

⁴⁷ Ibid., pp. 28–31.

⁴⁸ Ibid., p. 31.

⁴⁹ Ibid., pp. 29–30.

produced one of the most memorable passages in *The Discourses*—the discussion of damaging middle ways of behavior and the fact that men rarely know how to be completely good or completely evil (I, xxvii).⁵⁰

Hobbes: Thomas Hobbes was also responding to specific circumstances, namely divided England, torn in the Civil War. Here, Hobbes also offered a prescription within the paradigm of realism. First, Hobbes defines the human condition as being in zero-sum situation:

And because the condition of Man, ... is a condition of Warre of every one against every one; in which case every one is governed by his own Reason; and there is nothing he can make use of, that may not be a help unto him, in preserving his life against his enemyes; It followeth, that in such a condition, every man has a Right to every thing; even to one another's body. And therefore, as long as this naturall Right of every man to every thing endureth, there can be no security to any man, (how strong or wise soever he be,) of living out the time, which Nature ordinarily alloweth men to live. And consequently it is a precept, or generall rule of Reason, *That every man, ought to endeavour Peace, as farre as he has hope of obtaining it; and when he cannot obtain it, that he may seek, and use, all helps, and advantages of Warre.* The first branch of which Rule, containeth the first, and Fundamentall Law of Nature; which is, *To seek Peace, and follow it.* The Second, the summe of the Right of Nature; which is, *By all means we can, to defend our selves.*⁵¹

Here, unlike Machiavelli, Hobbes does not assume that human nature is evil. Rather, he believes that humans are insecure:

I put for a generall inclination of all mankind, a perpetuall and restlesse desire of Power after power, that ceaseth only in Death. And the cause of this, is not always that a man hopes for a more intensive delight, than he has already attained to; or that he cannot be content with a moderate power: but because he cannot assure the power and means

⁵⁰ Ibid., p. 13.

⁵¹ Hobbes, ed. by Richard Tuck, *Leviathan*, Cambridge: Cambridge University Press, 1996, pp. 91–92.

to live well, which he hath present, without the acquisition of more.⁵²

Based on this observation, Hobbes presents a solution, which is the common wealth, governed by the single unified authority. The people would enter into covenant with the authority. The authority, a king or an assembly, will use force to punish the offenders so that people can obtain security. In exchange, people will obey the authority:

The finall Cause, End, or Designe of men, (who naturally love Liberty, and Dominion over others,) in the introduction of that restraint upon themselves, (in which wee see them live in Common-wealths,) is the foresight of their own preservation, and of a more contented life thereby; that is to say, of getting themselves out from the miserable condition of Warre, which is necessarily consequent ... to the naturall Passions of men, when there is no visible Power to keep them in awe, and tye them by feare of punishment to the performance of their Covenants, and observation of those Lawes of Nature...

For the Lawes of Nature (as *Justice, Equity, Modesty, Mercy*, and (in summe) *doing to others, as wee would be done to.*) of themselves, without the terrour of some Power, to cause them to be observed, are contrary to our naturall Passions, that carry us to Partiality, Pride, Revenge, and the like. And Covenants, without the Sword, are but Words, and of no strength to secure a man at all. Therefore notwithstanding the Lawes of Nature, (which every one hath then kept, when he has the will to keep them, when he can do it safely,) if there be no Power erected, or not great enough for our security; every man will, and may lawfully rely on his own strength and art, for caution against all other men.⁵³

Hobbes emphasizes the importance that the authority is one or unified. The king was the most obvious candidate for that. But in his time, the Church asserted significant political influence. Therefore, he spends almost half of *Leviathan*, trying to undermine the Church influence. He seems to recognize three tiers in Christian authority: the words of Christ, the Scripture, and the Church as an interpreter of the Scripture. The one he

⁵² Ibid., p. 70.

⁵³ Ibid., pp. 117–118.

attacks most is the third tier. Some people seem to believe, though, that he was an atheist.

Since the foundation of Church power comes from the spiritual ground, his effort to undermine it made him materialist: “*Leviathan* was also well-known for its radical religious views, which were often Hobbes’s attempt to reinterpret scripture from his materialist assumptions. His denial of incorporeal entities led him to write, for example, that Heaven and Hell were places on Earth, and to take other positions out of sync with church teachings of his time.”⁵⁴

3. Problems in the Solutions

Both idealist and realist thinkers have been trying hard to find the solution for establishing permanently stable institution without recurring violence within their own paradigms of idealism and realism. Why, then, have all these efforts so far have proven to be fruitless? This investigation must be conducted in three tiers. The first is the problems internal to each individual approach. The second is the problems internal to idealism and realism in general. The third is the limit of idealism and realism itself.

(1) Internal Problems to Each Approach: To conduct an inquiry at this level, much more detailed studies on each approach are necessary. This level of inquiry will be left for the future generations. I can only present some random observations here. For example, in Hindu, people who obtained Moksha are supposed to live in seclusion as forest dwellers. So, the society is still ruled by people with full of desires. With this form, the benefit of individual achievement of Moksha will not spread to society in general. Their Caste system was also initially intended to distribute social burden according to individual capability. However, it seems that a hereditary system does not work here. If any society were to use the system of burden distribution according to ability, each individual would have to be assessed. Further, even individuals could grow stronger in their lifetime; therefore, this type of approach would require great flexibility.

One general comment must be made here. Naturally, general idealist principles must be fit into the need of a specific age and people. In physical engineering, airplanes come in all sizes from those just for a few people to jumbo jets. Among all jumbo jets, there are numerous internal design options, such as seat arrangements and color schemes to fit the needs and tastes of the intended passengers. But they all must satisfy the principles of aerodynamics. Religions also have to be tailored for specific audiences. But the fundamental principles cannot be changed. Here, it is necessary to figure out what elements are unchangeable universal

⁵⁴ <http://en.wikipedia.org/wiki/Leviathan>

principles and what elements are changeable specifics. General principles must be maintained in every occasion in order to maintain integrity of the religion; however, there must be enough flexibility to allow specific needs to be met. While this is easy for physical engineering, in metaphysical engineering, it is not always obvious. For example, after Christianity was legitimized by Constantine, the first serious debate was whether or not Christ was a person or a god. From universal idealist's perspective, I feel that this would not be an issue regarding a fundamental principle on which everyone must agree, and should have been left for interpretation of each individual.

(2) Internal Problems of Idealism: There are four main problems I can detect, which are inherent in idealism. First, as observed in the historical survey conducted in Chapter 2, the religious approaches of idealism exhibit a dilemma. Such religions as Christianity were found useful to the secular leaders. They contained the element that conveniently served the secular leaders to achieve dominance without expensive coercion by force. That is, by saying, "To serve me is to serve God," they could cultivate devotion among their subjects. On the other hand, religious principles needed political influence in order to achieve its ultimate goal to establish ideal society. Therefore, in Western civilization, religious and secular authorities initially developed a symbiotic relationship, only to become corrupt by the secular influence later. Contrary to this case, Buddhism failed to become a political force in their prospective civilization. Occasionally, it was picked up by the secular leaders but the influence could not become permanent as in the case of Christianity. The difference seems to come in their fundamental approach. All the religions would agree that the fundamental problem is that people love themselves but not others as much as they love themselves. There are two solutions to this problem. Christianity tries to solve this problem by expanding self-love into universal love—i.e., everyone should love others as s/he loves her/himself. On the other hand, Buddhism tries to solve it by extinguishing self-love, i.e. I can be indifferent about myself as about strangers. As a result, its approach was too passive and the secular rulers could not find the way to use it for their advantage. Religions must maintain integrity but must also be politically relevant. History shows that this is a very difficult balance to achieve.

Second, there seems to be a developmental pattern in religion, from polytheism to monotheism, and from smaller units to larger units. Jan Assmann classifies: "[P]olytheism is always the older of 'primary' and

monotheism the newer or ‘secondary’ type of religion.”⁵⁵ Within polytheism, there was sometimes a move toward monotheism. Ian Shaw observes such a tendency toward its sun god Ra in the New Kingdom in Egypt:

The sun-god and the king lay at the heart of Egyptian theological thinking and cultic practice as they had developed over the previous centuries. The daily course of the sun-god, who was also the primeval creator-god, guaranteed the continued existence of his creation. In the temple, the sun-god’s daily journey through the heavens was symbolically enacted by means of rituals and hymns, the principal aim of which was to maintain the created order of the universe. The king played a crucial role in this daily ritual; he was the main officiant, the sun priest, who had an intimate knowledge of all aspects of the sun-god’s daily course. Every sunrise was a repetition of the ‘first occasion’, the creation of the world in the beginning. Ra himself went through a daily cycle of death and rebirth; at sunset he entered the netherworld, where he was regenerated and from which he was reborn in the morning as Ra-Horakhty. Light could not exist without darkness; without death there could be no regeneration and no life. Together with the sun-god the dead were also reborn; they joined Ra on his daily journey and went through the same eternal cycle of death and rebirth. Osiris, the god of the dead and the underworld, with whom the deceased were traditionally identified, was increasingly seen as an aspect of Ra, and the same held true for all other gods, for, if the sun-god was the primeval creator, then all the other gods had emerged from him and were therefore aspects of him. In this sense a tendency toward a form of monotheism is inherent in the religion of New Kingdom Egypt.⁵⁶

In addition to this functional convergence, the convergence among different religions took place. In the ancient world, each community had an indigenous religion. These were gradually incorporated by more powerful communities. In the case of Egypt, in the Old Kingdom:

⁵⁵ Jan Assmann, “Monotheism and Polytheism,” in Sarah Iles Johnson ed., *Ancient Religions*, Cambridge: Harvard University Press, 2007, p. 17.

⁵⁶ Ian Shaw, *The Oxford History of Ancient Egypt*, Oxford: Oxford University Press, 2003, p. 266.

Religious beliefs of the ancient Egyptians were locally diverse and socially stratified. Practically every area of Egypt had its local god, which for its inhabitants was the most important deity.⁵⁷

Egypt went through a period of decentralization but the central government once again succeeded in asserting its influence in the New Kingdom, and people from less influential communities were incorporated into Egypt:

Peace had also changed the Egyptians' attitude towards their foreign neighbours, who were no longer primarily seen as the hostile forces of chaos surrounding Egypt, the ordered world created at the beginning of time. Amenhotep's court had become a diplomatic center of international importance, and friendly contact with Egypt's neighbours had led to an atmosphere of openness towards foreign cultures. During the earlier part of the dynasty, immigrants had introduced their native gods into Egypt and some of these deities had become associated with the Egyptian king, especially in his warlike aspect, but now foreign people were themselves seen as part of god's creation, protected and sustained by the benevolent rule of the sun-god Ra and his earthly representative, the pharaoh.⁵⁸

Sometimes, this process is peaceful, but other times it is not. Until the incorporation is completed, outsiders are regarded as "enemy." Idealism does not apply to these enemies. Therefore, most religion applies idealism to people inside the community and realism to those outside their community. This suggests that until the entire world can be considered as one community, there will be always feuding forces, even if each community manages to achieve the idealist goal.

Related to this is the issue of the common enemy. In order to achieve internal unity, this has been used as an effective tool. The Crusade would be one example. In other words, there may be a need to export dissent in the form of fighting a common enemy in order for any community to achieve internal unity.

Third, there is a problem of scale. Branches of idealism which adopt love as their tenets try to inspire universal love. However, if the

⁵⁷ Ibid., p. 101.

⁵⁸ Ibid., p. 265.

entire world were to be one community, how easy it might be to “love” someone you never met who lived in the opposite side of the world in the same way as you love your family? Can you love a total stranger you’ve never met as much as your relatives? This is the loyalty problem Plato raised when he proposed to abolish family for training his guardians. Christianity also preaches universal love and therefore faces the loyalty problem. The martyrdom of Perpetua can be one such example. Perpetua was a 22-year old newly converted Christian in the third century, A.D. She died in the persecution by the Romans. She was ready to be executed but his father, the pagan, begged her not.

Empirically, all the religion exhibits impossibility to hold together the large population covering a large territory. Christianity broke from Judaism. Islam broke from Christianity. Christianity became divided into Catholic and Protestant. Protestant broke into numeral denominations. Islam broke into orthodox and Sufi. Orthodox Islam broke into Shiite and Sunni. Buddhism broke into Theravada and Mahayana, each of which had numeral denominations in different countries.

This may be the ultimate limit of the ancient religion applied to the modern society with a much larger scale. As the ancient irrigation system would not be able to support the modern population, the ancient religion may not be able to serve efficiently the modern society with a much larger scale. When we look at the animal kingdom, animals are using kinship to create a community similar to ancient local human community, which can be seen, for example, in the TV show *Meerkat Manor* in the Animal Planet channel. To note, two areas of their lives are dictated by the realist tenet. One is against the outsiders. Against outside groups, they fiercely fight. There is no mercy. They kill enemies’ babies. The other is in the selection of leaders. Females in the same group would kill each other’s babies in order to obtain or secure the leadership position. Once the leader is chosen, however, the idealist tenet kicks in. In the TV program, there is a matriarch called Flower. She has the absolute authority, and makes decisions for the good of all her group, who are all her family. She has strict rules to maintain stability of the group and offenders are ousted. In all this, she does not abuse her power. Indeed, when she decides to fight the rival group, she is the first to charge, leading the group. In the end, she sacrificed her life in protecting her offspring. Animals are doing all this without any help of religion or philosophy. So, for the small community where everyone is related, people do not need religion to create internal cohesion. Religion helped to increase the scale to some extent, or even greatly. However, anything less than perfect might do more harm than good as history shows that the scale of religious warfare and the victims dramatically has

increased. Instead of groups of fifty people fighting each other, millions of people are fighting against millions of people.

Fourth, idealism seems yet to be successful in synthesizing emotion and intelligence. In Western civilization, the intellectual approach became philosophy and the emotional approach became religion. And there has been a strain between reason and faith. Dante, for example, could not place Plato and Aristotle in Heaven only because they are pagans. Islam seems to be tilted toward a more emotional approach but orthodox is more intellectual and Sufi, emotional. Buddhism has become divided into intellectually oriented Theravada, and emotionally oriented Mahayana. Confucianism was intellectual. However, over the course, it incorporated religious elements of Buddhism and Taoism and produced Neo-Confucianism, which has intellectually oriented Song Confucianism, and emotionally oriented Ming Confucianism. Taoism and Hinduism also have philosophical and emotional approaches.

(3) Internal Problems of Realism: To offer peaceful solution, both Machiavelli and Hobbes rely on a just ruler. Machiavelli's prince, as brutal as he may be, must act "in the public interest rather than for private advantage."⁵⁹ Hobbes's solution is also a strong and just central authority. This indicates that the realist forerunners were ultimately still operating within the idealist paradigm. It was just the means for them to get to the idealist state. But who is this central authority? If anything at all, all the contestants of power struggle are trying to achieve that position. That is not the solution to the problem but the cause of the problem. Empirically, too, if historical circumstances allowed any realist actor to achieve that position, they abused it—Hitler, Lenin and Tojo, to name a few in modern history.

Later realists offer a solution within its own paradigm, building on its own weakness. Realism builds its tenet on fear. This also leads the problem of size. You cannot use coercion to dominate a large population and territory. It is simply too expensive. Purely coercive domination is exemplified in mafia's rule. A mafia family terrorizes the neighborhood. They have rival families against whom they compete for turf. They offer citizens protection from their rival families and extort money in return. This must be limited only to the scale where direct intimidation is possible. It is simply too expensive to rule millions of people in this manner effectively.

Therefore, naturally, it is very difficult for realist power seekers to rule large territory and population. Their solution is to reassure this natural tendency in order to limit the level of violence, and therefore damage, by dispersion of power or prevention of the concentration of power.

⁵⁹ Bondanella, p. 22.

Machiavelli's domestic institution reflects it. Moving to the international politics, Hans Morgenthau presented the balance of power theory. In his theory, states compete for dominance but it is impossible for one state to achieve dominance because when one is getting stronger, all the other states get together to prevent it from getting any stronger. To make sure that is the case, he proposes the existence of the balancer. In the case of 19th century Europe, England played that role. No state is crazy enough to destroy itself. When faced with the stronger opponents, it will back off. In the world of pure realism, therefore, there would be many small conflicts but not the mass destruction.

Obviously, empirically this is not the case. How, then, should we have devastating global wars such as World Wars I and II? To investigate this question, we must now turn to the limits of idealism and realism.

(4) Limits of Idealism and Realism: Idealism assumes that all people are good, or at least can become good through education. So, they tend to focus more on educating the competent ruler and people and do not focus on how to handle evil. Realism on the other hand, assumes that all people are evil or circumstances prevent people from acting as good people, even if they may be good. So, they tend to focus on preventing evil from piling up to become enormous damage. Here, using the physical engineering analogy, when an engineer is designing an airplane, it must have high enough lift, which makes the airplane fly. However, that alone does not let the airplane stay in the air; it must also have low enough drag, which tries to pull down the airplane. So, it is neither lift nor drag alone that makes the airplane fly, but it is the adequate lift-to-drag ratio. Back to metaphysics, idealism is trying to do the equivalent of focusing on increasing lift by focusing on training a competent ruler who will hold the absolute power, ignoring the drag factor, while realism is trying to do the equivalent of focusing on decreasing drag by trying to reduce the power concentration as much as possible, ignoring the lift factor. This suggests that either increasing lift or decreasing drag alone is not enough to achieve the goal. They must be synthesized. Here, I believe that this image bring a more accurate understanding of the metaphysical world. Instead of a firm ground, metaphysical environment may be closer to air. Rather than trying to build a solid building, we may be wiser trying to build an airplane that can stay in the air against the ever-changing airflow.

These are the preliminary addresses. Some problems can be dealt with at the engineering level. But others need to be examined at the deeper level. The next section deals with them at the level of metaphysical theory.

II. FIELD SURVEY—METAPHYSICAL THEORY

The primary focus of this project is metaphysical engineering; however, it is impossible for us to deal with all the relevant issues within the limited layer of engineering. This section goes into the layer of theory. Unfortunately, I am not capable of operating at this level. Therefore, my sole purpose here is to describe as much as possible what line of inquiry must be executed at this level in order for universal idealists to formulate prescription to control Vico's cycle and establish perpetual peace. The job is endless but in this section, three issues are discussed.

1. Relation between Intelligence and Emotion

The prior section concluded that idealism has not effectively synthesized intelligence and emotion. Therefore, we will need a fundamental theory connecting intelligence and emotion. This task is very difficult to perform in the age of materialism as the one we live in, where non-material issues such as emotion are neglected. The only field that still contains both intelligence and emotion as integral parts is art. Therefore, we should investigate this field, trying to learn as much as possible. But before we proceed, it is necessary to examine whether or not what we learn from art is portable to metaphysical engineering in general. Can art be relevant to the world outside of itself? There is a debate among art scholars. For example, Leonard B. Meyer observes the world of music:

Composers and performers of all cultures, theorists of diverse schools and styles, aestheticians and critics of many different persuasions are all agreed that music has meaning and that this meaning is somehow communicated to both participants and listeners. This much, at least, we may take for granted. But what constitutes musical meaning and by what processes it is communicated has been the subject of numerous and often heated debates.

The first main difference of opinion exists between those who insist that musical meaning lies exclusively within the context of the work itself, in the perception of the relationships set forth within the musical work of art, and those who contend that, in addition to these abstract, intellectual meanings, music also communicates meanings which in some way refer to the extramusical world of concepts, actions, emotional states, and character. Let us

call the former group the “absolutists” and the latter group the “referentialists.”⁶⁰

According to the Meyer’s explanation, Plato will be a referentialist. Plato’s approach to art seems to insist that art has direct influence shaping the character. That is, right kind of arts can create a character desirable to be the philosopher king. But wrong kind can have adverse effects. If this is the case, artists are metaphysical engineers. What we need to do would be, then, to build on Plato’s insistence and study what kind of art would produce what kind of people. In the end, I dismissed the idea. Personally, I believe that the absolutists, as a polar opposite of Plato, are also wrong. And I believe that there are three possibilities in between.

The first possibility is to work as a reference point of life’s real emotion. My belief is that people would have had to take actual life’s travel to build their own character. It would be their actual experiences in life and responses to them that eventually would shape their characters. What artistic works could do is first to show them what kind of state of mind they should achieve, and second to tell them when they are there.

The second begins with the assumption that art has no direct relevance to our project. But since it is the only field that deals with the interaction between emotion and intelligence, we must go there and learn how it is done in order to extract generalizations. Then, we will use these generalizations to produce our own engineering programs. It is like when you don’t have the aerodynamic principles and see the airplane flying. You study how that plane works and figure out the aerodynamics. Once the generalization is attained, you can use it on the racecar to generate down force. Different field but the same principle.

The third possibility is as the connection between subjectivity and objectivity. As mentioned in Chapter 4, one of the differences between physical and metaphysical engineering is that in metaphysics, the researchers are simultaneously the researched. There is no equivalent in physical engineering, in which you might be an engineer while simultaneously a steel beam you are manufacturing a fuselage with. Suzanne Langer defines art as “an outward showing of inward nature, an objective presentation of subjective reality.”⁶¹

Even though we don’t know exactly what role art should play for the field of metaphysical engineering yet, this project makes an assumption that it has some sort of relevance, and that it should become apparent in its due course. At the end of the field survey of metaphysical theory, I will come back to reexamine this issue.

⁶⁰ Leonard B. Meyer, *Emotion and Meaning in Music*, Chicago: University of Chicago Press, 1956, p. 1.

⁶¹ Suzanne K. Langer, *Problems of Art*, New York: Charles Scribner’s Sons, 1957, p.9

With this, we will now examine the relations between intelligence and emotion through the field of art. The problem that makes it difficult for intelligence and emotion to communicate is language. Intelligence relied on words, but emotion is not fully comfortable with that. Suzanne K. Langer asserts:

Yet subjective existence has a structure; it is not only met from moment to moment, but can be conceptually known, reflected on, imagined and symbolically expressed in detail and to a great depth. Only it is not our usual medium, discourse—communication by language—that serves to express what we know of the life of feeling. There are logical reasons why language fails to meet this purpose.... The important fact is that what language does not readily do—present the nature and patterns of sensitive and emotional life—is done by works of art. Such works are expressive forms, and what they express is the nature of human feeling.⁶²

In music, Paul Henry Lang also insists that words cannot go far enough to express emotion fully: “It is in the nature of the simplest and oldest form of drama that, at the height of intensity of feeling and excitement, it turns into music, because music is able to continue to express emotions when the deeply stirred soul of man can utter only inarticulate cries.”⁶³

Then, are intelligence and emotion two compartmentalized fields utterly incapable of communicating each other? Regarding this inquiry, I found several fragmented indications that poetry may serve as a bridge between intelligence and emotion. First, Giambattista Vico places serious emphasis on poetry in his interpretation of history:

We find that the principle of these origins of both languages and of letters lies in the fact that the first gentile peoples, by a demonstrated necessity of nature, were poets who spoke in poetic characters. This discovery, which is the master key of this Science, has cost us the persistent research of almost all our literary life, because with our civilized natures we [moderns] cannot at all imagine and can understand only by great toil the poetic nature of these first men. The [poetic] characters of which we speak were

⁶² Ibid., pp. 7–8.

⁶³ Paul Henry Lang, *Music in Western Civilization*, New York: W. W. Norton, 1941, p. 12.

certain imaginative genera (images for the most part of animate substances, of gods or heroes, formed by their imagination) to which they reduced all the species of all the particulars appertaining to each genus; exactly as the fables of human times, such as those of late comedy, are intelligible genera reasoned out by moral philosophy, from which the comic poets form imaginative genera (for the best ideas of the various human types are nothing but that) which are the persons of the comedies. These divine or heroic characters were true fables or myths, and their allegories are found to contain meanings not analogical but univocal, not philosophical but historical, of peoples of Greece of those times.

Since these genera (for that is what the fables in essence are) were formed by most vigorous imaginations, as in men of the feeblest reasoning powers, we discover in them true poetic sentences, which must be sentiments clothed in the greatest passions and therefore full of sublimity and arousing wonder. Now the sources of all poetic locution are two: poverty of language and need to explain and be understood. Heroic speech followed immediately on the mute language of acts and objects that had natural relations to the ideas they were meant to signify, which was used in the divine times. Lastly, in the necessary natural course of human institutions, language among the Assyrians, Syrians, Phoenicians, Egyptians, Greeks, and Latins began with heroic verses, passes thence to iambics, and finally settled into prose. This gives certainty to the history of the ancient poets and explains why in the German language, particularly in Silesia, a province of peasants, there are many natural versifiers, and in the Spanish, French and Italian languages the first authors wrote in verse.⁶⁴

So, could it be interpreted that in the ancient society, people might not be as intellectually complex but the gap between intelligence and emotion was smaller? As civilization deepens, intelligence and emotion might have been dichotomized between philosophy and art.

Second, Lang talks about the meeting point between poetry and music and its tension. His discussion of French music during the Renaissance exhibits an example:

⁶⁴ Vico, pp. 21–22.

Already the chansons of the troubadours represented a national art in which musical rhythm was largely determined by the prosody and rhythm of the text. In the union of poetry and music, it was the former that dominated; the words commanded the notes. Thus from its earliest beginnings French music finds itself imbued with a verbal element, with an intellectualism following the word, the instrument of discursive language. This is a fundamental characteristic of French music, a characteristic which one meets in every manifestation of French art. Instrumental music, “not at all agreeable,” said Ronsard, “without the accompaniment of the melody of a pleasant voice,” never attained great popularity in France until the nineteenth century. Not that it was not practiced, of course, but it failed to please the French, who up to this day insist upon *du chant*, and always desire music whose sounds please the ear while its words engage the mind. In instrumental music, pure intelligibility loses ground, and the Frenchman is horrified at the thought of listening to something that he cannot follow and understand step by step.⁶⁵

Third, some artists might have used poetry as a bridge. Michelangelo memorized Dante’s *Divine Comedy* in its entirety. Also, as a young man, he started to write Petrarchan poetry. According to William E. Wallace, Renaissance reading was not about quantity. People would choose few books and really study them.⁶⁶ So, why did Michelangelo choose *Divine Comedy*? I would love to know. In addition, according to Wallace:

Michelangelo evidently thought about poetry in the midst of curving. We frequently find poems scribbled on sheets from his workshop. Michelangelo moved easily between poetry and sculpture. The rhythmic strokes of the hammer suggested verse to him. His verse retained elements of its rocketry origins. Almost everybody who studies Michelangelo’s poetry uses the adjective “rocky” to describe something of its character and complexity.⁶⁷

⁶⁵ Lang, p. 216.

⁶⁶ William E. Wallace, *The Genius of Michelangelo* (Lecture tape), Chantilly, Va.: The Teaching Company, 2007, Lecture 4.

⁶⁷ *Ibid.*, Lecture 20.

In Lecture 22, one can actually see his poems scribbled on his drawings for the design of the Laurentian Library.⁶⁸

In *Divine Comedy*, which is an Italian verse called *terza rima*, Dante brings up the same issues that Plato dealt with in *The Republic*, including what justice is, and how we should be governed. At the same time, with the equal importance, he brings up such issues as why one should write or read poetry and what any art is for.⁶⁹ Plato dealt with art and poetry in an awkward manner, in which he seemed to accept their value in character building in limited way, and then attacked poetry altogether. Therefore, this already suggests that poetry can cover wider range of issues toward emotion, even though it may have to sacrifice intellectual clarity. In several places of *Divine Comedy*, politics and poetry are discussed in parallel. In Inferno where heretics are being punished, the first sinner talks about politics and the second, poetry.⁷⁰ In Purgatory, Dante meets a poet and discuss politics. This time, for the first time, the encounter between politics and poetry was “cordial.”⁷¹ Toward the end of the pilgrimage in Purgatory, Dante’s Guide Virgil says: “he will take him as far as reason will allow, but that the final answer must wait for Beatrice as his guide.”⁷² This is the position that Christianity takes—i.e., the human reason is limited and we must rely on the divine revelation. I wonder if it could be also interpreted that in addition to intellectual ability, emotional ability is necessary for the humanity to achieve the ideal society. In Paradiso, Dante acknowledges the limits of speech. Cook and Herzman explain: “The language itself changes on the journey. The discourse in hell is coarser. The Paradiso introduces many new words that Dante invents: His experience presses the limits of language.”⁷³ This conforms the general position presented previously that poetry can bridge between intelligence and emotion, even though in order to go all the way, language is not sufficient.

An integral part of poetry is the use of metaphor. In *Divine Comedy*, for example, the central metaphor is “a journey from bondage to freedom.”⁷⁴ In order to perceive metaphysical phenomena, I believe that the only way is through the metaphor of physical phenomena. This project is built on two central metaphors: metaphysical engineering as physical

⁶⁸ *Ibid.*, Lecture 22.

⁶⁹ William R. Cook and Ronald B Herzman, *Course Guidebook: Dante’s Divine Comedy*, Chantilly, Va.: The Teaching Company, 2001, p. 1 and p. 4.

⁷⁰ *Ibid.*, p. 22.

⁷¹ *Ibid.*, p. 42.

⁷² *Ibid.*, p. 49.

⁷³ *Ibid.*, p. 59.

⁷⁴ *Ibid.*, p. 83.

engineering and the metaphysical world as the geographical world, shown by the map. I wonder if there is a possibility that poetry can play the role that calculus plays in physical engineering.

Obviously, there are problems in this attempt. First, I had a chance to discuss with a poetry professor the possibility of poetry used as an equivalent of calculus. He was skeptical saying that it was impossible for everyone to interpret the poem in one way like mathematical equations. Even between the poet and the reader, there will not be any agreed interpretation. The poet will mean something but each reader may take something else out of it. And it is perfectly fine. I came across a similar concept in music, where composers and performers bring their own ideas to a musical work. This may be true. But I have a feeling that there may be numerable emotions near the surface level of consciousness, but when it comes to the profound emotion such as the “death of Christ,” by which I mean the yearning of humanity to achieve idealist society and their lament for failing it again and again, entire humanity must share one and only emotion.

Another problem is that there are different languages, while calculus is universal. What makes poetry closer to music, such as meter and rhyme, are not portable among different languages. Here, I came across Hebrew poems from the Old Testament. John B. Gabel and Charles B. Wheeler explain:

The key to Hebrew poetry... is that it is a structure of *thought* rather than of external form and that a *Hebrew* poem is composed by balancing a series of sense units against one another according to certain simple principles of relationship.

These sense units are formed into phrases of clauses, often complete sentences, with obvious grammatical coherence.

The general term for the relationship between these units is “Parallelism.” Of the several types of parallelism found in Hebrew poetry, the simplest consists in the repetition of the same thought in different words. From one unit to the next, the only change is that of language. Hence this type is called “synonymous....”

The modern reader, confronted with this sort of thing, has to make adjustments. Our own literary forms do not encourage repetition; still less are they built on it. But the Hebrew poet thought otherwise and worked within a different tradition. A modern poet, having said something,

will be anxious to urge his composition forward to the next stage.... The ancient Hebrew poet, on the other hand, seems to have been in no hurry. If a thought was truly important, it could not be exhausted in one statement. Turning it in the hand and viewing it from different angles, as it were, the Hebrew poet could more fully demonstrate its latest significance.

[To] units related to each other by logic or by the forward movement of the poet's thought, [t]he term "synthetic" has been given....

The third major type of parallelism is "antithetic"; this occurs where a unit offers a thought that denies or provides an exception to the preceding one.... Other types of parallelism are offshoots or variations of these basic ones. Two in particular are worth defining.... "Emblematic" parallelism is a variety of synonymous parallelism in which the thought is expressed half literally and half metaphorically.

"Climactic" parallelism uses the method of synonymy to build up a thought by the repetition of short phrases toward some sort of climax...⁷⁵

This, to me, presents an enormous potential. Combinations of these parallelisms could make great contributions in the investigation of the relations between intelligence and emotion, or between idealism and realism. At least, this form would make us simultaneously face the two elements. If I had any literary aptitude, I would go ahead and begin to experiment with it. However, the community of universal idealists must wait for competent poets who are willing to devote themselves to the universal idealist cause.

However, we cannot simply stop here and wait for such a task to be performed. So, we must begin looking into the field of art in the best possible way. As soon as I started to look into the relation between intelligence and emotion, I realized its complexity. But when I studied music, I could examine it in a manageable size. When I was taking a voice class, I found an aria, called "Lascia ch'io pianga" from Handel's *Rinaldo* in the textbook. I heard it first time in the movie and was instantly gravitated by it. This is an aria in which a princess who was kidnapped by an evil spirit laments her fate. As I was preparing, since it hit emotionally so intensely, I broke down in the middle of the piece and could not even

⁷⁵ John B. Gable and Charles B. Wheeler, *The Bible as Literature: An Introduction*, New York: Oxford University Press, 1986, pp. 37–40.

sing through, let alone sing expressively. Then, I learned that raw emotions could not be communicated as art. To make audience feel the emotion you are feeling, it has to be controlled by intelligence. Otherwise, emotion will run amok. I think that studying theory and analyzing score will give intelligence a means to control emotion.

Then, at another layer, I started to look at an aria from St. Matthew Passion, which I also adore. Then, I realized that this contains a deeper emotion than Handel's aria. Handel's aria is a song of self-pity, which goes: "Lament my cruel fate." But St. Matthew Passion deals with emotion that runs through entire humanity felt by the "Death of Christ." Here, Victor Lederer somewhat confirms my view:

Here, Bach's emotional, dramatic, and spiritual trajectories meet in "Erbarne dich" (Have mercy), the grand confessional aria for alto.

If the St. Matthew Passion were an opera, this would be the moment in the libretto when one of the main characters is in an intolerable situation. This type of scenario is one of the chief purposes of dramatic music, for the composer is now free to unleash a flood of melody—heartfelt rather than passionate—that leaves the audience bathed in tears. (Handel was one of the greatest masters of this kind of aria; even those who are well acquainted with "Lascia ch'io pianga" —Leave me to weep—from Rinaldo find themselves predictably in or near tears every time they hear the simple, infinitely moving tune.) The dramatic situation of Jesus abandoned by his followers and Peter weeping for his own weakness allows Bach to unleash "Erbarne dich" on an audience itself ready to weep. Henrici's direct, moving words do not create a maze of overwrought Pietist imagery; instead they offer the composer a direct path to the expression of spiritual grief. One can imagine Bach telling his librettist, "Keep this simple!"

Have mercy, my God, for my tears' sake; look here: heart and eyes weep bitterly before you. Have mercy!" These are the lyrics of this most beautiful, touching, and comprehensible aria, for many listeners the very heart of the St. Matthew Passion, in direct outpouring of contrition to God by the faithful but troubled soul. In their plainness they stand just a step behind Kyrie eleison (Lord, have mercy on us), the devastatingly simple Greek prayer in the

Catholic liturgy, in which the congregation assumes the role of mankind, all acting as one, “Erbarne dich” takes an individual’s point of view, carrying with it the implications of humanity: here, one speaks eloquently for all. In both texts, less is more, as ultimately there is little for the faithful soul to say apart from these few potent words begging for God’s mercy.⁷⁶

As I studied and practiced these pieces, I came to realize that in order to prepare for a performance, first you must be in the emotional state one level deeper than that of the piece and let intelligence control from there. I could have a better control over the Handel’s aria when I was in the emotional state of St. Matthew.

While I saw intelligence as a controlling force in music performance, I also made a conflicting observation. In some cases, I feel that emotion knows better about emotional matters. As a young girl, I was an ardent admirer of Chopin and Beethoven. And I hated Johan Sebastian Bach. His work was the most boring thing I could play. Throughout years, Beethoven remained my favorite but I gradually lost passion for Chopin. Then, I discovered Mozart, whom I had also thought boring, and finally Bach. It was years later that I learned intellectually why. Chopin of course is romantic. In addition to that, his works are like interesting pebbles. Each one has interesting color and shape but you cannot build a large structure with pebbles. Beethoven, on the other hand, is a “motific” composer. Each of his motifs is like a brick. It may not sound so interesting by itself, but he can make a castle out of it.

I feel something similar when I think about the Goldberg Variations recorded by Glenn Gould twice—once as a young man and then much later. I would describe his first recording “radiant,” and the second “reflective.” The CD comes with a brief comment, which says:

Why did Glenn Gould, who seldom records a piece twice, choose to re-record a work that had received a definitive performance at his hands 27 years ago? Gould has offered only the explanation that new technology plus his own desire to re-examine the work in terms of its “arithmetical correspondence between theme and variation” led him back into the studio for the recording. Any more complete explanation of the new approach would, according to Gould, entail a complete written analysis, in an almost

⁷⁶ Victor Lederer, *Magnum Opus Series: Bach’s St. Matthew Passion*, New York: Continuum, 2008, pp. 78–79.

book-length essay, of the “thirty very interesting but independent-minded pieces” that make up the Variations...⁷⁷

It sounds awfully intellectually complex. But then my question is: Why is the result so predictable? As a young man, he delivered a radiant performance with virtuosity, and as a matured man, he delivered a deeply reflective performance. Why is it so hard to imagine the reversed order? Here, I almost hear the representative of all emotional voices say: “We know. You don’t have to work so hard, because we know.”

Then, in continuing my pursuit, I had a chance to analyze the score of Bach’s four-part chorales. As soon as I began, I made several stunning discoveries on his world in which intelligence and emotions are in perfect harmony. For example, I analyzed *Ach Gott, vom Himmel sieh’ darein* (BWV 153). It is a student quality analysis but I attached it here to show how much even I could find in this short piece.

Cantate BWV153

4. 5. Ach Gott, vom Himmel sieh’ darein
Schau’, lieber Gott, wie meine Feind’,
damit ich stets muss kämpfen
so listig und so mächtig seind,
dass sie mich leichtlich dämpfen!
Herr, wo mich deine Gnad nicht hält,

so kann der Teufel, Fleisch und Welt
mich leicht in Unglück stürzen.

4. 5. Oh God, look down from heaven
See, dear God, how my enemies,
with whom I must constantly battle,
are so deceitful so powerful,
That they easily oppress me!
Lord, where Your grace does not
sustain me,
the devil, flesh, and the world can
easily plunge me into misfortune.⁷⁸

Preliminary observation: This is for people who try to be strong in the face of hardship. Against an overwhelming desire to give in, people in this situation desperately look for a source of strength in God to do the right thing, even though sadly they often lose. I started to see two common threads running in his chorales. The first is that the emotional foundation of his chorale is adoration of God. The key of the key signature can represent this emotion. It starts and ends with this emotion. But I found one piece that the final cadence does not correspond with its key signature. If the chorale is about a delinquent, it would explain it. But I have to wait until I get back to that particular chorale.

⁷⁷ From the CD: Bach, *The Goldberg Variations*, BWV988: Glenn Gould, New York: CBS Records, 1982

⁷⁸ http://emmanuelmusic.org/notes_translations/translations_cantata/t_bwv153.htm#pab1_7

Different base emotions by humans—such as happiness, despair and sadness—are woven into it. But in the end, all these emotions are absorbed by the Godly emotion toward the final cadence. The second is one of the themes also expressed in the Goldberg Variations, which is small to large. Bach's works come with multiple layers—individual situation, path of individual life to God and humanity's path to idealism. If applied to this piece, what comes to my mind at the macro setting is the Armageddon. This echoes with what I have come to understand as a Christian teaching—Armageddon is happening every day in each one of us.

Structure: Its signature key is either G or E minor, which should be the God key. I interpret that E minor is humans' desperate attempt to find God's mercy as a source of strength, and G is joy of finding it. In addition, there is A minor, which I interpret as the key of a humanly struggle. The structure is roughly || A : || B -A, But when I chord comes back, it ends in the middle, leaving such an unfinished feeling. I think this suggests that the war between good and evil is not over and will continue on. I found a similar theme in Shakespeare's *King Lear*.

Harmony: Despite its signature key of E minor, Part A is more naturally interpreted as A minor—a humanly struggle. The second half of Part A is definitely in A minor. But because of the key signature and the first chord E, there is a strong pull toward E minor in the first half of Part A. This A minor-or-E minor dilemma feeling exactly echoes the human feeling of wanting to give up but constantly pressured by inner good to try to do the right thing, a quit-or-fight dilemma. It starts with borrowed I chord of E minor as if God were with him. But the major chord immediately erodes to the A minor mode. It's a major chord, but it is not G but borrowed I of E minor, so it is a desperate attempt masked with a positive tone. But like borrowed courage, his resolution wanes instantly in the face of hardship. The second half is in solid A minor, suggesting that, failing to find God's mercy, he struggles alone and has lost faith. Then, only a humanly struggle remains.

Then, Part B starts with G (V-I), This G is reinforced by the E minor paralleled with A minor at the beginning. I looked and I found it. If the initial part were in solid A minor, this G would not make sense. Why did you find it even if you didn't look? But almost instantly G goes away to E minor. This is as if just for a second, the human felt gallantly with God solidly behind him, but it didn't last and he once again loses confidence and starts to struggle to regain faith. Then, desperation kicks in. He feels the presence of God but struggling to turn it into real courage. So, the key of A minor comes back, marking a lonely struggle. But it ends with a half cadence, suggesting the ever-lasting struggle that will continue on. Again, it is E, giving some illusion that it might be ending with God's key, but it is not genuine because it is not in G. The last chord is the same as the first chord, suggesting that the next round of struggle immediately proceeds. This would be perfectly normal on paper because it looks as though it began as I (borrowed) of E minor and ends with I (borrowed) of E minor, as any other pieces

would begin and end. But when you hear these chords, they are functioning as V (borrowed) of A minor, which is unusual for the key signature of E minor. So, the fact it begins with an unusual chord and ends with the same unusual chord can substantiate the interpretation of the ever-going struggle.

Voice leading: I cannot sense this by hearing but looking at the score, the contrary motions of the soprano and bass coming together evoke an imagery of two armies marching toward each other. The voice leading of Part B is wild, reminding me of the battle ground. Then when A minor comes back, it ends with another contrary motion, this time with the interval widening, which gives me a mental picture of two armies withdrawing for now, but the half cadence declares that they will fight again.

Final observation: Here, I wondered what would happen if the key signature were changed to A minor, and accidentals were added when F-sharps come up since the chorale starts and ends in A minor. Then, I notice the enormous emotional charge at the beginning instantly disappear. Without the constant suggestion of E minor behind the key of A minor, the emotional charge of fighting to find God's mercy does not exist anymore and only the whining emotion is left. If I were a performer, these two would give me two completely different mindsets, which would certainly influence my performance. One is a person who has given up, saying "Nothing will change no matter what I do, so might as well join the camp." The other is an emotional turmoil of a person still fighting, "I want to quit. No, I can't. God, help me to be strong!" This turmoil creates an enormous driving force at the beginning and will carry through the entire chorale.

This is amazing because, when played, the two would produce exactly the same sounds but the emotional reaction to each is completely different. Here I witnessed how intelligence could work to create enormous emotional power. In Bach, intelligence and emotion are not in a trade-off but a synergistic [mutually potentiating] relationship.

Intelligence must first recognize the situation so that an appropriate emotion can be triggered. For example, if you see your loved one has been hurt, you first recognize the situation and then feel upset or sad. Analyzing a score is the process of intelligence recognizing the situation, which then must be relayed to emotion. Then, an appropriate emotion is triggered. To express that emotion so that other people can also feel it, performers must once again summon intelligence to control a raw emotion so it can be transported to the audience. In this way, intelligence and emotion depend on each other to achieve supreme art.

I also feel Bach's depth comes from multiplicity of layers. Bach does not simply highlight sad words with sad harmony and happy words with happy one. Instead, he insightfully perceives what kind of state of mind the person who says such a prayer must be in and describes it musically. But at the same time, it does not just show the internal state of mind of the individual, but it also describes the external

situation that the individual is in—both immediate environment and part of his/her long journey to discover God. Further, Bach shows that such an individual journey is also part of the journey by entire humanity to establish an ideal society. It is simply amazing that all this is accomplished in a chorale that lasts less than a minute.

As I read the English translation of the sung text, I realized that this is about the battle between good and evil. When I first look at the text, I imagined how I would set it to music if I were a composer. The first thing that came to my mind was dissonance because this was a head-on collision of two opposing forces. I would have chosen one righteous key, such as C or G, and the furthest possible key from that, such as C-sharp, to depict two poles and there would be abundance of dissonant chords. But that would mean to put an idea to music purely intellectually. Dissonance is called so because it is displeasing to emotions. So, intellectually, this might depict the concept to a head-on conflict between good and evil, but as a result, the emotional elements would be sacrificed.

Bach did not take this route. He worked completely within the convention of music. Instead of dissonance, he expressed the conflict by fully exploiting the duality of chords, which can be interpreted in two different ways, and was equally successful highlighting the emotional dilemma without sacrificing the musicality. I think that he naturally knew human emotions inside out and established a parameter within which everything would work with emotion. When he set any idea to music, I speculate that he chose materials within this parameter, reassuring to avoid any trade-offs no matter how much intellectual concept he introduced.

I analyzed several scores and began to observe some patterns. First, several emotions relevant to the situation described in the text are assigned to different keys. Here, emotions overlap. Humans are rarely occupied with one single emotion. Various related emotions come and go constantly. Bach seems to express this, using closely related keys with many overlapping chords. Second, among these emotions, the one toward God seems to be particularly important. It can be gratitude or praise for God, or plea to God. All other humanly emotions are there but eventually will merge into one emotion toward God. This is expressed by assigning the emotion toward God to the signature key. All begins with God and ends with God. Third, there is a multiplicity of layers. The emotional situations Bach describes seem to be applicable in many layers. It can be revolving around a single event of a person. It can also be the life journey of an individual toward discovering God. But it can also be the journey of entire humanity toward establishing an idealist society.

