

THE FUTURE OF SOUTH KOREA: ALTERNATIVE SCENARIOS FOR 2030

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## ABSTRACT

This dissertation is about five alternative future scenarios of Korea in the year 2030 to increase our understanding of the long-term future of Korea. By adopting Jim Dator's Alternative Futures Scenarios method, the five alternative future scenarios include four alternative scenario archetypes (growth, discipline, collapse, and transformation) and a preferred future scenario. This research explores the key question of 'what will Korea look like in the year 2030'. After reviewing Korea's history and current situation and existing forecasts of the futures of Korea, we bounded the uncertainty about the future through the five alternative scenarios. First, The Republic of Samsung scenario is an official view of the Korean future. It represents the continuation of the existing economic development. Korean society is following the predictable developmental trajectory from a developmental state society to corporate society. Second, in the Great Han River Flood in Warmer Korea Scenario, Korea encounters catastrophic weather events, contributed by global warming. This scenario can be seen as a degrowth society that is a natural outcome of a destructive river flood. Third, the A Big Global Family Phenomenon scenario challenges the consumption oriented attitude and materialistic nature. It originates from human oriented attitude and social justice. This scenario has charted out the emergence of cosmopolitan values in the context of trends moved toward rapid globalization, dominance of multilevel governance, and growth of global citizenship. Fourth, the Age of Biotechnology scenario is an attempt to realize the post-modern desire for progress through biotechnology. In this scenario Korea is becoming a bio-society due to the successful commercialization of biotechnological products. Fifth, the Peaceful Unification as a Dream Come True scenario is a preferred future. Its vision is the peaceful unification and an equitable and sustainable society. It

covers a situation in which two Koreans develop a strong support for peaceful unification. Also it is based on a sustainable economy to secure economic growth and to focus on the quality of life. By developing five alternative scenarios, this dissertation addresses the implications of five alternative scenarios for Korea's future and suggests strategic action plans to move toward a preferred future.

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## CHAPTER 1

### INTRODUCTION

*History warns us, however, that it is the customary fate of new truths to begin as heresies and to end as superstitions; and, as matters now stand, it is hardly rash to anticipate that, in another twenty years, the new generation, educated under the influence of the present day, will be in danger of accepting the main doctrines