Just when I thought I spotted a pattern, I came across one to which these patterns could not apply. In BWV 267 (4. 23. An Wasserflüssen

Babylon), I could not find the key of God. This is the lament of a person who was taken from the motherland to a foreign land by a conqueror. The sung text is filled with harsh words such as pain, shame and disgrace. So, I thought that it had to be in a minor key. But actually it is in the key of G. I couldn't figure out so I listened to the performance. Then, I got an overwhelming feeling of nostalgia. So, I presume that Bach detected a nostalgic sentiment behind the sung text, not heavy suffering. In the middle there is a part in A and D minors, which may represent the captive's longing for the homeland and his/her feeling of shame and disgrace in the current situation. But in the end, these keys are enveloped in G, as if Bach were saying: "All these are not so bad after all." It ends with G but in the last 2 measures, I definitely hear a sigh. So, I notice that it is still not a perfectly happy ending, but after all, s/he is not lamenting that the conqueror beat or starve him/her daily. Come to think of it, if you can afford to sit by the river and think about the motherland when you are taken to the conqueror's land, you are in a much better shape.

This exercise has led me to believe that it is possible to embrace the emotion totally and handle it intellectually. By going through each situation presented in the chorales and Bach's emotional interpretation, our intelligence will come to understand human emotions intimately. Analytical skills acquired in this manner could be applied to real emotions we experience as we go through our lives. I hope that musicians will pick it up from here.

2. Micro and Macro Approaches

Now we shall move to the second issue, which is a micro versus macro approach. This issue involves fundamental and logistical aspects.

First, at the fundamental level, all religions basically have been taking a micro approach, while P0 physical engineering has been taking a macro approach. The religious assumption is that all people are either good or can become good through religious training. For any religion to achieve a final goal, then, everyone must be or turn good. This is like trying to turn all molecules into oxygen. There is another micro approach, which focuses on actions of individuals. This would be like trying to figure out a phenomenon by calculating the momentum between particles. This kind of approach is not taken in the field of physical engineering. Engineers do not know the position or characteristic of individual molecules, but they use macro equations. For example, when chemists mix two substances to create a new substance, they do not pay attention to each molecule. In $\text{Na}(\text{OH}) + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$, a chemist would make a dangerous substance into harmless without addressing any particular molecule. Here, this equation does not accurately describe what is happening because many

molecules remain ionic. But without considering how many of which stay as ions and how many of which bond, it can achieve the same consequence. Also, instead of counting how many of what kind of molecules exist in a particular system, engineers use the ideal gas law ($PV = nRT$, where P is pressure, V is volume, $R = 8.314 \text{ J/mol.K}$, T is temperature.) For this, amazingly, you don't even have to know the type of gases involved.

For metaphysical engineering on the M0 plane, the macro approach might be useful. Referring to the above example, if the field of metaphysical engineering could achieve the equivalent, here, we could even bypass good and evil because they wouldn't matter. Or it may be even more important for metaphysical engineers to take macro approach because unlike physical sciences, where each physical substance has clear corresponding characteristics, metaphysically, physical existence does not correspond to metaphysical characteristics. In other words, no one is all evil or all good. Most people are partially good and partially bad, or partially strong and partially weak. So, we cannot label people as we can label that HCl is acidic.

Here, one note of caution. The modern approach is moving in the opposite direction. The new science, emerged after the Enlightenment, is under strong influence of individualism. Psychology and neuroscience, which should be the primary tool of investigation and prescription of this area, has distinctively individual focus. Therefore, it is not equipped to handle macro phenomena such as suicidal terrorists, while it offers an effective tool to understand individual offenders such as serial killers.

On the P1 plane, micro and macro approaches might merge because everything could be considered as some combinations of protons, electrons and neutrons, or even their smaller sub-units. This might also become true once we begin to work on M1 plane.

There are some suggestions that there is a ladder of micro and macro settings. Plato uses this ladder. In his *Republic*, he assumes that there are complete parallels between individual personalities and political regimes, such as a democratic man and democracy. It seems as though he were arguing for the micro-macro interaction in which a defect of each political regime produces a certain type of humans, who will create a political regime that reflects their characteristics.⁷⁹

Personally, I have also observed a micro-macro chain. As I work as a teacher in the classroom, I am the philosopher king, ruling realist and naïve idealist students. But my classroom belongs to the school district, which belongs to the state, and so on. This macro-micro chain can be incorporated in the universal idealist pyramid, shown in Illustration 3-2 (See Illustration 5-1.) On the border between the naïve and realist terrains,

⁷⁹ Plato, trans. by H.D.P. Lee, *The Republic*, New York: Penguin Books, 1971, Part IX.

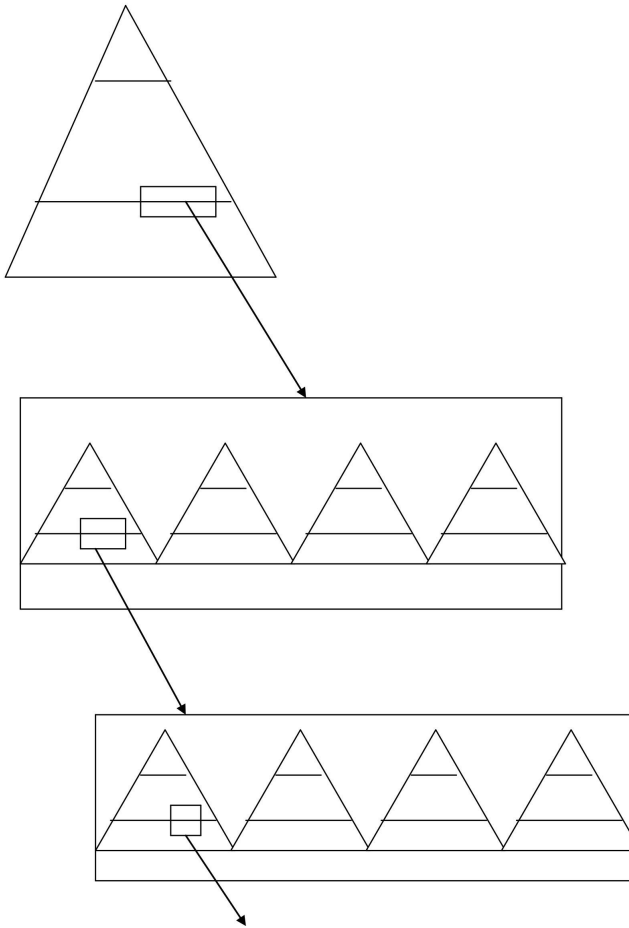
there are numerous small pyramids. And on the border of each small pyramid, there are another set of smaller pyramids. The chain continues to the smallest pyramid, such as my classroom.

Here, I found that some prose fictions, written in the scale of *War and Peace*,⁸⁰ may have a tremendous potential contribution to make in terms of connecting emotion and intelligence in the macro-micro interaction. In *War and Peace*, the story takes place during the Napoleonic Wars, which in our project represents toward the end of the Age of the Heroes, transitioning into the Age of Men. This macro trend affects individual choices, which in turn affects the macro trend. Tolstoy does not have an exclusive focus on the micro-macro connection. He also spends much energy focusing on universal issues that occur during individuals' passage of life, including immature and mature love, and facing life and death. At the same time, when he focuses on the macro environment that affects individual choices, he does that in such a way as to make the readers care so deeply for the characters. Therefore, it makes it possible for us to understand the emotional side of the phenomenon, as well as the intellectual side.

Logistically, this ladder could be a useful tool for metaphysical engineering. As mentioned in Chapter 4, one difference between the physical engineering and metaphysical engineering is the size. Through my life experience, I have come to feel that there are three layers that co-vary around me. In the smallest scale, as mentioned earlier, I came to realize that there are deeper layer of emotions, from which I can intellectually control my performance in the field of music. At the second layer, in my personal life, I had noticed the complex relations between emotion and intelligence in my personal life. My intelligence was always a disciplinarian, and a source of stoicism. Often, my emotion complained and wanted to quit. But my intelligence had a list of things to do and always made sure that they got done. On the other layer, however, the list of these things was made according to the deeper commitment that my emotion made to idealism. If I had committed to, for example, self-promotion, my intelligence would have generated a completely different list. Finally, at the largest scale, my inquiry led me to formulate two layers of idealists, namely, naïve idealists and universal idealists. I have come to equate my surface emotion with naïve idealists and my deep emotion with universal idealists. As a ruling class, residing in the deep layer of emotion, universal idealists would intellectually control their society.

⁸⁰ Leo Tolstoy, trans. by Ann Dunnigan, *War and Peace*, New York: A Signet Classic, 1968.

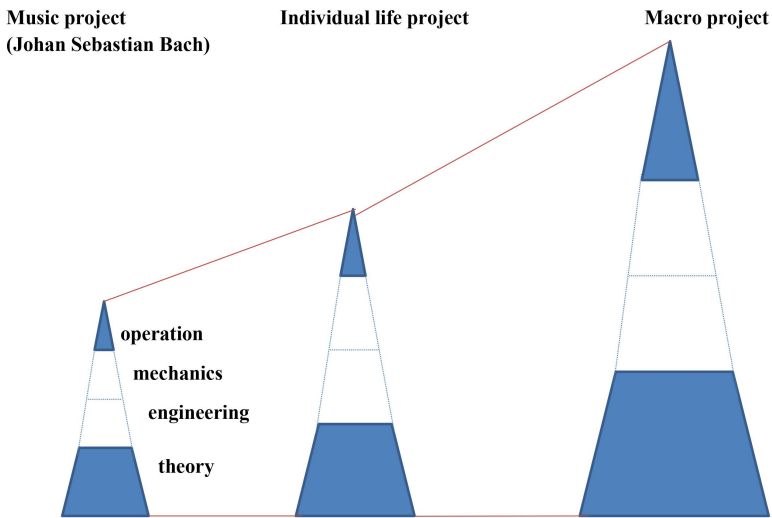
Illustration 5-1
Macro-Micro Idealist Pyramid



If we can use this phenomenon intelligently, we might be able to circumvent the size problem, in the same manner as physical engineers use models and wind tunnels. I am beginning to think that a metaphysical engineering methodology might be developed out of these three co-variations. In general, there are problems to apply micro pictures to macro situation. First, the direction from the macro to the micro pictures is direct and straightforward. Once you see the macro picture, you can directly apply to the micro situation. But the opposite is not simple. For example, if you see the shape of the earth, you can suddenly see the same shape in many daily objects, such as tennis balls and oranges. However, it is not possible to figure out the shape of the earth by watching daily objects.

There are simply too many shapes. Does the earth have a cubic shape like a dice, or rectangular like a book? Second, if one uses an individual life as a micro picture, it is nearly impossible to remain objective. Indeed, when applying the micro setting to the macro setting, most untrained people get it wrong. Some terrorists apply cases of their personal failure to some macro injustice and justify their destructive actions. For example, Unabomber, who once had a brilliant future but was experiencing personal failure, sent bomb packages to innocent people, arguing that he had to do this to call for attention to the erosion of human freedom caused by modern technology, which require a large-scale organization. Here, using two smaller cases might mitigate some of these difficulties. The first problem might be mitigated by using two micro cases. Drawing generalizations from one micro case is a wild game, but if you have two cases, the range of uncertainty could be significantly reduced. Second, by using the smallest music studies, an engineer can remain objective.

Illustration 5-2
Metaphysical Engineering Methodology Experiment



Of course, in this methodology, each engineer can only present one experimental data, underlining the dire need for a wide range of corroboration among people across time and place for any idealist projects.

3. Metaphysical Circuit

The final issue is what I call the metaphysical circuit. This is an observation so far rather than a theory. Just like people had observed

apples fall from the tree without knowing about the gravity for thousands of years, it is possible that we observe something without knowing what it really is. I have noticed in many occasions that two extremes lie next to each other, rather than at two opposite poles. If mastered, it can be useful to synthesize two polar opposite paradigms and to move up to the next plane.

It first came to my attention when I saw Mussolini turned to fascism from communism almost overnight. I thought that he was a realist politician and would not think twice to switch sides if that brought him what he wanted. However, at the same time, Japanese agricultural villages also went through the same transformation within a very short time. If two extremes are located at the two extreme ends of the linear extension, one must go through the middle in order to get to the other end. These examples almost showed that instead of linear, they are circular and two extremes are right next to each other.

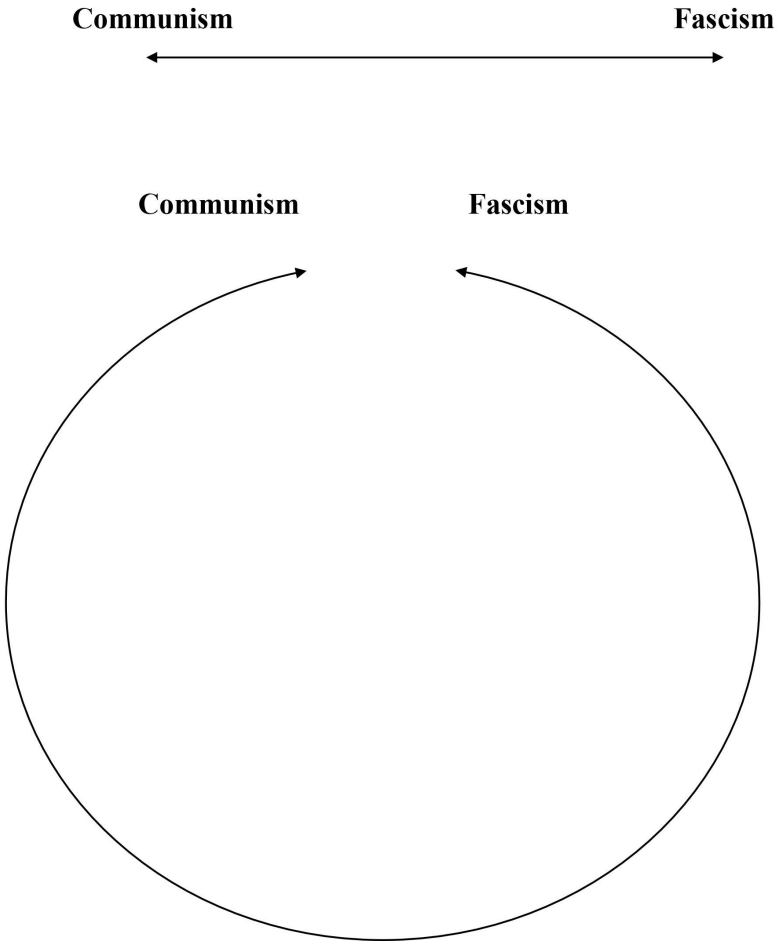
After this, I have run into similar circumstances many times. I have personally experienced it. In my pursuit of generalization, gradually I began to be criticized as being “too general.” I pushed further; then finally, no one understands me any longer, so I stand alone as you can see in this project. Then, I see such post-modernist thinkers as Foucault, who has gone all the way to claim that any kind of generalization is absolutely impossible. So, we are all trapped in our own individual self, unable to communicate to each other. But if you think about it, it is a sweeping generalization of its kind.

I also came across the statement that the world that Heraclitus, an ancient Greek philosopher, described also fits this: “[I]n the words of Heraclitus, ‘Good and evil are one,’ and ‘God is day and night, summer and winter, war and peace, surfait and hunger.’”⁸¹ This is not unlike the phrase “Fair is foul,” which Shakespeare used in *Macbeth*. This is a reference to the world where realism and idealism meet head on.

Christianity and Buddhism also meet at the extremes. As mentioned earlier, both understand that the problem comes from the fact that people do not love others as much as they do themselves. So, Christianity pushes to expand self-love to universal, while Buddhism encourages expunging self-love. Even though history shows that the process of achieving the goal produces different political and social dynamics, either way, those who go all the way would arrive at the same place.

⁸¹ Joseph Campbell, ed., *The Portable Jung*, New York: Penguin Books, 1986, p. xxvii.

Illustration 5-3
Metaphysical Circuit



Also, some theoretical physicists are meeting the God, when they go all the way in the road of rationality:

The thrust of Hawking's philosophizing in *A Brief History of Time* is to demean God's role in the affairs of the universe and to elevate the role of the human race. Spearheading this thrust is Carl Sagan, who foreshadows

the theme in his introduction to the book. According to Sagan, *A Brief History of Time* speaks “about God, or perhaps about the absence of God.” It represents an effort to posit “a universe with no edge in space, no beginning or end in time, and nothing for a Creator to do.” Ironically, this message contradicts the conclusions from Hawking’s remarkable work on singularity theorems, which in Hawking’s own words establishes that “time has a beginning.”

Through the principle of cause and effect, this theorem pointed obviously, perhaps too obviously for Hawking, to the existence of some entity beyond the dimensions of the universe who created the universe and its dimensions of space and time. Hawking’s only hope for escaping the beginning, hence the Beginner, lay in finding some possible point in the universe’s history where the equations of general relativity (on which his space-time theorem was based) might break down.⁸²

This, of course, is what this project classifies that P0 (Physics plane 0) meets M1 (Metaphysics plane 1). On the opposite end, when I first tried to study music theory, I picked up the textbook. Its first chapter was on the sound wave, a branch of physics.⁸³

Hindu’s claim that Atman is Brahman indicates that if you go deep into internal journey in search of self (Atman), you will also find the absolute universal (Brahman). There is another interesting claim that Hindu makes. According to *The Upanishads*, there are four layers of consciousness. The most surface level is when you are awake, the second level is when you are dreaming, the third level is when you are in the dreamless sleep and the final is beyond the dreamless sleep. Eknath Easwaran explores:

The sages of the Upanishads show a unique preoccupation with states of consciousness. They observed dreams and the state of dreamless sleep and asked what is “known” in each, and what faculty could be said to be the knower. What exactly is the difference between a dream and waking experience? What happens to the sense of “I” in dreamless sleep? And they sought invariants: in the constantly changing flow of human experience, is there

⁸² http://www.siprep.org/faculty/phanley/200files/Einsteinan_Hawkin_God.html

⁸³ George Thaddeus Jones, *Music Theory*, New York: HarperCollins, 1974.

anything that remains the same? In the constantly changing flow of thought, is there an observer who remains the same? Is there any thread of continuity, some level of reality higher than waking, in which these states of mind cohere?

These are the kinds of questions the sages asked, but for some reason they did not stop with debating them. They became absorbed in the discovery that as concentration deepens, the mind actually passes through the states of consciousness being inquired about. And in concentrating on consciousness itself—“Who is the knower?”—they found they could separate strata of the mind and observe its workings as objectively as a botanist observes a flower.⁸⁴

Looking at the specific four layers of consciousness in Hindu, I see some connection. The first level seems to be what I have been seeing the physical end, while the fourth level seems to be the most metaphysical end. The fourth layer seems particularly interesting. I wonder if this layer is what Kant meant when he mentioned his subjectivity. It seems to me that while Kant meant the fourth layer, his successors, down to the post-modernists, seem to focus on separate subjectivities, which would be the first layer in Hindu. At this level, the two problems of metaphysical engineering—the intertwining of subjectivity and objectivity, and required size beyond individual capability—might be solved. As mentioned in the quote above, this is the level that the achievers can observe self from objective vantage point. Also, at this level, the consciousness is no longer separated, so it should be possible to work on a project that goes beyond the individual physical existence. Michael N. Nagler put it this way: “What the myth does *not* tell us, being a myth, is the most important consequence of these beliefs: that a human being can, within consciousness, reverse the process of creation which proceeded from singularity to diversity: not just retrace it...”⁸⁵ In order for the metaphysical institution to survive, the fourth layer of consciousness may be required.

As promising as it looks, when I began to examine the concept more closely, I ran into a series of problems. For example, I tried to equate the state of consciousness I am in now to the second layer of consciousness in Hindu, the dreaming state. Instantly, there is a problem. When you are

⁸⁴ Eknath Easwaran trans., *The Upanishads*, Tomales, Calif.: Nilgiri Press, 1987, pp. 15–16.

⁸⁵ Michael, N. Nagler, “Reading the Upanishads,” in Eknath Easwaran trans., *The Upanishads*, Tomales, Calif.: Nilgiri Press, 1987, p. 282.

dreaming, you are confined within your own conscious world. You cannot share the dream with anyone else. So, is this level rather separating than unifying? Moving onto the third layer of dreamless sleep, people are unconscious at this level. The closest I can get is my experience where I go to sleep with a problem in mind I often wake up with an answer (even physics homework!). I always wonder if my mind is working when I am asleep. But how can I examine my mind when I am unconscious? Well, for that, I would have to be able to move the fourth layer of consciousness, where supposedly I can observe me being unconscious. But how am I to get there? And I am wondering if this also would come back as a metaphysical circuit if pursued to the end, where the first layer meets the fourth. After all, these two are the awaken states, where the first layer can see the most immediate subjectivity, while the fourth layer can see the most comprehensive subjectivity. But I am too far from the extremes to see where this leads to.

While proceeding with this project, out of these random observations, a more systematic group of circuits has emerged, which is presented here in Illustration 5-4. Some individual circuits were already mentioned above and are repeated here.

First, while swimming through the realist terrain in the universal idealist pyramid, shown in Illustration 4-7, I found myself at the two extreme poles between good and evil, expressed emotionally as love and hate. While trying to push the idealist agenda in the realist terrain, I have cumulated hate and anger against the society, which told me to starve to death in response to my plea to work together to solve the challenging problem to humanity. And I found myself right next to the domestic and international terrorists, who also regard this society as corrupt and aim at destroying it.

Second, when I look at love more closely within the realm of emotion, I found myself at the two extreme poles of grief and joy. The pursuit of the universal idealists is lonely, which is reflected in Bach's St. Matthew Passion. I found it profoundly sad but with no bitterness whatsoever. On the other end, I encountered Beethoven's Ode to Joy, which celebrates the bliss of idealism—humanity coming together. While struggling to synthesize the two emotional poles, I found Bach's Goldberg Variations, which might be the answer to the emotional synthesis. The emotion I can find in it is simply deep, as though it were the root of all emotions before diverging into different kinds of emotions such as grief and joy. I have felt the existence of God in both Bach's works. The one I feel in St. Matthew Passion is the God of omnipresence, the ultimate objectivity, while the one I feel in the Goldberg Variations is intimate, the God within you, and the ultimate subjectivity. This sounds awfully like

Brahman and Atman of the *Upanishads*. Hindu has synthesized the two by saying: Atman is Brahman.

Third, I also found myself within the metaphysical engineering pyramid that situates on top of the universal idealist pyramid, shown in Illustration 4-6. Here, I found myself at the two extreme poles between intelligence and emotion. Through the study of music, I tried to find the way to synthesize the two poles, which I described above. In order to pursue this line of inquiry a little further, I began to practice the Goldberg Variations. Soon after, I started to have a deeply contemplative feeling when I practiced. Suddenly, out of nowhere, Aristotle's First Mover appeared in front of me. Deep contemplation may be the place where emotion and intelligence can merge. I do see that when I am in that state, I am not sure if I am feeling or thinking. This might lead the way to the synthesis between emotion and intelligence.

Fourth, at this point, I could see the mirror image between the emotional and intellectual terrain. The Brahman-Atman relation between Bach's St. Matthew Passion and the Goldberg Variations also can be seen in Plato's Form and Aristotle's First Mover. I wonder where these syntheses will take us.

Fifth, the final synthesis ensues between the metaphysical and physical spheres. Scientists are conducting research in the form of where consciousness emerges. Personally, I began to recognize the issue toward the end of writing this book. I was constantly caught between physical and metaphysical concerns. Especially, when I was writing it, I used two-to-three week vacations that came three times a year. So, during academic terms, I had to fiddle with numerous daily survival issues, but as soon as the vacation began, I had to move to the deepest layer of metaphysical world within a day or two. When the vacation was over, I once again had to ascend to the most surface level layer of physical survival. Eventually, I began to feel that my physical existence is just the device for me to write this book. I have to be in the physical sphere because that is the only place where I can produce it. We are not able to communicate and share thoughts in the metaphysical sphere. So, we must come to the physical sphere if we wish to share thoughts.

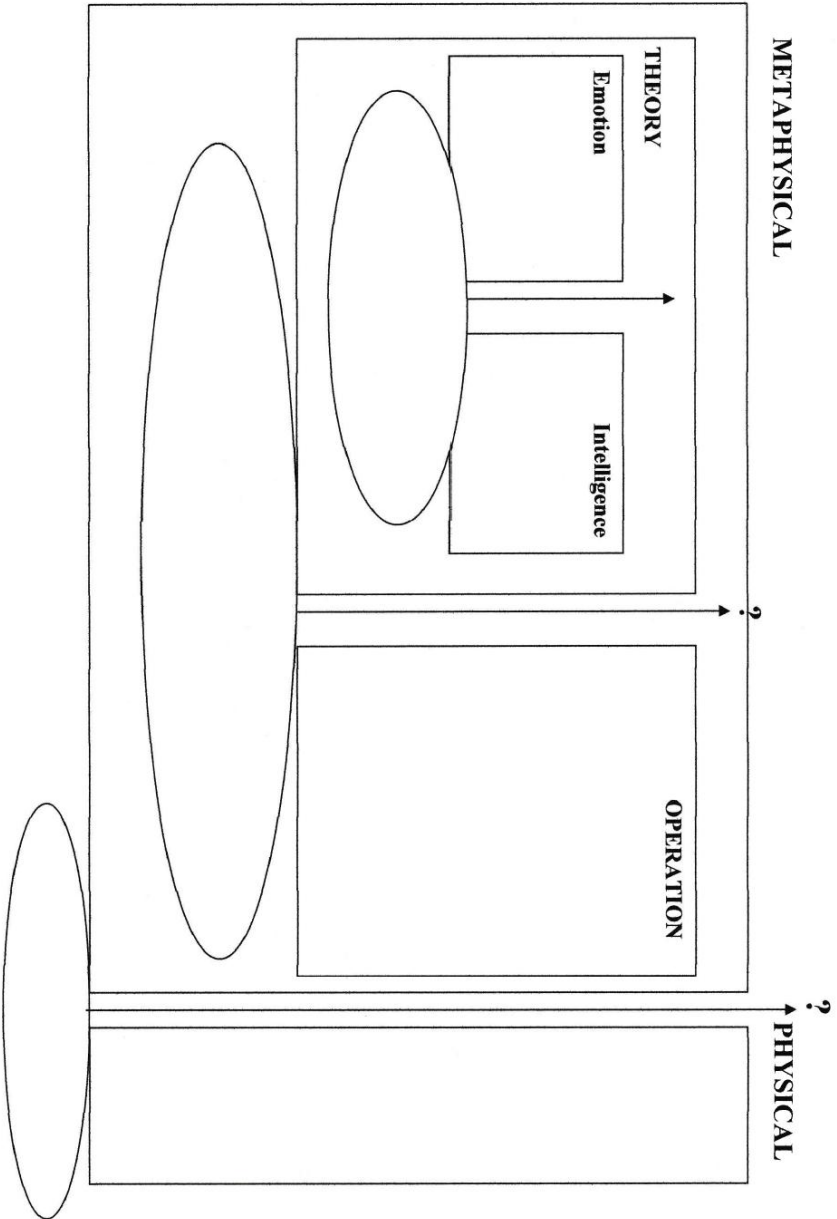
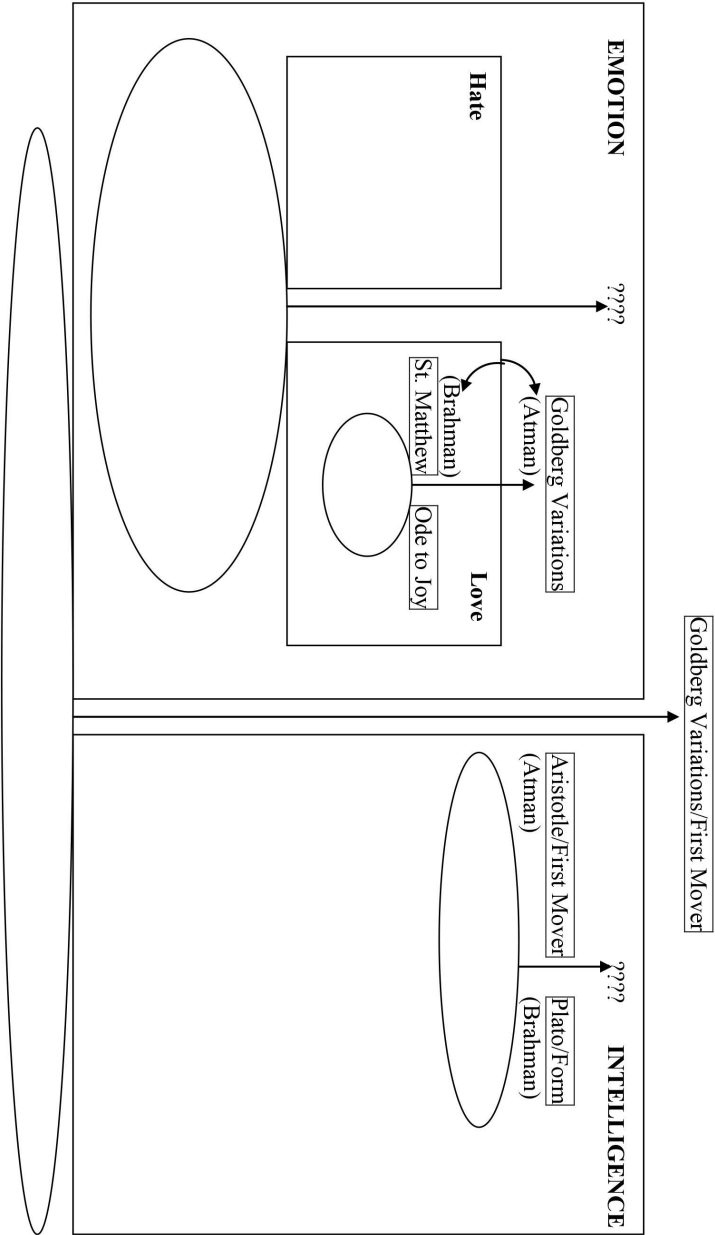


Illustration 5-4
Metaphysical Circuits



If this was to be the case, I wonder if the two opposite ends of infinite physical and metaphysical planes ($P_0, M_0, P_1, M_1, \dots$ and $P_0, M_0, P-1, M-1, \dots$) might also eventually meet, in which P infinity and M infinity on one end would meet P-infinity and M-infinity on the other end, shown in Illustration 5-5. If this were the case, our speculation would have to further expand to what other metaphysical circuit might exist at that level and even larger level. If they are all nothing but a speculation, it proves the narrowness of our knowledge at least.

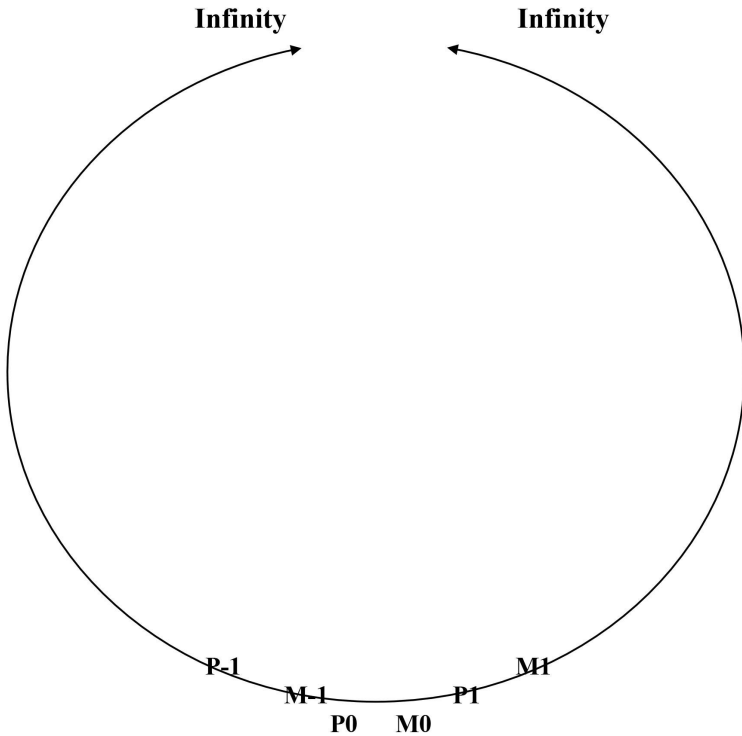
Some meetings are peaceful and others, violent. And I have no way of knowing why. I believe that it is necessary to compile more data on this. I hope that people who go all the way in their own fields will report back so we can begin to understand it.

It is too early to move forward, but I begin to see its resemblance to the digital circuit in physical engineering. There are two kinds of electrical circuits: analogue and digital. This might apply to metaphysics, too. Those who teach the value of middle course, such as Aristotle and Confucius, may be in the equivalent of the analogue system, while others are in the equivalent of the digital system. Then, we might eventually be able to manipulate the circuit to induce desired metaphysical phenomena.

The digital system has four possible outcomes (1, 1), (1, 0), (0, 1), and (0, 0). (0, 0) would be the case where two extremes are wiped out. Historically, democracy came about after two extremes—communism and fascism—were wiped out. This would be the (0, 0) incidence. Sometimes one extreme wins over the other. This would be either (0, 1) or (1, 0). The Bible talks about Armageddon, in which either good or evil will be defeated. What is interesting is (1, 1). It seems if we managed to achieve (1, 1), we might be able to step up to the next level. This reminds me of Hegel's historical dialectic, in which thesis and antithesis create something brand new—synthesis. But we might even be able to manipulate the process if we knew more about this metaphysical digital circuit.

I am also hoping that if these circuits are completed, we just might have large enough metaphysical space to address the problems of Vico's cycle. But for now these five metaphysical circuits will be left unresolved in this project. I hope that someone will take it from here and create a viable research project.

Illustration 5-5 M-P Ladder as Metaphysical Circuit



4. Johan Sebastian Bach—the Goldberg Variations as the Perfect Union

At the beginning of this section, I discussed the importance of art in metaphysical theory. After having gone through major theoretical issues, I want to reexamine what contribution art can potentially make. I believe that the potential is tremendous and here I will illustrate the potential, taking the Goldberg Variations by Johan Sebastian Bach. I believe that this work warrants the section of its own because of its great potential contribution in unifying the universal idealists' emotion, or even synthesizing intelligence and emotion.

When I began to practice it and listened to the lecture tapes, I was stunned. It was as though this work were made for universal idealists.

Here, I will present the summary of the lectures by Robert Greenberg and add my comments from the perspectives of a universal idealist.

First, the theme of the variation is eight-measure long descending notes, called ground base. This repeats four times in each piece. This gives the unified structure for the entire work. Each variation is so different. Melodies change. Sentiments change. But underneath there are always these descending notes. This to me represents the life of universal idealists. Circumstances change. People change. But universal idealists are to follow the idealist tenet consistently. That sets the structure of our lives.

Second, the work is cyclical at every level. At the micro cycle, these descending notes repeat four times. At the miniature cycle, the thirty-two measure long variations and arias are repeated. At the midi level, the thirty variations are divided into ten cycles of three variations. At the macro level, the thirty variations are divided into two cycles of fifteen variations. And the universal cycle completes the entire work as a singularity. Here, Greenberg characterizes the Goldberg Variations as fractal, by which he means: “large is small.” Each piece consists of thirty-two measures and there are thirty-two pieces in total. So, the small structure is the same as the large structure.

The most important cycles to us are, in my opinion, the ten cycles of three variations. Each cycle consists of character pieces, toccata, and canons. Character pieces are mostly dance tunes, which represents body movement or physicality. The toccatas are transitions. The canons represent metaphysical discourse, because melodies overlap so you cannot make physical movements to canons. Greenberg regards the canons as “heart and soul” of the Goldberg Variations. Of course, metaphysical discourses are heart and soul of universal idealism. And this to me represents the life cycle of universal idealists. We go through different stages of life and repeat these cycles.

There are nine canons and each time it appears, it increases the interval by one degree. So, the first canon is in unison, the second is two degrees apart. And the last one is nine degrees apart. This to me represents the expanding world of metaphysics as you go through these life cycles. In addition, Bach uses the concept of numerology, which assigns specific meanings to each number. Greenberg explains Variation 12, canon at the fourth as follows:

Psychologically, the different step from three to four is the progression from the infinitely conceivable to finite reality. Four is considered the number of fulfillment.... Bach signifies the special nature of this canon at the fourth by making it what we call a mirror canon or canon in

inversion.... Twice two is four and two images within and without the mirror make a singular whole. What cannon by inversion means is ... upside down mirror image of each other: when one goes up, the other goes down.... But it's the most interesting speculation; indeed, a mirror image of something, when you put two images together creates an even greater singular image and the numerical speculations of it. By doing a mirror cannon, Bach is reflecting the holistic vision of what the number four represents.⁸⁶

Personally, though vaguely, I also begin to notice that there is a continuum of consciousness from the most physical end to the most metaphysical end. So, I tried to fit my life into this scheme more closely and I was stunned once again. My life completely fits in it. Among others, some variations hit me directly:

Variation 15 is the last piece in the first half. This reminds me of myself at the airport waiting for the plane to the United States. It was the end of the first half of my life. Looking at the shiny silver body of the airplane I was to come aboard, I became so sad, thinking about the old life that I had to leave behind. The tone so perfectly fits how I was feeling then.

Variation 16 is an overture. It was the beginning of my second life. It's energy and enthusiasm reminds me of myself when I first saw Georgetown University from the Key Bridge. I thought I had lived for this day.

Variation 24 is cannon at the octave. There is a sense of completion. This corresponds to the time when I finished my first book. I did feel that sense of completion then.

Variation 25 has a very sad tone. This is me feeling the demise of idealism. I was hopeful that people would join my cause now that I had a framework for everyone to participate. But such optimism was completely shuttered in the next few years. In this piece, I hear death knells for a naïve idealist.

Variation 27, the last cannon at the 9th interval signified this book to me. It is the completion of my life assignment, and in it the metaphysical world is expanded to its maximum. Also, the mirror image is once again used here, which evokes in me the final link in the metaphysical circuit.

Variations 28, 29, and 30 build up the momentum toward the end. Variation 28 is rather quiet at surface but there is a lot going on underneath.

⁸⁶ Robert Greenberg, *Bach and the High Baroque, Part IV* (Lecture tape), Springfield, Va.: The Teaching Company, 1996, Lecture 31.

Then, you will suddenly hear the fanfare in Variation 29, leading into the Quodlibet. This to me is the piece for the celebration of homecoming—the arrival at the terrain of universal idealists. When I play this variation, the bells to rejoice the homecoming resonate so loud in me, like I could not hear anyone talk. I am finally here. Actually, this variation is a combination of two German popular songs. One says: “I have not been with you for so long. Come closer. Come closer.” I don’t have to add any universal idealist’s perspective to that. It is almost eerie to me to see this phrase in Quodlibet.

The Goldberg Variations tells me that this is the direction I am moving toward, which is heartwarming. But I have a concern. In the age of democratic decay, will I find this community? What if the terrain of universal idealists has been completely wiped out by the ever-expanding realist terrain? I might find a deserted ancient ruin when I arrive. The second German popular song Bach used gives me an eerie feeling here, too. It says: “Cabbages and beets have driven me away. Had my mother cooked meat, I would have stayed longer.” Would I find this note when I arrive at a deserted ruin?

Then, we hear the aria one more time at the very end. Aria da Capo tells me: “It does not matter what you find at the endpoint of your journey.” The final destination that the Aria shows me is a deep contemplation. It is all within. You’ve found an inner peace and that is the endpoint of this journey. Greenberg concludes his lecture by saying: “Following variations 28 to 30... the da Capo seems other-worldly, almost surreal. The life cycle of the work, the most macro of all the cycle is completed with the da Capo.”⁸⁷ He continues:

It’s a moment of signal pleasure, but great spiritual and almost metaphysical reflection. Returning for where we started. There is a whole different feel to this version, to this one, than there was when we first heard it. And we’ve got to ask why.... We’ve gone through world of possibility, a lifetime of experience since last we heard this melody. And the melody sounds very different through the eyes of maturity and experience than it did than those eyes at the beginning, before the moment of the big bang, at birth, before the singularity exploded into an ever expanding expressive and technical universe.⁸⁸

⁸⁷ Robert Greenberg, *Course Guidebook: Bach and the High Baroque, Part IV*, Springfield, Va: The Teaching Company, 1996, p. 48.

⁸⁸ Greenberg, Lecture 32.

Aria

1.

The image displays a handwritten musical score for an Aria. It consists of seven systems, each with two staves. The notation is written in black ink on aged paper. The top staff of each system is in the treble clef, and the bottom staff is in the bass clef. The key signature is one sharp (F#), and the time signature is 3/4. The music is characterized by intricate rhythmic patterns, including sixteenth and thirty-second notes, and various ornaments and slurs. The score concludes with a double bar line and a fermata over the final note.

To me, this journey from the first aria through thirty variations to Aria da Capo is precisely the journey of idealists from naïve idealism to universal idealism. The comparison between the first and the last arias is precisely the comparison between naïve idealism and universal idealism.

But is it arrogant to think that this piece represents MY life? Bach would have no problem with it. It is all part of his fractal: large is small. This one hour musical piece applies to my entire life. In turn, a life of a mere individual applies to the entire world of universal idealism. Indeed, here I see a kaleidoscope of micro and macro chains. Sometimes, the whole work seems to be a journey of a person from the naïve idealist to the universal idealist via the realist terrain. Sometimes, each cycle seems to be an individual journey and ten cycles together represents the collective journey of the community. For example, each cycle of character piece to toccata to canon also looks like the life of Beethoven, who went through his beginning phase to heroism to humanism, each of which corresponds to the naïve idealist's, the realist's and the universal idealist's terrains. His Fifth symphony is a representative of his heroism, in which righteous C major defeats evil C minor. And his Ninth symphony is a representative of his humanism, in which he rejects heroism and embraces humanism. His heroism to me is the travel through the realist terrain. Heroes stand out in the crowd so at this stage, it is still about self-glory. Bach's middle toccatas are all about virtuosity. This is where performers get to show off their wonderful skills. So, it is an opportunity to stand out. But at the end of his life, he rejects heroism and embraces, to me, the tenet of universal idealism. Further, the repeat of physical to metaphysical cycles can echo the repeating Vico's cycles in the history of humanity. As the cycle repeats, the metaphysical realm gradually expands. From this viewpoint, humanity is only in the second cycle, suggesting the long way to go. In this way, Bach allows us to play it at any fractal level. This answers the question that I have been harboring. I have heard about ten performances. Each one is so different, yet none completely resonates in me. I believe that each performer is playing at "MY" level. Therefore, we cannot completely understand their performances as each life is different. I have a feeling that if Bach were to play it himself, he would play at the macro level, which would engulf each single life; therefore, every listener would say: "This is it! This is the ultimate performance!" It is so regrettable that compact discs were not available in his age.

In addition to the macro-micro chain, the Goldberg also incorporates the metaphysical circuit. As mentioned earlier, his St. Matthew Passion, which represents universal grief of humanity not able to achieve the idealist world, is the opposite end to universal joy, together to unify the universal idealists' emotion. Out of this dichotomy, the Goldberg

Variations emerges. This is the deepest emotional world where intelligence meets emotion through deep contemplation, which reminded me of Aristotle's First Mover. Aria da Capo represents the arrival at the terrain of universal idealism, where intelligence and emotion are converged.

Here, I began to feel the existence of God in Bach. The God I feel in St. Matthew was one mighty god, or omnipresence. When I explore the world of the Goldberg, the God's image that comes to my mind is more intimate. At this point, things began to seem awfully similar to Brahman and Atman of the world of Hindu—Brahman being the ultimate omnipresence, and Atman being the ultimate self. And according to their Upanishads, Brahman is Atman. What was puzzling is that Brahman is supposed to be Atman. Why, then, in my metaphysical circuit chart, Brahman is placed one level below Atman? Even though I have no definite answer, it might be because Christian God is Brahman, but Christianity uses predominantly universal grief, symbolized with the crucifixion of Christ, which does not necessarily have to be. Bach would have been capable of producing a work with a full scope of Brahman but Christianity might have constrained him.

In this way, in Bach's Goldberg Variations, every issue I raised intellectually in this section is present. I also suspect that there are many more issues that I have not yet discovered. It is simply miraculous to me that an artistic piece that affects your emotion so deeply contains all the intellectual issues relevant to universal idealists. This is indeed the perfect union of intelligence and emotion. To me Bach is the human being closest to God. I believe that his Godly power comes from his deep commitment to idealism. In composing music, his sole desire was to glorify God. According to Fr. Martin Shannon:

“For Bach,” wrote Robin A. Leaver, “the ascription S.D.G. (Soli Deo Gloria—“To God alone the glory”) at the end of his manuscripts was no empty formality; it was an aim he pursued throughout his life.⁸⁹

If he had pursued individual glory, he would have produced a totally different set of musical works. But that motivation did not drive him, so he made no compromise in his artistic pursuit. He paid the price for it. He never achieved fame and his works were forgotten until they were rediscovered much later by Felix Mendelssohn. But by looking at something beyond individual existence, Bach could produce artistic works

⁸⁹ Fr. Martin Shannon, “Soli Deo Gloria,” in John Burr ed., *The Sacred Choral Music of J. S. Bach: A Handbook*, Brewster, Mass.: Paraclete Press, 1997, p. 41. Originally in Robin A. Leaver, *J.S. Bach and Scripture: Glosses from the Calov Bible Commentary*, St. Louis: Concordia, 1985, p. 107.

that survived beyond his physical existence, which was eventually recognized. This is an exemplary way to contribute negative entropy to the system.

The next chapter continues with the field survey on the metaphysical mechanics and operation.

CHAPTER 6

METAPHYSICAL ENGINEERING—FIELD SURVEY (2) METAPHYSICAL MECHANICS/OPERATION

Once theorists and engineers build general approaches, it is the mechanics' job to apply them to the specific situations. Naturally, as we go up the ladder from theory to operation, the level of generalization decreases. At the level of mechanics and operations, the applicability is limited. It is age-specific and situation-specific, and it is impossible to discuss all the specifics of all ages and situations in detail. Therefore, this chapter focuses on the contemporary world in the 21st century and makes adjustments to the general arguments in order to make them useful to the contemporary triple challenges. Of course, the generalizations at the theory and engineering levels are not complete; therefore, the goal of this section is also limited to give people an idea what it might look if it were complete.

The investigation begins with Henry Kissinger, a prominent statesman in the second half of the 20th century, who analyzes the world in the 21st century as follows.

First, European states has been operating based on the principle of the balance of power since 1648, but now they are abandoning this principle and moving toward establishing the European Union, which resembles more to the Holy Roman Empire. There, the sovereignty of the member states has diminished significantly but not completely. But because their politicians are still elected by domestic constituents, a tension exists now between regional interests of Europe and domestic interests of each state. To deal with this internal challenge, Europe begins to orient itself inwardly, involving itself less in the global world order.¹

Second, in the Middle East, the state system is being degenerated into rivalries among realist power seekers. What used to be governed by the state now contains many areas of power vacuum, which power seekers try to fill. So, the region has reverted to Vico's barbarism. In the areas absent of the central government, power seekers fiercely compete with each other, sacrificing the well-being of the population. Even in the areas where the state is preserved, rulers now have a good excuse to tighten their

¹ Henry Kissinger, *World Order*, New York: Penguin Press, 2014, pp. 93–95.

rules because of the surrounding threat. And each power contender seeks possibility to obtain support from outside, such as the United States and Russia. There, religions are still influential and, therefore, available as means for power seekers to achieve their ambitions. So, many conflicts take the shape of a religious dispute, including the lingering Arab-Israeli conflict as well as Islamic Jihad against the West.²

Third, in Asia, China's rising status as a world power is a central issue. There is a possibility that tensions may rise between the U.S. and China, which might even result in war. The key issue to shape the U.S.-China relation is its strategic environment. Two states are suspicious of each other, which might cause a spiral of distrust, jeopardizing each other's security, not unlike the U.S.-U.S.S.R relations during the Cold War. East Asia begins to exhibit a pattern of balance of power among China, Korea and Japan. In addition, the United States, a geographically remote state, is an integral part of this balance of power system. But there is an ambiguity in this pattern, such as the U.S. being an ally of Japan, while also proclaiming to be a partner of China. This ambiguity might help, as it did in Europe in the 18th century, the balance-of-power system to operate efficiently, in which each state balances and re-balances to prevent a rising power from becoming a hegemon.³

The following sections will bring up several issues pertaining to his analyses from the metaphysical engineering viewpoint.

I. FIELD-SURVEY—METAPHYSICAL MECHANICS

As stated initially, the contemporary world faces three challenges: the democratization of China, and possibly Russia, the secularization of the Islamic world, and the democratic decay of the Western World. Kissinger's observation indicates that analyses which primarily rely on the balance-of-power system among nation-states are insufficient to deal with these challenges because the nation-state as a unit of the international society is crumbling. The following section will briefly examine the metaphysical engineering issues necessary to face the triple challenges.

(1) Democratization of China and Russia: In the previous democratization cycle, Germany, Italy and Japan became extremely violent. Is there any possibility that China or Russia could follow the same path? The problem of democratization and violence has been examined in detail somewhere else⁴ and also in Chapter 2, so here; just a brief summary will

² Ibid., pp. 142–145.

³ Ibid., pp. 228–231.

⁴ Masayo Ohara, *Democratization and Expansionism: Historical Lessons, Contemporary Challenges*, Westport, Conn.: Praeger, 2001.

be presented. While Germany, Italy and Japan took the path of external violence, the democratizations of Great Britain, the United States, and Sweden were relatively violence free. Those of Spain and Latin American countries experienced internal violence. China and Russia failed in democratization and became the communist countries. Several factors account for these variations.

Before listing these factors, it is necessary to remind ourselves what democratization means in this project. Democratization is understood as the transition of power base from the military social groups (the king and the aristocracy) to the economic social groups (the bourgeoisie and labor). Democracy will be achieved when the bourgeoisie and labor can form a coalition against the military social groups. The factors that influence this coalition formation account for the different paths and consequences.

The first factor was the timing of industrialization. Great Britain was an early industrializer. There was no concentrated economic interest and they took longer to democratize, making the transition sequential from the king to the aristocracy to the bourgeoisie to labor. Germany, Italy, and Japan were late industrializers, making it necessary to catch up quickly. This created large bourgeois and labor interests economically and strong military interests. China and Russia were late-late industrializers and did not have chance to harness bourgeois interests. Here, China's second attempt will take place during the post-industrial age. So, the heavy industry, which created the large bourgeoisie, is unlikely to be the central element. However, it is possible that China would take over the manufacturing industry, while industrialized countries move onto mainly service industry.

The second factor is the size. Spain and Latin American countries, being small states, did not have options to export violence; therefore, it went through the course of internal violence. The distinction, however, is not clear-cut. Spain and Italy were similar in size. They were both mid-sized state. Italy, as a rising power, opted for external violence, while Spain, as a declining power, experienced internal violence. Here, China is categorically a large and rising country. There will be plenty of opportunity for external violence available for China.

The third factor is an economic and security environment. The U.S. did not have immediate threat around; therefore, it did not have to build strong military interest. Here, China lies in a heavily strategic Asia.

Sweden was small. But international economic and military situations were favorable when it was going through democratization. So, it managed to democratize without significant violence. Here, continued peace and economic prosperity is ideal. But the worst is the sudden

fluctuation. If economic and security conditions are good, the economic social groups will thrive and assert the economic dominance over the military. The military then will feel threatened. At that time, if security conditions change suddenly, the economic social groups will become dependent on the military for their security. Then, there will be radical military interest, which will gain social influence. This is the worst-case scenario.

In the contemporary international system, China and Russia bear the risk of producing violence during democratization. Countries like India may have a potential. But as of now, it seems as though none of these countries are on direct course to violence. Sadly, Russia seems to be failing again. If this is the case, Russia will not become a serious expansionist caused by democratization. However, in the contemporary international society, Russia's desperate attempt to prevent disintegration seems to cause unsettling violence. On the other hand, China is blooming. China may be bypassing the democratization process directly to democratic decay. However, much more detailed study is necessary to make certain judgment on this issue. For example, Asia in the 21st century somewhat looks like Europe in the 19th century at a glance. If China followed the path to expansionism, any possibilities for the balance-of-power system working as an efficient mechanism would be stripped off. And this would jeopardize the international security gravely, and the world might look like the eve of World War II. These countries should be closely monitored meanwhile.

(2) The Secularization of the Islamic World: The secularization process in the Islamic world has been interrupted during World War I. The process had been taking place and it was less violent internally than Western civilization. This could be due to the initial situation, in which founder Mohamed was the spiritual leader as well as the military leader. So, unlike the Christian society, it did not create separate spiritual and temporal poles. Later, it was divided into Sultan and Caliph. But it was once again combined to form the office of Sultan-Caliph. And Sultan, the secular leadership, was gaining more influence over the Caliph when the process was interrupted. At this point the Sultan-Caliph system was abolished. Therefore, there is no political or spiritual center in the Islamic world now. This may be a good thing. However, in the age of internet, extremist organizations are sending inflammatory messages and there is no central Islamic authority, like Vatican, to condemn the behavior internally. This could be a problem.

Another issue is the variation in the secularization process. In the 20th century, Turkey almost immediately became multi-party democracy,

even though it experienced crises, which resorted to the intervention by the armed forces. This may be because it had been the center of the Ottoman Empire, where the control by the Sultan-Caliph must have been the strongest. Consequently, when the system was abolished, it may have experienced the biggest void, from which a new institution could be created. The level of industrialization may have affected it, if there was already the bourgeois class in society. Its strategic location right next to the Soviet Union prompted huge amounts of economic aids from the United States. This also may have affected the course.⁵

Iran became an autocracy, which was eventually replaced with a highly reactionary religious regime. In the 1960s, it was moving through a course in which autocracy, built on the military social groups, was challenged by the economic social groups led by Mosaddiq, who tried to nationalize the oil industry. Mosaddiq had to form an uneasy alliance with the religious influence in doing so, which made the reform difficult. Then, Great Britain and the United States intervened and blocked the road. The autocracy continued but eventually fell, and Ayatollah Khomeini took over to establish a highly reactionary religious regime. So, the fact that it was an oil producing country may have caused the ordinary course to be altered by the foreign intervention. Even though there was no guarantee that Mosaddiq's reform was succeeded without the intervention, it might have taken a road similar to Turkey, in which several attempts for the reform eventually might have led to the establishment of a democratic government. Also, the religious influence remained strong. Iran, being a Shiite nation, may not have been affected much by the abolition of the Sultan-Caliph system.⁶

In Egypt, young military officers launched a coup d'état and abolished the monarch in the 1950s. Unlike Iran, the coup against the monarch was a power struggle between two military social groups, not between the military and the economic social groups. Nasser emerged as a national leader. He played tactfully the Cold War rivalry and division among the West to further secure his dominance during the Suez Crisis. His foreign policy successes made him popular domestically. Egypt was not an attractive destination for foreign capital, either, which spared it from foreign interventions. His regime also conducted land reforms and advances popular measures such as expanding education, which helped the regime to acquire some legitimacy. The religious influence had been expressed in the form of the Muslim Brotherhood but, thanks to this relatively secure power base, the military regime pushed them underground.

⁵ For more detail, see William L. Cleveland, *A History of the Modern Middle East*, Boulder: Westview Press, 1994, pp. 261–271.

⁶ For more detail, see *ibid*, pp. 271–282.

Religious social groups had lost its substantive political power and became subordinate to the military social group, which used religion as a tool to secure its dominance.⁷

In Syria and Iraq, the old ruling class was defeated by a military coup d'état by officers in rural origins. In the end, Hefiz al-Asad in Syria and Saddam Hussein in Iraq consolidated power and became dictators. In so doing, they relied on the Baathist ideology, which means resurrection and has a nationalist and reformist orientation. Although it has incorporated the Islamic tenet, it is fundamentally secular.⁸ So, their regimes were built upon the armed forces and the secular Baathist ideology. This made it unnecessary for them to rely on Islam as an ideological foundation, so the traditional religious social groups were excluded. As a result, their interests were expressed in the form of rebellion. Also, the Baathist ideology failed to cultivate the universal acceptance that the religion can exert among the population. To cope with this problem, al-Asad and Hussein had to adopt more repressive measures, eventually becoming ever so brutal, even though they did promote some social reforms such as making education more accessible.⁹

In Saudi Arabia, there was a ruling family with deep roots in the region. In the 20th century, one of the ruling family members, Abd al-Aziz ibn al-Saud established a monarchy. The existence of an indigenous secular ruling family may have given the secular social group locally an advantage over the religious social group, even though the latter retained significant influence. As a result, the monarchy established a superior position over the ulama but had symbiotic relationship with them. It derived its legitimacy as a defender of Islamic beliefs, probably not unlike the Western notion of the divine right to rule by the king. The ulama was gradually stripped off their decision-making power and incorporated into the state payroll. In return, the ulama prevailed as a moral enforcer among the citizens. They enjoyed great influence in the field of educational and legal systems. The Morality Police was controlled by the ulama, and after the death of King Faysal, its authority increased.¹⁰

These preliminary observations suggest that the secularization process in the Islamic world seems to vary due to such factors as the central/peripheral locations, the existence or lack of oil reserve, the level of industrialization, the availability of alternative ideologies, the availability of local leadership, and the international setting and foreign influence. In order to determine the exact causal relations, further investigations will be

⁷ For more detail, see *ibid.*, pp. 284–303.

⁸ For Baath ideology, see *ibid.*, p. 306.

⁹ For more detail, see *ibid.*, pp. 353–376.

¹⁰ For more details, see *ibid.*, pp. 377–397.

necessary. If the causes of these variations can be determined, then is there any way for outsiders to influence the course and the level of violence produced during the transition? Will they be able to avoid their Thirty Years War? These are the questions that I must leave for area specialists.

During the 1980s and 1990s, some countries succeeded modernization; as a result, the socio-economic reality began to pressure their old political arrangements. Furthermore, the end of the Cold War drastically altered their environment. These changes greatly affected their secularization process. In the early 21st century, the Islamic world has entered an era of uncertainty.

Here, it is important to note that they are going through very fast the transformation which took centuries in Christendom, and they have not undertaken their Enlightenment yet. Therefore, in general, there is still a significant religious influence in the Islamic world, which will be the main driving force of the directional change. The purpose of religion is to make people commit to the tenet of idealism. The ideal society cannot be established if people turn on and off idealism as is convenient to them. So, it encourages people to have blind faith and adhere to the idealist tenet no matter what, even if their own lives are threatened. All successful religions are able to foster this blind faith. But when idealism is exported into the realist terrain and corrupted, this rigidity creates the worst possible dynamics. In the realist terrain, the rigidity creates a spiral of hate, instead of love. In such a situation, any chance of balance of power, which requires flexible balancing and re-balancing, to function will be destroyed.

The comparison between the U.S.-Japan relations right after World War II and the Arab-Israeli conflict is interesting here. During the war, my parents' generation was taught to hate the Allied countries as *Kichiku Beiei* (Americans and British as goblins and beasts). However, this kind of sentiments disappeared almost overnight once the war was over. This may be because that the United States decided to adopt lenient policies due to the rise of the new enemy, the Soviet Union. And both Japanese and U.S. officials dealt with each other in practical manners in conducting Japan's postwar reconstruction, based on the strategic interests of both sides. This is a typical realist function at work—i.e., yesterday's enemy is today's friend. The Japanese armies' attempt to foster hatred among the Japanese citizens did not last.

On the other hand, in Arab-Israeli conflict, since Israel is a sacred land for both the Arabs and the Jews, either side could not make compromise. In addition, since the Jewish people had just come out of the atrocious persecution in the Nazi regime, they were not in a position to be flexible when it came to their own security. These initial inflexibilities triggered a spiral of hate and made it impossible for each other to achieve a

practical solution. Most recently, when the peace process was in progress, the radical Hamas won a majority in election, refused to comply with the peace terms and eventually took control of the Gaza Strip. Then, it began launching rocket attacks into the Israeli territory. Israel responded with a blockade. When three Jewish teenagers were murdered in 2014 by Hamas members, Israel attacked Gaza, killing and displacing thousands of civilians.¹¹ This round of action-reaction of hate must have created yet another huge amount of hate and anger, which is available for realist power seekers to manipulate.

One useful way to use a corrupt religion as a tool for political purposes is to adopt a common enemy. This is an inexpensive tool for realist power seekers to achieve political unity within the territory. After the Iranian Revolution of 1979, under the leadership of Ayatollah Ruhollah Khomeini, Iran called for the restoration of Islamic institutions. However, this time, Islamic countries were not responsive, as Cleveland observes:

The success of the revolution provided encouragement to those Muslims everywhere who were disenchanted with Western models of development and who longed for a restoration of Islamic institutions through which they hoped a prosperous and positive future could be built. But the rulers of Middle Eastern states did not share in the popular euphoria the revolution generated. The emergence in Iran of a militant Islamic Republic caused tremors among conservative monarchs and reformist dictators alike, and Iran became isolated in the Middle East.¹²

So, this is not an easy task to accomplish. However, if the Islamic states ever successfully adopted the common enemy strategy to achieve its internal unity and export violence outside its own sphere, they might be able to avoid the devastating war within, but violence could spread globally. The world would become extremely unstable. Depending on the availability, it might form an alliance with democratizing China against the Western industrialized states or indiscriminately export violence anywhere into non-Islamic region in the form of Jihad. Islamic militants are now spreading their messages through the internet and have achieved some tactical successes. Young adults who hold grievances against the existing system are responding, randomly attacking the establishment. Whether or not this can become a global phenomenon, enough to threaten the existing system, is yet to be seen.

¹¹ http://en.wikipedia.org/wiki/2014_Israel-Gaza_conflict

¹² Cleveland, p. 398.

Finally, the Islamic world is not contained in the Middle East. Outside the sphere, Indonesia is the largest Muslim country. There, right after its independence, Sukarno formed an authoritarian regime with the backing of the Air Force, which the Army and the Muslims resented. In the 1960s, the Army launched a coup d'état and Suharto became the president and launched his "New Order." He promoted an ideology called Pancasila as Indonesia's national ideology, which combined socialism, nationalism and monotheism. The military, backed by Suharto, adopted anti-Islamic policy, denying their promotions and so on. To tighten his dominance, he forced Islamic parties, as well as secular parties, to merge among themselves and placed them under his influence by controlling the party leadership. In the 1980s, the demonstration by the conservative Muslims against Pancasila was suppressed by the military, killing about 100 people. Muslims retaliated by bombing, which resulted in their arrests. But he was forced to resign in 1998, and democracy ensued.¹³

It seems that Indonesia has been smoothly sailing into democracy. Area specialists attribute the reasons as follows:

The ease with which democracy is thriving in Muslim-majority Indonesia is usually ascribed to the moderate forms of Islam Indonesians have adopted. "Much of the literature during the twentieth century portrayed the [Indonesian] Muslim community in largely benign terms. There were several interlinked aspects to this approving commentary. The first remarked on the myriad ways in which local Muslim communities had 'indigenised' Islam, blending it with pre-existing religious practices to produce richly distinctive variants. Moreover, this Indonesianized form of Islam bore none of the severity and rigidity attributed to Middle Eastern forms, earning it praise for its moderation and tolerance. Some scholars even approvingly observed that large numbers of Muslims appeared lax in their devotions and heedless of all but the most basic requirements of Islamic law," Greg Fealy and Sally White note.¹⁴

This is a stark contrast to the volatile image in the Middle East. It is reported that there are almost as many Muslims living in Indonesia as in

¹³ [http://en.wikipedia.org/wiki/New_Order_\(Indonesia\)](http://en.wikipedia.org/wiki/New_Order_(Indonesia))

¹⁴ Michael Buehler, "Islam and Democracy in Indonesia," p. 53. The citation is from Greg Fealy and Sally White, "Introduction," in Greg Fealy and Sally White, ed., *Expressing Islam: Religious Life and Politics in Indonesia*, Singapore: Institute of Southeast Asian Studies, 2008, p.1. http://www.columbia.edu/cu/weai/pdf/Insight_Turkey_2009_4_Michael_Buehler.pdf

the entire Arab-speaking world combined.¹⁵ Therefore, whether or not Indonesia can steer clear the volatile course that the Islamic countries in the Middle East are following will make a great difference to the world.

(3) The Democratic Decay of Western Civilization: While these two challenges are lurking, the Western democracy may lose its ability to deal with them effectively, due to its democratic decay. The last democratic decay was experienced in the Ancient Athens. There, Plato insists that excessive freedom brings down democracy. Socrates' experience also suggests that naïve idealists' desire to be more than what they are, if unchecked, will suppress voice of reason and contribute to the demise of democracy.

Plato's description of democracy is of particular interest to us.¹⁶ Plato acknowledges that democracy is the fairest regime and people would enjoy the greatest degree of freedom:

'Would you agree, first, that people will be free? There is liberty and freedom of speech in plenty, and every individual is free to do as he likes.' ... 'I dare say that a democracy is the most attractive of all societies.'" I said.... I went on, 'there's no compulsion either to exercise authority if you are capable of it, or to submit to authority if you don't want to; you needn't fight if there's a war, or you can wage a private war in peacetime if you don't like peace; and if there's any law that debars you from political or judicial office, you will none the less take either if they come your way. It's wonderfully pleasant way of carrying on in the short run, isn't it?' ...¹⁷

Plato further insists that it is this excessive freedom that will bring down the democratic regime:

'Then they're very considerate in applying the high principles we laid down when founding our state; so far from interpreting them strictly, they really look down on them. We said that no one who had not exceptional gifts could grow into a good man unless he were brought up from childhood in a good environment and given a good

¹⁵ Anna M. Gade, *Perfection Makes Practice: Learning, Emotion, and the Recited Qur'an in Indonesia*, Honolulu: University of Hawai'i Press, 2004, p. 1.

¹⁶ Allan Bloom, *The Republic of Plato*, New York: Basic Books, 1968, pp. 235–244.

¹⁷ Plato, trans. by H.D.P. Lee, *The Republic*, New York; Penguin Books, 1955 [1971], pp.329–331.

training; democracy with a grandiose gesture sweeps all this away and doesn't mind what their habits and background of its politicians are, provided they profess themselves the people's friends.'

'All very splendid.'

'These, then, and similar characteristics are those of democracy. It's an agreeable, anarchic form of society, with plenty of variety, which treats all man as equal, whether they are equal or not.'¹⁸

'If anyone tells him that some pleasures, because they spring from good desires, are to be encouraged and approved, and others, springing from evil desires, to be disciplined and controlled, he won't listen or open his doors to the truth, but shakes his head and says all pleasures are equal and should have equal rights.'

'Yes, that's just what he does.'

'In fact,' I said, 'he lives for the pleasure of the moment. One day it's wine, women, and song, the next bread and water; one day it's hard physical training, the next indolence and ease, and then a period of philosophic study. Next he takes to politics and is always on his feet saying or doing whatever comes into his head. Sometimes all his ambitions are military, sometimes they are all directed to success in business. There's no order of restraint in his life, and he reckons his way of living is pleasant, free and happy.' ... 'This, then, is the individual corresponding to the democratic society, and we can fairly call him the democratic man.'¹⁹

Plato then argues that democracy will end and be followed by tyranny:

'Then, does not democracy set itself an objective, and is not excessive desire for this its downfall?'

'And what is this objective?'

'Liberty,' I said, 'You must have heard it said that this is the greatest merit of a democratic society, and that for that reason it's the only society fit for a free man to live in.'

'It's certainly what they often say.'

¹⁸ Plato, pp. 330–331.

¹⁹ Plato, p. 334.

‘Then, as I was just saying, an excessive desire for liberty at the expense of everything else is what undermines democracy and leads to the demand for tyranny.’

‘Explain.’

‘A democratic society in its thirst for liberty may fall under the influence of bad leaders, who intoxicate it with the neat spirit; and then, unless the authorities are very mild and give it a lot of liberty, it will curse them for oligarchs and punish them.’

‘That is just what a democracy does.’

‘It goes on to abuse as servile and contemptible those who obey the authorities and reserves its approval, in private life as well as public, for rulers who behave like subjects and subjects who behave like rulers. In such a society the principle of liberty is bound to go to extremes – it will permeate private life and in the end infect even the domestic animals with anarchy.’

‘How do you mean?’

‘Well,’ I said, ‘it becomes the thing for father and son to change places, the father standing in awe of his son, and the son neither respecting nor fearing his parents, in order to assert his independence; and there’s no distinction between citizen and alien and foreigner. And there are other more trivial things. The teacher fears and panders to his pupils, who in turn despise their teachers and attendants; and the young as a whole imitate their elders, argue with them and set themselves up against them, while their elders try to avoid the reputation of being disagreeable or strict by aping the young and mixing with them on terms of easy good fellowship....’

‘Let’s have the whole story while we’re at it, as Aeschylus says.’

‘Right,’ I said; ‘you shall. You would never believe— unless you had seen it for yourself—how much more liberty the domestic animals have in a democracy. Love me love my dog [and cat], as the proverb has it, and the same is true of the horses and donkeys as well....’

‘What it all comes to is this,’ I said, ‘that the minds of the citizens become so sensitive that the least vestige of restraint is resented as intolerable, till finally, as you know, in their determination to have no master they disregard all laws, written or unwritten.’

‘Yes, I know.’

‘Well, this is the root from which tyranny springs,’ I said; ‘a promising beginning.’...

‘So from an extreme of liberty one is likely to get, in the individual and in society, a reaction to an extreme of subjection. And if that is so, we should expect tyranny to result from democracy, the most savage subjection from an excess of liberty.’²⁰

Charles Patterson summarizes Plato on how exactly democracy will degenerate into tyranny:

Now, how does a democracy turn into a tyranny? Well, the leaders of the democratic state are those who had formerly led the rebellion against their oligarchic masters; many of them had then been either paupers or criminals, as we saw. As democratic leaders, these men will now do their best to please the people; they will spend their time pandering to them, so as to retain their popularity. They will rob the few remaining wealthy citizens, keep most of the lot for themselves, and distribute the rest to the masses. If this happens, the wealthy men who have been robbed will complain in the popular Assembly. They will then be accused by the democratic leaders of plotting against the people and of being reactionaries and oligarchs. This will lead to a civil war, and the masses will look to one of the democratic leaders for support. This popular leader will have the complete support of the people, and the people will do everything he says. He will exile or execute the few remaining landowners and wealthy men, and soon he will become supremely powerful. Of course, this leader will have to protect himself, so he will demand bodyguards and gradually build himself a private army. In the early days of his rule, he will deny he is a tyrant; he will make large promises, distribute money, and generally behave kindly to everyone. But he will have to be constantly on his guard against conspirators. He must enlarge his private army and, therefore, tax the citizens highly. He must distrust all intelligent and courageous men, for these might plot against him. His companions and bodyguards will therefore be stupid, criminal types, for he

²⁰ Plato, pp. 335–337.

can trust no one else. Soon he will run out of funds, and he will begin to oppress the citizens, the very people who brought him to power. This, then, is the tyrant; the state he rules is clearly the worst and the unhappiest of all communities.²¹

Socrates' experience implies another aspect of democratic decay. That is, there is always a tension between naïve and universal idealists and it can break down as democratic decay progresses. His *Apology* vividly illustrates the precarious state of cooperation between universal and naïve idealists. Naturally, everyone wants to feel knowledgeable and special, and does not like to be told that s/he is ignorant. But unless naïve idealists can resist such temptations and keep themselves in check, they will be recruited into the realist terrain. They will become a tool for realist power seekers and destroy the universal idealists' terrain. In *Apology*, Socrates describes how his relationship with naïve idealists was strained:

I reflected that if I could only find a man wiser than myself, then I might go to the god with a refutation in me and I should say to him, "Here is a man who is wiser than I am; but you said that I was the wisest." Accordingly, I went to one who had the reputation of wisdom, and observed him—his name I need not mention; he was a politician whom I selected for examination—and the result was as follows: When I began to talk with him, I could not help thinking that he was not really wise, although he was thought wise by many and wiser still by himself; and I went and tried to explain to him that he thought himself wise, but was not really wise; and the consequence was that he hated me, and his enmity was shared by several who were present and heard me. So I left him, saying to myself, as I went away: Well, although I do not suppose that either of us knows anything really beautiful and good, I am better off than he is,—for he knows nothing, and thinks that he knows. I neither know nor think that I know. In this latter particular, then, I seem to have slightly the advantage of him. Then I went to another who had still higher philosophical pretensions, and my conclusion was exactly the same. I made another enemy of him, and of many others besides him.

²¹ Charles H. Patterson ed., *Plato's The Republic*, Lincoln, Neb.: Cliff's Notes, 1963, p. 65.

After this I went to one man after another, being not unconscious of the enmity which I provoked, and I lamented and feared this but necessity was laid upon me,—the word of God, I thought, ought to be considered first. And I said to myself, Go I must to all who appear to know, and find out the meaning of the oracle. And I swear to you, Athenians, by the dog I swear!—for I must tell you the truth—the result of my mission was just this: I found that the men most in repute were all but the most foolish; and that some inferior men were really wiser and better. I will tell you the take of my wanderings and of the “Herculean” labors, as I may call them, which I endured only to find at last the oracle irrefutable. When I left the politicians, I went to the poets; tragic, dithyrambic, and all sorts. And there, I said to myself, you will be detected; now you will find out that you are more ignorant than they are. Accordingly, I took them some of the most elaborate passages in their own writings, and asked what was the meaning of them—thinking that they would teach me something. Will you believe me? I am almost ashamed to speak of this, but still I must say that there is hardly a person present who would not have talked better about their poetry than they did themselves. That showed me in an instant that not by wisdom do poets write poetry, but by a sort of genius and inspiration; they are like diviners or soothsayers who also say many fine things, but do not understand the meaning of them. And the poets appeared to me to be much in the same case; and I further observed that upon the strength of their poetry they believed themselves to be the wisest of men in other things in which they were not wise. So I departed, conceiving myself to be superior to them for the same reason that I was superior to the politicians.

At last I went to the artisans, for I was conscious that I knew nothing at all, as I may say, and I was sure that they knew many fine things; and in this I was not mistaken, for they did know many things of which I was ignorant, and in this they certainly were wiser than I was. But I observed that even the good artisans fell into the same error as the poets;—because they were good workmen they thought that they also knew all sorts of high matters, and this defect in them overshadowed their wisdom—therefore I

asked myself on behalf of the oracle, whether I would like to be as I was, neither having their knowledge nor their ignorance, or like them both, and I made answer to myself and the oracle that I was better off as I was.

This investigation has led to my having many enemies of the worst and most dangerous kind, and has given occasion also to many calumnies.²²

Facing the death sentence, brought by disgruntled naïve idealists, Socrates courageously holds his ground:

And therefore if you let me go now; and reject the counsels of Anytus, who said that if I were not put to death I ought not to have been prosecuted, and that if I escape now, your sons will all be utterly ruined by listening to my words—if you say to me, Socrates, this time we will not mind Anytus, and will let you off, but upon one condition, that you are not to inquire and speculate in this way anymore, and that if you are caught doing this again you shall die;—if this was the condition on which you let me go, I should replay: Men of Athens, I honor and love you; but I shall obey God rather than you, and while I have life and strength I shall never cease from the practice and teaching of philosophy...²³

Socrates also sends warnings to naïve idealists about the consequences of eliminating the leadership by universal idealists:

I certainly have many enemies, and this is what will be my destruction if I am destroyed, of that I am certain;—not Meletus, nor yet Anytus, but the envy and detraction of the world, which has been the death of many good men, and will probably be the death of many more; there is no danger of my being the last of them.

Someone will say: And are you not ashamed, Socrates, of a course of life which is likely to bring you to an untimely end? To him I may fairly answer: There you are mistaken: A man who is good for anything ought not to calculate the chance of living or dying; he ought only to consider

²² Plato, “Apology,” in *The Trial and Death of Socrates: Four Dialogues*, New York: Dover Publications, Inc., 1992, pp. 22–24.

²³ *Ibid.*, p. 30.

whether in doing anything he is doing right or wrong—acting the part of a good man or of a bad.²⁴

I would have you know, that if you kill such an one as I am, you will injure yourselves more than you will injure me. Meletus and Anytus will not injure me: they can not; for it is not in the nature of things that a bad man should injure a better than himself... And now, Athenians, I am not going to argue for my own sake, as you may think, but for yours, that you may not sin against the God, or lightly find another like me, who, if I may use such a ludicrous figure of speech, am a sort of gadfly, given to the state by the God; and the state is like a great and noble steed who is tardy in his motions owing to his very size, and requires to be stirred into life. I am that gadfly which God has given the state, and all day long and in all places am always fastening upon you arousing and persuading and reproaching you. And as you will not easily find another like me, I would advise you to spare me. I dare say that you may feel irritated at being suddenly awakened when you are caught napping; and you may think that if you were to strike me dead as Anytus advises, which you easily might, then you would sleep on for the remainder of your lives, unless God in his care of you gives you another gadfly. And that I am given to you by God is proved by this:—that if I had been like other men, I should not have neglected all my own concerns or patiently seen the neglect of them during all these years, and have been doing yours, coming to you individually like a father or elder brother, exhorting you to regard virtue; this, I say, would not be like human nature.²⁵

In this way, in ancient Greek, democratic decay progressed and democracy collapsed. Another thinker, Machiavelli also casts doubt about the viability of democracy. He believes that democracy will be short lived. According to Bondanella:

In *The discourses* he presented a view of the cycle of governments—the three good forms of states: principality, aristocracy, and democracy; and their three corrupt

²⁴ Ibid., p. 29.

²⁵ Ibid., pp. 31–32.

counterparts; tyranny, oligarchy, and anarchy—which he found in the writings of a number of earlier classical theorists. For him however, “all the forms of government listed are defective: the three good ones because of the brevity of their lives and the three bad ones because of their inherent harmfulness (*Discourses*, i. ii.)”²⁶

But just because democracy collapsed in historical cases, it should not mean that contemporary democracy will also fail. Indeed, Patterson seems to believe that this does not apply to contemporary democracy: “Of course, Plato had no experience of modern society or government with its complex and elaborates systems of checks and balances.”²⁷ Therefore, it is necessary to examine contemporary democracy here.

For universal idealists, contemporary democracy is the final stage of the collapse of idealism into the natural state of war of all against all. The idealist society, positions occupied by the universal idealists who became wise and benign rulers and made the decision for the good of all, had been taken over by the realists who claimed to be the universal idealists but began to pursue their own interests as soon as they occupied the seats. As a result, the universal idealist terrain had been completely discredited. Democracy came as a reaction to this situation. As a remedy to this problem, the universal idealist terrain has been eliminated, leaving the realist and naïve idealist terrains in society. So, the sandwich strategy between universal and naïve idealists is no longer available. In order to contain the abuse of society by realists, a series of safeguards are incorporated to prevent the concentration of power, such as the check and balance system among the three governmental branches. Democracy also focuses on individual rights, rather than duty to society, as a reaction to the previous situation, in which realist abusers violated individual members’ well-being in the name of duty. These remedies for the problems from the immediately preceding historical era resulted in a system, based on the principle of equality, in which people hold the sovereignty.

This caused the democratic system to contain the seed of destruction within. First, intellectually, there is no competence. A majority of people are naïve idealists who are supposed to be the followers in the ideal society. Now they are left alone to make decisions on their own. In the case of the United States, the founding fathers were aware of the danger of tyranny of the majority, so they set up the system in which decision-making was to be entrusted to knowledgeable politicians. However, the system has not worked as intended. Politicians, as Plato says,

²⁶ Bondanella, p. 29.

²⁷ Patterson ed., p. 67.

are trying to remain popular so they are eager to please people; as a result, they follow closely to the opinion polls in making their decisions. Therefore, decision-making in this society is done by people who don't have deep knowledge of the issue. Imagine a doctor decides whether or not s/he operates on you based on an opinion poll. It would be dreadful if you were the patient, in which case we collectively are.

Second, too much emphasis on individual right is proven to be harmful to the well-being of the society. In order for democracy to work, each citizen must understand that freedom does not mean that s/he can do anything s/he wants to do as s/he pleases, but it is the right to self-regulation. In other words, instead of someone else regulating you, you are allowed to regulate yourself. A society in which people cannot regulate themselves this way will collapse back to the natural state of the war of all against all. Here, historical circumstances tarnished the notion of duty to society so badly, and only the notion of right is emphasized, which has caused its citizens to grow inflated sense of entitlement. Instead of wanting to contribute to the system, people demand that the system serve their own desires and interests. In order for the system to function effectively, people should be contemplating daily how much sacrifice they are willing and able to make, but in this stage, people think what they can take from others or the system. Under such circumstances, the system of check and balance has often paralyzed the decision-making system, making it impossible to pursue coherent long-term policies. Each governmental branch will be occupied with politicians, who represent parochial interests, or have no interest at all, except to be elected, blocking each other's policy agendas. Also in the absence of the sense of duty, in the system of check and balance, people will begin to criticize how other people are not performing their duties, instead of what they should be doing; as a result, there will be no one in society to work actually on impending problems,

The first problem can be expressed by using the engineering analogy. For this, the concept of aerodynamics is useful. There, airplanes fly because of the adequate lift-to-drag ratio and high lift and low drag alone cannot do the job. Plato's philosopher king would be the equivalent to the effort to increase lift, in this case the competency of the ruler. But this equivalent of focusing on lift alone produced severe human rights violations. The democratic solution of preventing concentration of power would be the equivalent of reducing drag. Then, current industrialized democratic states may very well be described as an airplane that has lost their wings. Wings give lift to the airplane but are also a major source of drag. If people only wish to reduce drag, they may easily clip the wings without realizing the consequence of the loss of lift. Current democracy also suggests that its effort to break down concentrated large drag simply

generated innumerable small drag, instead of reducing the overall drag. Even worse, during such an effort it even increased the overall drag. A close visualization would be an airplane, which lost its wings, are breaking into innumerable pieces in mid-air, each of which generates its own drag, amounting to exceed the original level. When they hit the ground, the civilization would collapse with the society reverting to the state of nature, described by Hobbes as the war of all against all, which is Vico's barbarism.

The issue of right and duty could be perceived in terms of entropy, as mentioned in Chapter 5. Here, pursuing individual rights would be an equivalent of either releasing entropy into the system or taking negative entropy from the system. Performing duty to society would be an equivalent of either absorbing entropy from the system or yielding negative entropy to the system. If too much entropy were released into the system or too much negative entropy were taken out of the system, the system would collapse. Idealists' solution was to produce negative entropy, annihilate entropy or convert entropy to negative entropy. Once succeeded, there would be no entropy in society so decision-making could be entrusted to one wise individual. However, in reality, this solution produced a malign autocracy. There, one huge entity was absorbing negative entropy and/or releasing entropy from and into the system. To counter this, democratic solution was proposed within the realm of realism, which seeks solutions within the existence of entropy, trying to disperse power as much as possible as the source of entropy generators or negative entropy takers. However, democracy planted the sense of entitlement among its citizens, which resulted in producing innumerable amount of small entropy generators. As a result, even though it succeeded in preventing the concentrated entropy generator from emerging, it could not reduce the total amount of entropy generated in society.

Another democratic principle of equality also causes a problem. As can be seen in history of Hinduism, initially, those who bore more burdens began to feel entitled to more rewards. It seemed reasonable so they were given privileges as compensations. Then, realist power seekers took over their place, enjoying these privileges without performing the designated duties. Democracy came as a prescription to the corrupt state of this system, focusing on the equal distribution of benefits. This has caused citizens to think that whatever everyone else has, they are entitled to it. But this kind of thinking will soon push the society into bankruptcy. It also ignores the issue of the distribution of burdens and assumes that everyone is capable of bearing an equal amount of burden, as in "All people are created equal." Under the false pretenses of equality, many people are forced to carry a burden disproportionate to their capability. In other words, the notion of

equality has increased the amount of overall entropy, which is distributed downward in society.

In contemporary democracy, because of these problems, the amounts of entropy released into and negative entropy absorbed from the society have become dangerously high. There is no way to numerically express this. Instead, here, the situation is described borrowing the language of Christianity: democracy has unleashed the “seven deadly sins” in society.

Lust: The inflated sense of entitlement has led to insatiable desire for material or nonmaterial gain among people. Economists incorporated this into their fundamental theoretical assumption: people’s desire is limitless, which makes this state normal, eliminating any negative connotation. So, now people pursue more wealth, more power, and more status and feel legitimate about it to the point of worshipping those who succeeded in accumulating wealth, power or status. Take, for example, billionaire Bill Gates, the founder of Microsoft, a computer company. When you search on Amazon.com for his biography, 95 titles show up. Some of the titles are: *The Success Secrets of Bill Gates: The Inspirational Story and Success Secrets of Microsoft Billionaire Bill Gates* (by Anthony Taylor), *Gates: How Microsoft's Mogul Reinvented an Industry—and Made Himself the Richest Man in America* (by Stephen Manes and Paul Andrews), and *The Rich and How They Got That Way: How the Wealthiest People of All Time—from Genghis Khan to Bill Gates—Made Their Fortunes* (by Cynthia Crossen.)

Bill Gates started a foundation to give out the wealth he has accumulated. But after having destroyed the social integrity by unleashing the “golden calf,” damage is already done, and their surplus money cannot fix this problem.

Greed: There is an increasing tendency that those who succeeded in accumulating wealth to keep it for themselves. The inflated sense of entitlement has led them to believe that if they are smart enough to be rich, they are entitled to keep the fortune for themselves. It is reported in many places that the *nouveau riche* are less charitable.²⁸ This is causing the increasing gap between the wealthy and the poor in this society.

Greed paralyzes humanity. It seems that wherever money goes, humanity leaves. Take, for example, the entertainment industry. The business people take young talented people—many times just teens, squeeze as much money as possible for a few years and move onto the next ones. The long-term potential of performers is completely ignored. They are not allowed to explore life and polish their talent to mature as

²⁸ See, for example, “Silicon Valley Wealth Divides San Francisco,” in *Los Angeles Times*, August 14, 2013, B1, B6.

performers. As a result, they peak at a very early stage of life and must experience life-long painful decline from there. At the age 40 or 50, if they are still around, many are forced to compete with teen-agers at the shallowest level to survive because they are not allowed to travel down the depth of emotion as they age. A saner society would make sure that its talented people reach their fullest potential and have a long career, during which period they would grow as human beings, reflecting it back into their performances.

Gluttony: The inflated sense of entitlement has caused people to lose cap in their desire. Indeed, capitalist economy depends on this for its survival. Consumption is the driving force for economic growth. So, people are urged to acquire goods and services that they really don't need, because it is necessary for economic growth or recovery. For example, according to an article on the Wall Street Journal:

Since the 2008 economic crisis damped luxury-goods sales in the U.S., China has been seen as the sector's primary driver globally. Chinese consumers took on additional importance as the euro-zone crisis bit into spending among local European consumers. Many luxury executives saw busloads of Asian tourists in Europe as coming to their rescue.²⁹

To get people to spend more, goods become more luxurious to the point of extravaganza. If you have 20-inch TV, you should get 60-inch plasma TV, if you have a house, you should get a vacation house, and on and on. Naturally, this kind of action cannot be sustained forever. Sooner or later, we will exhaust all the resources and collapse.

Pride: This force led to the killing of Socrates in ancient Greece. Everyone wants to be special but the inflated sense of entitlement makes people think that they have the right to be special. This put the society under enormous downward pressure. The standard is lowered to the lowest denomination, where everyone can feel special. Any work that people cannot understand is scorned as snobbish and ignored in this society. One example can be in the field of art, many people want to become famous even when they don't have enough talent, so they invented pop culture, where people with limited talent can attain fame.

Some movie actors participate in making movies with no substance to go along the downward trend in exchange for a huge amount of fee.

²⁹ "What Recession? Americans Regain a Craving for Luxury," by Nadya Masidlover and Christina Passariello, *The Wall Street Journal*, February 13, 2013. (<http://online.wsj.com/article/SB10001424127887324880504578300291357105904.html>)

Then, some donate millions to charity. But this behavior will be able to produce only a very limited and temporary effect on society, and only exacerbate the disintegration of society in the long run. To make a true contribution to society, what they would have to do is to hold their own ground by refusing to make such movies and making sure that quality in their own industry would be maintained. By each person holding his/her own where s/he belongs, society can maintain integrity.

Sloth: This is a society of instant gratification. People feel entitled to having what they want now and here with making little effort on their part. Hardworking is something to be laughed at. When there are problems, people all agree that the problems should be dealt with. But they expect others to fix them instead of asking what role they can play in fixing them. This has put the society into collective denial. This kind of mentality caused such crises as the sub-prime meltdown, where people in every segment of society tried to make easy and fast money by lending money to those who didn't qualify for high interest rates, and purchasing houses they couldn't afford with a plan to sell in a few years with hefty profits. It was obvious that this could not go on forever, but they ignored it.

A combination of pride and sloth can produce a harmful effect on society. By pride, people want to occupy prestigious positions that they are not qualified. The most obvious example will be the presidency. There are truly qualified people, but they know solutions to any problems require work. Then sloth kicks in. People do not want to hear that. People want to hear that the problem can be easily fixed. Not knowing what they are getting into, unqualified people easily promise that, while those who really understand the problem cannot. So, people end up electing unqualified people, making it impossible for qualified people to be in the position to do something about the problem.

Envy: According to a definition, envy is a resentment which "occurs when someone lacks another's quality, achievement or possession and wishes that the other lacked it."³⁰ If this is the definition, this society is beyond envy now. If a rich person can afford a million dollar medical treatment, for example, people don't wish s/he could not afford such a treatment that they cannot afford. Instead, the inflated sense of entitlement gets them to think that it is their right to receive the same treatment and the society should pay for it. This kind of thinking will push up the cost of welfare prohibitively. The welfare state will not work unless each citizen strongly feels that it is a disgrace to be on government welfare. In a society in which citizens feel entitled to taking as much money as they can from the government will go bankrupt. This mentality is the foundation of

³⁰ W. G. Parrot, and R. H. Smith, "Distinguishing the Experiences of Envy and Jealousy," *Journal of Personality and Social Psychology*, 64 (1993), pp. 906-920.

the American Dream: “Whatever someone else has, I can have it, too.” Naturally, it is as unsustainable as gluttony, leading the society to collapse.

Wrath: The inflated sense of entitlement causes people to take for granted something that they should be grateful to have. When they lose it or don’t get it, then, they feel wronged or denied what they are entitled to. Thus, the society has become filled with lawsuits, many of which are frivolous. Sometimes, they demand the government to do something about the “wrong” they suffer, dragging the government into more frivolous matters. The First Amendment, for example, was initially intended to protect people who were persecuted for their political or religious beliefs. Thomas Moore of England, for example, was executed because he refused to recant Catholicism. Nowadays, people demand protection by the First Amendment to publish child pornographies. The system cannot accommodate to protect everyone to do whatever s/he wishes to do, especially if it harms other people. It can protect people’s fundamental interest by asking people to give up non-essential freedom. But now the system has become paralyzed.

To be worse, while people are obsessed with tangential matters, the core of the First Amendment has been eroded. For example, a journalist, Gary Stephen Webb, reported a government conspiracy, in which Nicaraguan anti-communist group Contras, supported by the CIA, smuggled cocaine into the U.S. to raise funds. Even though it was later verified, Washington Post, New York Times and Los Angeles times all dismissed and criticized him, causing him to commit a suicide. Ironically, it turned out that due to the media deregulation during the 1980s, the monopolization of the media had progressed and large capital started to own major media outlets, and they are often pro-government. This is a chilling lesson from the warning from Plato about excessive freedom. If there are no rules of the game, of course the strongest will win and take all the benefit. Even though physically, it may have been a suicide, Webb was killed. The First Amendment failed to protect one person whom it should protect, while protecting white supremacists and child pornographers.

People are also taught that their opinions count, so they expect their opinions to be counted all the time on everything. And they get upset when their opinions are not counted. This caused the distinction between the public domain, where individuals’ actions affect part or entire segment of the society, and the private domain, where such actions do not have the same effect, to become fuzzy. Politics should be defined in the most abstract sense as the allocation of negative entropy among the citizens to be contributed to the system, or the allocation of entropy to be absorbed by the citizen. What does not affect this should remain in the private sphere. But, here, every issue has become politicized, such as the abortion and

same-sex marriage, and people try to impose their will on each other and bitterly attack those who do not share the same opinions. However, none of such debates seem to lead to productive solutions, because people are not really interested in solving the problems. It just paralyzes the political arena. The result is ironic that this society protects people who intend to harm the society, such as white supremacists, and denies rights of people who are utterly harmless to the society, such as gay couples who just want to get married.

The abortion debate really reminds me of the King Solomon's story that I heard as a child, in which two mothers claimed an infant. King Solomon ordered them to pull the infant and whoever had it at the end was the real mother. But when one let it go when she heard it cry, he declared that she was the mother. In the contemporary debate, either side is not letting go even though children are suffering in between. The current debate offers two choices to these children, either getting killed or born unwanted. If people were really interested in solving the problem, the debate would take a different form. The two sides would work together to create an environment where these children could thrive. Then, the number of abortions will naturally decline. So, they would devote as much resources as possible to establishing a social system that would offer a wide range of options for pregnant mothers, including adoptions, family and social support systems and counseling. The final decision should be left to the mother and her close family members who would be directly responsible for the child's life. The government could support such efforts by providing funds or passing legislations for expanding these services or making counseling mandate.

In this kind of society, the spiritual realm, which is essential to idealism, will decline. As another indication of this trend, many people treat their pets more as a family, eerily reflecting Plato's comment above. It seems as if people were elevating pets to the status of humans. But the relationship with your pets is confined within the physical existence. You can never feel close to any animals that existed hundreds of years ago or will exist hundreds of years in the future, while spiritual people can feel close to other spiritual people in the past or even in the future. This is one quality that sets humans apart from every other animal, and can only exist in the realm of idealism. But in the rise of realism, people are relinquishing this special human quality and become more clinging to the physical existence. So, in this case, it is not that pets are elevated to the human status but that humans are depreciating themselves to the animal status.

Once unleashed, these tendencies cannot be contained due to lack of competent leadership. Naïve idealists are weak, who will abandon

idealism as soon as they face difficulties. But “right things” are always hard to do, because it requires people to give up negative entropy in varied degrees and donate to the system so the system will retain its integrity. In the ideal society, a competent leader would assign each member the amount of contribution depending on his or her abilities, and make sure that it would be done. S/he would inspire people to be strong by making the biggest sacrifice by him/herself. Such leadership is not available any longer. In such a situation, naïve idealists would lose the direction and self-destruct. The life of my brother is an example of the cruelty of such society. He had a strong sense of superiority as a child. However, as he grew older and began to contact with the outside world as a student, he was made aware that he was not as superb as he had believed. This would be quite common. Most people have ambition to be great as children but as they grow older, they learn to live within their given talent. Unfortunately, my brother lost his way here. He entered a top-rated university, but was expelled in two years for lack of progress. He first reacted to this set-back by criticizing the society for having serious flaws in its philosophical foundation, which made it unworthy to live in. He was a clever person so his criticism had merit, but it was hearsay knowledge, just like a spectator criticizing professional athletes while watching television. Naturally, he could not keep on living this way, so he had to participate in society. Here, a healthy society would keep him in line with his talent, but such control is impossible in this sort of society. He was cut loose; as a result, he started acting, after establishing his own company, as if he were an equal of the elite who graduated from a top university and worked at a big company. To this, conscientious ones completely ignored him, but realist businessmen took the opportunity and used him for their advantage. I witnessed an incident in which the executives of a prefectural bank promised him to give him a contract in exchange for a “tiny favor” of mediating conflicting interests between the two banks under its umbrella, which he duly obliged, only to cancel at the last minute due to an “unforeseeable event.” They said next time, but it never came. He was unable to accomplish anything constructive in society, became desperate to meddle with some legally suspicious activities, and finally drank himself to death. His way of living releases enormous amount of entropy, which people around him must absorb. His family became exhausted both financially and mentally. Such tragedies will spread, debilitating the society, like spreading metal fatigue weakens the body of an aircraft.

How, then, will the destruction of leadership proceed? It will take the form of the erosion and the fragmentation among the vertical and horizontal fields in the universal idealist terrain shown in Illustration 4-7.

The erosion starts at the bottom of the universal idealist's terrain. For example, my Ph.D. dissertation, which deals with the problem of democratization and expansionism, was warned by all the people to whom I had spoken not to write because it was too big. But as seen in this chapter, this problem lies in the mechanics layer. What this indicates is that people are given the doctorate by working the job equivalent to mechanics in the field of physical engineering. Here, there is absolutely nothing inferior about being at the mechanics level. Each level is indispensable. The problem is that the certification that should be given at the deepest level is given to the second surface level, wiping out the levels below that. If you attend any Ph.D. program in political science in the U.S., you will need to choose one out of the four specialized areas: International Relations, Comparative Politics, American Politics, and Political Theory. Chances are you would be advised against going into Political Theory because there is no job available. Political theory belongs to the engineering layer. Others operate at the mechanics level. So, people are obtaining the Doctor of Philosophy, where no philosophy is involved.

Second, at each layer, the fields are getting smaller and compartmentalized. The communications among different fields are next to impossible. There are independent exclusive fields for each segment: Philosophy and Theology at the theory level, Sociology, Anthropology, Economics, Political Science, Literature, Art and others at the engineering/mechanics level. These fields are being further divided into smaller sub-fields. It is also becoming more difficult for these fields to communicate. Economics, for example, has been heavily quantified and lost common language with Political Science. As a result, contemporary scholars trap themselves in their own tiny specialized fields with no knowledge of how they may fit into the whole picture. There is a testimony from a theoretical mathematician which confirms this point:

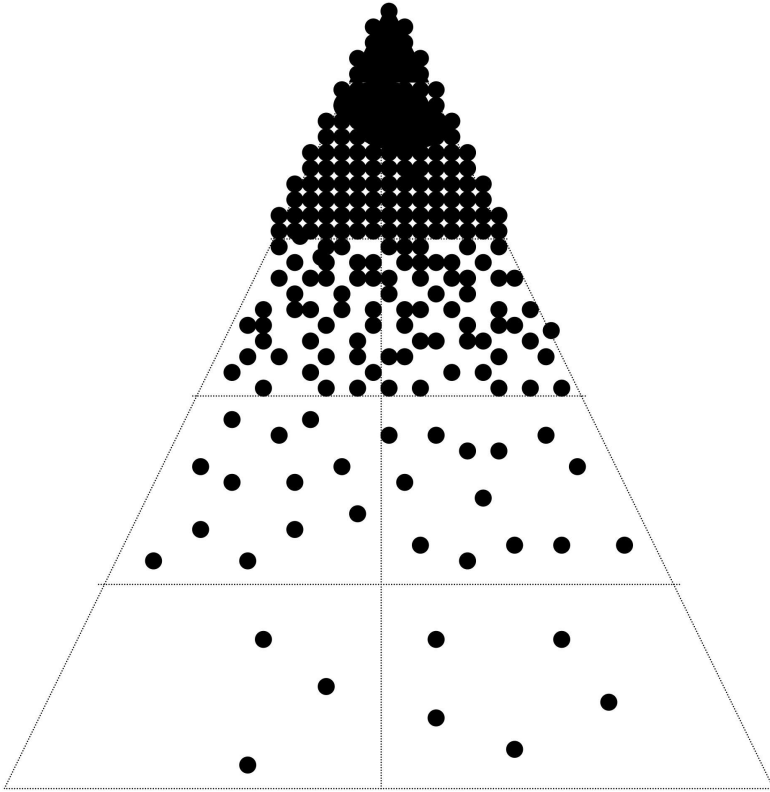
I share with you how I view my own mathematical works and mathematics in general. Imagine, if you will, a very large copper orb. Ok, and the mathematicians live inside this copper orb and that copper orb represents the boundary of our mathematical understanding. And every little mathematician is equipped with a ball peen hammer. What we are doing is just hammering inside this copper orb just as you would make a pan out of a copper. Slowly, slowly we put this dimple and dimples upon dimples, this orb slowly begins to grow.³¹

³¹ Edward B. Burger, *Zero to Infinity: A History of Numbers* (Lecture tape), Chantilly, Va.: The Teaching Company, 2007, Lecture 1.

This is the major cause of the fragmentation of the thought system in Western civilization. What was supposed to be a means to an end has become the end itself. And what was supposed to be a means to this new end has once again become the end itself. A succession of this phenomenon put them into isolated orbs. As a result, the whole system is disintegrating. While the surface level has become increasingly crowded, creating a fierce competition, the bottom layer is in dire need for people. This current tendency is shown in Illustration 6-1. In this state, it is impossible to make sensible decisions to save the society.

Democracy could end in two ways. One is ending internally. In this case, the conflict between haves, who feels entitled to keeping what they've got, and have-nots, who feels entitled to taking what others have, would become bigger, eventually ripping the social fabric for cooperation into pieces. At this stage, the society would look more and more like Hobbesian war of all against all. There, people won't need protection from the government as much as from each other. For example, just recently, an eighty-year old professional basketball team owner had an argument on the phone with his mistress about fifty years younger, over a photo of her taken with a black former basketball player. During the argument, he said that he did not want black people to come to his game. Who knows? He did it because he was a racist, or he was just jealous. This conversation was taped, without his knowledge, and publicized in a gossip program on television. Then, the entire society fired up and next day he was sanctioned with millions of dollars of fine and banned from the league for life. The government could never prosecute a case like this. Can you imagine that when you had a frustrating day at work, came home and lashed out to your friend on the phone, "I could kill my boss!" Then the next day the government comes and arrests you? It may have warranted further investigation to see if there was a pattern of racist behavior, but he was penalized by the public without a fair trial. This hysteria looked like a witch hunt. But later, the owner had a public interview and, instead of pleading the public to leave private matters in a private sphere, criticized his mistress' boyfriend, dragging himself into the public sphere. This, to my eyes, destroyed the last thread of integrity from the incident, foreshadowing the state of public affairs in decayed democracy.

Illustration 6-1
Fragmentation of Metaphysical Engineering Pyramid



Recently, I had another opportunity to spot a potential path to democratic decay. There is a national initiative to raise the competency level for the high school diploma. In this standard, competency to function at a state university level will be required to obtain a diploma. But it is obvious that not everyone is capable of achieving this competency level when we think about how many people are accepted by state universities. Those who cannot reach this level, then, will be completely left out because a high school diploma is so often required to enter vocational training. Such programs do not require that level of competency, but they are denied access to these programs without a diploma. Then, they will be stuck with a minimum-wage job, further widening the gap between the rich and the poor. This is a typical example of what happens if mechanics do

the engineering job. The U.S. is losing the competitive edge to foreign competitors. So, it is necessary to regain overall competence. But the solution is just to raise the standard, hoping that everyone will meet it. There is no consideration as to whether or not it is realistic and what the wider implication of this policy will be. To answer the first question, this is an unrealistic interpretation of the democratic principle of all people being equal. All people may have equal rights but they are not equal in their abilities. I see in this tyranny of the majority who say to the minority: "Why can't you be like us?" To answer the second question, this will generate tremendous anti-social energy by those left out, who may be a minority but still a significant segment of society. Harboring such explosive anti-social energy seriously endangers the whole society.

The poor is fighting back. They launch a campaign to raise the minimum wage. And sometimes they succeed. However, this kind of solution will not bear fruits in the end. The pay scale by the skill cannot be dismantled. If fast food servers are earning \$15/hour, book keepers will not work at the same rate. Then, the accountant will refuse to work at the same rate as book keepers, and so on. By the time this runs its course, pushing the inflation spiral upwards, a loaf of bread will cost \$10. The only way the poor can support themselves is to acquire skills and move up the ladder. This, the above education reform will make impossible.

The rich and the poor might find the way to come to a compromise, in which case everyone tries to live like a king and the society will go bankrupt. As problem deepens, the lack of competent leadership and people's reluctance to make any sacrifice would bring down the society. When democracy becomes ungovernable, people would turn to someone who could turn things around. However, by then, it would require too much sacrifice for them.

Evil power seekers will take advantage of these opportunities to rise. They will exploit weaknesses of desperate people, or anger and frustration of those left out. Two examples are presented here. In one case, they are the false idols, presenting themselves as saviors. The other is the case in which one evil exposes another evil, urging people to destroy the evil, and make people fight proxy wars for them. Super churches are examples of the first case. Manipulating their emotional weaknesses, these evangelists are telling what people want to hear with unrealistic solutions: "Don't worry. Everything is going to be ok. You don't have to make any sacrifice. God will fix it for you." In so doing, they twist the creed of Christianity. The notion of the original sin, for example, as I see it, is to warn us not to be self-righteous, and maintain healthy skepticism about our own goodness. However, I heard one super church minister say, responding to a TV interview, that since Jesus Christ took care of the

original sin for us, we don't have to worry about it anymore. During Hurricane Katrina in 2005, I also heard a TV evangelist claim that God was punishing homosexuals. However, according to the universal idealists' interpretation, in this instance, you would have seen a deeply sad face of Jesus Christ. Everyone knew that New Orleans was below the sea level and needed a lavvy. But this would mean for politicians to introduce an unpopular tax bill, for bureaucrats to incur overtime work, and for many people to give up a big screen TV to come up with the money. I hear Christ say, "If you could have found strength in you to do these unpleasant things, the disaster would have been avoided. I showed you with my own life to be strong facing these challenges." Compared to the sacrifice he made, what we are asked to sacrifice is very small. But many people are falling left and right for this kind of demagogue, because it is far easier to blame someone else for the ordeal they are going through than acknowledging that it is the responsibility of each one of us to deal with it. In history, it has been proven, as can be seen in the example of the Nazi regime, to be such an effective weapon by the evil to sway people with very little cost. Currently, they are just interested in making money on these people. But given the right opportunity, they may become politically ambitious.

The Bible is often used by these power seekers. But if used out of the context, parts of such massive documents as the Bible, complicated by the fact that it is 2000 years old, can offer justification for just about any position. For example, there is this poor fellow who was stoned to death by the order of the LORD because he worked on the Sabbath day (NUMBERS 15:32). If people were to follow the Bible to the letter, this would mean that those who work on weekends must be killed. To avoid this, the general spirit must be extracted from the whole first and then each part must be interpreted to conform to this general spirit. Here also, theologians and clergies must assume responsibility to protect the public from demagogues used by "false idols" by showing how parts of the Bible are abused against its general spirit. So, they must make clear to the public what the general spirit of the Bible is and always scrutinize claims used to justify certain positions, especially the ones used against a certain group of society such as the gay population.

Evil power seekers can use secular means, but spiritual vacuum will be exploited nevertheless. For example, leaders of white supremacist movements take advantage of frustrated people left out of the system. Young people currently with no future prospects can be recruited into destroying the status-quo system. That way, they can keep their hands clean and get their followers do all the dirty jobs. In the age of internet, recruitment is becoming very easy. And this society is helping them, as in

the above-mentioned case of high school students required to meet an excessively high standard, by providing them with a reserved army of people alienated from the society. If their job is successful and the status quo power is destroyed, they plan to fill the vacuum. As the democratic decay proceeds and people are put into more desperate situations, these manipulators' arguments will become more convincing. All they must do is to hide their ulterior motive.

There would be people who warn against these evil power seekers both in secular and religious realms, but such a voice would be suppressed. In the field of religion, theologians, who themselves are naïve idealists rather than universal idealists, are more interested in remaining in the ivory tower to defend their existence by countering the assault from science, as can be seen the comment below by a theologian:

Creation is very much at the center of discussion at the moment: partly because some scientists have put forward new theories about the origin of the universe like the Big Bang theory.... Most discussion about creation today, however, offers no explanation of how the matter out of which the universe is made came to be there in the first place but presupposes the existence of matter. Thus, scientists and others are often talking not about creation in the proper sense but about the genesis of the world: that is, how it came to be as we find it from its initial conditions, not how matter came to exist.³²

Lacking backup from theologians, equivalent of engineers in physical engineering, clergies, equivalent of mechanics, are left alone to counter the evil on the street. Decent clergies, who try to teach people to be strong facing the difficult situations, are often abandoned by people who would go to a super church to hear that they don't have to because God takes care of them. Thus, the membership for these churches is shrinking, while the one for the Super Church grows fast. So, they either would have to join the others, and thus spiritually perish, or to lose the income to sustain their lives, and thus physically perish.

Secularly, these people will have difficulty getting to be in the decision-making position in the political arena over those who say that the problem could be fixed without any pain if people left it to them, rather than presenting real solutions, which are always hard and require sacrifice. People would become resentful for those who insist that they do the "right

³² Francis Selman, *Aquinas 101: A Basic, Introduction to the Thought of Saint Thomas Aquinas*, Notre Dame, Ind.: Ave Maria Press, 2007, p. 31.

thing” in order to maintain the long-term integrity of the system, on which people’s ultimate security depends. These easy fixes, as in the case of stimulating consumption for economic recoveries, would only exacerbate the long-term problem. Now the society will enter a vicious cycle: As social ills become more prominent, solutions becomes even harder to bear. So, people will become hostile to those who press for solution, and eventually the second killing of Socrates would punctuate the end of democracy. Politicians, who do not want their ignorance or incompetence exposed, will indict him, and people, who do not want to hear that fixing the problem require sacrifice, will support the indictment. There forms an alliance between the weak and the evil. When the evil is in power, all the remnants of the system protection will be eliminated. Then, the realist dynamic kicks in. It is very difficult for power to be concentrated because there will be other challengers. If one becomes stronger, others get together to bring him/her down, and then start fighting among themselves. In some cases such as the Roman Empire, therefore, tyranny, in which someone temporarily succeeds in concentrating power, is a prelude to Vico’s barbarism.

Democracy could also end by an external force. One of the major concerns in our study is the linkage of the three concurrent cycles. As illustrated above, it is very easy to frame the democratic decay using a religious language, which can be easily made inflammatory. This means that the democratic decay can be linked to the religious transformation in Islamic civilization. Rather than infighting, they may choose to export violence by setting Western civilization as their common enemy. Evil power seekers abroad could easily make a case against democracy. Industrialized democratic countries, which have about 20% of the world population, consume 75% of total energy.³³ Recently in the United States, there was a movement called “99%,” protesting that top 1% of the citizens accumulate wealth disproportionately. It is not surprising that people outside industrialized democracy may feel the same way toward the democratic industrialized countries. Further, democracy acts selfishly in international society, closing its border and exporting its social ills abroad whenever possible in order to make their citizens happy. It is not surprising, then, that these people see democracy as hypocritical, declaring that all human beings are equal and acting like a dictator. So, many people would be willing to participate in such an endeavor, truly believing that they are serving their God, destroying the evil on the earth. The only thing the evil power seekers must do is to hide the fact that they themselves are just evil

³³ “The Impact of Energy Use in Industrialized Countries upon Global Population Health,” by Anthony J. McMichael, MBBS, PhD, Alistair J. Woodward, MBBS, MPH, PhD, and Ruud E. van Leeuwen, MSc, in <http://www.ippnw.org/pdf/mgs/1-1-mcmichael.pdf>

exposing another evil, as in the domestic case. This force can be particularly formidable in the areas, such as in the Islamic world, where religious influence still remains very strong. They are already tactically successful, sending suicide terrorists to various parts of the world to harm Western civilization.

Here, historically, evil people have been more successful in recruiting people into destruction of their rivals than good people in recruiting people into construction of good. Their success may come from the fact that it is not necessary for people to stay long in the metaphysical conscious state for destruction. It takes only a short-lasting passion to destroy something. On the other hand, for the construction of good, which is required to build truly good society, people must stay in that state for a significantly longer period. Working for the construction of good means to keep working on your duty for practically your lifetime, while absorbing all the injustice done to you like a sponge absorbs water, making sure that none will be passed onto society. To be able to do this, people must persevere constantly at the metaphysical end of consciousness. The teachings of the Christianity—forgiveness and turning your cheek—refer to this, I think. But this is much harder than to act on a moment of fever, triggered by such emotion as anger and frustration.

Moving to the problem of democratization in international society, China is a fast learner, it seems quickly joining the democratic decay of the West before it fully achieves democracy. At the same time, though, there is some indication that it may be taking a reactionary path. To estimate more accurately its path in the longer run, it will be necessary to know how strong the emerging economic social groups are and how coherent their interest can be. Russia seems to have failed to launch the democratic process and reverted to Vico's barbarism. If these observations are true, the worst case scenario, in which China and Russia united to attack democratic West, might be averted. But instead of falling into denial until it is too late, being proactive by coming out of the blind worship of democracy and reexamining it with a healthy dose of skepticism might save us by spotting the defect early.

In so doing, let's use engineering terms at the theory layer once again. A sustainable political system can be achieved through adequate distribution of entropy. In society, every citizen is asked to donate negative entropy or absorb entropy. However, there is a gradation among citizens in terms of intellectual and emotional strength, causing a variation in the amount of negative entropy that they can donate or entropy that they can hold internally. To achieve a sustainable system, it is imperative that the amount does not exceed individuals' capability. Failure in this regard could bring a dire consequence. Generally, the realist terrain is the primary

entropy generator, which either releases entropy into the system or takes negative entropy from it. The universal idealist terrain should then be the primary entropy absorber. Each naïve idealist will contribute a small amount of negative entropy or absorb a small amount of entropy. However, if they are forced to contribute negative entropy or hold entropy exceeding their capability, they will begin to focus on self-preservation and become entropy generators, joining the realist terrain. Since they are by far the vast majority of the population, the total amount of negative entropy absorbed or entropy released from this terrain in the system is significant.

This entropy distribution can be understood as force distribution in designing an airplane at the engineering layer. In designing an airplane, engineers also must first calculate all the loads that would be applied to each part, and then select materials strong enough to sustain the assigned loads. But the airplane model can add more concrete details for building a functional social system. In addition to strength, there are other factors such as weight and heat resistance. Engineers would take into considerations and select the best material for each part. Aluminum cannot be used for the frame of a fuselage because it will be bent too easily, but it will be suitable as outer plates due to its light weight and flexibility. People are also different in their qualities such as strength and flexibility. Therefore, right people must be chosen for right places for the social system to be sustained. Socialist regimes adopted this system. In the Soviet Union, talented people in various fields were specially trained by the state. In some limited fields such as the field of sports, they were successful. However, the state leadership did not apply this method to themselves; therefore, the system failed in the end.

To amend democratic defects from this viewpoint, the maintenance of the healthy universal idealist terrain is indispensable. Two things are necessary for this. The one is to reinforce the border between the realist and universal idealist terrains. Hindu tried it by establishing the Caste system but it was too rigid. So, the border here must be firm but flexible. Establishing the field of Metaphysical Engineering and requiring the degree to be a professional may improve the situation. To become a politician, a candidate would be required to have a bachelor's degree, with which s/he would master the field of metaphysical operation and mechanics. Bureaucrats are required to have a master's degree, with which they would master the field of metaphysical engineering. In academia, people with a Ph.D. in Metaphysical Engineering would cooperate with bureaucrats to establish a political system with integrity. The other is to train competent professionals, which will be discussed in Chapter 7.

Once the universal idealist terrain is secured, the border between naïve idealists and realists must be secured. Naïve idealists are recruited

into the realist terrain through fear and desire. Therefore, it is imperative that political leaders construct an incentive structure to curve these two mechanisms. To curve fear, leaders must know how much entropy/negative entropy that naïve idealists can hold/contribute and should not burden with more than what they are capable of. Within this limit, naïve idealists should be encouraged to do the best they can, and feel rewarded by doing it without the need for rewards so that all the available negative entropy can be used to maintain the integrity of the system. But once the good deed started to be punished, such as in the case of a journalist Gary Stephen Webb, a massive migration to the realist terrain would ensue because people feel that they must take care of themselves, or else no one will. To curve desire, the sense of entitlement must be curved. Also, it is important for them to see cheaters punished. If they see other people cheat and get away with it, it becomes difficult for them to do the right thing, so they will bandwagon into the realist terrain.

It is also crucial that cooperation between naïve and universal idealists is fostered in order to maintain the health of society. To do so, we must deal with the problem that Socrates experienced. I observed three ways that naïve idealists cannot recognize their ignorance. The first is the selective registration. When a set of ideas is presented, they select only the elements familiar to themselves and completely fail to recognize the rest. Therefore, to their mind, they are always fully cognizant of the entire thought system. The second pertains to the fractal. As I mentioned earlier, when you have a grasp of a larger fractal, you can recognize the pattern in smaller fractals; however, the opposite cannot be true. When a certain idea is presented, they understand it in terms of a smaller fractal, and believe that they have a good grasp of the whole. The macro-micro idealist pyramid, shown in Illustration 5-1, is a good example. When the macro pyramid is explained to them, they understand in terms of any of these micro pyramids, and believe that they fully understand the macro pyramid, which prompts them to start making erroneous generalizations. It would be like, when they are told that the earth is a sphere like a soccer ball, they would say: “I know. The earth is also with an alternating pattern of black pentagons and white hexagons, and made of genuine or synthetic leather and its inside is filled with air...”

This phenomenon is not limited to laypeople. Those who are considered professionals in this society have also fallen into this trap. I have observed that academic elites make generalizations based on their immediate competitive cut-throat surroundings. Most academic elites were born into the realist layer of the idealist pyramid. Based on their individual experience, they develop a world view. As a result, they are having such a hard time explaining such concepts as altruism and cooperation, and only

successful formulating some auxiliary theorems. Looking at a larger setting, they are also influenced by the immediate environment. So, mostly, what they present as a general theory is a description of their immediate environment sprinkled with fancy terminologies. During the Cold War, for example, a theory was presented that a bipolar international system was the most stable, and people argued over it. Prior to that, when many states were forming and reforming alliances, it was a multi-polar state system that was the most stable, and people argued over it. But the applicability of these theories is confined within the world they live in—a smaller fractal.

Third, there is a kind of knowledge that should be considered hearsay. For example, I once read on a CD sleeve that Mozart was a genius because he knew every possible move that could follow and could choose the absolute best. By this, I feel I already know and I could show off my knowledge in front of people. However, this is useless knowledge because it does not make me capable of composing any music. People sometimes take this kind of knowledge as true knowledge and believe that they are knowledgeable. However, people with this kind of knowledge are actually ignorant.

Some of naïve idealists with these kinds of knowledge believe that they should be in universal idealist terrain because they are knowledgeable. When they are told to stay in the naïve idealist terrain, they get upset and abandon idealism. The strong sense of entitlement that democracy fosters among its citizens exacerbates this problem.

There are some people who are intellectually capable of spotting these problems. But the emotional barrier is too overwhelming for them. Two factors are at work here. One is the desire to be special, intelligent, and knowledgeable. So, when someone points out their ignorance, they get upset. The second is fear. Once they acknowledge their ignorance, they must work hard to rectify the problem. And it can be overwhelming. If I said that all the scholars must return their doctorates and train for ten more years to be really eligible, not a single person would actually do that. Especially, it is even more difficult under the current system because there is no means to support their lives during these 10 years. Politicians and bureaucrats also face this fear. Even though someone else may be more competent to hold their positions, yielding the position means to lose the paycheck. So, they will not acknowledge the fact. The hostility that killed Socrates is rooted here. People would initially ignore such a voice but if the voice became too loud, they would silence it in any means including from ostracizing to killing.

I believe that the union between naïve and universal idealists can be fostered only under the presence of God. In front of almighty God, everyone is ignorant so there is no shame of not knowing everything.

When you see the infinite M-P ladder in Illustration 5-5, you can see that even the most knowledgeable human-being knows nothing, compared to God, who has the commanding knowledge of this ladder and beyond. Human ignorance is given, and feeling knowledgeable in the presence of such an existence would be a sheer arrogance by humans. Also, the desire to please God makes everyone to focus on truly worthy knowledge to pursue, instead of knowledge to show off, and gives strength to overcome barriers: If it takes ten years to acquire skills necessary to pursue truly worthy knowledge, I can be patient under the guidance of God. But in the absence of God, two kinds of idealists can become bitter enemies.

In fixing democracy, the European Union is an interesting experiment. A super-structure, which is to curtail democratic deficiency mentioned above, is now being created. The success would depend on the quality of the leadership and the degree of control that the Union can exert over the individual democratic states. If Europe succeeds in creating a political structure in which the democratic benefit of the protection of individual rights is preserved and the democratic deficiency of excessive individual liberty are controlled by wise leadership, it will bring hope to the world. It then could try to form a partnership or even a federation with such states as the United States and Japan. If that could be achieved, the world would be in a good shape to handle the two remaining challenges. However, Europe faces an uphill battle. After the age of Enlightenment, Christianity does not hold enough religious influence to sway its population, which has already experienced the enormous sense of entitlement under the democratic regime, back to the idealist terrain. It would either have to reinvent and revitalize Christianity or create some kind of idealist creed, which would be more acceptable if it did not contradict physical science of the 21st century. Historically, this has been only possible after the prolonged age of barbarism, when people are willing to make huge sacrifices just to escape the extremely brutal terrain of realism. The only chance, however slim it might be, would be for people to make a conscious effort by knowing the dynamics of Vico's cycle. If the Union officials became corrupt, there would be just a larger state in dictatorship, not unlike the Soviet Union. If they were to be elected, there would be just a larger democratic state with all the deficiencies.

II. FIELD SURVEY—METAPHYSICAL OPERATIONS

Finally, politicians must make specific decisions for each political case. This project is not intended to provide comprehensive guidelines for this task. Therefore, several general guidelines that might be relevant for the contemporary politics will be mentioned below.

(1) Democratization: Democracy cannot be imposed. Political institution, which is justified by political philosophy, and political reality, which is expressed in power distribution, develop in tandem. Political institution paves the way by reinforcing the development of the new regime. It also defers the collapse of the old regime by defending its legitimacy. However, political institutions cannot be installed outside of the range accommodated by political reality.

In Vico's cycle of Western civilization, first there was a power struggle between the pope and the king, in which power gradually shifted from the pope to the king. Then, there was a power struggle between the king and people, in which power gradually shifted from the king to people. Debates over political institution closely follow this pattern.

In late antiquity (250–750), the Church and the State had a symbiotic relationship with the Church having superiority over the state. Here, “Pope Gelasius I [had] exposition of the separate and reciprocal functioning of the priestly and imperial jurisdictions.”³⁴ At the same time, he claimed “‘spiritual’ superiority and Roman primacy [over Germanic kingship].”³⁵

In the Medieval period(11th to 14th centuries), this symbiotic relationship turned a contest for power:

[Gregory VII] ascended the throne of St. Peter believing that subjection of the lower ranks of the church, both clerical and lay, to papal authority was inescapably political and legal as well as spiritual, required by the justice (institia) and the law (jus) of Christ. His belief was reinforced by the fierce opposition of the French and German kings and of the German episcopate to his legislation for the canonical election of bishops and their investiture by metropolitans. In their resistance Gregory discerned the satanic pride of worldly rulers who put their inflated wills above the manifest will of God.³⁶

The Church then formed the theory of papal plenitude to justify its superiority:

Faced with royal encroachments on the property and privileges of the French church as well as on papal

³⁴ Oliver O'Donovan and Joan Lockwood O'Donovan, ed. *From Irenaeus to Grotius: A Sourcebook in Christian Political Thought, 100–1625*, Grand Rapids, Mich./Cambridge, U.K. :William B. Eerdmans Publishing Company, p. 170.

³⁵ Ibid.

³⁶ Ibid, p. 232.

jurisdictional rights, and confronting novel arguments for the moral, legal, and political self-sufficiency of the civil polity, the papal publicists, who included Ptolemy of Lucca, Giles of Rome, James of Viterbo, and Augustinus Triumphus, undertook to define carefully the modes of papal jurisdiction over things as well as persons, and to demonstrate the universality of papal plenitude and its exclusive derivation from Christ's earthly plenitude.³⁷

During the 14th and 16th centuries, the state became more influential:

The humiliation of Pope Boniface VIII by King Philip IV of France, with which the fourteenth century opened, had a symbolic importance greater than its practical effects. Of more moment than the royal curtailment of both curial finances and the administrative and juridical independence of the French church was the defeat of papalist corporational ecclesiology. This construed the church as a hierarchy of corporations, whose spiritual and temporal unity, authority, and right finally resided in the papal head. Against it the French government and its more radical publicists set the conception of a national church, whose temporal unity, authority, and right finally resided in king and realm.³⁸

The Thirty Years War established the supremacy of the state over the church. Then, the political debates shifted its focus to the power struggle between the state and people, which is more familiar to the contemporary generation of the 21st century. Initially, kings had overwhelming power, justified by the divine right to rule, which excluded kings from any political accountability. Kings were entitled to the right to rule by the will of God; therefore, were not accountable to the will of their people. Then, in the 18th century, John Locke, Rousseau, and Montesquieu came along, challenging the divine right of kings. Montesquieu forwarded the theory of separation of power. Rousseau presented *The Social Contract*, which insisted that sovereignty lied with people, not the king. John Locke claimed that people had the right of resistance/revolution, so the monarch could be rightfully overturned by people. These thinkers paved the way to the democratic institution.

³⁷ Ibid. p.235.

³⁸ Ibid. p. 389.

In this way, democratization is an internal process and others can only indirectly influence the process by providing favorable environment. Just like you cannot put a business suit on a seven-year old child and say he is a fully grownup businessman, you cannot impose the democratic institution on a country that is not ready. Democracy would have certainly failed if some outside influence had tried to impose it on Europe in the 14th century. If forced, the consequence will be bleak. The country could give birth to another dictatorship as seen in the demise of the Weimer Republic. Or, it could break down into civil wars, which we have seen in Eastern Europe in the 1990s.

Henry Kissinger, referring to the Middle East, observes this:

But conceptions of security necessities and of democracy promotion have often clashed. Those committed to democratization have found it difficult to discover leaders who recognize the importance of democracy other than as a means to achieve their own dominance. At the same time, the advocates of strategic necessity have not been able to show how the established regimes will ever evolve in a democratic or even reformist manner. The democratization approach could not remedy the vacuum looming in pursuit of its objectives; the strategic approach was handicapped by the rigidity of available institutions.³⁹

In Syria, for example, in the 2010s, there was an uprising against its dictator, Bashar al-Assad, which was ensued by a civil war:

The principal Syrian and regional players saw the war as not about democracy but about prevailing. They were interested in democracy only if it installed their own group; none favored a system that did not guarantee its own party's control of the political system.... The conflict, as they perceived it, was not between a dictator and the forces of democracy but between Syria's contending sects and their regional backers. The war, in this view, would decide which of Syria's major sects would succeed in dominating the others and controlling what remained of the Syrian state.... As the combat approached a stalemate, it turned to increasingly radical groups and tactics, fighting a war of

³⁹ Kissinger, p. 123.

encompassing brutality, oblivious on all sides to human rights.⁴⁰

Here, as mentioned above, Turkey was successful in its immediate secularization and went onto the path to democracy. Indonesia also seems to be smoothly sailing into democracy. They must have developed the infrastructure for democracy which other countries have not developed. Identifying these factors will be a useful measure in the future to decide if countries in question are suited for installing a democratic institution. As shown in the example of the invasion of Iraq, followed by the total breakdown of the state system, no order is sometimes worse than a bad order.

(2) Material versus Ideational power: The West has overwhelming material power, while such civilization as Islam has stronger ideational power. People there have much stronger resolve and are willing to sacrifice much more for the sake of what they believe. If you have a strong army but a weak navy, you should not fight a naval war, especially against a major naval power. You want a land war. The same applies here. You want to stay on the material realm. In this regard, the First Gulf War was reasonable because the United States went into war in order to protect the material interest of Saudi Arabia, responding to Saudi Arabia's request. Even with that, it aggravated radicals such as Osama bin Laden. It suggests a sensitive nature of this issue. The second war was reckless. If you go to principles, Islam has much stronger grounds than the democratic principle. After all, the United States violated the democratic principle of self-government on which it based its legitimacy. The Middle East is divided by material interests. Some are oil rich and others destitute. There are tensions among these states. But they could be united on the ground of Islamic ideal. If the West makes a wrong move, all Islamic states, poor or rich, could unite against the West. That is the worst the West wants to face.

In this aspect, direct intervention will not be a recommended policy, because it will certainly link the Islamic secularization to the democratic decay of the West. Also, the Western democratic countries must behave in such a way as not to become an easy target as a common enemy by domestically refraining from decadent behavior. Meanwhile, they have enough ideational elements left in their society; therefore, it is worthwhile to encourage them to pursue ways to escape Vico's cycle and achieve a universal idealist structure from where they are now.

⁴⁰ Ibid., p.126.

(3) Nuclear Weapons: Recently, President Obama of the United States launched a campaign to create a nuclear-free world. The following is the statement of one of his supporters—former Secretary of Defense William Perry:

My colleague Senator Nunn has said that the goal of eliminating—totally eliminating—nuclear weapons, he thinks of being the top of the great high mountain. And we are very far down that mountain right now. And we are seeking to climb to the top. But that goal is so far away right now that we can't even see the top of the mountain. It's—it's—it's covered by clouds. But—so we don't know what it's going to take to get to the top. We don't know how to get to the top. But we do know it's better to go up than go down. As you go up that mountain, we make ourselves safer. He has also described an intermediate goal of getting to what he calls a base camp—in mountain climbing terms where we will be safer than we are today, but where we'll be close enough to the top of the mountain that we can see it. Then we can make the judgment of how to get to the top and how long it will take. We cannot make that judgment now.⁴¹

Metaphysical engineering might be helpful here to give a larger picture in which they conduct the nuclear disarmament. From the viewpoint of this project, the possibility for the elimination of all the nuclear weapons would largely depend on how we might be able to handle Vico's cycle. If we were successful, we would not have to worry about anyone wanting to use nuclear weapons. If we were not, no matter what we did, those who wanted to use would acquire them and use them. Of course, it is not just one way. The existence of nuclear weapons might well affect the direction of the cycle. If a rival country owned nuclear weapons, another country would feel it necessary to own their own. So, they would spread, making the world less stable, which would make many more to feel necessary to acquire their own. But the judgment must be made under full realization of such a cycle.

(4) Economic Environment: For the same reason, it is crucially important to maintain stable economic environment. We are not doing a good job at all here. Especially, democratic states export negativities into

⁴¹ Interview with Secretary William Perry by Producer Eddie Noguchi, July 18, 2009.

the international arena to protect their own citizens. It is a heavy burden placed on the economists to somehow figure out a better system. Historically, Great Britain opened its domestic market in economic distress to prevent the international economy from collapsing. In the 21st century, Europe is forming a union, where some country might play this role for the European Union, while closing the border to the outside region. China also might be able to rely on its huge domestic market, if they can succeed in equalizing the income distribution. North America is on its way to form its own economic sphere, even though it is having a hard time incorporating Latin America due to the income disparity and political instability among the participating states. I wonder if these trends will result in forming three self-sufficient economic spheres. Will it have a better effect providing stable international economic environment, or will disputes emerge among the economic spheres?

III. THE NEXT CYCLE

Chapters 5 and 6 examined the four layers of the field of metaphysical engineering. These investigations show that we have an enormous task ahead of us. And the clock is ticking on each of the triple challenges we face in modern society. It is hard to see where we can start.

Naturally, it will be the best if Vico's cycle can be stopped during the current cycle. However, the decaying momentum might be already too strong at this moment. Some phenomena are irreversible even with the most skillful engineering, as it is impossible to fix an airplane which lost its wings in mid-air. We may not have completely felt the effect yet because it has not hit the ground yet. Lack of more exact engineering, we just don't know whether the wings have been completely clipped off, or they are just damaged and we have enough time to land it safely on the ground to repair them.

If it turns out to be too late to be repaired, our fate is sealed. Any amount of engineering effort cannot save our civilization, and we will enter Vico's barbarism. If the Western democratic states collapsed, there would be nothing to control the processes of China's democratization and the Islamic secularization. With that, any hope to control Vico's cycle in the current cycle would disappear. Therefore, the engineering effort must shift to the next opportunity. Vico's cycle suggests that we are reaching another crucial point in the next several centuries, when the new cycle begins. This is a tremendous opportunity for humanity because we could get an upper-hand to the problem. By getting things right for the first place, we would not have to struggle with problems that keep occurring because of the errors we made at the beginning. This will be a tremendous opportunity but it also will be an enormous burden to the generations on which the

responsibilities lie. They cannot accomplish this alone. If there is any chance at all, we must do everything we can do to assist them.

First, historical cases present many issues to be investigated regarding Vico's cycle, some of which have been scattered throughout this book. They are restated below and we can begin to investigate these and other relevant issues for them.

1) There have been variations in the forms of religious and secular authorities. In Christendom, religious and secular authorities were two independent entities, while in the Chinese civilization they were incorporated into relatively cohesive one entity, with Islamic system being in the middle. Do these differences affect the level of violence?

2) There are significant variations in secularization pattern in Islamic world. Where do these variations come from? These might be attributed to such factors as the degree of control by the central authority, different denominations and variations in material wealth. Then, do these affect the level of violence?

3) In Western civilization, empires prove to be unsustainable and the nation-state system emerged, while China took the historical form of one empire replacing another. Does this affect the level of violence during the cycle? If so, how is it possible to create one form or the other? Why did the Roman Empire degenerate into numerable small entities, while Chinese bureaucracy was taken over by the next empire?

4) Why did ancient religions fail to achieve what they strived to do? All religions were encroached by power-seekers in the realist terrain and, as a consequence, lost its power. For example, in the Roman Empire, when Constantine declared Christianity as its national religion was the beginning of the decline of Christianity. This seems to suggest that there is a dilemma between religious purity and political influence. That is, religions can retain their original purity while they do not have political influence, but this makes it impossible to have widespread effectiveness to establish a stable idealist society. On the other hand, once they attain widespread political influence, they lose their original purity, which also makes it impossible to establish a stable idealist society. Is there any way to reconcile this dilemma in the next cycle?

5) There are other mistakes that some religions made. For example, Hindu wanted to distribute burden according to people's ability. The stronger was supposed to bear more burdens and therefore put on a higher social hierarchy, while the weaker was supposed to take fewer burdens and therefore put on a lower social hierarchy. This went terribly wrong, suggesting that systems like this require great flexibility. The strong does not always reproduce strong off-springs, so the hereditary

systems are not suitable here. How can we create a more effective distribution system?

6) My experience has led me to believe that intelligence is neutral, and it is the deep emotion that urges people to commit to idealism. To get intelligence to work for idealism, it is necessary to make intelligence believe that a force beyond its comprehension is dictating it. Otherwise, in an immediate threat to individual survival, intelligence will make a logical decision to follow realism. Thus religion cultivates blind faith. To do so, all religions have at least some elements of mysticism that reason cannot explain. But the advancement in science has torn the veil of mysticism off religion. Then, in this age of science, how can intelligence be persuaded?

7) Religion is a double-edged sword. Successful religions persuade the deep emotion to commit to idealism. Here, if people can make the commitment to the fundamental principle of idealism, they will become infinitely open-minded. However, a problem occurs here. For most people, fundamental principles are too large and abstract to fathom. So, each religion creates specifics tailored to its target population. Unfortunately, when people make indissoluble commitment to specifics, they become inflexible and intolerant to other specifics, and fight over surface level differences, producing the very result that religions try to avoid. Historically, this problem, combined with the essence of blind faith mentioned above, has been made worse due to religious manipulations by power-seeking realists, creating the worst possible case with the rigidity of idealism and the evilness of realism. How can we avoid this?

8) Monotheism often treats outsiders as enemies and applies realism, even if it succeeds in establishing an idealist society internally. Globally, this produces conflicts among different religions. How can we avoid this?

9) The contemporary world has a much larger scale, which seems to be too big for historical religions to be effective. As the ancient irrigation system is not adequate to support the modern population, religions may need to be modernized to fit the scale. How can we do that?

These engineering problems cannot be effectively handled without the backup by solid theories, just as it is impossible to design an airplane without the principle of aerodynamics. Therefore, we must begin to build up metaphysical theories as fast as we can. This is a very demanding task. The field of metaphysics is so vast that no single human being can conduct a comprehensive investigation. We are all small parts of the whole. Even an experiment takes generations to complete. That is the reason that this field has been practically abandoned in Western civilization after the Enlightenment, which started the age that embraces only experimentally falsifiable phenomena. However, we cannot simply ignore phenomena that

affect our lives in such significant ways just because they cannot be perceived in the way we can in physical sciences.

It is imperative that all the results be made available in one place for the generations at the beginning of the cycle. It would be ideal if we could create a depository where people who worked on these issues can submit their results so they won't have to be lost or scattered all over, making the already difficult job even more difficult for the burdened generations. Here, individual focuses hurt the process because, as mentioned repeatedly, projects as a tool for personal advancement will be too small for our goals. Each of us must all be willing to play just a small part, which might look insignificant by itself, for this project to work. Therefore, ideally, the central depository should have a constitution presented here.

To get the project going, I propose that the first step is to train one hundred metaphysical engineers. From there, those who have inclination to deeper inquiry can branch out to become theorists, and those who have inclination to action and persuasion can branch out to be in charge of mechanics and operations. Then, the problem is how to train such engineers? The next chapter explores this issue.

Constitution of the Universal Idealist Depository

This depository was established in order to facilitate concerted efforts among universal idealists, who are scattered geographically and temporally. Any works that comply with the following are encouraged to be deposited here. Any uses from the library are also welcomed as long as they comply with the following.

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CHAPTER 7

METAPHYSICAL ENGINEER

Democracy could work if decision making were entrusted to professional metaphysical engineers. When airline companies order a jet airplane, they shop and decide from which manufacturer they will buy one. They could choose Boeing, or they could choose Airbus. In either case, they can be certain that their airplanes are made by professionals and aerodynamically sound. When it comes to the aerodynamic design, there is only so much variation that can exist. So, either company's airplane will not look so different. It will not have nine wings, nor will it have a square shape. So, it's just a matter of other factors such as price and internal design. The same would apply to metaphysical engineering. People can select among professional engineers, but there would not be a wide fluctuation of policies because, once we know the working of metaphysics, there will be only so many options that we could choose. People could choose by candidates' personalities, race, looks, or anything. The bottom line is that, as long as they were all trained to be metaphysical engineers, they will do a similarly sound job. Indeed, just as untrained engineers should not be allowed to design an airplane that will carry hundreds of people, all politicians should be required to have a metaphysical engineering degree. No movie actors nor professional wrestlers. Unfortunately, we do not have any educational system for that. We do not even have the field of metaphysical engineering yet. So, as urgent as the matter is, the problem won't be solved overnight. But I hope that, if we can train the first one hundred metaphysical engineers, things could multiply from there. This first generation, however, will not have a formal educational system to go through. So, I will first look at Plato, who proposed a similar educational plan for his philosopher kings—who are required to obtain the same skills as metaphysical engineers—and then rely on my own experience in making myself a prototype metaphysical engineer. This transition will be uneven and haphazard. But I hope someday, there will be a more efficient training system. In such a system, metaphysical engineers must be trained intellectually and emotionally. The final section will discuss each.

Before we start, we must revisit Chapter 4, in which two differences between physical engineering and metaphysical engineering were discussed. Here is a brief summary. One was the size. The scale of metaphysical engineering far exceeds the one of physical engineering. If metaphysical engineering were to be reduced to the same size as physical engineering, we would have to accomplish designing and producing a new model of airplane, which takes years, for example, with our life expectancy being only a few months. Second, in metaphysical engineering, there is no division between objectivity and subjectivity. In physical engineering, engineers manipulate materials, such as metals and woods, in order to design and produce objects. There is a clear division between the engineers and the materials they use. However, in metaphysical engineering, engineers are at the same time also materials they use. So, objectivity and subjectivity merge here. These two differences must be taken into consideration when a training plan is formulated.

I. PLATO'S EDUCATIONAL SYSTEM.

In *The Republic*, Plato insists that a philosopher king “must have the following characteristics: a philosophic disposition, high spirits, speed, and strength.”¹ To this goal, he lays out how to train philosopher kings in three stages. The first stage is discussed in Part III. The second stage is discussed in Part VIII. The final stage is the apprenticeship as a military officer, also discussed in Part VIII.

H.D.P Lee briefly describes Plato's first stage of education:

Education had three principal subdivisions. Reading and writing, physical education and what we may call secondary or literary education. This last consisted mainly in a study of the works of the poets, which were learnt to be recited and, where necessary, sung to the lyre, so that it included a knowledge of music; it corresponded, broadly, to the ‘secondary’ stage of our own system, and followed by two years military training which began at eighteen.²

The main purpose of the education at this stage is to develop character, as Lee explains: “[T]he general purpose of this stage of education [is] to train both character and moral and aesthetic judgment, these last two being closely allied.”³ Lee further explains the importance of poetry and music as a moral education: “It must also be remembered that the Greeks had no

¹ Plato, trans. by H.D.P. Lee, *Plato: The Republic*, New York: Penguin Books, 1955, p.114.

² *Ibid.*, p.113.

³ *Ibid.*, p.141.

Bible, and what the Bible has been to us as a source of theology and morals, the poets were to the Greeks.”⁴

So, Plato intends to use poetry and music in order to develop a character suitable for a philosopher king. And he believes that poetry and music have decisive effect in character development:

‘And we shall begin with the mind and character, shall we not?’

‘Of course.’

‘In this type of education you would include stories, would you not?’

‘Yes.’

‘There are of two kinds, true stories and fiction. Our education must use both, and start with fiction.’

‘I don’t understand you.’

‘But you know that we begin by telling children stories. These are, in general, fiction, though they contain some truth. And we tell children stories before we start them on physical training.’

‘That is so.’

‘That is what I meant by saying that we start to train the mind before the body. And the first step, as you know, is always what matters most, particularly when we are dealing with those who are young and tender. That is the time when they are taking shape and when any impression we choose to make leaves a permanent mark.’⁵

For this reason, Plato insists that rigid “censorship of the music and poetry to be used in education is required.”⁶ Then, he goes on to discuss in detail what kind of stories should and should not be told to children. And he dismisses most poetry, including Homer’s, which portrays gods and heroes as morally flawed. Plato then objects to the use of drama as part of education because it requires students to lose themselves in order to become the personality that they play.⁷ Next, he discusses music as an accompaniment to poetry. Plato adds that certain modes are more suitable for children to develop a preferable character than others.⁸ To sum this argument up, Plato connects aesthetics to morality:

⁴ Ibid., p.113.

⁵ Ibid., p.114.

⁶ Ibid., p.141.

⁷ Ibid., pp. 130–131.

⁸ Ibid., pp. 138–141.

‘But there is one thing we can decide at once, that beauty and ugliness result from good rhythm and bad.’

‘That is undeniable.’

‘And good rhythm is the consequence of music that suits good poetry, bad rhythm of the opposite; and the same is true of mode and tune, if, as we said a moment ago, both the rhythm and mode should be suited to the words and not vice versa.’

‘The words must of course determine the music,’ he said.

‘But what about the style and content of the poetry themselves?’ I asked. ‘Don’t they depend on character, just as the other things depend on them?’

‘They must.’

‘Good literature, therefore, and good music and beauty of form generally all depend on goodness of character; I don’t mean that lack of awareness of the world which we politely call “goodness”, but a character of real judgment and principle.’

‘I quite agree.’

‘And are not these things which our young men must try to acquire, if they are to perform their function in life properly?’

‘They must.’

‘And they are to be seen in painting and similar arts, in weaving and embroidery, in architecture and furniture, and in living things, animals and plants. For in all of these we find beauty and ugliness. And ugliness of form and disharmony are akin to bad art and bad character, and their opposites are akin to and represent good character and discipline.’

‘It is not only to the poets therefore that we must issue orders requiring them to represent good character in their poems or not to write at all; we must issue similar orders to all artists and prevent them portraying bad character, ill-discipline, meanness, or ugliness in painting, sculpture, architecture, or any work of art, and if they are unable to comply they must be forbidden to practice their art. We shall thus prevent our guardians being brought up among representations of what is evil, and so day by day and little by little, by feeding as it were in an unhealthy pasture, insensibly doing themselves grave psychological damage.’

Our artists and craftsmen must be capable of perceiving the real nature of what is beautiful, and then our young men, living as it were in a good climate, will benefit because all the works of art they see and hear influence them for good, like the breezes from some healthy country, insensibly molding them into sympathy and conformity with what is rational and right.’

‘That would indeed be the best way to bring them up.’

‘And that, my dear Glaucon,’ I said, ‘is why this stage of education is crucial. For rhythm and harmony penetrate deeply into the mind and have a most powerful effect on it, and if education is good, bring balance and fairness, if it is bad, the reverse. And moreover the proper training we propose to give will make a man quick to perceive the shortcomings of works of art or nature, whose ugliness he will rightly dislike; anything beautiful he will welcome, and will accept and assimilate it for his own good, anything ugly he will rightly condemn and dislike, even when he is still young and cannot understand the reason for so doing, while when reason comes he will recognize and welcome her as a familiar friend because of his education.’⁹

Next, Plato talks about physical education. Here also, Plato uses it as a means to develop character, rather than building physical strength:

It is, of course, to stimulate their energy and initiative that they undergo these severities in their training, not merely to make themselves tough, which is the object of the diet and exercises of the ordinary athlete. And that, my dear Glaucon,’ I went on, ‘is why I say that the purpose of the two established types of education (literary and physical) is not, as some suppose, to deal one with the mind and the other with the body.’

‘What is it then?’ he asked.

‘I think that perhaps in the main both aim at training the mind.’

‘And how do they do that?’

‘Have you noticed,’ I asked, ‘how a lifelong devotion to physical exercise, to the exclusion of anything else, produces a certain type of mind? Just as a neglect of it

⁹ Ibid., p.141–142.

produces another type? One type tends to be tough and uncivilized, the other soft and over-sensitive, and ...'

'Yes, I have noticed that,' he broke in; 'excessive emphasis on athletics produces a pretty uncivilized type, while a purely literary and academic training leaves a man with less backbone than is decent.'

'It is the energy and initiative in their nature that may make them uncivilized,' I said; 'if you treat it properly it should make them brave, but if you overstrain it, it turns them tough and uncouth, as you would expect.'

'I agree,' he said.

'The philosophic temperament, on the other hand, is gentle; too much relaxation may produce an excessive softness, but if it is treated properly the result should be civilized and humane.'

'Yes.'

'And must not the two elements be combined to produce a mind that is civilized and brave, as opposed to cowardly and uncivilized?'

'That is so.' ...

'What I should say therefore is that these two methods of education seem to have been given by god to men to train our initiative and our reason. They are not intended, one to train body, the other mind, except incidentally, but to ensure a proper harmony between energy and initiative on the one hand and reason on the other, but tuning each to the right pitch. And so we may venture to assert that anyone who can produce the best blend of the physical and intellectual sides of education and apply them to the training of character, is producing harmony in a far more important sense than any mere musician.'¹⁰

In this way, Plato's first educational stage consists of education with poetry and music, after writing and reading, and physical education. He intended both to be used for character development.

Those who excelled in the first educational stage are to continue receiving further education to become philosopher kings. The second stage consists of the study of mathematics and dialectic. The goal at this stage is to train the mind, specifically to think abstractly. First, students are to study five mathematical branches as preliminary to dialectic: Arithmetic, Plane Geometry, Solid Geometry, Astronomy, and Harmonics. After

¹⁰ Ibid., pp.152–155.

mathematical training, students will move onto dialectic. Lee summarizes the ultimate goal of this educational stage:

The mathematical studies are only the preliminary to Dialectic. We are reminded of the Line and Cave. Dialectic is the exercise of pure thought or intelligence, the highest section of the Line; its object is the vision of the Good, the last stage in the ascent from the Cave, when the eye can look at the sun itself. Exactly what Plato meant by Dialectic has been much disputed. It is clearly concerned with both mathematics and morals, in each bringing a coherence and certainty lacking at an earlier stage; but Plato deliberately avoids detail and precision, and if we say that Dialectic is a purely philosophic activity, that it gives coherence to the whole of a man's knowledge, and leads finally to a vision of ultimate reality, we have, perhaps, said as much as can be said with certainty.¹¹

Plato himself emphasizes the creation of the whole knowledge by this educational stage:

‘Well, we must enroll in a select number those who show themselves most at home in all these exercises and studies and dangers.’

‘At what age?’ he asked.

‘As soon as their necessary physical training is over. During that time, whether it be two or three years, they won't be able to do anything else; physical fatigue and sleep are unfavourable to study. And one of the most important tests is to see how they show up in their physical training.’

‘True.’

‘After that time, then, at the age of twenty, some of them will be selected for promotion, and will have to bring together the disconnected subjects they studied in childhood and take a comprehensive view of their relationship with each other and with reality.’¹²

In this way, the second educational stage consists of two parts: Mathematics and Dialectic. Here, Plato warns that not everyone should be

¹¹ Ibid., p. 300.

¹² Ibid., p. 307.

given the opportunity to study philosophy: “In fact all we’ve been saying has been said in the attempt to ensure that only men of steady and disciplined character shall be admitted to philosophic discussions, and not anyone, however, unqualified, as happens at present.”¹³

Finally, the candidates will receive practical experience, much like an internship:

‘Then suppose twice as long is spent on a continuous and intensive study of philosophy as we proposed should be spent on physical training, will that be enough?’

‘Do you mean six years or four?’

‘It doesn’t matter,’ said I; ‘make it five. After that they must be sent down again into the Cave we spoke of, and compelled to hold any military or other office suitable for the young, so that they may have as much practical experience as their fellows. And here again they must be tested to see if they stand up to the temptation of all kinds or give way to them.’

‘And how long do you allow for this stage?’

‘Fifteen years. And when they are fifty, those who have come through all our practical and intellectual tests with success must be brought to their final trial, and made to lift their mind’s eye to look at the source of all light, and see the Good itself, which they can take as a pattern for ordering their own life as well as that of society and the individual. For the rest of their lives they will spend most of their time in philosophy, but when their turn comes they will turn to the weary business of politics and do their duty as Rulers, not for the honour they get by it but as a matter of necessity.’¹⁴

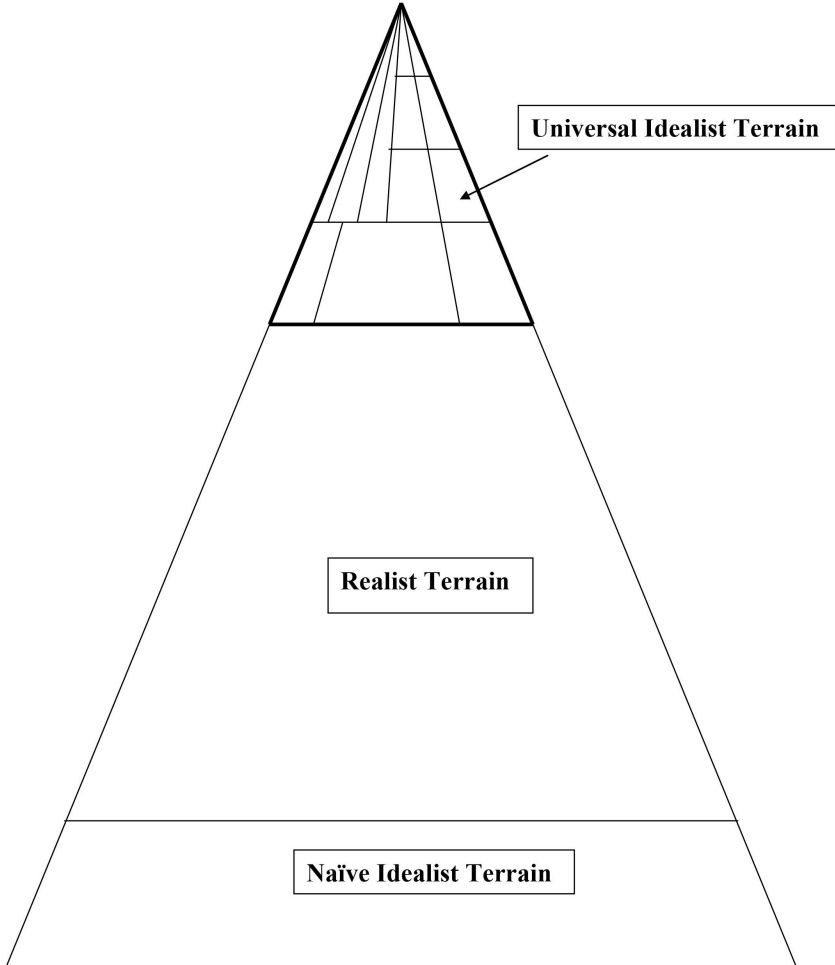
Plato’s educational plan offers to us both lessons and problems. There is a lesson that we can use to remedy the flaws in our educational system in order to train metaphysical engineers. Plato uses both literary and mathematical trainings as the tool to achieve larger goals—character development and ability to think abstractly, both of which are also the means to achieve the liberation from the Cave, discussed in Chapter 5. In the final stage, the separate learning is to be put together through Dialectic so the students can see the whole.

¹³ Ibid., p.310.

¹⁴ Ibid.

The current system has a potential to function as a whole described in Chapter 4 (see Illustration 4-7).

Illustration 4-7
Universal Idealist Pyramid



However, the fragmentation among the vertical and horizontal fields mentioned in Chapter 6 is so severe that it cannot work as required. Liberal Arts educations have been placed in order to prevent this fragmentation. However, in liberal arts training, each area is taught separately and no attempt is made for the students to cultivate the ability to put these separate pictures together. This specialization is so intense that in the final stage, scholars are to become specialists of their own field with no concern about

understanding the whole. As shown in Illustration 7-1A, if you are shown only the tip of the mountain, these subjects are unrelated. It will work together only if the bottoms are shown in which all independent subjects merge. The problem is that teachers are most likely to have gone through this dysfunctional education. This makes their focus of teaching very narrow. They are incapable of showing the connection at the deeper level between subjects that are seemingly unconnected. And this trend is becoming worse. For example, when I took a class on Shakespeare, the professor, who must have obtained the Ph. D in the 1970s, asked each student why s/he had enrolled in the class. I said that I had a stronger background in music, even though art was not my stronghold, and that I was curious as to why some of the Romantic composers, including Verdi, Mendelssohn, and Berlioz, were so interested in Shakespeare, I encountered an awkward silence. The textbooks used in this class, written by a scholar a generation or two before the instructor, had some references to the music based on Shakespeare. For example, Harold Bloom writes on Othello: “Auden, in one of his most puzzling critical essays, found in Iago the apotheosis of the practical joker, which I find explicable only by realizing that Auden’s Iago was Verdi’s (that is, Boito’s), just as Auden’s Falstaff was operatic, rather than dramatic.”¹⁵ This suggests that he was interested in examining how Shakespeare was interpreted in other fields of art. So, with him the connections had not yet been lost.

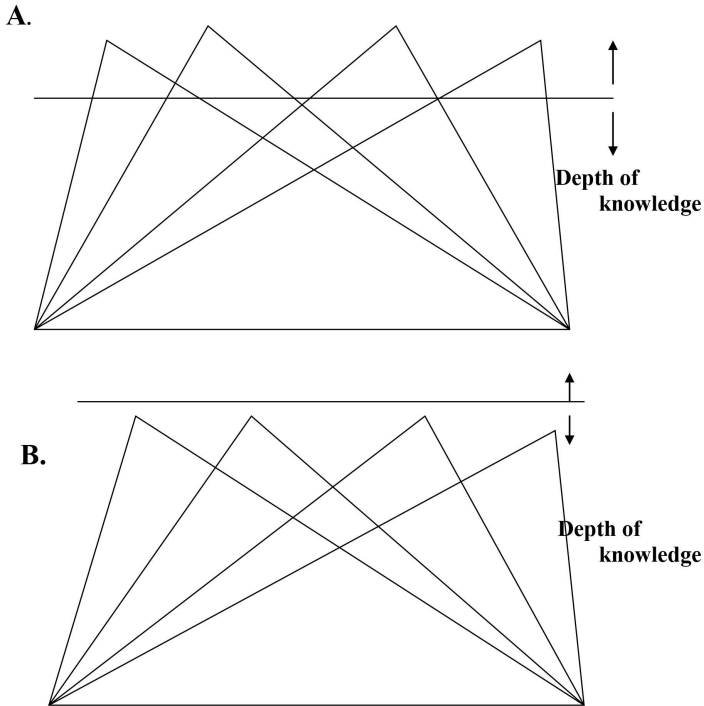
But once the class started, the instructor was very helpful in directing me to gain better insights about idealism and realism through the works of Shakespeare. Now the newest generations of scholars have an even narrower scope. When I took a poetry class and wrote up a question about Milton’s *Paradise Lost* and idealism, the young professor, who must have obtained her Ph. D. in the 1990s, wrote me back, saying, “Those questions are outside of the field of poetry.” I eventually dropped out of that class because I could not operate within such a narrow definition of poetry.

At the same time, there are some new trends that encourage “multi-disciplinary” approaches. For example, sociologists and anthropologists are studying together to understand an immigrant community in contemporary American society. These trends, however, are not really reversing the trend of fragmentation. It is just that each field has become so shallow that the field categorization has lost any practical meaning (see Illustration 7-1B). In other words, it is an indication of the total disintegration of the Western intellectual system. In engineering terms, mechanics of Ford and Honda may have a hard time logistically, at least

¹⁵ Harold Bloom, *Shakespeare: The Invention of the Human*, New York: Riverhead Books, 1998, p. 435.

for a while, if they are asked to produce one car together. But they will not have any problem if they are asked to produce some simple devise such as a lawn mower. There are hardly any theories or specializations required for that. And this is the equivalent of the current state of academia. In this way, the contemporary academic society has completely lost Plato's spirit of the whole.

Illustration 7-1



As examined in Chapter 3, this is a predicted effect of the rise of realism. Contemporary academia is dominated by the realist tenet, in which scholars' main concern is their own well-being or self-glory. They try to publish their works, not because they are important to the well-being of society in general, but because it will bring them fame (at a maximum) and employment (at a minimum). In such an environment, the natural tendency is to take the shortest possible way. There will be no need to communicate with other fields unless scholars are really in search of solutions to society's serious problems.

This leads to Plato's concern that unqualified people should not be given dialectic training. By saying this, I presume that Plato has sophists in mind. Knowledge is power. In order to give power, society must also make

sure that the person getting this power has ability to judge when to use the power and to what purposes.¹⁶

This problem did not harm the progress of physical engineering because of the fact that objective and subjective concerns are separated in physics. In the TV series called *Law and Order*, there is an episode called “Big Bang.” It is about a circle of theoretical physicists, who are competing for the Nobel Prize by working to discover something novel before someone else does. One prominent physicist has been working on the theory of proton decay, which could explain how the universe began and will end, but he has made no progress for over thirty years. Then, a young and struggling physicist, who works as a doorman, comes up with a hypothesis that would discredit the prominent physicist’s theory. This ought to launch his career. However, the prominent scholar first denies a fellowship the young scholar applied for and then tries to steal his idea. Since this is an episode of a fictional police story, it diverts here, and one ends up trying to kill the other. But this story is a metaphor for real life. How can people who are concerned with the beginning and the end of the universe simultaneously be concerned with such a miniscule issue as an individual career? It is possible because their objective concerns are completely separate from their subjective concerns.

I must add that, even though as an independent branch, shown in Illustration 4-2, the field of science worked perfectly, when it is incorporated as part of society, shown in Illustration 4-7, serious problems emerged. We have become a society in which we want to know how the universe began, while at the same time we don’t know if we can survive through the next century. We have become a society in which we spend billions of dollars to build a particle accelerator, while billions of us are starving. In other words, we live in a society in which no one says: “Let’s wait on that and make sure that we can survive long enough to contemplate how the universe began,” or “Let’s wait on that and make sure that nobody on this Earth will die from starvation.”

In metaphysical engineering, as mentioned in Chapter 4, there is no division between objective and subjective concerns. This is necessary to engage in any meaningful metaphysical engineering project. But contemporary philosophers are realist scholars whose main goal is self-advancement. Therefore, their focus is too limited, which makes it impossible to have a large enough scope to see the whole metaphysical pyramid. As a result, they are unable to see the connection between theory and engineering, which makes it impossible to derive any engineering

¹⁶ Interestingly, Japanese Bushido also shares a similar concern in principle. Those who are to attain lethal martial arts skills are also to study the tea ceremony and write poems. They are to make sure that those who have the skill do not abuse it to harm others.

effects from theory. Thus, their theoretical field has become isolated. To justify their position, there seems to be a universal argument they rely on that philosophy does not have to make any practical contribution because philosophy means love of knowledge (philo=love, sophia=knowledge). The instructors of the two of the lecture tapes I used for basic philosophy started their lecture by saying that. When I took the class titled Philosophy of Religion, as soon as I walked into the classroom, I saw on the blackboard, an un-erased writing from the previous philosophy class: philo=love, sophia=knowledge. If philosophy really does not have to have any practical contributions, why did Plato write *The Republic*?

On the other end, ordinary people usually are concerned with “practicality.” When they say practicality, they mean convenience in daily life. Transferring the phenomenon to the physical engineering, their concerns would be, in the case of an airplane, for example, comfortable seats, enough leg room, the number of bathrooms, and so on. They have no ability to comprehend abstract principles of aerodynamics that make it possible for the airplane to fly. So, when they are shown these mathematical equations, they will dismiss them as “not practical.” Thus, the connection between the deep and surface levels is lost.

In this way, Plato offers invaluable insights in our educational system. On the other hand, Plato’s approach poses two problems. First, he makes intimate connections between aesthetics and morality. In his system, those who can recognize the Good in art can automatically recognize the Good in morality. So, studying fine art, especially reading good poetry can change personality for the good, while being exposed to bad art or poetry will make students who are morally lapsed. However, at a minimum, this claim is unsubstantiated. Personally, I have been seeing episodic evidence against such a claim. Years ago, I saw an interview of a leader of the white supremacist movement on television. In the interview, he was listening to *Missa Solemnis* by Beethoven. I also teach high school students. In the English curriculum of this school, moral teaching is emphasized. Students are asked to read *To Kill a Mocking Bird*, by Harper Lee, in which a white lawyer defends an innocent black man in the South in the 1960s, where racism is rampant. They also study *The Twelve Angry Men* by Reginald Rose, in which a juror stands up to the rest of the complacent jurors who are not interested in justice, but just want to get it over with and go home. Both stories encourage being courageous in difficult situations. They also study *The Crucible*, by Arthur Miller, in which one girl’s attempt to save herself causes hysterical witch-hunting in a pre-modern small American society, and a man saves his soul by refusing to confess, even though it costs him his life. Then, they study *Animal Farm*, by George Orwell, an allegory of the Russian Revolution, in which the revolutionaries initially

sided with the people, but, as soon as they were put in the position of authority, they started abusing the privileges. My observation is that the students intellectually understand what they are supposed to say in response to these works, but it is miles away from getting them to act accordingly, especially because they are surrounded by complacent adults. So, the message that they are getting from the previous generation is: “You guys should do this, even though we don’t.” Regrettably, this teaches them hypocrisy.

To be fair to Plato, his program isolates his students from society, so they are not exposed to real-life complacency. Also, he complements the intellectual studies by having them to build strength by two years of physical training. This might alleviate the tendency to some extent; however, I am not sure if it cures all the ills. First, physical exercise program might help. However, in our contemporary world, too much emphasis is placed on winning and little on developing strong mind. In the right setting, for example, team sports can offer students an early moral dilemma to confront. Everyone wants to be a starter, but only the best can make the team. If you don’t make it, can you still support the team? On the other hand, if you become a starter, can you appreciate the effort made for the team by those who didn’t, instead of developing a “star-athlete” mentality? If physical exercise is to be used as a tool to cultivate strong character, its nature must be reevaluated. Second, in a vacuum, they may develop their strength; however, they will not have opportunities to experience people’s weaknesses. Plato himself uses the concept in the Myth of the Metal. Some people are gold, others are silver or the rest are copper. The first will become the rulers, the second, the soldiers and the third the ruled. If a ruler is to rule effectively, s/he must know the quality of each metal so that s/he can employ adequate materials to adequate place. Being isolated, students cannot develop such an eye. This would be an equivalent of an engineer, who doesn’t know what level of stress each material can endure. So, at the engineering stage, he might make a crucial mistake of using a weak metal in the critical part of the airplane that cannot sustain the stress it receives during flight. It will fail almost instantly.

The limit may be expressed in *The Republic* itself. There, Plato must sneak in another myth for his plan to work. It is the Myth of Er, which tells that those who lived a just life will be rewarded after death, while those who lived an unjust life will be punished. It also tells that whatever happens in your life is the result of the choices you had made before you came into being.¹⁷ Plato tries to deal with the issue mostly within reason. But there is a limit to that. So, he has to put in an ad-hoc

¹⁷ Plato, pp.393–395.

myth to compensate for it. In Western civilization, it is Christianity that took it up and developed the issue in full force. The term in intelligence may describe how strong character must be. However, ultimately, developing strong character is an affair of emotion. And just as one cannot become adept in sports by reading about it, one cannot become morally strong by just reading stories. One must actually experience various moral dilemmas and conquer them one by one to gain moral strength. Religion tries to fill this gap.

The second problem is his sequential learning plan. As mentioned, he presents three educational steps. The first is character development. The second is cultivation of ability to think abstractly, and the final stage is practical application. Personally, sequential learning has not worked for me, even though I do not have comprehensive and objective evidence against it. It failed in my music studies. I started to take piano lessons when I was three or four years old and spent a good two decades practicing following notes and developing techniques. I was always thinking that once I perfected the technique, I would focus on cultivating expressiveness or musicality. Well, my first problem was that at my level, I never perfected the technique, so I never got to the stage where I could explore musicality. The second problem was that when I finally realized and tried to focus on musicality, I started to take music theory lessons. And then I realized that the pieces I was working on, such as Beethoven's piano sonatas, were theoretically so complex that I could barely intellectually understand, even if they were explained to me. And I had no means to convert such complex intellectual concepts into emotional expressiveness. Just as you cannot start practicing piano at the age 40 and expect immediately to play these pieces, you cannot start focusing on musical expressiveness suddenly at the age 40 and expect to understand its musicality. When I worked on music composition, I started with very simple exercises, such as figured bass in four parts with a length of a few measures. Initially, I had no idea what made them more musical. So, I wrote out many mathematically possible combinations and asked my teacher to tell me which one was more musical and why. Over time, I gradually became able to pick my favorite among the mathematically possible combinations. Had I continued my musical lesson, I would have asked my teacher not to move to the next level of complexity until I fully mastered the musicality and fully explored all musical expressiveness possible at each level. Another exercise I would have wanted to do is to pick a technically and theoretically manageable piece. First, just listen to the professional performance and write down whatever came to my mind; then analyze the score, and finally listen to several professional performances to see how each professional performer interpreted the technical score and write down my own performance plan. I

should have done this, instead of just technically following the notes when I practiced the piano as a young girl. In other words, while mastering the craftsmanship, one must simultaneously learn how and when to use it, which I regard as art. Craftsmanship is a means to an end, which is art. That way, I would have achieved the whole at each level, and progressed with the complexity.

This should apply to engineers, too. If a student focused on studying equations in physics for the first few years, then on solving end-of-the-chapter problem sets for the next few years, and then suddenly were asked to develop a jumbo jet, could s/he handle such a job, even though the previous study covered all the equations and problems needed to design an airplane? I believe that s/he would have to start designing some simple gadget such as a lawn mower while s/he were studying equations and solving practice questions.

In summary, Plato's educational plan offers important implication for the training of the metaphysical engineer. It shows the vital flaw of the contemporary educational system, which is causing the fragmentation of the thought system by focusing on specialization, rather than generalization. However, his plan also shows the problems by making unwarranted connection between aesthetics and morality, and presenting a sequential learning plan. Based on these observations, the remaining sections of this chapter try to formulate a preliminary training plan for metaphysical engineers.

II. TRAINING FOR THE METAPHYSICAL ENGINEER

In order to create an educational plan, it is necessary to understand what metaphysical engineers must accomplish. To do so, it is helpful to look at Illustration 4-7. Metaphysical engineers are all universal idealists. They all start as naïve idealists. The illustration shows that they must do two things. One is to swim through the realists' terrain to get to the universal idealists' terrain. The second is to master the world of universal idealists. The former is roughly equivalent to Plato's character development, which is his first educational stage, and the latter, to train the mind to think, which is his second educational stage. So, the former belongs to the emotional realm and the latter to the intellectual. However, this is not a complete picture. Due to my own failure to fully synthesize emotion and intelligence, I see two separate images. In my experience, emotion and intelligence are intertwined in a very complex manner. If this complex interaction is successfully synthesized, we should not have separate curriculum. I hope someday someone will successfully incorporate these two realms so that more comprehensive educational system can be devised. At this point, I will have no other means but to

present two separate educational areas, intellectual training and emotional training. These will be discussed separately; however, they should take place as simultaneously as possible in order to avoid the problem in Plato's sequential educational plan.

Logistically, the biggest problem is the lack of trainers. It is rather obvious but Plato indicates that in order to teach the whole picture, teachers must understand it first:

‘Then I must surely be right in saying that we shall not be properly educated ourselves, not will the guardians whom we are training, until we can recognize the qualities of discipline, courage, generosity, greatness of mind, and others akin to them, as well as their opposites, in all their many manifestations. We must be able to perceive both the qualities themselves and representations of them wherever they occur, and must not despise instances great or small, but reckon that the same process of learning gives us skill to recognize both.’¹⁸

However, as mentioned earlier in detail, the metaphysical world is so fragmented in the contemporary era that there are no teachers who can teach the whole system. This means that before we can come up with the comprehensive educational system, the first generation of the metaphysical engineers must train themselves.

In retrospect, in my case, the biggest asset I had in training myself was to have been born outside Western civilization. For the first twenty years of my life, I lived in an environment with a predominantly oriental thought system, even though there were enough cultural exchanges to be aware of Western civilization. As an adult, I moved to the United States, and ever since, I have been looking into Western civilization as an outsider. And when you have accomplished something that the native would consider an achievement, you are left with an enormous advantage—both internal knowledge and an outsider's perspective. I can imagine how difficult it would be for someone born into Western civilization to have to grow out of such a huge territory.

Unfortunately, however, this is not a controllable element. By the time you decide that you want to be a metaphysical engineer, it is likely that you have lost that opportunity already. However, I believe that this can be done in a smaller scale. For this reason, at this moment, I will skip

¹⁸ Ibid., p.143.

the primary education, focusing on 10–20 year old students,¹⁹ and then focus on how to train metaphysical engineers starting at the college level. I hope that in the future, someone will be able to formulate a more systematic training regimen.

1. INTELLECTUAL TRAINING

First, metaphysical engineers must be aware of horizontal and vertical components. They might eventually decide to focus on a particular layer and a particular division such as chemical engineer or theoretical physicist. However, they must always know that theirs is just one segment of the whole. They must know that because, when facing a particular problem, they must be able to identify at what level that problem must be dealt with. Is it a theoretical problem, engineering problem or mechanical problem? Can there be a chemical solution or electrical solution? If you are an electrical engineer, but the problem turns out to be mechanical, you will contact a good mechanical engineer. To do so, the main focus of the training must be to cultivate the sense of whole.

Second, the solution must be also practical. Many times, what works on paper does not work in real situation. Physical engineering students are very familiar with this. As soon as they walk into the lab and try to reproduce the phenomenon that they learned in classroom, they know that it is not that simple. When I was taking chemistry, I could never come up with the supposed result. At the end, there was supposed to be some white crystal at the bottom of the test tube. No, there wasn't. Where did I go wrong? It was horrible. I hated it from the bottom of my heart. But to become a competent physical engineer, you must be able to figure out what is supposed to happen and then how to make it happen, and find clear steps to do so.

As mentioned earlier, the biggest problem at the current university educational system is that liberal arts are offered separately with no training to make connection between each field, which prevents students from acquiring the whole picture. Another problem is that currently all the metaphysical teaching is confined in the classroom setting. As physical engineers are required to do during their training, it is necessary for metaphysical engineering students to have experience outside classrooms. Here, I propose a three-tiered training system consisting of two-year

¹⁹ It is naturally better if a comprehensive educational system, including the elementary level, can be constructed along with the model proposed here. There have been several attempts, which can be seen in such works as John Dewey, *The School and Society* (Cosimo Classics, 2008). I hope that someday, such a comprehensive system will be established. Plato believes that the most important educational aspect for these ages is character development. I agree and believe that students at these ages should go through a series of moral dilemmas in real life to develop a strong character.

classroom liberal arts introduction class, practicing art and real life internship for leadership.

(1) Liberal Arts Introduction Class: I propose to offer a two-year comprehensive liberal arts course, in which each field is introduced in such a way that connections can be established among the fields. I add a sample syllabus below.

While I was training for my Ph.D., I noticed that there people tended to make up their own mind as to what school they subscribed to fairly early in their study and started to attack other schools' defects. This is a very dangerous trend and must be avoided at all cost to train good metaphysical engineers. Scholars trained in the current educational system often engage themselves in polemic debate. For example, when I spoke to a Japanese historian about my dissertation in political science, in which I argued that democratization conducted under certain international conditions might cause overexpansionism and deduced lessons for China's and Russia's upcoming democratization, she screamed: "The cause of expansionism before the Russo-Japanese War was totally different from that before World War I!" We could not even continue the conversation. Using the engineering language, what I witnessed there was a mechanic barking at an engineer: "It is ridiculous! Ford's engines are completely different from Honda's!" Or an engineer barking at a mechanic: "As long as you know the principal of thermodynamics, who cares about the engine parts! It should run!" It would be necessary for each to understand where the other is coming from in order to cooperate.

Even at the same level, your vantage point may give you a very different picture than others. This is not unlike the debate over "what an elephant should look like." If one is looking at it from the front and the other from the back, the elephant looks quite different. Once you notice that, then you also realize that in order to have a complete image, you must look at it from the front, the back, the top, the bottom, and two sides. Then, in your mind, you must put the entire image together. This is what the proposed course tries to achieve.

For this goal, even though teaching liberal arts in one course helps, continuous and deliberate attempts must still be made not to allow clusters of independent fields. Ideally, all the separate fields will eventually merge into one perspective for the metaphysical engineer. I had to do it on my own. I first had an identity as a political scientist. Then, I developed an identity as a musician. Later, I developed an identity as a physical engineer. Eventually, all these merged to become an identity as a metaphysical engineer. To develop these identities and merge them eventually, you must invest heavily. To come to the class regularly week after week takes a lot

of energy. When I go to the first class in an unfamiliar field, I always feel: “Oh, no! I don’t belong here.” For example, when I took the chemistry class, in the room with test tubes and Bunsen burners, I felt so out of place. But strangely enough, by the time the term was over, it became part of me and I could picture myself there. After going through this, it becomes very difficult to dismiss any of these fields as useless, saying for example, “Chemistry has nothing to do with world peace.” The minute you say that, three months of your investment will go down the drain. What you spent so much energy on, you want to be useful. This will be your extra incentive to incorporate everything you know into one useful framework so no part of you must be deemed useless. This, I call the “internalization” of the perspectives. Once you have internalized the perspective, you identify yourself with that perspective. Having internalized multiple perspectives is helpful. As in the physical world, you cannot see the whole picture from one vantage point in the metaphysical world. You must move around and see things from different vantage points and then mentally put together the whole picture. So, you can see your project in political science as a musician and see how it looks. Eventually, these separately internalized perspectives will merge into one comprehensive perspective and become one as a metaphysical engineer.

While taking the introductory class, there are several things students must do to cultivate the sense of whole. First, they must acquire the ability to examine each theory neutrally, rather than adhering to one and attacking others. In my case, I saw each theory as a broken radio. So, you take apart each radio, pick up the working parts, and put them together to make one working radio. So, from two or three broken radios, you can make a working one. Of course, it is easy to say. But how do you recognize which parts are working and which aren’t? One exercise you can use is to set up bank accounts of questions and theories and make collections. So, I had always a series of questions. And every time I encountered a new theory/theorem, I examined each question to see if any of them could be answered. Say, for example, you have a question: Why do the levels of institutionalization for cooperation differ between Europe and Asia? There will be a historical argument that would claim that Europe has had centuries of experience dealing with each other multilaterally, while Asia has not. There will also be a strategic argument that claims that Asia has China and remaining communist states, which complicates the situation and makes it difficult to establish institutionalized form of cooperation. Now, do you have to choose one as correct and attack the other, or can they be complementary? You can say that Europe is ahead of Asia in terms of historical development, so it can offer insights as to how the institutionalization of cooperation in Asia might proceed. On the other

hand, the strategic argument offers a snap shot of the current situation. We cannot simply sit and wait for a new institutionalized system to be set up. Problems are coming up every day and we need to deal with them. Using the engineering terms, in order to prevent air pollution, it is necessary to develop a new kind of automobile such as electrical cars. But meanwhile, there are many gasoline cars that need to be maintained until a new kind of car can be produced. That way, you can see they are complementary and both are useful tools for different purposes.

Another important thing about recognizing working parts is not to abandon whatever theory you are working on, until there is absolutely no other way to see the problem. So, before resorting to any other approach, first see how much this particular theory can explain. In other words, you would have to grow out of it. This way, you will know fully what a particular theory is capable of and what it cannot do. This is a particularly difficult practice in the current state of academia because there is an enormous pressure to present something novel. Students have a tendency to look immediately for defects of the established theories. They often end up with presenting minor adjustments, which will not survive many years beyond their dissertations. Unfortunately, these adjustments are getting even smaller in recent decades. In the long run, it is far more productive to work with the established theories. Use them as much as possible and do not start making amends until there is absolutely nothing else that you can do with them and find what problems are left unanswered. You will know, then, how much these theories can do. They have survived decades and centuries for a reason. If you fight them, you have a slim chance of winning. In my time, innumerable amendments were proposed to the classical balance of power theory, such as absolute versus relative gains, threats or intentions as opposed to power as the balancing factors. I wonder how many have survived. I certainly found none of them useful at his level of inquiry.

Syllabus

INTRODUCTION TO METAPHYSICAL ENGINEERING

The biggest constant in human history is wars. History has been plagued with wars. But why is it the case? Why can't we eliminate wars eternally from our history? It is time for us to try. Metaphysical engineering is a tool for that. This is a four-semester long introduction course. Metaphysical engineering incorporates the fields of philosophy, religion, science, art and history. Conventionally, they are taught separately so students don't have a chance to put them together. This course is to offer some remedy to that problem. At the end of the course, students will know why literature majors must take physics, why physics students must write poetry and why philosophy plays crucially important roles for the well-being of our own society.

VICO'S HISTORICAL CYCLE

Giambattista Vico was an Italian philosopher in the 17-18th centuries. He examined the ancient civilizations and observed that there had been a common underlining cycle. It starts with barbarism; then the religious rulers will rise, followed by secular kingship. Finally, the people will take over the governing authorities. The first term of studies will take it from where Vico left off and observe the historical cycles of Europe, China, India, Islam and Japan. Students are encouraged to think about whether these cycles are real or imagined, if the cycle can be applied to other civilizations, and, if there are exceptions, why and for what reasons?

UNIVERSAL IDEALISM

Universal idealism is an attempt to explain Vico's cycle. We will observe that behind these cycles lay undulating rises and falls of idealism and realism. First, we will examine philosophical, religious and art histories of Europe to observe their correlations to the cycle. Second, we will examine idealism of the other civilizations, which was mostly developed in the field of religion. Finally, the tenet of universal idealism will be presented. Students are encouraged to examine if such a correlation exists in other civilizations.

PHYSICAL ENGINEERING

In the third term, we will conduct a field survey of physical engineering as a starting model for the metaphysical engineering. First, we will observe the tight integration among the four vertical layers—theory, engineering, mechanics and operations; and among such horizontal engineering fields as mechanical engineering, electrical engineering and chemical engineering. Students will acquire the perspectives of the engineer, whose concerns will be how to put theories to practical uses, and how to balance opposing forces. Third, we will observe other scientific fields, analyzing them from micro to grand levels. This process will show how different levels have different uses so we can learn how to choose the right level for the right purpose.

METAPHYSICAL ENGINEERING

The last term will focus on metaphysical engineering. It is not an established field yet. So, we will study historical figures in vertical and horizontal layers. We should immediately notice that these layers are not nearly as integrated as they are in physical engineering, and there are no common languages for communication. Students are encouraged to think what contribution they can make, given their expertise, to establish a solid field of metaphysical engineering.

INTRODUCTION TO METAPHYSICAL ENGINEERING 1

VICO'S HISTORICAL CYCLE

1. Giambattista Vico and his historical cycle
2. Application of Vico's cycle to world history
 - A. Europe
 - i) Democratic decay of ancient Greece
 - ii) Rise of Christianity
 - iii) Rise of State
 - iv) Democratization and democratic decay
 - B. China
 - i) The first cycle
 - ii) Rise of the Empire
 - iii) Emperor and Bureaucracy
 - iv) Communist China
 - v) Democratization
 - C. India
 - i) The first cycle
 - ii) Hindu and Buddhism
 - iii) Kingdoms
 - iv) Islam
 - v) Western Imperialism
 - D. Islam
 - i) Rise of Islam
 - ii) Sultan and Caliph
 - iii) Islamic Empires
 - iv) Western Imperialism
 - E. Japan
 - i) Shinto and emperor
 - ii) Rise of warrior government
 - iii) Edo Bakufu
 - iv) Meiji Restoration and democratization
3. Triple challenges of the contemporary world

INTRODUCTION TO METAPHYSICAL ENGINEERING 2

UNIVERSAL IDEALISM

1. Evolutionary history of humanity
 - i) Realism
 - ii) Idealism
2. Brief European history of metaphysics
 - i) Intellectual approach: philosophy
 - Idealism
 - Realism/Materialism
 - Fragmentation of thought system
 - ii) Emotional approach: Christianity
3. Independence and fragmentation of art in Europe
 - i) Classical period
 - ii) Medieval period
 - iii) Renaissance period
 - iv) Baroque period
 - v) Neo-Classical period
 - vi) Romanticism
4. Islam
 - i) Intellectual approach: Orthodox Islam
 - ii) Emotional approach: Sufi
5. Hindu
 - i) Intellectual approach: Jnana Yoga
 - ii) Emotional approach: Bhakti yoga
6. Buddhism
 - i) Intellectual approach: Theravada
 - ii) Emotional approach: Mahayana
7. Confucianism
 - i) Confucianism as philosophy
 - ii) Neo-Confucianism: Incorporation of religious elements
 - Intellectual approach: Song Neo-Confucianism
 - Emotional approach: Ming Neo-Confucianism
8. Universal Idealism
 - i) Assumptions
 - ii) Correlation with Vico's cycle

INTRODUCTION TO METAPHYSICAL ENGINEERING 3**PHYSICAL ENGINEERING**

1. Vertical integration: Physics
 - i) Theory: Thermodynamics
 - ii) Engineering: Automobile engine
 - iii) Mechanics: Automobile maintenance
 - iv) Operation: Driving a car

2. Horizontal integration
 - i) Mechanical Engineering
 - ii) Electrical Engineering
 - iii) Chemistry

3. Designing airplane
 - i) Aerodynamics
 - ii) Wing/fuselage design

4. Other Sciences—Levels of Analysis
 - i) Micro level
 - Microbiology
 - Organic Chemistry
 - ii) Human level
 - Physiology
 - iii) Macro level
 - Geology
 - Meteorology
 - iv) Grand level
 - Astronomy
 - Cosmology

5. Quantum Physics: End of division of science?

INTRODUCTION TO METAPHYSICAL ENGINEERING 4

METAPHYSICAL ENGINEERING

1. Vertical Layers

i) Metaphysical Theory

- Plato
- Aristotle
- Kant
- Hegel
- Metaphysical circuit?

ii). Metaphysical Engineering

- Plato
- Aristotle
- Machiavelli
- Hobbes

iii) Metaphysical Mechanics

- Plato
- Aristotle
- Karl Marx
- Hans Morgenthau
- Kenneth Waltz

iv) Metaphysical Operation

2. Horizontal Layers: Intelligence and Emotion

- i) Shakespeare
- ii) J. S. Bach
- iii) Michelangelo
- iv) Poetry: Calculus of the metaphysical engineering?

3. Differences between Physical and Metaphysical Engineering

- i) Scale
- ii) Objectivity/Subjectivity separation

4. Physical-Metaphysical chain of causality

5. Conclusion: Metaphysical engineering jobs ahead

Cultivating the sense of depth is an important part of understanding the whole. The key to this is to find the common thread. The further apart the two fields are for which you can find the common thread, the deeper you know it comes from. If you can find something common between painting and music, it is deeper than surface level. Then, if you can find something in common in fields farther apart, such as between art and science, you are at a deeper level. And the farther apart the fields are for you to find the common thread, the more abstract you must become. To acquire a true sense of depth, therefore, you cannot just become a specialist of one area, but must also develop breadth of knowledge. I found that a good way to acquire this is to go through higher education and attain in one area the deepest knowledge that a human can obtain at this point. Then, after that, you revisit other fields. This time, you have better sense of how far you should go. In this way, to continue studying outside your field throughout your life is of utmost importance. I started in International Relations, which is a sub-division of Political Science, and from there, expanded to Comparative Politics, which is another sub-division of Political Science and to History. After having obtained a Ph.D., I revisited the fields in liberal arts, from physics, chemistry and engineering, to art history, to literature and poetry, and to philosophy. Also, to get a feel of mechanics layer, I attended an auto-mechanic class for about four months.

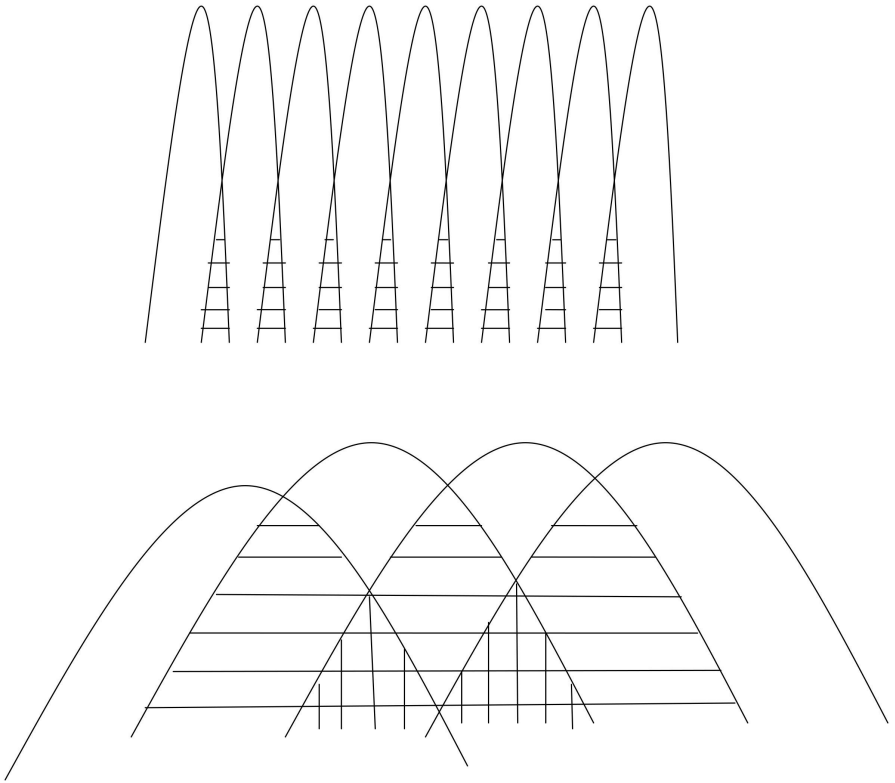
After two years of my specialized study, circumstances pushed me to study music; then, I spent about 25–30% of my attention on music. In retrospect, this helped me to avoid a completely sequential study process. While taking lessons in music composition, I had a similar experience to the one I had in political science as a Ph. D. student—i.e., growing out of the existing rules [theories]. I learned that rules are there to help you. Rules were frustrating. When I was working on a four-part voice-leading exercise, these rules prevented me from doing what I wanted to do. So, at one time, I intentionally broke the rules so that my concept could be implemented. The instructor told me that it was musically inferior. Then, I learned that rules were there to give you minimum musicality. If you follow the rules, you can at least eliminate the works with the least musicality off hand. So you can achieve minimum musicality just by following the rules if you don't have the ability of, say, a Mozart. It is so easy to break the rule, but it is so difficult to break the rule AND improve musicality. The way to do it is first to exhaust all the possibilities that you can develop within the regulations, as you should do in political science projects. Now I know that this runs in common between political science and music, which means that it comes from the deeper level of knowledge.

But how much do we have to know for each field? To answer this question, it is necessary to discuss, first, three different levels of knowledge. As an example for this, I will use how I learned about Mozart's genius. The first level is basically hearsay. As I mentioned in Chapter 6, when I bought one of his CDs, I read some Mozart scholar explain that Mozart was a genius because he could first lay out all the possibilities for the next notes and pick the absolute best. Now, with this, I have knowledge that I could show off. This level of knowledge would be useful for the purpose of dissemination, functioning somewhat like the medium through which ideas could travel. That is, people can relay the idea until it reaches to people with deeper knowledge. But it does not let you do actual work. In order to move further down the depth of knowledge, you must start studying musical theory. After a few years, you have basic knowledge and at that point, if someone shows you, through score analyses, what the possibilities are and what expected resolutions are at each situation, and then, shows you what Mozart's choices are and how they are the absolute best, you can follow. I call this level passive knowledge. That is, you can understand if it is explained to you. But, still you cannot do much with it. The deepest knowledge is the true knowledge. After years of practice composing music, you will finally be able to follow, on your own, what Mozart's intentions are. When you reach that point, you are at the mercy of heaven. You can reach as far as the talent you were born with. So, you may find that you are not the next Mozart. Still, at this point, you are a competent composer, and using this level of knowledge, you can actually create your own.

I have come to believe that it is this passive knowledge that plays the crucial role for the integrity of the metaphysical pyramid. As mentioned, a major difference between the physical and metaphysical pyramid is the size. In metaphysical engineering, both theoretical physicists and opera singers have important roles to play. But they do not share the same language as the physical engineers—i.e., mathematical equations, even though I suggested that poetry might eventually become the common language in metaphysical engineering. So, in order for them to communicate, each having the passive knowledge of the other is crucial. I find that the first level of knowledge given at the conventional liberal arts education cannot hold up as glue. I believe that theoretical physicists must write poems and music. Of course, the product will not have much competence but being familiar with the processes and substance is crucial for communication. So, the extent of the passive knowledge that metaphysical engineers have provides the strength of the cohesion, as can be seen in Illustration 7-1C.

Illustration 7-1

C.



Finally, a larger size of metaphysical engineering also puts demands on the time span it takes to develop. There is a good exercise to develop the sense of scale in this regard. During the three-week recess, I tried to read *The Cambridge Medieval History*. It is a massive work that consists of eight volumes. In order to finish, I had to skim very quickly. And I noticed that someone—king or pope—dies almost every hour. And this must be a close experience to be engaged in a metaphysical engineering project.

In this way, this introduction class will prepare for students to acquire the sense of the whole before they move onto their chosen specialization. But it is important for metaphysical engineers to keep up the exercise throughout their career.

(2) Practicing art: As discussed in Chapter 5, art is the only field with the complete shape with the emotional element. Therefore, it is imperative that students practice at least one form of art. The pyramid of physical engineering will give them a good sense of the whole, but it does not contain any metaphysical element. Taking art history and art appreciation class will be helpful, but students need to experience directly the interacting issues of emotion and intelligence.

In the case of music, metaphysical theory consists of the underlining philosophy. In Bach's case, his religious works are derived from Protestant Christian theology, and even many of his secular works are also derived from deep philosophy as can be seen in the Goldberg Variations. At the metaphysical engineering level is music theory. So, you must study music theory to understand how deeper philosophical issues are translated into musical materials. At the metaphysical mechanic level, composers create musical pieces, which are performed at the metaphysical operational level. So, you want to study some composition in order to understand how the piece is shaped in preparation for your performance. You do not have to be a top composer/performer, obviously. But it is necessary to go through this whole process to understand what it is like to deal with abstract materials such as emotion. Having passive knowledge, mentioned above, in one form of art is a prerequisite for metaphysical engineers. Here, I once wondered if the same classification could apply to other fields of art. Unlike performing arts, painting and sculpture may not have the operational layer. But, I believe that copying master piece can work in lieu of performing composer's works. It may not be recognized as respectable in the field of art, but for the training purpose for metaphysical engineers, I think it can play the same role.

Studying art solely scholastically will not bring any useful insights for the metaphysical engineering. You must practice some art in order to discuss it. I have found some scholarly works that use exclusively intellectual approach to the problems of emotion. And I have found that the knowledge coming from these approaches is not suited for metaphysical engineering. Take, for example, what Leonard B. Meyer wrote in *Emotion and Meaning in Music*. The following is a random excerpt to show his general approach:

The mind of the listener which produces such organization is not a kind of neutral, disinterested tabula rasa. The stimulus field is learned habits of discrimination and perception of the listener. Such learning, by directing the listener's attention to certain parts of the total field, conditions what is looked for and expected and hence

modifies what is perceived; “where the center of our interest lies there, *ceteris paribus*, a figure is likely to arise.” Learning also tends to influence the quality of the figures which arise, because “attention, adding energy to the particular field part, will increase its articulation, if it is not articulated as well as it might be.” In other words, the practiced listener has learned to direct his attention in particular ways, depending upon the stylistic circumstances; hence he not only tends to improve articulation in general but tends to favor certain types of organizations over others in a given set of stylistic circumstances. Thus, in perceiving music which he supposes to be polyphonic, the practiced listener will tend to emphasize the equality of more or less equally well-articulated figures; while in attending to music which is presumed to be homophonic, the listener will favor one strand of the texture over the others, and these latter aspects of the texture will appear more uniform than might otherwise be the case.²⁰

Using all the impressive technical knowledge he has displayed here, can he compose deeply emotionally moving music? I must say I have doubts. I have doubts because this kind of approach gives me the impression as if you could understand emotion, when reading a novel, by analyzing grammar. Well, in English, most adjectives are placed before noun. Does that tell me anything about the emotional effects of what I am reading? I think that grammar is important, but only as a necessary condition. That is, when you read, first you must understand what is written there. So, you need to learn grammar and you need to learn words. But an intellectual approach cannot go beyond this level. Having been trained predominantly in the intellectual realm, I also had a danger to fall into this trap. For example, when I was studying music composition, I was unsure how I could use the learned compositional technique for an emotional effect. And I somehow always felt, if I were to pursue my study on this, my teacher would give me a comment like, “You know, there is always a lot going on in your work, but somehow I don’t feel moved.” In other words, my work would be intellectually driven.

In comparison, the following is an excerpt from Robert Schumann’s critique on Berlioz’ *Sinfonie Fantastique*. Schumann is a

²⁰ Leonard B. Meyer, *Emotion and Meaning in Music*, Chicago: University of Chicago Press, 1961, pp. 187–188.

composer who could actually write fine music. And what I see distinctively in his writing is the prominent presence of emotion.

Now that I have gone through Berlioz' symphony countless times, astonished at first, then horrified and, finally with wonder and admiration, I shall try to sketch it for you. I will show the composer as I have come to know him, with his virtues and his shortcomings, in his vulgarity and his intellectual sovereignty, as a spiteful instrument of destruction and as a lover. For I know that what he has given us here can no more be called a work of art than nature without the ennobling hand of man, or passion without the discipline of a higher moral force....

We have here a young man of French blood, so musical, bursting with strength, already struggling with the future and, perhaps, with other formidable passions, suddenly pinioned for the first time in his life by the god of love—not, mind you, by that modest sensation which tends to confide in the moon, but rather by the dark flame that one sees pouring at night from Mount Aetna.... There he sees her! I picture this feminine creature as I picture the main theme of the whole symphony,—pale, slender as a lily, veiled, still, almost cold;—but the word grows sleepy and its tones burn into the vitals,—Read in the symphony itself how he plunges towards her, seeking to entwine her in all the tentacles of his soul, and how he recoils breathlessly before the chill of this Briton, and again how he would humbly bear her train and kiss its hem, only to stand proudly upright and demand her love because he—loves her so extravagantly. Read it through. It is all written in drops of blood in the first movement....²¹

As for the harmonic quality of this symphony, one notes the eighteen-year-old, rather clumsy composer who glances neither to right nor to left but heads straight for his objective. If Berlioz, for example, wishes to go from G to D flat, he does so, without any modulatory formalities.... I would even go so far as to say that his harmonies, despite a diversity of combinations conjured from this material, are characterized by a certain simplicity, certainly by a pithiness and terseness encountered—in a more highly

²¹ Robert Schumann, trans. and ed. by Henry Pleasants, *Schumann on Music: A Selection from the Writings*, New York: Dover Publications, 1965, pp. 78–79.

developed form, to be sure—in Beethoven. On the other hand, one encounters vulgar and commonplace harmonies—even faulty ones, at least by the old sound—and some that sound badly, tortured, disfigured. May the day never dawn when such passages will be sanctioned as beautiful!

And yet there is a curious thing about Berlioz. Try to change something, or to correct it, as any practiced harmonist can easily do, and see how dull it seems by comparison. The first utterance of a strong youthful spirit has a certain individual, indestructible vitality; it may be rough, but is the more effective the less one tries, through criticism, to bring it in conformity with what are accepted as the canons of art. It is simply not susceptible of artistic confinement, short of learning from its own resources to accept discipline and to establish objectives and procedures. What he hates he seizes rudely by the scalp; what he loves he smothers with affection—more or less. Well, indulgence is called for with a tempestuous young fellow whose dimensions are not measurable with a shopkeeper's yardstick. Let's not overlook much that is tender and of original beauty, balancing the rough and the eccentric.²²

It is a long quote but I could not cut it short because I feel that his writing itself, a critique, very artistic and even sometimes poetic. My emotion is drawn to his writing and does not want to let go. Capable of producing emotionally competent results, while also capable of talking about it intelligently, he would be a superb prime candidate for a metaphysical engineer. What this tells me is that in the field of metaphysics, the requirement is that theory must be helpful in producing results. So, I hope that the theorists will emerge through self-reflection by the engineers themselves.

Finally, art can be instrumental in highlighting some of the important issues of metaphysics. For example, from Mozart, I learned the difference between art and craftsmanship. A composer like Mozart can exhibit most challenging techniques from the beginning to the end in one piece. But when I analyze his score, there are simple enough parts that even I can follow. Of course, then suddenly I find myself totally lost in the highly technical part. But why is that, then? That tells me that in addition to superb technique, he also has art to tell him when to use what technique to achieve the highest emotional effect.

²² *Ibid.*, pp 80–81.

I had been struggling to bridge between craftsmanship and art for a long time. I had taken piano lessons as a child and as an adult; I studied music theories with various teachers. I thought that it was necessary to know theory to understand completely the music pieces that I was practicing. So, I learned the theory and conducted score analyses, but then I hit a dead-end asking so-what. I had no idea how I could use the knowledge to enhance my performance. Then, when I was studying Bach's four-part chorale, finally it occurred to me that the result of the score analysis must be interpreted. In other words, after analyzing the score, I have to ask why Bach did what he did. That thinking will get me into the realm of art. For this, looking at the sung text was extremely helpful. Anything Bach did musically must have been done to enhance the emotional effect of the sung text. Suddenly, these numerical analyses had artistic meanings to me. This is a very effective exercise to correct the disjuncture between craftsmanship and art in the current educational system.

I think that the most effective way is to look at the text first and identify what emotions are present. After all, that's where Bach must have started. If you are musician, you could try to set it to music on your own and compare the result to what Bach did. If you are not a musician, you could directly analyze the score, trying to see what he did (As a sample, see Analysis of Bach's BWV 153 in Chapter 5). That way, professionally or non-professionally, you can observe Bach's art and see how he used his craftsmanship to achieve deep emotional effects. This would be an equivalent of working on end-of-chapter problem sets for students of physical sciences.

Without art, any musical piece will become just an opportunity for composers to show off their technique. Works like that will not survive long. I always thought that music is a transportation to take us to emotional places we cannot go without it. Pop music is like your own car, with which you can drive to the beach to have fun. Bach's pieces are like a jumbo jet, with which you can visit far and exotic places such as Northern Europe to see the aurora borealis.

If someone comes just trying to show off some vehicle, I am not impressed. Classical music may be going down this route. When I was taking music theory classes, my teacher lamented that instrumental teachers were against any subjects that cultivated emotional depth and that they were only interested in improving techniques. Students trained that way will become interested only in showing off their technique without being able to take audiences to emotional places. In order to make others feel a certain emotion, you must be feeling it yourself. If you have never

been in an emotional place that the composer intended, how could you take your audience there?

This lesson can also be generalized to apply to subjects other than art. These days, scholars use publications as means to promote themselves. As a result, their works becomes very close to showing off their craftsmanship. They don't seem to know when to use what technique to produce effective solutions to the problems at hand. So, I see overly technical works applied to a simple problem, which is counter-productive. For example, I once came across a scholastic work like this:

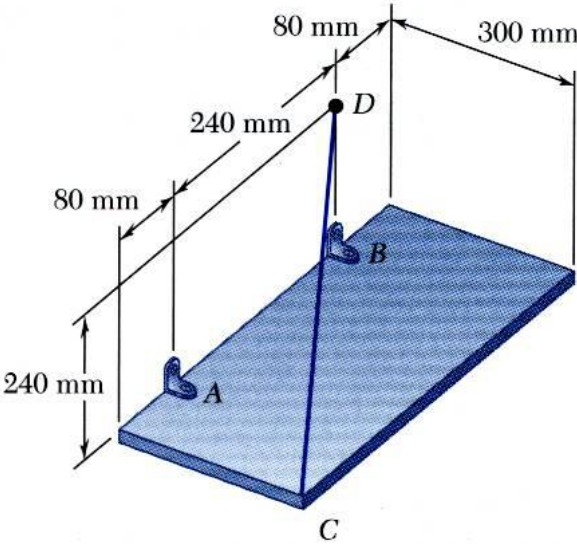
This article lays out a theory of nuclear fetishism by adapting four themes that are characteristic of the pattern of behavior known as fetishism: materiality, historicity, efficacy, and reification. By applying these categories to the fetishism of nuclear weapons, the author shows that nuclear weapons represent a new social form consistent with, yet distinct from, other fetish objects.... Marx identified money as the mature expression of commodity fetishism; the author identifies nuclear weapons as the mature expression of the fetishism of force. As such, nuclear weapons function as the currency of power in the international system.... [It presents] some initial policy implications that can be derived from this reinterpretation of the relationship between nuclear weapons and human behavior and used to defetishize nuclear weapons.

But in the end, all it says is that during peace time, there will be a disarmament trend. This to me is an example of over application of craftsmanship, making things unnecessarily complicated. In this, I hear my imagined music teacher's comment, mentioned above: "You know, there is always a lot going on in your work, but somehow I don't feel moved." This would be a better work if it lost all the unnecessary jargon and was kept within its adequate scope: "During peace time, there will be a disarmament trend, but the process will not be smooth due to such problems as vested interests. This article identifies these obstacles during President Obama's nuclear disarmament attempt and how they have been overcome."

(3) Real Life Internship: If you take physics or chemistry, you first learn the basic equations or principles. Then, immediately after, there is homework. You must do the problem sets at the end of the chapter.

That’s when you get totally stunned (at least I was). For example, I only have the equation $M_o = r \times F$.

Then I face a problem like, “A rectangular plate is supported by brackets at A and B and by a wire CD. Knowing that the tension in the wire is 200N, determine the moment about A of the force exerted by the wire on point C.”



So, at one moment, I was copying this simple equation, the next minute, I was facing this utterly confusing diagram and the instructor says they are somehow related. And I learned that behind $M_o = r \times F$, the following calculations exist to lead to the answer.²³

²³ The solution follows the one shown in Ferdinand P. Beer, et al. *Vector Mechanics for Engineers: Statics and Dynamics [in SI Units]*, New Delhi: Tata McGraw-Hill Publishing Company Limited, 2005, p. 83.

SOLUTION

Using the equation

$$\mathbf{M}_A = \mathbf{r}_{C/A} \times \mathbf{F} \quad (1)$$

$\mathbf{r}_{C/A}$ is the vector drawn from A to C ; therefore,

$$\mathbf{r}_{C/A} = \overrightarrow{AC} = (0.3 \text{ m})\mathbf{i} + (0.08 \text{ m})\mathbf{k} \quad (2)$$

\mathbf{F} is the 200-N force directed along CD . Here, $\mathbf{A} = \overrightarrow{CD}/CD$; therefore,

$$\mathbf{F} = F\mathbf{A} = (200\text{N})\overrightarrow{CD}/CD \quad (3)$$

Here, resolving the vector \overrightarrow{CD} into rectangular components to obtain

$$\overrightarrow{CD} = -(0.3 \text{ m})\mathbf{i} + (0.24 \text{ m})\mathbf{j} - (0.32 \text{ m})\mathbf{k} \quad CD = 0.50 \text{ m}$$

Now plugging this into (3) to obtain

$$\begin{aligned} \mathbf{F} &= 200\text{N}/0.50\text{m}[-(0.3\text{m})\mathbf{i} + (0.24\text{m})\mathbf{j} - (0.32\text{m})\mathbf{k}] \\ &= -(120\text{N})\mathbf{i} + (96\text{N})\mathbf{j} - (128\text{N})\mathbf{k} \end{aligned} \quad (4)$$

Now plugging (2) and (4) into (1),

$$\begin{array}{lll} \text{Here, } \mathbf{i} \times \mathbf{i} = \mathbf{0} & \mathbf{j} \times \mathbf{i} = -\mathbf{k} & \mathbf{k} \times \mathbf{i} = \mathbf{j} \\ \mathbf{i} \times \mathbf{j} = \mathbf{k} & \mathbf{j} \times \mathbf{j} = \mathbf{0} & \mathbf{k} \times \mathbf{j} = -\mathbf{i} \\ \mathbf{i} \times \mathbf{k} = -\mathbf{j} & \mathbf{j} \times \mathbf{k} = \mathbf{i} & \mathbf{k} \times \mathbf{k} = \mathbf{0} \end{array}$$

Therefore,

$$\begin{aligned} \mathbf{M}_A &= \mathbf{r}_{C/A} \times \mathbf{F} = (0.3\mathbf{i} + 0.08\mathbf{k}) \times (-120\mathbf{i} + 96\mathbf{j} - 128\mathbf{k}) \\ &= (0.3)(96)\mathbf{k} + (0.3)(-128)(-\mathbf{j}) + (0.08)(-120)\mathbf{j} + (0.08)(96)(-\mathbf{i}) \end{aligned}$$

$$\boxed{\mathbf{M}_A = -(7.68\text{N}\cdot\text{m})\mathbf{i} + (28.8\text{N}\cdot\text{m})\mathbf{j} + (28.8\text{N}\cdot\text{m})\mathbf{k}}$$

You must do problems after problems until you can see the jump between the two. Then, there is laboratory.

After taking science courses, I had a chance to take a class on philosophy of religion. It was a standard class of learning the tenets of Christianity, Judaism, Islam, Hinduism, Buddhism, and Daoism. But after taking physical science courses, this class looked odd. There are no end-of-the-chapter problem sets. There is no lab work. You are to memorize the main ideas of each religion and repeat them in the exam. The instructor was very knowledgeable. But, it was really hearsay knowledge passed from one person to another. He could articulate what the four yoga and eight noble paths were supposed to be but had no passive or true

knowledge. Students there were looking for answers. One was overcoming a drug problem and brought up in the class her problems, but the instructor had no answer. The equivalent of this in the physics class would be that a knowledgeable instructor, who knows all the equations that exist in the field of physics, has no ability to connect these equations to engineering problems. Students would have engineering questions such as how the law of thermodynamics is used in the automobile engine, but the instructor would have no answer. If science classes were conducted this way and all the activities were only to memorize equations, they would be deemed useless. Just as you cannot train physical engineers if the class required only memorizing the equations, you cannot train metaphysical engineers if no application is taught in these classes. In science and engineering classes, studying equations is just a small part of the process. It is followed by extensive training to make the knowledge true by first solving the end-of-the-chapter problem sets, and then completing lab activities.

So, what are lab activities in the field of metaphysics? This probably is the biggest problem we might face in training metaphysical engineers. It must be done in real life. I think that students should have an internship for a few years in any position that requires leadership skills.

In my case, I was a teacher and put in charge of forty to fifty students per class. This was a mass tutoring class, in which students worked on their own assignments and turned in their work for grading. They would come to ask questions should they be stuck on some problems. As I kept working, I began to notice some issues relevant to the macro setting. And I began to take this job as an equivalent of a lab assignment in science courses. The assignment was to establish an idealist community among these students, using the principles described in this project.

To begin with, there are always a small number of students who could not be corrupted no matter what the environment might be around them. They are born idealists. You will not have to do much for them. On the other spectrum, there are also a small number of students who will resort to any means to get what they want. They think that, if they are smart enough to beat the system, it is their privilege to profit from it. If they are caught cheating, they think that they just will have to cheat better next time. They are born realists. There is not much you can do to change that. These people must be kept at bay.

It is the vast majority of students in between who could go either way. These are the ones that you must work on diligently. With your leadership, they can join the idealist community, while with your neglect, they will join the realist community. They are naïve idealists, who are willing to do the right thing if the cost of doing so is low enough.

Therefore, it is very important to establish an incentive structure that induces them to stay with the idealist community. I tried several things:

1) The most important thing is to maintain your legitimacy. Students will not follow your instructions if they do not accept your legitimacy. The most important thing in maintaining your legitimacy is to bind yourself by the highest standard in the community. When you bind others by some regulation, but exclude yourself, no one will follow the regulation. By showing that you bind yourself by the standard higher than anyone of the community, you will gain legitimacy among them.

2) Make students understand the idealist tenet that, by making a little sacrifice, you can gain from the system in return, while, if you try to beat or cheat the system, everyone will lose. Do not adopt any policies that contradict to this tenet. In order to reduce the burden of enforcement, it is important for the students to know clearly what is expected. Most of them will comply, if they know what they are supposed to do and if they find it reasonable.

3) Make them understand the true meaning of freedom. Freedom does not mean that you can do anything you want. Freedom is the right to self-regulation. It is not the license to act as you wish. If you cannot act responsibly, therefore, your freedom will be taken away. It is crucially important for the members of the community to know that.

4) To the best of your ability, make sure that cheating has consequences. If students keep seeing people cheat and get away with it, eventually, they will lose faith in the system and start cheating. And doing the right thing will look stupid in front of those people who are cheating and gaining from it.

5) Do not ask for more than your students are capable of, but do ask for the best they can. If you ask them to deliver beyond what they are capable of, they will eventually succumb to the pressure to cheat. Reward amply those who are doing their best, even though they are not meeting the set standard. Then, they will remain in the idealist community, making the best contribution they can.

6) Make clear that flattering the teacher does not earn them privileges to draw personal gain from the system. On the other hand, if students are loyal to the system, reward them amply. Watch them carefully so that they do not have to resort to showy behavior trying to impress the teacher.

7) There is a misguided loyalty among students. The able ones let the struggling students copy their answers so they can pass. But this, in the end, does not help the struggling students. Also, by eroding the quality of the members of the community, it will hurt all society in the end. I make sure that the students understand this point. To do this, judging students on

the effort they make rather than what they achieve is helpful. They can feel secure as long as they are doing their best, instead of trying desperately to meet some outside standard.

On paper, this seems straightforward and almost unnecessary to write it up. But, like the chemistry lab I first hated, what is supposed to happen does not happen easily in the lab. It is truly difficult to establish an idealist community even with only fifty people or so. As in the chemistry experiment, in which I should find a white substance at the end, I find, instead, a black substance. What happened? Where did I go wrong? Every day, I struggle to produce the result I am supposed to produce. One of the most difficult things is to maintain balance between discipline and compassion. Surrounded by those who are determined to get their own way and who try to see how much they can get away with, I have been gradually worn down. The physical fatigue puts me in a mentally unhealthy state, in which I begin to suspect everyone. I am afraid that one day I might start punishing people without compiling adequate evidence and become a merciless tyrant who regards people guilty until they are proven innocent.

On the other end, I may become too tired and just want to take an easy way out. At one time, my teaching aids had a chatting problem. Many times I explained that my legitimacy would be lost toward my high school students if I allowed them to chat since I forbade the students to chat. This would be an exhibit of a double standard. Finally, I had to yell at them and they started to develop an attitude. I should have given them next a written warning and then dismissed them. But I was worried about losing my aids and having to do all the work myself. So, I schemed and transferred one to another section with some excuse. Dynamics like this can create a toxic environment because, if I were found out, she would never trust me again. The worst strategy is to punish your subordinates clandestinely. I see now why Plato proposes that philosopher kings take turns ruling. You do need to renew yourself to maintain fairness and strength.

While in the classroom, I play the role of a philosopher king. This position also put me in a larger setting, where I play the role of an operator in the metaphysical pyramid. In this setting, I had an opportunity to witness what would happen if a naïve idealist were put in a position of leadership. As opposed to a philosopher king, I would call him a people king. He has good intentions but is intellectually and emotionally weak. He would be willing to serve others' needs only when his needs are all met. Instead of being the absorber of the excess load expected of a king, he would pass the load downward as soon as he met a hardship. I have learned that there are stark contrasts between the two kings and the organizations run by each.

Below, I will first summarize my experiences and then draw a generalization from it.

During my tenure, an initiative to raise the educational standard for the high school diploma was implemented. I indirectly heard that it was initiated by university administrators who complained about the lack of academic competence of their incoming students and wanted them to be more prepared. When such a narrow focus is applied to the entire system at the national leadership level, the negative effects trickle down. I had a chance to witness that.

In the mainstream society, this standard looks better on paper, but it completely lacks reality. While there is no problem to raise the academic standard of the higher education, the fact is that not all high school students are bound to colleges or white collar careers. No matter how hard teachers and students will try, conservatively speaking, the bottom 30% of mainstream students will never be able to meet this standard. The main problem is that high school diplomas are the requirement for entering almost all occupational training programs such as mechanics and security guards. Therefore, once students fail to obtain the diploma, they will not be able to enter these programs and stuck forever at the minimum wage jobs, even though these jobs do not require that educational level. The program will generate so many disfranchised young people. The threat of having such a large potentially explosive anti-social segment inside is severe. At a minimum, some of them would randomly respond to inflammatory messages that international and domestic extremists put on the internet. But if the segment becomes big enough, they may organize themselves.

When such a reckless policy is handed down from the top, the next leadership level, in this case the superintendent of the school district, will bear an obligation to send it back for reconsideration or rectify negative effects. In this case, the school district could have implemented a two-tier diploma system, such as after completing basic requirements, students would be awarded certificates with which they could enter training programs. But no such effort was made.

Moving to its effect on the adult school and its students, with this standard, few students entering the ESL program will be able to obtain the final diploma. I understand that the mission of the adult school is to give immigrant students first enough English skills and then basic skills so they can obtain jobs necessary to support themselves. Many of our students did not even finish grade schools in their own countries. Then, they studied English conversation for a few years and then are required to function at high school level. Once this behind, there is almost no way to catch up; therefore, many first generation immigrants are sacrificing themselves by working hard to send their children to college so they can pursue careers in

the mainstream society. Now, their means to support their family as a prerequisite to be successfully incorporated into American society in two or three generations is severely jeopardized.

When this policy is handed down, therefore, the adult school leadership should have rejected it as it had nothing to do with our main population, declaring that it would continue issuing the diploma to those who met its own standard. If colleges decide not to accept our diploma, it is their prerogative. If accepting the standard is mandatory, the leadership should have created a new trade certificate, earnestly appealing to the state to accept it for entering various training programs, and also reached out to the local business community to accept it in lieu of the diploma for certain entry level positions.

Instead, the leadership opted for a quick fix. They seem to expect that the enrollment by the immigrant population will decrease overtime with this standard, so, in order to survive as a program, they are abandoning our main population and shifting the focus to those who can meet the standard more easily such as high school students and high school incompleters. For example, I heard that they were considering changing the instruction format from classroom to online. But from my experience, many immigrant students are not comfortable with computers, and probably the percentage of students who do not own personal computers is the highest among this student population. So, it is possible that many immigrant students cannot keep up with the classes in this format. Taking this direction in order to survive may help maintaining the enrollment on paper, but, in the long run, it will destroy the *raison d'être* for independent adult education, while, if we stood with our own ground, we could become an invaluable safety valve, absorbing potentially anti-system forces.

Now, if the leadership is harming our students and the program itself, the responsibility to protect them shifts to the school administrators. To protect our students and our long-run integrity, the school administrators should have taken such policies as vehemently protesting the direction taken by the leadership, and conducting a school-wide survey to find out goals and capabilities of our main student population to figure out how we can serve them best.

But instead, the school administrators also opt for a quick fix, which is to manipulate numbers so that it looks as if we were producing results. For example, in order to improve the passing rate artificially, we were ordered to prohibit students from taking the exit exam unless they were sure to pass, even though they wanted to take it. This does not solve the fundamental problem. It is even harmful because we are robbing the students of their rights to making the final decision and of the best learning

opportunities in the real-test taking. Any policy that ignores students' well-being will eventually hurt the program.

Based on these observations from my experiences, I draw a generalization. In setting up an organization, a philosopher king would know his community very well, including the needs and capability of his people. So, he would design his organizations to meet their fundamental needs. Also, in building the organizations, his plan would be achievable well within the realm of reality. Then, he would distribute the load to build and maintain them according to the capability of each member and make sure that his people would have enough resources to take up such a load. Stronger members would be asked to carry heavier loads. Naturally, as the strongest, he would carry the heaviest load. In order to maintain the organization that would benefit all the members of his community, he would not try to foster personal loyalty to himself among the members, but loyalty to the organization by presenting a clear strategic direction and encouraging everyone to contribute to it. He would also set up a flawless feedback system from the bottom of each organization to himself at the top to make constant adjustments to ever changing circumstances and to adopt preventive measures by detecting problems at early stages.

A solid organization built in this manner would rarely experience crises. But should there be any, he would be capable of offering a creative resolution. In so doing, he would understand that he is responsible for the well-being of each single member of his community. He would know what he must be the first to be sacrificed and the last to be saved in crises. By showing that he is making the greatest sacrifice, he would inspire his people to set aside their own interests and focus on the restoration of organizational health.

On the other hand, a people king would not be able to build a solid and sustainable organization. He would have no idea about the needs and capability of his people. When designing his organization, he would be clueless as to what is realistic and what is utterly infeasible. His organizational design would be either irrelevant or even sometimes harmful to the fundamental benefit of the community members. He would then distribute the load unrealistically, while disregarding what is necessary for each member to carry such a load. He would have no strategic direction and his policy would fluctuate as he responded to immediate situations. He would loathe bad news, thus discouraging his people from bringing up concerns and problems. This would paralyze the feedback system, further robbing his capability to maintain the health of his organization. In addition, he would be susceptible to manipulations by opportunists. He would demote those who bring "bad news" to him and promote those who say what he wants to hear, no matter how unrealistic

that may be. Over time, his organization would be filled with inconsistencies and contradictions, which would lead to recurring crises.

Facing such crises, he would not be able to offer any creative solutions and look for a quick fix, rather than fixing a fundamental problem. His quick fix would range from ordering his subordinates to fix it without providing any necessary resources, to simply cutting off any problematic segments, stranding his people in this segment, and to micro-managing on miniscule issues, totally ignoring the fundamental issues at stake. His subordinates, who were held responsible to produce results in this impossible situation, would resort to create the appearance and report back to the king that the job had been done, presenting manipulated data. In so doing, if they deemed necessary, they would resort to harming their fellow members, for example, by excluding some segment of the community from participating in a program which was originally created to serve that very segment, just to make the statistics look more favorable to them. If, however, a problem arising from this practice surfaced, they would be blamed for not reporting the problem sooner. This puts the subordinates in a rock and hard place as “you are damned if you do, and you are damned if you don’t.” The king would then further promote those who take this opportunity for their personal gain by telling him what he wants to hear. The organization now would have lost integrity, and possibly have been taken over by the private interests of opportunists. This would further deepen the crisis.

Once this dynamics began, it would spread downward quickly through the chain of command to the bottom. The engineering problems would be passed unsolved onto the mechanics level, which would be passed unsolved onto the operational level. It would be next to impossible to save the organization. It would be very difficult to turn it around in the middle of the chain, because the top is supposed to be the strongest and as you go down the chain, leaders become weaker intellectually and emotionally. So, if the stronger cannot handle the problem and passes it to the weaker, chances are, the weaker also cannot handle the problem. By the time it gets to the bottom, the problems are too big to be handled. So, people there lose faith in the system and feel left alone to protect themselves. At this point, the legitimacy of the king is gone. The bond of trust between the ruler and the ruled was broken. Everyone has opted to save him/herself. This is a world similar to Israel mentioned in the Old Testament: “In those days there was no king in Israel; everyone did what was right in his own eyes” (Judges 21:25).

Where I work, there was a severe budget crises and I witnessed a down-ward spiral. I felt as though I were witnessing a micro-model of the demise of democracy. Facing the budget crisis, a new superintendent, after

having served for a few months, announced that the entire program that served 300,000 immigrant students would be eliminated. Left alone to defend themselves, teachers and students launched a large scale campaign to save the program. They organized rallies, collected signatures, conducted telephone campaigns and so on. We were united during the campaign, and it was partially successful. The program was saved, but more than half the teachers and personnel were laid off. This created a rift between those who stayed and those who were laid off. This was a fight over a shrinking pie. Whenever any segments of society face their piece shrinking, they resort to protest: Don't take it from us. There was little focus on stopping the shrinking, and none on producing a growing dynamics. So the pie kept shrinking. In consequence, the segment becomes divided into yet smaller segments fighting over smaller pieces. The process appears ready to repeat until the last individual struggles alone in war of all against all.

In this situation, nothing an individual does could possibly change the direction. Then, what should the responsibility of a metaphysical engineer be? In the end, I decided that in such a situation, you must continue performing your duties, even if the system is too deteriorated to produce any results, rendering your efforts meaningless. But at the same time, you are not to take over all the dysfunctional parts in order to preserve the integrity of the whole organization. It is simply impossible for any individual except the leader at the top. In my case, I faced three options: to stay and join the trend, to stay and fight, and to leave. The first was unacceptable. It was difficult to choose between the remaining two options. In the end, I decided that, just as a test pilot can only report problems to mechanics and engineers, I, as an operator, could only report the problems. So, I resigned and sent the statement to up to the state leader, knowing that it would be completely ignored. A stronger character might be able to stay and fight, but I was afraid to give in to pressure, corrupting myself into taking the first option.

2. Emotional Training

Plato believes that there can be an artificial environment, such as laboratory in physics, in which students can obtain metaphysical skills necessary to be philosopher kings. My belief is that in the field of metaphysics, the lab is life itself. All candidates will start as naïve idealists, the bottom of the pyramid shown in Illustration 4-7, and travel upward to the universal idealists' terrain. The further away from the bottom, the stronger they must become. In order to build a strong character, instead of listening to what someone else did, each student must confront life's dilemma between self-preservation and self-sacrifice and must conquer

desire for self-glory. Initially, it will be small, such as a student overcoming the desire to cheat in order to get a good grade at school. As the student grows, the dilemma becomes bigger, such as a company employee refusing to conduct illegal activities in order to increase revenue, even though it may mean that s/he will lose the job. Each time students conquer a smaller dilemma, they are ready to face a little more difficult one. There is no clear line between where the training ends and where the real responsibility starts in this. It is about how far you can go. Many will perish spiritually, abandoning the idealist tenet. They would call it “growing up” in a real world. On the other hand, some may even perish physically, making the ultimate sacrifice for the sake of the idealist tenet.

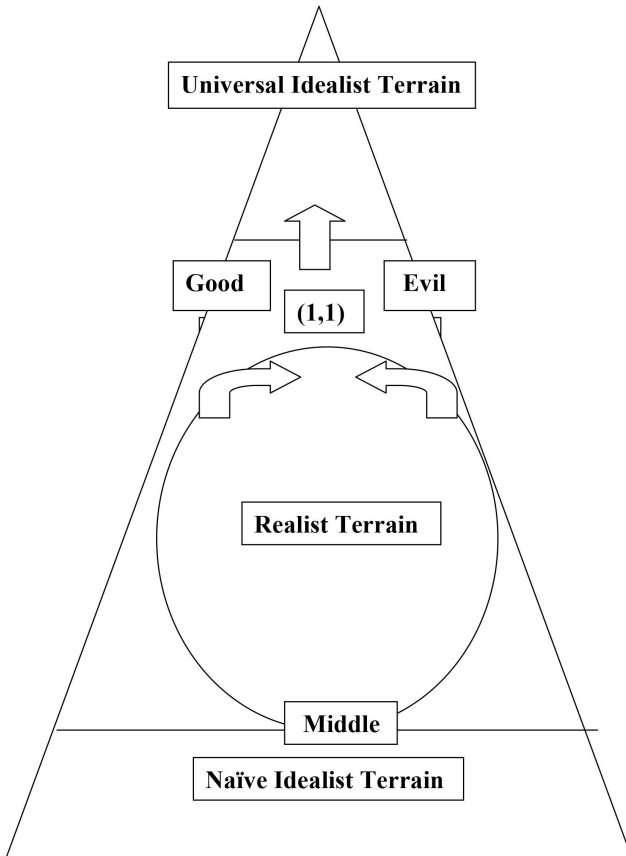
This journey came to me as going through a metaphysical circuit, shown in Illustration 7-2. I started out in the middle. Most people stay here. For example, Aristotle, in his famous golden rule of the mean, encourages people to stay here. This area is stable and safe. However, there will not be a breakthrough to take people to the next level of consciousness. So, metaphysical engineers must venture out to the extreme end of good. The further away from the middle, the stronger you must be.

It is not possible at this point to present a comprehensive training plan to help metaphysical engineers to go through this process for two reasons. First, each historical context would make the journey different. I can only present the subjective case of myself, which has been conducted at the early stage of democratic decay. In this particular process, the journey has taken the shape of the marginalization of the engineer. I have suffered a moderate ostracism in society. But if you try to train yourself during further decay, the price will be much higher. On the other hand, if you were to do so during the rise of idealism, the training process would be entirely different. Since you would be so well supported, you might have to fight your own demons called yourself against abusing power. Second, when exploring the matters of emotion, language is inadequate. Lacking adequate literary training, I can only make a feeble attempt to describe intellectually what the trainees must go through, and I cannot communicate with suitable competence what emotions they would go through during these processes.

I can borrow the genius of the historical masters to communicate the gist of it. The closest I could find is Dante’s *Divine Comedy*. The following inscription above the Gate of Hell, for example, would be adequate to send off students as they leave the terrain of naïve idealists and start the journey through the terrain of realists.

THROUGH ME THE WAY INTO THE SUFFERING CITY,
 THROUGH ME THE WAY TO THE ETERNAL PAIN,
 THROUGH ME THE WAY THAT RUNS AMONG THE LOST,
 JUSTICE URGED ON MY HIGH ARTIFICER;
 MY MAKER WAS DIVINE AUTHORITY,
 THE HIGHEST WISDOM, AND THE PRIMAL LOVE,
 BEFORE ME NOTHING BUT ETERNAL THINGS
 WERE MADE, AND I ENDURE ETERNALLY,
 ABANDON EVERY HOPE, WHO ENTER HERE.²⁴

Illustration 7-2
Emotional Training



²⁴ Dante Alighieri, trans. by Allen Mandelbaum, *The Divine Comedy*, New York: Everyman's Library, 1995, p.68.

Dante's journey has some similarities to that by the metaphysical engineering trainees. However, there is one major difference. Through the journey into Hell, Dante meets a variety of sinners and has conversations or listens to their testimonies. Our trainees, instead of talking to them, would have to meet them in real life and many times suffer the consequences of these sinners' actions. And still, they would have to have strength to carry on with the idealist agenda. The emotion that they would go through and the final emotional state that they must achieve after the journey could be communicated only by someone with a similar literary gift to Dante. Instead, here, I will just describe my journey without much emotional content.

I myself started out as a typical naïve idealist. In grade school, I had a teacher born in Hiroshima. He was evacuated when the atomic bomb was dropped but he came back in a few weeks. Because of that, he was granted the health certificate which would guarantee him free health care for the rest of his life. As a child, I thought it was fantastic, but he told us that he really didn't want to be stigmatized like this. He ardently taught the devastating effect of the bomb. But I could not fully comprehend his lessons. I thought it had happened decades ago and that he should snap out of it. So one day, I wrote that in my essay and somehow, when collected, mine ended up on top of everyone else's, so he read it in front of the class. He looked sad. I was embarrassed. After having moved on to junior and senior high schools, the thoughts came back occasionally and I finally grew to believe that, even though his intention was honorable, he failed to connect the past event to the present strong enough so we could see the relevance to us. In the early 1980s, as a college student, I went to an anti-nuclear protest demonstration. There, all I heard was: Nuclear weapons were bad. Bad things must be eliminated. Therefore, nuclear weapons must be eliminated. I thought it was rather naïve to argue that way. If you really wanted to get rid of nuclear weapons, we would have to be able to make arguments that could convince supporters. So, I decided to come to the United States and study what arguments supporters of the nuclear weapons were making so that I could eventually make a convincing argument against the weapons. That's how I left Japan, setting off to the United States.

Metaphysically, this represented my departure from the naïve idealists' terrain into the terrain of realists. Here I was one of the lucky ones who did not know what would be involved in this process until it was too late to turn around and come back. I wonder if I would have had courage to set out on this journey if I had seen Dante's inscription at the entrance to the realist terrain and understood it.

Initially, my focus was to obtain reasonable knowledge on how realists dealt with issues of war and peace. I was always eager to use whatever I gained to the idealist goals. This sometimes caused awkward tension in the world of realism. When I stated my idealist intent, one of my professors advised me not to advertise it, saying: “It is too cute.” It was a strange sensation I felt when I learned that in this world working hard to prevent another global war was “too cute.” But I understood that he was worrying about my well-being. In order to survive in the realist world, you could not afford to look naïve. And my comments made me look naïve.

I was naïve well into my journey through the realist terrain. I always believed that people would join my cause if I could present a strong enough case. I worked hard to present realistic solutions toward the idealistic goals. As I gained more skills in doing so, I started to receive comments that they would support me but I would have to first prove that I was ready for that. When I got a master’s degree, I was told that I would have to obtain a Ph. D. in order to be credible for what I did. So I did it. Then, I was told that I would have to publish the dissertation in order to be credible. So I did it. Especially, in that project, I pointed out the danger of democratization that China and Russia would go through in the 21st century and laid out the framework in which scholars from different disciplines, such as political scientists, economists, historians, regional specialists and policy-makers could work together to avert a repeat of what happened when Japan and Germany underwent this same process in the first half of the 20th century. I still expected naïvely that people in academia would pour in to work together now that they had a common framework to do so. It was completely ignored and I could not even obtain employment. After publishing dissertation, I was turned down due to lack of teaching experience. That put me in a Catch-22 dilemma. In order for me to have teaching experience, I needed to be hired. But in order to be hired, I had to have teaching experience. I did what I could do to comply by volunteering to be a teaching assistant, but it was to no avail. It took me a long time to realize that people in academia had no intention of hiring a person like me with a genuine idealist agenda incompatible with their realist agenda—i.e., pursuit for self-interest.

From there, it felt like a free fall, from the center of academia to the outer margins as an adult school teacher, where mostly immigrants try to learn English and obtain high school diplomas. It was a rough ride and I tried to hang onto the idealist agenda, but it was not easy. First, I was always facing the dilemma between self-preservation and preservation of humanity. At the adult school, for the first two years, I was able to obtain only part-time assignments. This gave me time to take liberal art classes

that were crucially important for the development of the paradigm of universal idealism. Meanwhile, I was advised to enroll in courses to obtain the teaching certificate for high school so that I could have more permanent employment because the adult school did not offer reasonable job security. Second, I was not getting any encouragement. While I visited different fields such as music and science in my post-doctorate liberal arts self-training, I also tried to recruit people into the idealist agenda. I explained what I was doing and showed them what crucial roles they could play in averting what could be the most devastating disaster in human history. The answers were always the same: “That’s wonderful. Do carry on. But not here, somewhere else.”

In this environment, I have travelled through three stages of emotions parallel to my music studies, which were discussed earlier. Art helps me again to express these stages. The first was a stage of self-pity, which is represented in Handel’s aria *Lascia ch’io pianga* in his opera *Rinaldo*. While living in constant worry about my own preservation and with no encouragement to continue with the idealist agenda, I started to develop a victim’s consciousness. I felt that this society told me to starve to death in response to my sincere plea to work together to avert the global disaster. I lost faith. Hate was growing inside of me. At one point, I was caught off-guard when I found myself sitting right next to Timothy McVeigh—the Oklahoma Federal Building bomber—and Mohammed Atta—one of the 911 attackers. As I discussed earlier, this was the metaphysical circuit in which two opposites meet. I traveled to the extreme and found the place unbelievably volatile and difficult to live through. Here, metaphysical engineers must steer clear of the volatile environment and attempt at synthesizing the two extremes or discover a way to synthesize the opposites in the metaphysical circuit in order to achieve a higher level of consciousness, from where controlling Vico’s cycle would become possible.

It was rough. I was in complete darkness, hopeless and filled with bitterness. It was during that time when I first discovered J. S. Bach’s *St. Matthew Passion*, as the representative of the second stage of emotion, universal grief. It took me to a place where it was deeply sad, yet did not have even a hint of hate or anger. I thought that this was the emotional state of mind that universal idealists had to attain. It told me to go and stay there emotionally. But of course, my actual emotion was influenced by my life events. So, like a sand castle on the beach, the emotional state I achieved by listening to the *St. Matthew Passion* disappeared in the hustle-bustle of the daily life. I listened to it, got there, and then was pulled back. So, I listened to it again, got there, and then was pulled back. After a few years of struggle, suddenly, Beethoven’s *Ode to Joy* came into my life.

This is a polar opposite of the St. Matthew Passion, filled with joy and the bliss of idealism. In his musical creations, Beethoven himself traveled through the era of heroism of the middle period, represented in his Fifth Symphony in which good C major triumphs over evil C minor, to the celebration of what I call universal idealism in his final days, represented in his Ode to Joy in his Ninth Symphony, in which he rejects heroes and instead embraces all humanity. I could not understand it for a long time because I had never felt anything close to this emotion in my pursuit of idealism. To this day, I wonder where I took a wrong turn. Is it my personal path that has gone wrong, or has Western civilization lost its way in the post Enlightenment Era? The advancement of science has benefited humanity greatly, but the price has also been high. We lost the ability to believe truly beyond physical existence. I have learned that the early Christians were invincible in that they could truly believe it. Because of that, they could share joyful sentiments despite their dire situation. Was Beethoven the last of the generation that could feel the joy of the universal idealist family, or was it his exceptional talent that made him actualize the joy while it no longer existed? I am still bewildered by the fact how he could travel the path of such optimism losing his hearing, the worst experience for a music composer.

It was during this time, I felt association with Christianity. Several things mentioned in the Bible were comforting. A person like Plato would demand the engineers to perform his duty stoically. However, I found that it would require strength beyond human. I had to rely on something. Then, I discovered the community of universal idealists in Christianity. Christianity helped me to describe this process by lending me their language.

It also makes it easier to have blind faith. You dedicate your work to God, who will make sure that it would be assigned to the next person in charge. Through Bach's music, I hear God's voice, which I have come to understand as: "On your day of crucifixion, I will be there with you." In other words, all of us are asked to set aside our desires and weaknesses and dedicate for the good of all. The stronger you are, the more sacrifice you are asked to make. The strongest will be asked to make the ultimate sacrifice, as Jesus Christ did. And they are the ones who will have the privilege to meet God. So, with each hardship, I feel one step closer to God.

God has given us all we need, and we are to use it dutifully. Never use it for your own sake. The more people are ready to follow it, the less sacrifice will be required. But if people in general abandon their duties, the remaining few must bear the entire burden. That's what happens in the age of realism. There, when you feel crucified, go talk to Jesus Christ and tell

him that. He will say: “Well, I WAS crucified.” Then, suddenly, what looked like a huge sacrifice for you will start to look like a small one. I felt crucified when this society denied what I believed I had earned and was rightfully mine for trying to save people from a potentially unprecedented human-caused disaster. Now, I start to feel grateful to be asked to make such a small sacrifice. I may not have the status or respect from society, but I am not in jail for saying what I am saying, let alone executed for that. On days I feel sorry for myself, I think about the subsequent generations in the community of universal idealists. Some would be asked to make much bigger sacrifices. I feel deeply for them. I feel grateful to be asked to make such a small sacrifice, and I try to do the best I can to reduce their burden in any way possible.

At this point, I started to read the Bible and found some notions very familiar and comforting. It is comforting to know that Jesus Christ cried the night before he was arrested:

He took with him Peter and the two sons of Zebedee, and began to be grieved and agitated. Then he said to them, “I am deeply grieved, even to death; remain here, and stay awake with me.” And going a little farther, he threw himself on the ground and prayed, “My Father, if it is possible, let this cup pass from me; yet not what I want but what you want.”²⁵

It tells me that we don’t have to gallantly face the harshest reality. This is where I rely more on Christianity than on Plato. Plato makes me feel that, once we find out what to do, we are to perform our duty stoically. There is no time to complain. There is no room for self-lament. Christ says lamenting is ok. We have feelings. We can cry.

When I hear Jesus Christ say: “The kingdom of God is among you,”²⁶ I hear that I never need to search for external validation. No matter what happens in the environment surrounding us, we do what we do, not because we will be rewarded for that. We will perish spiritually if we do that. People will leave us. People will punish us for pushing to do something difficult to do. But we need to be loyal to our own kingdom. That’s where we will be judged. This helps me to write this book, which few will read but which has to be written anyhow.

²⁵ Michael D. Coogan, et al. ed. *The New Oxford Annotated Bible* (3rd 3dition), Oxford: Oxford University Press, 2001, “New Testament,” p. 50 (Matthew 26:37,38,39).

²⁶ *Ibid.*, p. 130 (Luke 7:21).

When I hear Jesus Christ say, “Love your enemies and pray for those who persecute you,”²⁷ I hear it mean to diligently work with constructive forces. I am to focus on taking part in the creation of good, and never on the destruction of evil. Once you shift your focus on the destruction of evil, you will fall right into the hand of a realist ambition, and will be fighting a proxy war between the two evils.

When I hear Jesus Christ say, “Forgive...,”²⁸ I hear, once again, to focus on the construction of good no matter what. If any injustice is done to you, move on. If you cannot forgive, you will be burned by hate, and fall right into the hands of evil and start focusing on destruction, fighting proxy wars for evil. This is a hard lesson for me. I am still struggling. There is still a lot of anger inside of me against those people who took away what was “rightfully mine.” If I cannot forgive, I try to forget. I don’t have energy to burn for hating them. I must concentrate all available energy on the creation of good—my specific assignment, which is to complete this book.

I read that once the devil tried to tempt Jesus, but he had to refuse the realists’ power promised to him:

Then the devil led him up and showed him in an instant all the kingdoms of the world. And the devil said to him, “To you I will give their glory and all this authority; for it has been given over to me, and I give it to anyone I please. If you, then, will worship me, it will all be yours.” Jesus answered him, “It is written, ‘Worship the Lord your God, and serve only him.’”²⁹

This is a good lesson. Metaphysical engineers must understand that drastic reform is impossible if they receive significant benefit from the existing system. Do not try to get to the top through the existing system and plan to execute reform once you get there. By then, you will be so deeply embedded with the existing interests that you will not be able to break free. There is a similar warning in Matthew:

Enter through the narrow gate; for the gate is wide and the road is easy that leads to destruction, and there are many who take it. For the gate is narrow and the road is hard that leads to life, and there are few who find it.³⁰

²⁷ Ibid., p. 15 (Matthew 5:44).

²⁸ Ibid., p. 108 (Luke 6:37).

²⁹ Ibid., pp. 102–103 (Luke 4: 5,6,7,8).

³⁰ Ibid., p. 17 (Matthew 7:13).

Contemporary sensibility might find it difficult to understand why suicide is such a grave sin in Catholicism. But from the viewpoint of universal idealism, it is evident. Each one of us has a duty to fulfill. If you evade it, it will be passed onto someone else, who, as you might understand, is already under enormous stress, considering the smallness of the number of universal idealists. We must hang in and complete our jobs so others will not have to do our job in addition to theirs.

But even this stage did not give me enough strength to keep going. Two problems remained unresolved. First, Christianity teaches us that the sacrifices you make in this world will be compensated in your afterlife. Similarly, sins you commit in this world will be punished in your afterlife. There will be the Judgment Day at the end of your physical life. Therefore, we all must live in preparation for the Judgment Day. I wrote this book because it had to be written even though no one may read it. I will gain no reward from it. I can accept that, but I will be paying the price for it. While I should be preparing for my old age, accumulating pensions and savings, I am holding onto an unstable job that barely supports my current needs. Even so, I wrote it because I was concerned with my credibility in the eyes of God. It must hold up on my Judgment Day. As an idealist, you must have blind faith that your work will be rewarded there. However, here again the modern world view mocks me. How could I find the strength to make that final leap into faith, sacrificing my material well-being, when, in the age of quantum mechanics, my intelligence tells me that there is no such thing as the Judgment Day?

Second, during my journey, I have learned the perspective of universal idealists. For us to do what we need to do, we need to develop a larger consciousness because everything takes centuries and millenniums. If we are confined with individual consciousness, it is simply impossible to conduct any of our projects. So, I started to develop affiliation with those who worked on universal idealists' projects in the past and those who will work on them in the future. I started to see them as my spiritual family. Some of the people I perceive as my parents left their names in history but the most remained nameless. People I perceive as my children are not born yet. There is no way that I get to know them in person or even physically meet them, but over time, I have grown to feel very strongly about them. It is amazing how close you can feel about total strangers that you will never even meet. But that's what has happened over the course of these past few years.

As I moved further into the realm of spirituality, physical existence became less important to me. I mentioned this change in Chapter 5 as part of a metaphysical circuit between physical and metaphysical extremes.

While I was writing this book, I began to feel that I was transferring my soul into it, rather than just writing it. After finishing it, I feel as though my physical existence were merely an empty shell, and my true being now exists in these writings. This indicates that there has been a shift in my consciousness from the physical end to more metaphysical end. It is probably a natural endpoint of the journey I have taken. I also begin to realize that in the metaphysical sphere, the writing process has not stopped when I finished physically writing it. It has just begun. The integrity of the book depends on how I spend the rest of my life. If I give in to the existing system in order to survive physically, it will lose all its power and become meaningless. But this is not a complete switch I could turn one way or the other. I go back and forth every day. One day, I feel that, when I finish this book, I have done my duty, so I don't care about what happens to me after that. But another day, I fear if I have strength to face the eventuality, when it actually happens. Whenever I see a homeless person on the street, I see myself in him/her. I pray desperately for strength. Gradually, I began to look for strength with my spiritual family. The Judgment Day is less real to me than these families are.

With all this, I was on a head-on collision course with my biological parents. My parents love me and care about my well-being. They have done and would do so much to protect me. My father always told me not to worry about the financial condition, but just to keep on working. He sacrificed his whole life to ensure his family's survival and comfort. Indeed, without their help, I could not have written this book. I had to live in order to write. But eventually, it is my physical existence that they want to protect, even if it means to sacrifice my spiritual well-being. The problem had been lingering throughout my journey, but finally at this point I had to confront with it. It erupted when my father yelled at me, "Why can't you do what everyone else can do!?" I feel his pain. I am his family, so he cannot walk away like everyone else did, saying, "That's wonderful. Do carry on, but not here, somewhere else." I am sorry that I can't make him happy to repay all the things he has done for me. But at the same time, I also feel abandoned, because for most of my life I have looked to them for my strength. Now I wonder: Do I have to choose between obeying God and staying with my spiritual parents, and answering the plea of my biological parents? Is this dilemma totally unreasonable, with no room for coexistence?

I searched for an answer. First, I went to St. Augustine and read his *Confessions*. I found him in a completely different environment, confronting a completely different challenge from mine. He lived in the height of idealism, when the old Roman realism was dying. So, his

challenge was predominantly internal. As a young man, he indulged in bodily and secular pleasures:

I CAME TO CARTHAGE, where a cauldron of illicit loves leapt and boiled about me. I was not yet in love, but I was in love with love, and from the very depth of my need hated myself for not more keenly feeling the need. I sought some object to love, since I was thus in love with loving; and I hated security and a life with no snares for my feet. For within I was hungry, all for the want of that spiritual food which is Thyself, my God; yet [though I was hungry for want of it] I did not hunger for it: I had no desire whatever for incorruptible food, not because I had it in abundance but the emptier I was, the more I hated the thought of it. Because of all this my soul was sick, and broke out in sores, whose itch I agonized to scratch with the rub of carnal things—carnal, yet if there were no soul in them, they would not be objects of love. My longing then was to love and to be loved, but most when I obtained the enjoyment of the body of the person, who loved me.

Thus I polluted the stream of friendship with the filth of unclean desire and sullied its limpidity with the hell of lust. And vile and unclean as I was, so great was my vanity that I was bent upon passing for clean and courtly. And I did fall in love, simply from wanting to, O my God, my Mercy, with how much bitterness didst Thou in love come to the bond of consummation: I wore my chains with bliss but with torment too, for I was scourged with the red hot rods of jealousy, with suspicions and fears and tempers and quarrels.³¹

Well, this never had been a problem for me. So, it appeared that his internal struggle had little to offer to resolve my dilemma. However, he did teach me one thing through his close connection to his mother Monica, a devout Christian. She had been always his earnest supporter, patiently watching over him throughout his young adulthood. Thanks to her guidance, he turned things around and at the age of 32, he converted to Christianity and left the prestigious and lucrative position of Rhetoric professor.³² When Monica dies, Augustine describes the final moments:

³¹ Augustine, trans. by F.J. Sheed, *Confessions*, Indianapolis: Hackett Publishing Company, Inc., 1993, p. 35.

³² *Ibid.*, p.151.

When the day was approaching on which she was to depart this life—a day that You know though we did not—it came about, as I believe by Your secret arrangement, that she and I stood alone leaning in a window, which looked inwards to the garden within the house where we were staying, at Ostia on the Tiber; for there we were away from everybody, resting for the sea-voyage from the weariness of our long journey by land. There we talked together, she and I alone, in deep joy; and *forgetting the things that were behind and looking forward to those that were before*, we were discussing in the presence of Truth, which You are, what the eternal life of the saints could be like, *which eye has not seen nor ear heard, nor has it entered into the heart of man*. But with the mouth of our heart we panted for the high waters of Your fountain, the fountain of the life which is with You: that being sprinkled from that fountain according to our capacity, we might in some sense mediate upon so great a matter.

And our conversation had brought us to this point, that any pleasure whatsoever of the bodily senses, in any brightness whatsoever of corporal light, seemed to us not worthy of comparison with the pleasure of that eternal Light, not worthy even of mention....

Such thoughts I uttered, though not in that order or in those actual words; but You know, O Lord, that on that day when we talked of these things the world with all its delights seemed cheap to us in comparison with what we talked of. And my mother said: “Son, for my own part I no longer find joy in anything in this world. What I am still to do here and why I am here I know not, now that I no longer hope for anything from this world. One thing there was, for which I desired to remain still a little longer in this life, that I should see you a Catholic Christian before I died. This God has granted me in superabundance, in that I now see you His servant to the contempt of all worldly happiness. What then am I doing here?”...

Further, I heard afterwards that in the time we were at Ostia, she had talked one day to some of my friends ... of the contempt of this life and of the attraction of death. I was not there at the time. They marveled at such courage in a woman—but it was You who had given

it to her—and asked if she was not afraid to leave her body so far from her own city. But she said: “Nothing is far from God, and I have no fear that He will not know at the end of the world from what place He is to raise me up.” And so on the ninth day of her illness, in the fifty-sixth year of her life and the thirty-third of mine, that devout and holy soul was released from the body.³³

Monica’s death was hard on him but in the end, he reflects:

So, let her rest in peace, together with her husband, for she had no other before nor after him, but served him, in patience bringing forth fruit for Thee, and winning him likewise for Thee. And inspire, O my Lord my God, inspire Thy servants my brethren, Thy sons my masters, whom I serve with heart and voice and pen, that as many of them as read this may remember at Thy altar They servant Monica, with Patricius, her husband, by whose bodies Thou didst bring me into this life, though how I know not. May they with loving mind remember these who were my parents in this transitory light, my brethren who serve Thee as our Father in our Catholic mother, and those who are to be fellow-citizens with me in the eternal Jerusalem, which Thy people sigh for in their pilgrimage from birth until they come there: so that what my mother at her end asked of me may be fulfilled more richly in the prayers of so many gained for her by my Confessions than my prayers alone.³⁴

Their relationship teaches me that the dilemma I am facing between spiritual and biological families is not unique. Indeed, where idealism prospers, your biological parents are a special form of your spiritual families. With the vast majority of your spiritual families, you have no chance of connecting physically. But in a very special occasion, as between Augustine and Monica, you can share physical time and space with your spiritual families. These moments are very short, comparing with the eternity that spiritual families share, making them very precious. How fortunate for them to share such a special moment together in this physical realm. In an idealist world, therefore, biological families are a special form

³³ Ibid., pp. 163–166.

³⁴ Ibid., p. 170.

of spiritual family, as circles are a special form of ovals. There is nothing contradictory in these relationships.

It becomes a harsh dilemma only when idealism is overwhelmed by realism, in which physical survival becomes supreme and spirituality all but disappears. When I look at my relationship with my father, I see two of us struggling to gain as much strength as possible, facing a situation requiring human strength next to impossible.

After thinking my way through this, then I went to the ancient Greek philosophers. Plato proposes that trainees for philosopher kings are to be taken away from their families, because being with their families will create conflicting loyalty.³⁵ But I didn't want to read some abstract argument. Rather, I looked for people who actually lived through this problem. So, I went to Socrates, who was put to death in a democracy. For him, too, as a philosopher, once things are intellectually figured out, they will be done. I always feel that for Greek philosophers, the emotional strength to do the right thing is taken for granted. After the death sentence, his friend Crito visited the jail, trying to persuade him to escape. Among other reasons, he mentions Socrates' children:

I should say that you were betraying your children; for you might bring them up and educate them; instead of which you go away and leave them, and they will have to take their chance; and if they do not meet with the usual fate of orphans, there will be small thanks to you. No man should bring children into the world who is unwilling to preserve to the end in their nurture and education.³⁶

Socrates responds:

Dear Crito, your zeal is invaluable, if a right one; but if wrong, the greater the zeal the greater the evil; and therefore we ought to consider whether these things shall be done or not. For I am and always have been one of those natures who must be guided by reason, whatever the reason may be which upon reflection appears to me to be the best; and now that this fortune has come upon me, I can not put away the reasons which I have before given: the principles which I have hitherto honored and revered I still honor, and unless we can find other and better

³⁵ Allan Bloom, *The Republic of Plato*, New York: Basic Books, 1968, p. 136.

³⁶ Plato, "Crito," in *The Trial and Death of Socrates: Four Dialogues*, New York: Dover Publications Inc., 1992, p. 45.

principles on the instant, I am certain not to agree with you.³⁷

The other considerations which you mention, of money and loss of character and the duty of educating children, are, as I fear, only the doctrines of the multitude, who would be as ready to call people to life, if they were able, as they are to put them to death—and with as little reason.³⁸

Has a philosopher like you failed to discover that our country is more to be valued and higher and holier far than mother or father or any ancestor, and more to be regarded in the eyes of the gods and of men of understanding?³⁹

I can see for Socrates, biological families are just secondary, not even worth suffering the dilemma and can be dismissed without any internal struggle. I admire and long for his strength. Socrates' problem dwarfs mine. I think about him often and try to be as strong as possible. He is my spiritual father. But this is a very difficult standard to achieve for an ordinary person. To act stoically as reason dictates requires a superhuman strength. Where do I find emotional strength to act as reason tells me to do?

Finally, I revisited Perpetua, whom I mentioned in Chapter 5 and think about frequently. She lived in the Roman Empire and was volunteered when some of her slaves were arrested for following Christianity. She is the closest figure that I can find in dealing with the dilemma. She lived in a world at the nadir of idealism and confronted by the most severe form of dilemma in which there is no room for biological and spiritual families to coexist. Joyce E. Salisbury observes, referring to the early Christian community:

Christian communities were creating new social structures that called for individuals to leave their fathers and mothers, to break previous community ties and form new communities. Motherhood, with its emphasis on family, on creating and preserving future generations, would seem to be incompatible with personal salvation gained through martyrdom. The goal of Christian martyrdom was to follow the example of Christ and not let considerations of family, society, or cultural continuity get

³⁷ *Ibid.* p. 46.

³⁸ *Ibid.*, p. 48

³⁹ *Ibid.*, p. 51.

in the way. The martyrs took seriously Jesus's call to leave worldly concerns behind.⁴⁰

She had to choose one or the other. There is no doubt that she chose her spiritual family. She perished in a coliseum in Carthage in the Roman Empire, leaving her father and newborn child. Perpetua first severs ties with her father, as Bart Ehrman describes:

One of the most gripping elements of the story is her reaction that Perpetua records towards her poor father... poor fellow that her daughter is facing death in refusing to recant in the face of her approaching execution. Her father is a pagan who doesn't understand why she is insisting on dying for the faith. He tries in vain to get her to see reason for his sake and for the sake of her own child. She has a young infant she is still nursing. He is trying to get her to recant because of this baby that's hers and, if she dies, what happens to this child. And of course he's trying to get her to recant for her own sake.

Let me read several passages from this diary of Perpetua about her reaction toward her father: "While we are still under arrest," she says in her diary, "my father, out of love for me, has tried to persuade me into shaking resolution. 'Father,' said I. 'Do you see this vase here, for example, or water potter or whatever?' 'Yes, I do,' he said. And I told him, 'Could it be called by any other names that what it is?' He said, 'No.' 'Well, so, too I cannot be called anything other than what I am, a Christian.' At this, my father was so angered by the word Christian, he moved towards me as though he would pluck my eyes out, but he left at that and departed vanquished along with his diabolical arguments." So she considers his arguments to be diabolical. So she is rejecting her father who is, after all... just concerned her own well-being. A little later we have another account. "My father arrived in the city again warmed with worry and he came to see me again with the idea of persuading me. 'Daughter,' he said, 'Have pity on my gray head. Have pity on me, your father. If I deserve to be called your father. If I favored you above all your brothers. If I raised you to reach the prime of your life.

⁴⁰ Joyce E. Salisbury, *Perpetua's Passion: The Death and Memory of a Young Roman Woman*, New York: Routledge, 1997, p. 88.

Do not abandon me to the reproach of others. Think of your brothers. Think of your mother and your aunts. Think of your child who'll not be able to live once you are gone. Give up your pride. You'll destroy all of us." Well, again it's to no avail. She doesn't yield.⁴¹

Then, she had a dream:

*Then I saw an immense garden, and in it a gray-haired man sat in shepherd's garb; tall he was, and milking sheep. And standing around him were many thousands of people clad in white garments. He raised his head, looked at me, and said: "I am glad you have come, my child." He called me over to him and gave me, as it were, a mouthful of the milk he was drawing; and I took it into my cupped hands and consumed it. And all these who stood around said: "Amen!" At the sound of this word I came to, with the taste of something sweet still in my mouth.*⁴²

Salisbury interprets that this vision is about her father:

In her vision, the shepherd was old with gray hair; he resembled her description of her father. In portraying the shepherd as a[n] older man, Perpetua changes the images that she brought to her dream world. Early Christian art portrayed the Good Shepherd as a young man, and neither did the *Shepherd of Hermas* show the shepherd as old. In Perpetua's dream, familiar images were changed to replace the father figure she had recently rejected in life. She was welcomed into the heavenly family with paternal caring: "*I am glad you have come, my child.*" Her new father was proud of her choice in a way her old father was not.⁴³

Severing ties was not easy for her, but it was harder to sever ties with her baby. But eventually, with subsequent dreams, she replaces her physical tie with a spiritual tie once again. She had a dream of her brother, Dinocrates, who had died at a young age from cancer:

⁴¹ Bart D. Ehrman, *From Jesus to Constantine: A History of Early Christianity* (Lecture tape), Chantilly, Va.: The Teaching Company, 2004, Lecture 13.

⁴² *Ibid.*, pp. 99–100.

⁴³ *Ibid.*, pp. 100–101.

I saw Dinocrates coming out of a dark hole, where there were many others with him, very hot and thirsty, pale and dirty. On his face was the wound he had when he died.... There was a great abyss between us: neither could approach the other. Where Dinocrates stood there was a pool full of water; and its rim was higher than the child's height, so that Dinocrates had to stretch himself up to drink. I was sorry that though the pool had water in it, Dinocrates could not drink because of the height of the rim. Then, I woke up, realizing that my brother was suffering.⁴⁴

Salisbury interprets her dream: “Perpetua’s previous concern for her son’s suffering and his thirst for milk becomes transferred to her thirsty brother. Since her hearing, Perpetua increasingly was focused on the next world. So her maternal care was now for the dead.”⁴⁵

In this way, Perpetua’s solution to the dilemma is to replace the biological family completely with the spiritual family. Perpetua’s dilemma dwarfs mine. I feel deeply with her. Every day, I think about her and how strong, therefore, how close, I can be to her. She is my spiritual mother. In her presence, I try to be stronger. At the same time, I found myself deeply feeling her father’s pain. The pain was unbearable and I wished desperately that I could do something to ease his pain. Then, suddenly, the frustration that I was feeling with my father was replaced with this deep compassion for Perpetua’s father. There is no bitter feeling left in me. It’s just a deep compassion to the aged father who has been caught between the two worlds and suffered. He has lived in the era of reconstruction after the devastation of World War II, and he has sacrificed everything to keep his family safe. The only thing he wants in return is to see his children married happily and play with his grandchildren. It’s such a small reward for his life-long sacrifice. Then, he was dragged into this dilemma through me. It pains me greatly to think that I have to be the source of his agony in his ripe age when he should be getting all the reward for his sacrifice. He does not deserve this at all. Thank goodness, my brother has given him the joy of having a grandchild.

So, I thought that I needed to continue my journey toward spirituality, deriving strength from my spiritual family, while being the source of strength for my biological family, reassuring them and encouraging them to join the journey. Around this time, I saw a picture in which Boeing engineers were conducting a stress test on the wing of a B-777. The caption says, “[T]he wing tips were deflected more than 24 feet

⁴⁴ Ibid., p. 105.

⁴⁵ Ibid., p. 105.

above their normal position and endured loads equal to around half a million pounds!”⁴⁶ I felt that this was the representative image of metaphysical engineers, who were simultaneously engineers conducting the test and the wing being tested. Metaphysical engineers were the wings of an airplane called society, as well as the designers of such wings. We were directly responsible to the well-being of the members of the society. So, we must endure.



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While I was sorting through this dilemma, I began practicing the Goldberg Variations. Then, suddenly in it, I discovered the third stage of emotion, which is the stage of deep contemplation, just as Aristotle’s First Mover would be doing.

In this stage of consciousness, things began to look as if nothing was my choice but was determined by a higher consciousness. If it was decided that I were to perform a certain duty, even if I tried to weasel out of it, it would keep coming back at me until I finished it. The distribution

⁴⁶ Guy Norris and Mark Wagner, *Boeing 777: The Technological Marvel*, Osceola, Wis.: MBI Publishing Company, 2001, p. 27.

would be fair. Just as a competent engineers chooses the material suitable for a specific purpose, this consciousness would know our strength and weaknesses and assign suitable duties. I would not be given any duties that I were not capable of completing. So, all I would have to do was to do the best I could in any given situation, trusting that anything I could not handle would not be assigned to me.

At this point, I began to perceive myself a cell in an imagined body. Take a body's immune system, for example. White blood cells, which include neutrophils and macrophages, are summoned when the body finds foreign objects inside. Then, both neutrophils and macrophages digest the foreign objects to kill them. But here, "Neutrophils will often be phagocytosed themselves by macrophages after digestion of pathogens."⁴⁷ It indicates that some cells are asked to sacrifice their own lives to save the body they live in.

Now I cannot help seeing the parallel to this and feeling that we are all programmed and summoned as necessary by some larger form of metaphysical entity we live inside. Such people as Socrates and Perpetua were asked to sacrifice their physical beings to become eternal for the rest of us. Once I perceive this, what I have been calling "mini-miracles" suddenly begin to make sense. As I was travelling through my path to universal idealism, I began to notice a series of coincidences that put me exactly where I should be and I was always given what I needed to complete my task. As I moved further, they became more explicit.

First, after having finished my master's program, in which I had studied nuclear strategies and disarmaments, I tried to stay in the field but there was nothing available for me. So, I went to work for a Japanese bank in New York. In the next few years, nothing worked for me. I managed to obtain a permanent residency in the United States, but it became obvious that business was not for me. So, I decided to go back to my original mission and tried to get into a doctoral program. It was not easy but I started to talk as many people as I knew. I contacted a former director of a non-profit organization where I had volunteered. He gave me the name of a professor at the City University of New York. So, I contacted him and volunteered as his teaching assistant in exchange for a letter of recommendation. He also taught at Columbia University, so his recommendation got me in there. I was rejected by everyone else, so my effort would have ended if I hadn't met this professor.

Initially, I had a hard time. After the first semester, I was put on probation. So, I said to myself, "I may not be able to stay beyond one more semester, so let's make the best of it and get as much as possible for my cause while I can stay." That helped and so I survived. Then, in the second

⁴⁷ <http://en.wikipedia.org/wiki/Neutrophil>

year, I failed the first comprehensive exam. This time, I thought that was it. So, I was ready to leave. I had two reasons. First, I felt that I had done everything I could. Second, I was having a hard time trusting people there. Before the exam, I went everyone I could think of, telling what I was doing and asking if I was doing ok. Everyone said no problem. So, this came as a surprise to me. They told me that it would be fine if I took it again, but how could I believe it after the first time? But in the end, I decided to stay. But I had to move fast. My emotion was still nagging me with this trust issue. But my intelligence told my emotion to back away while it took care of its business. So, I picked up piano lessons which I stopped after college so that my emotion could be away from this ugly business, and I took the exam again and passed. I wondered if music was just a temporary evacuation for me. But by then, it seemed to have become a more permanent part of me. So, I kept up with music studies, which have become a crucial part of this project.

After my doctorate, I tried to obtain an academic teaching position, but I went absolutely nowhere with this. At one time, a Japanese business tycoon was starting a new university and I was hired there. Then, the Japanese government rejected their request to approve of me on their faculty because I had no publication record. It was April and my dissertation was due to be published in June of that year, but my appeal was of no avail.

I ended up at an ethnic museum as a project manager. The job was introduced to me by my friend, whose father happened to sit next to one of the board of directors for the museum on the airplane. She was visiting me and called him when she found out that I was looking for a job. He then faxed the job announcement given to him on the airplane. During the phone interview, I instantly disliked the director and decided to turn it down. I talked to my father on the phone that day and he yelled at me, so I felt forced to take the job. It was a nightmare as a job, but they were trying to get some publications out so it gave me a perfect opportunity to get my dissertation ready for publication. When I needed a photographer, he was right there working at the museum. When I needed a cartographer, well, we just contracted one. I cannot imagine where else I could have done all this. After having published my dissertation, I tried one more time to get a teaching position but I just accumulated several dozen more rejection letters. In the end, I could not bear to stay with the job, so I left with no prospect.

At one time, the neighborhood music school where I was taking the theory lessons opened a professional conservatory division. As an accreditation requirement, they were looking for a history teacher. I thought that it could be a good match. While I could pursue my agenda of

uniting intelligence and emotion by continuing musical studies there, I could teach their students how they could place their own field of music into a wider historical context, which would give more interpretative depth and expressive power to their performances. My theory teacher was supportive of my proposition, and did what he could do to help me. At the same time, he informed me that there was a tension between theory teachers and instrumental teachers. Instrumentalists were not eager to give much importance for theory lessons. Because of sheer numbers, their position was becoming stronger and my theory teacher felt more isolated every day. He told me that at the school only he and the library director believed in the importance of deeper elements of music, which go beyond the ability to play instruments. Sure enough, I was turned down.

After spending almost two years, looking for a job, the only thing available was a teaching position at an adult school. I didn't like it, but I had bills to pay so I started to teach there. Around the same time, I began to see the need to develop an engineering background to prepare for my true project. I looked at some trade schools, but none seemed viable at this point of my life. So, once again, I thought that my efforts would end here. I resigned and started to work. But they did not give me a full time assignment. I got to work only for 10 hours a week. Within a matter of weeks, then, my supervisor told me that I could get a teaching credential for math if I took several classes at a community college, which would increase my chance of getting more assignments. So, I picked up their brochure, in which I found all the physics and engineering courses that I needed to take. In the next few years, I took all the courses I needed. In addition to physical science courses, I had a chance to take art history, religion and poetry classes, too, all of which were needed to complete this project. I also found out that the adult school had an auto mechanic workshop. So, I attended one every Saturday. This helped me to have a well-rounded overview of the engineering pyramid from theory to mechanics/operation, as well as basic training to expand into the field of metaphysics. On top of that, after a while, I realized that my classroom setting was an ideal lab situation for me to experiment on various leadership issues, which I have written up as a report in this chapter.

Meanwhile, I also made a series of attempts to obtain a full-time job somewhere and obtain more assignments at the school. After all, I had to live first before I "serve humanity." But none whatsoever worked. I managed to take all the necessary classes, but I could not sustain my living here anymore, so I was ready to quit once again. Then, within a matter of weeks, my supervisor again gave me a piece of information that the school was expanding into an older adult program. She suggested that I go to the

principal and tell him that I was interested in getting more assignments. I did just that. Right there, he gave me an assignment.

So, now finally, I didn't have to worry about starving. But, my assignments were spread all over the week, morning and afternoon, so I could no longer spend so much time on my project. In the next four years, I kept reading but could not do much more. Periodical recesses of two or three weeks three times a year helped. But then, they began to talk about expanding the school to 50 weeks a year. This would have killed any opportunity I had to continue with my project. So, I was ready to give up again.

Then, an unprecedented budget crisis happened, and our hours were severely cut. Because of this, I had a new schedule, in which I would have three days off each week. In addition, instruction weeks were also cut. So, I ended up having plenty of time to write up my project. During three-day weekends, I read further on metaphysics. And during recesses, I wrote chapters. But initially, I was concerned because I really couldn't picture the structure of the book. I had been harboring the idea for several years. It sometimes looked to be thousands of pages, but other times simply a few pages. Everything moves simultaneously so I could not see any way to sequentially present the ideas. Then, suddenly out of the blue, a few weeks before the first recess started, I saw the entire structure of the book. Just in time! Religions talk about revelation. This felt closest to that. Coincidentally, the translation job I had to supplement my income completely stopped while I was writing it up.

When I finished the first draft, I felt completely spent. As when I quit the museum, I felt that there was nothing here for me anymore. So, I wanted out. But I remembered when I left the museum. The break turned out to be a year and a half. I felt that I was supposed to stay there for six to nine months longer. So, despite my screaming desire, I was determined not to leave on my own. By then, I had come to feel that it would be better not to let my will intervene because, if I were to leave, it would naturally happen. At the end of that year, the new superintendent announced that the school district would entirely eliminate our program. I felt that this was it. So, I began to prepare for my departure.

Then, I got to see how democracy worked in a micro scale as I participated in the protest, which I also wrote up as a lab report. And the program was saved. More than half of the instructors were laid-off. I was supposed to be one of them but the last-minute union negotiation saved my category. So, I stayed. At that point, I realized that my job was not complete. So, the past year, I was pushing hard to go the last mile to reach where I had to be to complete this project, which is the perspective where Aristotle's First Mover meets Bach's Goldberg Variations. So, in

retrospect, I know why I have had to stay until now. Looking back on all this, I feel that a book like this cannot be written only with the effort of an individual. Some larger force must have been at work.

Finally, when I started working on this book about 15 years ago, I had no prospect whatsoever as to how I could get this out. I knew that a mere adult school teacher had no way of publishing anything. But something inside me pushed me to start and I kept working on it. But during the past 15 years, the e-book industry developed and by the time I completed it, publishing through this venue has become common. I tried conventional publishers but did not get any favorable response. I expected it. So, I started working on publishing it as an e-book. I was a little unhappy about not having a hard copy but still content of being able to get it out at all. Then, as I was going through the process, I realized that I could have a hard copy sold by print-to-order. In addition, in this venue, I get to keep the copyright, to make revisions after getting published and to set the retail price to be reasonable. Suddenly, I realized that I was given everything I needed. Yet once again, I heard this voice saying, "Just concentrate on your duty, then what you need will come effortlessly to you." Of course, there is no guarantee, or even it is unlikely, that this book will reach the person who needs to read it. But I have a feeling that it is where it should be.

After all this, I now feel that my surface consciousness has become a sheer burden. It has been an agonizing journey and I could have achieved the same goal without any pain if I hadn't had this surface consciousness. At this point, I am fully willing to expunge my individual consciousness and surrender to this higher consciousness. I will spend my lifetime trying to figure out what its intention might be, so I can act accordingly. I cannot even imagine questioning its intentions.

Understanding its intentions is not easy, though. Often, I get paralyzed over a decision, even with total determination to obey its intention. For example, when I work at a corrupt organization, in which innocent people are hurting, should I stay or leave? If I stay, does it mean that I am courageously fighting for these people or that I just want to keep my paycheck? If I leave, does it mean that I am refusing to be part of the corruption or that I just want to take an easy way out of an awful situation? Eventually, its real intention will be revealed but until then, I just must endure. For this, unbelievable patience is required. But over time, with practice, I hope to become more adept at understanding its mind.

When I got to this stage, I began to think that what I perceived as my spiritual family should really be perceived as myself. This self is not contained within my physical existence but includes all that came before me and all that will come after me, just as a cell in my body when I was

five years old and a cell in my body now are both part of me. And I imagine that there is an evolutionary trend toward greater consciousness, and we are an interim product. I now call this greater consciousness “the transcendental Self.” I am just one of many cells, dutifully performing an assigned function. I wonder what my assigned duty might be. I feel as if I were a cell in an auditory organ programmed to gather all the information from the environment. Now, I must send it to the brain. Here comes the blind faith that this book will be picked up and sent there by another pre-programmed function, which I call a mini-miracle. Of course, not all the cells are working all the time. Once an auditory cell processed an incoming sound, it goes into rest until the next sound comes in. So, cells are activated and deactivated according to the need of the body. I feel this activation process is similar to be summoned by the transcendental Self. When summoned, we are to perform our duties diligently and when finished a particular assignment, we will be deactivated.

If we were all pre-programmed according to the needs of a larger metaphysical entity, we would not have free will. Things would happen as they should no matter what we intended, which we might perceive as fate. But I feel that we have one choice, which is whether or not we want to join such an entity. Once we chose to join, then the rest would be set. When we decide to commit to the well-being of the transcendental Self, we become full-fledged metaphysical engineers.

Then again, we may choose not to. And so we would become somewhat like cancer cells in our body, pushing our needs to the maximum and destroying the very body we live in at the end. The age of rising realism might be somewhat similar to a body with a widespread cancer. In such a state, the normal bodily function would be disrupted, and no matter what remaining healthy cells did, there would be no use because they could not take over the function of the cells that have succumbed to cancer. Even so, each remaining cell still would have to keep performing its assigned duty.

At this moment, I am feeling the emotion of the Goldberg Variations—infinately calm, deep contemplation. When I am there, I am not sure if I am thinking or feeling—just deep contemplation. There, I meet my intelligence, which perceives this state in Aristotle’s First Mover. There, my emotion perceives God in a very close manner to the traditional personified god. But my intelligence perceives God in more like a general theory of metaphysics, which may be similar to my interpretation of Kant’s subjectivity, as a counterpart to the general theory of physics. I wonder how God might be when my emotion and intelligence develop one image of God. The synthesis is yet to come.

Here, I realize that I no longer have the burden of impossible choice between God and parents, nor do I have to cling to the notion of the Judgment Day. It is a huge relief, and all agonies bubbling in me started melting away. Of course, it is not an overnight change. I still struggle. After I released this book, years of neglect for my physical security finally caught up with me and I can no longer financially support myself here. So, I am due back home. There, I notice that three layers of my emotion are reacting differently. My surface consciousness feels self-pity and resentment toward the society which has abandoned me. At the universal grief layer, where I hear Bach's St. Matthew Passion, my emotion interprets it as the day of crucifixion. I am still sad but feel deeply grateful to God that mine has come in such a moderate form as voluntary exile. At the deepest layer, where I hear Bach's Goldberg Variations, my emotion interprets it as the move from Quodlibet to Aria da Capo, completing the full circle in deep contemplation. There, my intelligence interprets it as the deactivation of a cell. In either case, there is no turmoil. I feel calm. Right now, all three emotions coexist. Then, I realize that by the presence of the deeper emotions, I can at least control the emotional turmoil of my surface consciousness. Overtime, I hope that the surface emotion will gradually disappear and the deepest emotion will become predominant.

ADDENDUM

FINAL JOURNEY FROM QUODLIBET TO ARIA DA CAPO

A little over a year has passed since I moved back to my hometown. This was supposed to be the physical representation of my final journey from Quodlibet to Aria da Capo. So, I was hoping that I would be arriving at a perfectly serene emotional place, but my expectation was completely betrayed. The past one year turned out to be the year of turmoil. In this stormy weather, I searched hard for my Aria da Capo.

It was my deepest emotion that arrived there first. It was almost instant. The symbolic coincidences that I came back to live in the house I had lived as a child and that I had worked abroad for exactly thirty years—the exact number of the Goldberg variations—were enough for it to hear a heavenly declaration that I have gone through the entire cycle and arrived at Aria da Capo. The feeling is pure serenity—perhaps closest to what is expressed in Aria da Capo. In this serenity, I begin to contemplate if there is a world beyond Goldberg.

It was my intelligence that arrived there next. It took much longer for it to get there. Initially, I was tormented by what I was seeing around the world: rising tension among nations, terrorist attacks all over the world, and visible signs of democratic decay in Europe and the U.S. To me, it was urgent to train the first hundred metaphysical engineers to begin dealing with the problems effectively. So, I desperately made several attempts. I approached a couple of academic institutions here, pleading to establish the field of metaphysical engineering. Of course, I received a deadly cold reception. So, I tried to do what I could do by myself. I prepared the Japanese version of my first book. Since it mainly concerns the democratic transition of the 19th century, which produced extremely violent nations, I thought that letting Japanese policy-makers know what was at stake at a profound level was important as they must now face China's democratic transition. Chances of gaining any attention were slim to none, but I felt that it was my duty to do everything possible to prevent this global disaster. I planned to self-publish it as an e-book. To do so, I needed to get the permission from the publisher of the English version. I made a request but it was rejected.

It was this moment that I came to realize that my job was done. Even though I was used to getting no help in my endeavor, I was not prepared to get my effort actively blocked. I expected to be told: "No problem. Good luck with it," not "We cannot grant your request unless you have a Japanese publisher." I still made several attempts, including consulting with a copy-right lawyer and finding a publisher, but nothing worked. I finally had absolutely nothing on my to-do list. I remember the days when knocking one item off from the list generated two or three new things to do. Back then, the harder I worked, the busier I got. But now, my efforts are blocked and my attempt to counter this antagonistic force cannot generate any momentum whatsoever. I still want to continue. I want to train the first hundred metaphysical engineers. I want to do everything I can to prevent a global disaster. But the situation indicated that I was now trying to do the job way beyond what I was equipped to do. I must now take myself out of this futile process, which devours enormous energy, producing no results. There is nothing more for me to contribute as eager as I am, except to wait and see if I get summoned back. With this realization, my intelligence sank deep into resignation. Now I have personally experienced the deactivation process I described earlier.

Finally, what gave me the most trouble was my surface consciousness. It was always obvious to me that you could not expect protection from the system you spoke up against. I kept pleading, but naturally society never let me in a position where I could have any influence. So, I kept working alone on this book. I didn't expect it to be

read by anyone. However, at this surface level, I was hoping that in the end, my effort would bear fruit, believing, so to speak, “Build it; then, they shall come.” Writing it was not an easy task. I had to fight a two-front war for the survival of humanity and myself. Fortunately, I had a safety net in the individual front, which was the financial support from my family. It made a huge difference, but I tried not to rely on it so far as it was possible. So the last three years, I had to prepare for the possible loss of employment at the end of each school year. This took a toll. By the time I completed the book, I felt completely spent, but I was still hoping for the moment of redemption. Well, it never came. After I had made “so many sacrifices,” one time I needed help, the society turned its back on me. I was not asking for a medal, but I begged to let me stay and continue working. All I got was a diplomatic greeting: “Well, why don’t you come back in a few years.” Even so, if my work had been properly taken over, I would have been relieved. So, I used all the few remaining connections to the center of the society to entrust the next work—dissemination. However, here again, I was greeted with indifference. Before self-publishing this book, one publisher offered to publish it at the price five times more than the current one on condition that I paid all the printing costs. This was the best help I got. I felt as if I were told by the police, when I called in to report a crime, that they would send policemen if I paid all the costs to do so. Those at the center of society bear responsibility to maintain the welfare of entire society, but in the height of realism, they have no such sense of duty. I felt as if all my efforts ended in vain. Thus, I left.

At home, my surface consciousness was fatigued, hurt and bitter. It would have been wise, at this point, to concentrate on rehabilitation, to take advantage of the complete disconnection of the two environments. My family’s safety net allowed me to take a year or so off, so I wasn’t rushed to get a full-time job. Meanwhile, my intelligence wanted to make sure that the change of environment was not meant to be the end but the beginning of the next duty, so it pushed me to keep trying with the mentality: “A success may come after 999 failures.” I should keep trying without expecting any results in order not to miss this one-in-a-million possibility. It turned out that my surface consciousness was unable to take this stoic attitude any more. After I approached any institutions or organizations, during the long wait before I got any response, I kept hoping that this might be it. When it turned out to be a false alarm, I could not help feeling disappointed. The repetition of this cycle took an emotional toll on me. This fatigued state angered my surface emotion against those at the center of society. Then to distract myself from this anger, I began a new cycle, which put me into a vicious cycle of fatigue and anger. By the end of the first year, I did not feel rested at all, but I was reluctant to keep

depending on my family's safety net. So, I applied for another part-time job to increase my income to a half-way decent level.

I applied for a job as a patent application translator. During the interview, I found out that it was a small company, desperately trying to expand in order to survive in a harsh business world. The job was part-time but it came with the responsibility of a full-time employee. My surface consciousness was screaming "NO!" to this, but my intelligence had an iron rule that it was not for me to decide; that is, if it was meant for me, it would come to me, which I could not turn down. At the back of my mind, I was thinking about the time I began working at the adult school, which was just for a means to support myself but turned out to be the door opening for my book project. This just might be another opportunity like that. They seemed ready to offer me the position. I knew the drill but my surface consciousness was miserable.

Then it happened. I told my aunt about this. She was staunchly against taking the job. She said: "You are so fortunate that you don't have to take anything available just to support yourself, thanks to your parents. Take advantage of it. Take your time and build your next career slowly. Just no need to rush!" Heaven chooses its messenger. I would have been suspicious if this had come from anyone else. But she had a similar experience as a young woman—coming back from the U.S. to her parents. Her mother did not allow her to stay home so she had to support herself immediately. So, I figured that she would disapprove of what I was doing. Receiving the message from her resonated in me and I finally realized that I could now say no to what I didn't want to do. The timing was also right since my intelligence had just realized that my responsibility had ended. I had to do whatever it takes to complete my responsibility, but now that I have accomplished that, I no longer have to make such sacrifice. I still need to be thrifty, not guzzling negative-entropy from society, but I no longer will have to keep providing my negative-entropy to the point where my own well-being is at risk. This realization liberated my surface consciousness, which ended the vicious cycle of fatigue and anger.

At this point, I thought that all the problems were solved. It was five days before the trip to which my aunt invited me, so it felt as if it were the celebration for my completion of the long assignment. Then, the next day, my mother was hospitalized and three days later, she died. I tried to make sense of it. The immediate lesson was that there was no celebration for idealists. Celebration is entropy; the energy spent on it can be used for more constructive purposes. Looking back, this was taught repeatedly. Circumstances did not allow me to attend the Ph. D. convocation. A dozen copies of my first book were also unceremoniously delivered to my door in a cardboard box.

With her life, she also taught me deeper lessons. She and I followed two completely different life paths. Her life was all about pursuing her individual ambitions, while mine was the polar opposite. She believed that individuals had the right to pursue their own dreams, putting their needs ahead of others. I, on the other hand, insisted that it was that kind of attitude that collectively caused such macro problems as the rise of populism and terrorism, which we have just begun to see in the world. In the world like this, those who have been excluded from the “winners circle” are bound to become the anti-status quo force, destabilizing society. Once the process begins, there will be no winner. In other words, her way of living would generate and release so much entropy into the system, eventually destroying it. For me, therefore, she had no place in this idealist project.

In the reflection after her death, I realized that my relationship with her was not one of irreconcilable opposites. In the life course, I have been assigned to a much bigger job, but for that I have been given much more. I realized that we were all born with assigned jobs and just enough negative entropy to complete them. So, it would be wrong both for people born with less fortune to envy those who are blessed with more, and for people born with more burden to accuse those who take less social responsibilities. The only problem occurs when someone privatized negative entropy.

In addition, I have learned that there are complexities to it that goes further than quantity. Throughout my battle, I absorbed as much entropy that people generated as possible but in the end, I became totally saturated. That was the time I came home and began to live with her. During the year I spent with her, I came to see her as the symbol of what I was fighting against. I threw at her all the resentment I had internalized over the decades. It was true that her wanting a family and a career at the same time caused her to neglect her family obligations, which was rare back then. I was the absorber of her entropy then for a long time. Then, I left and seldom interacted with her. After thirty years, when I came back, we had exchanged our positions. From this, I learned that entropy was not about settling the account here and now.

Furthermore, a slew of her former students came to pay her final respect. They told me many things about my mother that I didn't know. Her only remaining student came with her mother. She was crying hard. They told me that the relationship was much more than the one between a piano teacher and a student. Earlier, she was having a problem and apparently only my mother could get true to her. The mother of another student told me that she was not just another teacher to give technical lessons but gave him life's important lessons, training him to finish what he started. Her colleague also came and she told me, crying, that my

mother was her first music teacher, who inspired her to become a music teacher herself. From this, I learned that entropy was not about settling the account directly between you and me, either. Earlier, I may have been the absorber of the entropy generated by my mother, who became a music teacher—she once told me—because she wanted to be called *sensei* (roughly, a master). Meanwhile, she was providing negative entropy to these students of hers.

With her life, she has shown me a system much more complex than I had in mind. The system consists of a highly complicated network of designated assignments and entropy distributions, which is impossible for any individual to understand. Decisions have to be made by the central brain, or what we might have been traditionally calling God, who can oversee the system in its entirety. When summoned, we are on duty, but we are not expected to work all the time. While on reserve, we are to live as individual-beings. Now then, I cannot even identify who are privatizing negative entropy. In retrospect, my mother lived pursuing her dreams throughout her life, but at the end, she bore a very important responsibility, which was to guide me through the last mile to *Aria da Capo*.

There have been many people who I thought let me down. But I don't think that everyone was a sell-out to realism as I accused. For many of them, helping me was not simply their assigned task. Someday, they may be summoned to do their jobs and obliged dutifully. It is not for me to decide what they should be doing and to judge them. At the other end, there have been many people that I don't know who helped me without any reciprocity from me. Without such help, this book would not have come out. I now recall that, during the final conversation I had with her, she told me: "Those who perform their duties to a tee often can't forgive, but I do things somewhat irresponsibly, so I can forgive." Forgiving is one of the crucial qualities we must have in order to work in this complex system.

I think about the final moment before I left the U.S. I was hurt and bitter that no one helped me to stay and fight after all these years of dedication on my part. But now I know that it was simply because I was due home to my *Aria da Capo*. Once I realize that, I can forgive them, or actually there is no one to forgive. Then, I thought about my students that I left behind. There was this sense of guilt I had suppressed that deep down kept bothering me. They may have felt abandoned. They may have resented that I neglected my duty to protect them. But now I know that it was not my assignment, either. Even if I had stayed, I could not have been any help to them at all. Having realized that, along with the resentment I was feeling, this sense of guilt also subsided. I now finally took my burden off my shoulders. I will not be able to save millions of lives, but I am not meant to be a hero to save the world. Idealism is not about heroism, as

Beethoven rejected in his Ninth symphony, but it is about dutifully completing the assignment that is too small to make any effect on the system as a whole. Now I feel that I did my part and I no longer burn myself with guilt, nor do I accuse others for not doing their part. Thus, finally, my surface consciousness has found its own Aria da Capo.

There, I heard my mother's Quodlibet, through which she tells me: "Welcome back. It has been so long, and you are finally back to me. Sorry, I have to go now. I would have stayed longer if you had understood it sooner." While listening to her Quodlibet, I once again appreciate one of Bach's messages: large is small. The Goldberg Variations can be interpreted as about the grand ten cycles of civilization, in which each cycle of three variations represents the cycle of one civilization, but at the same time, it could be about one life ever so personal. Indeed, every individual plays his or her Goldberg with life. I finally got to listen to my mother's, as I keep playing mine. I still have Aria da Capo to play, and I feel that she is playing hers alongside.

What appears in front of my eyes in my Aria da Capo was Aristotle's great metaphysical circuit, which begins and ends with the First Mover. What connects the two ends is a chain of infinite number of idealists. I have found myself in one of the links of this chain. Before me, there have been an infinite number of people who did their parts and passed them onto the next person. After me, there will be an infinite number of people who will take it from me and pass it onto the next person. Here, I contemplate on the First Mover, as well as the task I was assigned, those who came before me and connected the chain to me, and those who will continue connecting the chain until eventually it reaches the First Mover. Some are linked physically, so we can directly communicate, but other connections are as if achieved through chemical transmission. Just as I had to release my book in the sea of books on the internet, hoping that it will reach to the person on the next link, such transmission must be accomplished through blind faith.

As I contemplate on Aristotle's metaphysical circuit, I begin to think that it will be wonderful if I can actually visualize the circuit, instead of imagining abstract chains. Through imagination only, there is only so much I can trace back in the chain. To do so, I wonder, Japanese *renga* or *haikai* type of short poems might be useful. They are a series of *haiku*-like short poems, written by multiple poets, each of which consists of either 5-7-5, or 7-7 syllables. Each poet builds on the previous poems and leaves theirs to the next poets. The form seems to fit to follow the circuit. It also has additional potential. Focusing on individual *haiku*, its purpose is to express emotions that each of the four seasons evokes. It is an art form in which words depict images to convey the emotion that these images bring

up. So, it can be considered as an alternative to paintings. There are two advantages in it. It uses the communication medium of intelligence, which is words, so it can be shared between emotion and intelligence more easily. In other words, in *haiku*, poets do not say “I feel desolated,” which can be understood intelligently, but not emotionally. Poets, instead, would say something like: “walking alone in the silence of cold winter night,” which evokes a particular emotion in ways intelligence will also understand. Compared to paintings, it is also economical. First, *haikus* can be recorded in notebooks, instead of having to be hung on the wall. Second, a *haiku* uses season terms, in which certain words are assigned to a particular season, such as cherry blossoms for spring. These words themselves are to evoke a particular emotion shared among poets and readers. This is useful for a short poem, because it can economize the expression. Instead of giving wordy explanations to express a certain emotion, just one season term takes us half way to the destination.

Further, according to Kyoshi Takahama, who was a master *haiku* poet, subject and object also intersect in *haiku*:

I dare to insist on *kyakkan shasei* (objective portrayal).
It is because in *haiku* poets must place an emphasis on
objectivity. In *haiku*, the art of *kyakkan shasei* must be
endlessly pursued.

*

While diligently practicing the art of *kyakkan shasei*,
subjectivity begins to permeate out through this objective
portrayal. The poet cannot hide his subjectivity no matter
how hard he may try. As he becomes more adept at
objective portrayal, his subjectivity becomes more
prominent.

When a poet becomes proficient in objective portrayal,
even if he tries, he cannot hide his personality, and without
his realizing it, its keen edge will break through the bag
called objective portrayal.⁴⁸

Kyoshi insists that a *haiku* poet, as well as a painter, passes the phases from objectivity to subjectivity, and back to objectivity while mastering his art, suggesting the existence of its own metaphysical circuit:

Take, for example, painting. Its mastering process
begins with studying objects—their shapes and colors. As

⁴⁸ Kyoshi Takahama, *Haiku e no michi*, Tokyo: Iwanami Bunko, 1997, p. 33.

an apprentice becomes adept at describing their shapes and colors, the distance between the painter and objects gradually becomes closer, and he will learn to depict the shapes and colors in such a way as they feel right to him. Even the same model will look in ten different ways as ten painters paint it, naturally showing the true nature of the painter in the painting. For example, some may be portrayed in the correct shape, while others distorted, or some with soft lines, while others powerful. Some may be dark and yet others may be a little shiny. These characteristics naturally come closer to the painter while he portrays the object in front of him, and his work will show himself simultaneously as well as the object. When the practice progresses more, his works will become the ones that can be created only by him, and even his purely objective portrayal will show in it the personality of the painter. Once that happens, the shadow of subjectivity becomes hidden again and his works once again begin to bear the nature of *kyakkan shasei*. There are no doubt periods in which subjectivity is celebrated; however, once these periods have passed, the painter will come back to objectivity.⁴⁹

Utilizing these qualities, I wonder if it is possible to create a series of *haiku*-like short poems by multiple poets, depicting Aristotle's metaphysical circuit. The four seasons might be projected onto Vico's cycles, in which spring would be assigned to the rise of idealism, summer to the height of idealism, autumn to the rise of military authority, and winter to the age of democratic decay back to barbarism. Of course, such an attempt immediately runs into a difficulty. Season terms express general emotions that we feel in each season. Cherry blossoms, for example, evoke a certain tender feeling, which might also be felt in the rise of idealism, among almost all Japanese people. However, such a feeling will not be transported outside the national border. On that, I would like to believe that a poet with a caliber of Bach just might be able to compile the season terms for this purpose to which the principle of "large is small" can be applied; that is, the terms that evoke the same feeling in each one of us, no matter where we are, and also can be felt globally. If successful, Aristotle's metaphysical circuit would become visible as concrete evidence for the existence of our community, which would be incredibly inspiring for us.

⁴⁹ Ibid., pp. 35–36.

Such a person could also explore the above subjectivity-objectivity circuit to find something insightful. Let us keep hoping for his or her arrival.

A little over a year has passed since my mother passed away. Meanwhile, my brother and father also passed away, and I had no time to work on this project due to a series of ceremonies and other duties. I also stopped playing the Goldberg Variations. After my father was gone, I picked it up where I had left off. With it, my desire to play also came back. This time, however, the way I play is different. As my emotion wishes, I repeatedly play the Quodlibet. This time, in it, I no longer hear the loud bells of celebration that I heard three years ago. In deserted ruins, I kept looking for someone. After I kept looking for three years, I got exhausted and sank down to the ground. There, I once again heard the Quodlibet. This time, however, I hear the sound of a sad parting: “It’s hard to part but it’s time to leave. Get up and start walking.” Even so, when I approach toward the end of the piece, I am pulled down by the low D, which is the first note of the Quodlibet, and start playing it from the beginning. It is as if my emotion, reluctant to leave, pulled me back, saying, “If we wait a little longer, someone may come along.” Even so, after I play it many times, at one moment toward the end, I hear the heavenly high G—the first note of Aria da Capo, prompting me to move to the aria. This seems to parallel to my life. I have been passing the Quodlibet of my life for three years, and now it is time for me to move to Aria da Capo. In my reluctance to leave, I am waiting for the moment in which I hear the heavenly G.

My deepest emotion has already arrived there, contemplating if there is a world beyond the Goldberg. Here, suddenly, I realize that at the end, Aria da Capo becomes the first Aria, prompting the second cycle. In this way, the Goldberg will continue eternally with Aria da Capo becoming Aria of the next cycle.

The heavenly G entered my life ever so subtly and gently. It came out of one regret I had. Toward the end of his life, my father seemed to be doing nothing significant. Every day, he got up, cooked for us bean sprouts with a wiener, read the newspaper, watched television, ate dinner I cooked with a glass of *shochu* liquor, and went to bed. All he talked about was how he could not sleep at night and how much he walked the day. I didn’t find any significance in this life. After having dealt with such a big project as securing the survival of humanity, it looked so trivial that I even wondered if it was worth living like this. Once I lost him, however, I dearly missed this routine with him, especially my favorite moments in which we greeted each other first thing in the morning with gentle “Good morning,” and he had the second supper with me when I came back from work so I didn’t have to eat alone. How can I miss so dearly what I

considered so insignificant? The heavenly G came as the answer to this question. It taught me that this small cycle of the day is the foundation of everything and, therefore, Aria da Capo itself. At the end of my journey, I was expecting to make some grand discovery, but the lesson was so commonsensical as is often said: The blue bird is right at home. This, however, is perhaps something almost everyone knows but almost no one truly understands, which denotes the difference between Aria and Aria da Capo. What is so simple, we can understand only after the long journey through the thirty variations. With this realization, I now begin to play my Aria da Capo. Every day, I get up, feed my cat, eat my breakfast, take a walk, tend my father's garden, buy oranges at the little fruit stand where my father used to shop, play Goldberg, sometimes go to work, cook dinner, and go to bed. As I go through the cycles, I feel serene, just as I feel serene playing Aria da Capo.

In repeating these daily cycles, I can also see a larger cycle of seasons in motion when I admire the blossoms of plums, cherries, azaleas, peonies, hydrangeas, fragrant olives, and camellias that come and go in each season. There, I can see that a linear progress consists of infinite cycles.

I can afford to do this, of course, because of the financial arrangement that my parents have left for me. I wonder if I have reached this state of mind only because I no longer have to be concerned too much with my physical survival, or there is no coincidence in the fact that I have arrived here both physically and mentally at the same time. Either way, I will keep playing my Aria da Capo, and I feel that someday I may find that Aria da Capo has become the first Aria of the second cycle.

It's been over two years since I last wrote. I hardly think about the days I tried to leave behind. But, just when I started to look forward, an incident occurred to make me reflect on my journey again. Long after I lost the permanent residency, I found out that I could still owe them taxes. The minute I found that out, all the bitter feelings that I thought were gone came back with vengeance: Now you won't let me in even if I ask, but you are telling me to pay taxes? What injustice is this? Kick me when I am down! As I had moved through a difficult journey, facing rejections from almost everyone I had pleaded for help, I had learned to forget these hard experiences because I could not forgive. But this incidence taught me: What you forget, you will remember. And when it comes back, so does the emotion you were feeling back then. So, forgetting is not a substitute for forgiving. I now must learn to forgive.

I thought that my surface emotion had already learned to forgive, but then I realized that it was my intelligence, not surface emotion, that had

learned it. My surface emotion was still struggling. To learn to forgive, I was sent out of the universal idealist's realm I had just reached, and back to a micro pyramid on the border between the fields of naïve idealists and realists, as shown in Illustration 5-1. There is a gate similar to the one I passed when I set out for my journey to the realm of universal idealists, mentioned earlier in this chapter. There are so many gates like this on the border and many naïve idealists come across them every day. Our job is to persuade them to turn back to the naïve idealists' realm and guide those who came back from the realists' realm safely back to where they should be. I feel as if I were a sentry watching the gate. The one I am assigned to is located in a remote place and there are hardly any people reaching here. I feel I have been given a suitable position at this micro stage because I do not possess an ability to reach out to a large number of people at a macro stage. Here I am to work on one person at a time. I have had an opportunity to tutor two high school students and I try to keep them away from the gate. This is, however, also a frustrating job at times. I can tell them what will happen if they enter the realist realm, but I cannot force them to turn back. I already have one student who entered there, led by her mother.

At a cram school I work, there is also a special summer session called *Onkochishin* —*Visit old, learn new*—which encourages students to think, instead of memorizing what they are taught. This program looked like a heavenly match to my project. I heard that this program had a long history and I got to participate in it, giving a lecture so far twice about Vico's cycle. There have been only several students who attended but they seemed to get interested. Unfortunately, this has become something like a pet project of several senior lecturers and their dilettantes. So, I decided I wanted to revitalize it to be a school-wide project. Once a solid framework is established, I want to get students to become familiar with Vico's cycle and to think about the key concepts of democracy, namely, sovereignty, rights and duties, and freedom and equality. So, I volunteered to be an organizer.

As I am settling down, I began to develop a mental image. I arrived at my assigned gate. Initially, my surface emotion was not happy to be a castaway in such a deserted place. It looks like a terrain I saw in the movie *Wuthering Heights*—a dark, cold and dreary rocky terrain. There is a rusty gate which I am to watch. Well, now that I am here, let's make this place as comfortable as I can. First, let's remove these rocks and then build a nice little cottage. There, I have come to think that forgetting is to avoid these rocks in making a cottage, while forgiving is to remove them. My surface emotion finally seems to see the difference. Having to keep avoiding them, I won't be able to build a truly comfortable cottage. In real life, this means to build up the summer program at the cram school. I do

not have to build my cottage from scratch. Rather, it is already there. But it is old and damaged, and needs a big renovation. Once on track, I will be able to live a peaceful sentry life by giving a lecture once a year there.

Also, I got some extra time at hand so I decided to take piano lessons. I have been practicing the Goldberg Variations by myself for over a decade both on a keyboard and with my life. There is a gap between the two and I want to connect them. My life experience came up with the interpretation, which I want to express on a keyboard. But I lack playing skills to realize it. It was as if I started to dig a tunnel from both ends but hadn't been able to connect them yet.

This prompted me to reflect on Goldberg, which I hadn't done for a while. Indeed, I had lost track on my life journey in Goldberg. I thought I may be on the second Cycle but it wasn't quite clear. Then, my mental image coincided with it. Two years ago, while I was repeatedly playing Quodlibet, I was pulled by high G, the first note of Aria da Capo, and started to walk. I traveled through a dreary rocky terrain for several years, which I now realize was the travel from Quodlibet to Aria da Capo. It was not the second Cycle at all. I was walking through the realist terrain, from the universal idealist realm back to the gate in the naïve idealist realm for my new assignment.

As I reflected on it, I made an important discovery. I once compared Goldberg with Beethoven's Ode to Joy, which expresses the joy of belonging to the idealist community. Hundreds, sometimes thousands of people join the chorus to praise idealism. However, my reaction is: We idealists are scattered around different times and spaces and cannot get together like this. Listening to such a chorus makes me feel lonely. On the other hand, Bach's principle of "large is small" assures the existence of our community. As noted earlier, there are three levels in the cycle of Goldberg. One is that of keyboard performance, the second is that of life, and the third is that of civilization. At the third level, a civilization rises and falls in one cycle and the next one rises with a broader metaphysical range before it falls and another one rises. After repeating this cycle ten times, humanity will finally arrive at Aria da Capo, achieving a permanent idealist community. So, in Goldberg, all of us in the idealist community can be together beyond time and space. Even physically isolated, we are never alone in Goldberg.

So, now I am going through Aria da Capo in my life, trying to establish a life as a sentry. At this moment, Dante, who sent me off to the journey at the gate, once again entered my life. My parents had protected and guided me through the physical world and left. It was as though Virgil left Dante, telling him to wait for Beatrice. Now, I feel I am to wait for my Beatrice to guide me through the spiritual world. So, I shall now wait for

her as I tend occasional naïve-idealist visitors. Then, I suddenly see a great ocean before me, and I am standing on pure white sands on the beach. The whiteness of the sands makes me feel as if all the emotions merged there. I feel safe standing there as if I were surrounded by a genuinely serene emotion, cut off from all the problems of the world outside. There, I shall lead a quiet life. In the morning, I shall walk on the beach, and in the evening, I shall look up the bright orange sky in sunset. One day, Beatrice will appear there, taking me to the world above this one. Then, I hear the final ascending motifs of *Aria da Capo*, paralleling to the divine stairway through which Beatrice will lead me up to the next world. Following Beatrice, at the final moment, I will look back and see the entire pyramid with the path I have taken, represented in the extremely reflective last two measures of *Aria da Capo*.

Things seemed to be settling down. Then, a world-wide pandemic broke out. I feel as if I were witnessing the arrival of Vico's Barbarism. In a healthy idealist society, competent leaders would suspend activities in dangerous industries and relocate the labor force to the fields needed to handle the crisis. They would also avoid any industrial structure vulnerable in times of crisis by limiting such non-essential industries as entertainment and tourism. But our society does not have a leader capable of doing so. If incompetent leaders tried this, a tragedy experienced in the communist experiment would ensue. Further, the democratic principles of liberty and right prove to be the obstacle. The freedom to choose occupation prevents the government from influencing the industrial structure, nor forcing workers to shift to another industry. As a result, in this crisis, the only thing the government can do is to ask the food industry to suspend their business voluntarily. In addition, a strong sense of entitlement that people can do anything as they wish worsens the situation. Freedom is a cruel thing. After all, the perfect freedom is none other than Barbarism, where the strong devour the weak. It is you who chose to have this occupation, so you should be ready to accept anything that might come as a result. If you don't like the idea, you must relinquish your freedom and accept whatever assignment the government gives you. But the public opinion demands compensation if the government wants to suspend the food industry.

The democratic principle is misinterpreted here. People seem to believe that the job of their government is to provide its people with the environment in which people can safely do whatever they want to do. In other words, people are customers, who are always right. However, in democratic society, people are the decision-makers who hold sovereignty and the government merely represents their will. Therefore, people have duty to cultivate reliable and competent leaders to run the government. Whether or not they vote for current leaders, they must support the

decision made by the government all the way as made by themselves. If a decision is truly harmful to society, leaders must be replaced immediately. If not, however, their performances need to be judged during regular elections.

Here, is it possible for a society without universal idealist leaders to cultivate such competent leaders? Also, in this society, it seems that a realist trend of the pursuit of individual profit already starts to rise, so it will be difficult to establish an idealist political system. Politicians seem to act based on the interest of their own or their supporters, rather than that of the people, which causes people to lose faith in politics. Politicians ask people to refrain from many activities, while insisting on hosting the Olympics, or ending the session in the Diet just to avoid a persecution for their misbehavior. Minority parties criticize everything the government does so it will lose its credibility; as a result, the credibility of the system itself is being lost. The media also seems to be interested in improving their viewer rates or magazine sales, rather than protecting the interest of society. This is impairing the effectiveness of governmental actions or policies. While it hesitates to issue the emergency decree, the media reports on hospitals awash with patients. But once it issues the decree, the next day, reporters focus on struggling restaurants. Such behavior makes the government look incompetent no matter what it does. Also, if bureaucrats have banquets during the emergency period, the media victoriously reports on it, which discredits the national leadership. Then, people starts to have their own banquets. The media should refrain from reporting on things that will reduce the effectiveness of the emergency decree. After things settle down, such misbehavior should be publicly scrutinized thoroughly to hold them responsible. In this society, people will just criticize each other and no one will hold oneself responsible. A fundamental democratic principle of check and balance will eventually corrupt to take this form.

These phenomena are still limited in scope in this society. Most people are dutifully playing their roles. However, repeating crises will weaken the foundation of society with the government losing its ability to protect its people. Then, this kind of phenomenon will spread with weaker ones brought down first and our civilization will come to the end. Here, I find myself as a by-stander, coldly observing the situation. I once had an image of myself trying to prevent a dam from collapsing. Standing in front of the dam wall, I try to fill every breach to stop the water. I cry out for help but people are just standing at the top of the dam, watching what I do. When I notice, however, our positions have been reversed. This time, I am standing at the top of the dam, watching people struggling down there. I say to them; "You made the bed, now you lie in it." (Of course, when the dam collapses, no one will be safe.)

This troubles me. As an idealist, I cannot be indifferent to people in society. Then I reflected on my attitude to people. Initially, they were the source of my strength. Whenever I encountered difficulties, I thought of people whose lives were sacrificed in war. My suffering seemed nothing compared to theirs. But overtime, I lost faith in them. They must have been the same as all the others, but they were just unlucky. I then found the community of idealists as the source of my strength. When I thought about those who made a great sacrifice while performing their duties, my suffering seemed nothing. I see them as my parents. I also see people who will be killed by democracy in a century or two, just like Socrates was a few millenniums ago, as my children. Then, people have become the ones who will hurt my children. Hate and anger are piling up in me against them. As a result, I have been caught in a difficult situation in which I must hate those whom I am supposed to protect.

But eventually, I passed through this stage and then entered into the state of indifference I might call apathy. Hate and anger had disappeared, but at the same time, I no longer had strong feelings toward people. There is no empathy in me to people who are suffering. I also lost drive to continue on. I wondered if I finally had burnt out.

It was at that time when I received a call from Beatriz. As I had imagined, I followed her and made the ascension to the world beyond. There, everything had disappeared. There, nothing existed but God and me. No external motivation was necessary. Such a thing did not exist. I just tried to listen to the voice of God. I wanted to know his intentions and execute them loyally. But it is not easy to listen to and understand God's will. I cannot figure out which intention is his and which is mine. Is what I am doing now according to his will or mine? How can I figure this out? There is no shortcut in this endeavor. The only thing I can do to get closer is to keep trying day after day.

I once had a similar experience to this. It was when I studied Bach in the field of music. His will was absolute. There was no room for doubt. I just tried hard to understand what he had intended in each passage. Of course, it was like trying to walk to the moon. Keep walking and walking, I would never get there. Even so, everyday, I would be one step closer to his absolute will. I remember the joy I was feeling then. One step at a time, I was closer to Bach. That was a real feeling, even though I was trying something impossible. The attempt to understand God's will must be similar to this process.

In order to feel God, it seems that images, not words, are necessary. Christians can feel their God through the work of Michelangelo and Rafael. Buddhists can feel Buddha's mercy by visiting Buddhist temples. I envy them. Here, the greatness of Bach once again strikes me. While St.

Matthew Passion was composed within the framework of Christianity, the Goldberg Variations was a secular piece. Thanks to that, idealists beyond Christians can feel God. Thank goodness to Bach, even after I decided to reject Christianity, I kept my special feeling to the Goldberg.

Even at this primary stage, there are some things that I begin to see. My duty was to plant a seed. This seed will germinate when the time is right. I cannot accelerate the process. I don't know if it will be decades or centuries later, but when the time comes, it will germinate. At that moment, I realized what I had been doing was trying so hard in vain to make it bloom while I am alive. When I was sent to the micro pyramid, I thought I just might manage to make it grow since this was a small system, but I was wrong. It is not possible to grow a trunk from a leaf. A leaf can start playing its role only after the trunk has grown and send nutrition to its leaves.

This society on its decline is like an aircraft which has already lost its wings, so the immediate priority must be placed on getting the pilot to land it as safely as possible. It is not the time to investigate the causes and propose the design revision. So, the field of metaphysical engineering is now experiencing the fall or winter season, which is not suitable for germination. The seed must wait through long winter until spring comes. Indeed, my projects which I thought had finally kicked off at the cram school instantly collapsed. I proposed that we launch a campaign to reach out to a wider audience at work. The school told me that they would make an announcement during the spring workshop. It was so encouraging. I also found a piano teacher for my Goldberg project. I received a warm response. It seemed as if things finally started to move forward. Encouraged by this development, I contacted a publishing company I found on TV which presented the company as a challenger to the existing system, hoping to get some assistance regarding the publication of a Japanese version of my first book. They may not agree to publish it, but they may help me to negotiate on the lease agreement. Within a week, however, the copy I submitted was sent back with a two-line rejection note. From there, everything disintegrated rapidly. In the workshop, there was no announcement. I got no explanation for it. I didn't feel like asking, either. The pianist also stopped writing me back after several exchanges once I started to explain my project in more detail.

In this way, to keep struggling here brings no benefit to society. Worse still, it could be even harmful. While trying in vain to make the impossible possible, we may feel frustration against people who refuse to help us. It may pile up to be hate and anger, which, in the worst case, may be released into society. When I was watching the news on this infectious disease, I learned about a symptom called a cytokine storm, in which one's

immune response gets uncontrollable and attacks one's own healthy cells. I feel as if it were about my situation where the right motivation for establishing an idealist world can, if excessive, bring a result opposite to what I try to achieve.

When I realized it, an image sprung up in me. There, I am one cell belonging to a larger organ. This organ exists much longer than my lifetime, and each cell in it will be given nutrition to perform the assigned duty. My assignment is just small part of the whole, to be performed for only a very limited duration. There, by the will of God, following the benefit of the whole, which individuals cannot perceive, a body achieves homeostasis, where individual cells will not be forced to do something against their wills. Everything necessary for each one of us to perform assigned duty will be provided, but if we try something other than our duties, it will fail, just like a cell in an ear trying to speak. Here, I am repeating myself. I already mentioned this earlier in this chapter, when I was referring to transcendental Self. This seems to be the same process in which students, as in a typical learning process, first understand the concept by reading textbooks and then acquire real skills to show expected results in laboratories.

Then, I once again heard the voice of Beatriz: "Follow this path and get close to God. Then, the love of God will fill your heart and through his love, you will be able to love people once again."

So I tried to feel the love of God. There, what I found out was extraordinary. I found his love in my surface consciousness, which I thought was nothing but a burden needed to be disciplined or even vanished. God of all mighty would have no problem at all in creating the new entity in which we were to play the same role as the cells in our bodies. Just as these cells have no independent consciousness, God would be able to create the entity all mechanically, removing our surface consciousness. However, he must have wanted us to feel the joy of life. That must be the reason why he has given it to us and has been watching us ever so patiently. Surface consciousness, therefore, is the gift from God, which we are supposed to nurture just like parents rear their children. Now, it is our job to prove that we deserve to keep it. When I realized that, for the first time, I felt affection to my surface consciousness. I could say to it, patting it on the shoulder: "It has been a tough road but you have done a good job in accomplishing your duties. Now I feel that it is this affection that will spring out of my heart and spread as empathy toward the weakness in all of us.

This is as far as I can go in forming the training program. In retrospect, I was travelling through the two poles of metaphysical circuits

between love and hate, emotion and intelligence and theory and practice shown in illustration 5-4. As a young person, I left the pole of love with a desire to build a peaceful world, but while coping with the uncooperative world and suffering self-pity, I found myself at the pole of hate. There, through the existence of God, I reached the place where my deep emotion, intelligence and surface emotion can coexist in perfect harmony.

But the journey never was straight to the destination. I repeatedly went forward and then backward. Meanwhile, I experienced ebbs and flows of many emotions as I saw expressed in Bach's cantatas. It was also so complex because I was moving through multiple circuits simultaneously. Therefore, as I read back my last chapter, I see many repetitions and contradictions. I suppose it will be possible to streamline the section to be more succinct and luminous. However, in order to develop a systematic educational system in the future, I decided that the process was important. So, I am leaving it as it is. By analyzing this process, I hope that an effective educational program will be developed and that young metaphysical engineers will be able to follow the path together, not alone. On that note, I shall pass this book onto the next generations who are destined to work in the realm of universal idealists, bearing the burden to rule.

The first task will be to collect cases. In this chapter, I presented my journey through the metaphysical world, but it is solely based on my personal experience. For example, during the journey, I discovered what I call here metaphysical circuits. But with only one case, it could just be my demented mind which sees them. But if hundreds of people venture out and see the same thing, it will become stronger. Metaphysical phenomena may not be falsifiable or able to be tested in a laboratory setting. So, we may not be able to explain why, but with a number of cases we will be able to establish a correlation. And if we have enough cases, even if we cannot explain it, we can start using it, just as we were using gravity in numerous engineering projects even though we could not explain why until Newton came along. Once we have numerous cases, the future generations burdened with the post-democratic reconstruction of civilization can begin to examine and may succeed in coming up with an explanation. Eventually, our Newton might come along and give us our calculus to make the field more systematic. These take time, but the more people venture into the metaphysical world, the more cases we can accumulate, accelerating the process. So, we should begin this age of exploration of the metaphysical world as soon as possible. Ideally, these cases should be deposited to the universal idealist depository, mentioned at the end of Chapter 6, to make it readily available for the future generations.

CHAPTER 8

CONTEMPLATION

All of human history has been plagued with war. Humanity has repeatedly attempted to escape these terrible recurrences. However, as the scale of human communities expanded and technology developed, the degree of devastation also increased. In the last century, we became capable of slaughtering hundreds of millions of people in a single war. In the next global war, there might be no winners. Then, the questions are these: Why do we do this to ourselves? Is there any way we can stop this? So many people must have asked the same questions, but could not find the answers. There may be no answers. But I believed that we must keep asking these questions and keep looking for answers.

In these efforts, I have come to believe that ultimately, humanity might be able to achieve perpetual peace if we could together create a superior physical-being to house the consciousness of the transcendental Self. How could we actualize this? I feel that the blue print is there already, and we are all pre-programmed with each assigned role. I feel that way because of the deep yearning in our heart for human connections and greater-being, expressed as love among us and love of God. I boldly imagine that there might be a law of counter-entropy in the metaphysical realm to offset the law of entropy in the physical realm, and that we are all its activators. By mastering the relation between the laws of entropy and counter-entropy, I wonder if we could create a physical entity for the transcendental Self that can internally produce negative entropy.

The actualization process might be somewhat like a nuclear reaction. It requires enormous activation energy, and once the reaction begins, the rate must be controlled so that it won't become destructive. Likewise, until the process begins, each one of us must blindly follow our assigned roles, setting aside our individual desires and devoting everything we have got with absolute resolution to the well-being of the transcendental Self, doing everything we do with everything we've got,

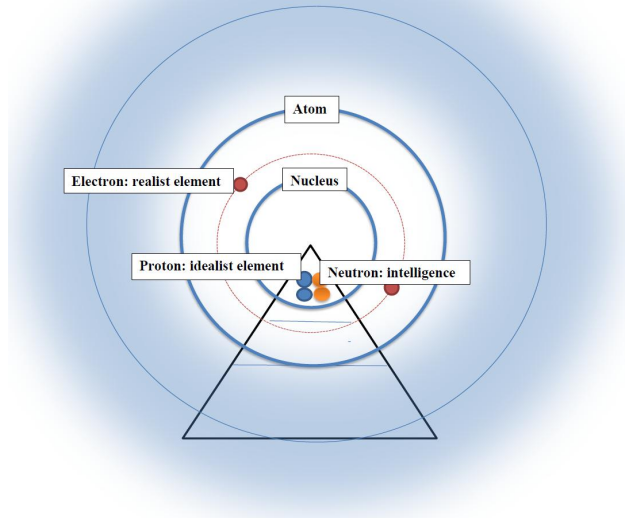
whether we like it or not. Once the process is activated, we must courageously persevere with the greatest possible patience for the rest of our lives to pace the rate of progress for a steady and stable supply of negative entropy.

What if we ever succeeded in actualizing the transcendental Self? I wonder what it would be thinking. Aristotle thinks that his First Mover is contemplating about itself. I wonder if the transcendental Self is contemplating about an even greater Self. In a higher metaphysical plane, such as M2 or M3, the creation of the transcendental Self might look like an atomic creation (See Illustration 8-1). There, the universal idealist's terrain might be the nucleus of the atom, where idealist emotion and intelligence existed as protons and neutrons. The realist terrain might be the energy level, where surface emotion existed as electrons. If it were kept in the orbit, it would be stable. If not, it would become harmful, just like free electrons. The outer-layer would be the naïve idealist terrain with many undefined subatomic substances, which could become realist emotion, or idealist emotion or intelligence.

The wings of imagination spread.

February, 2022

Illustration 8-1
Grand Synthesis



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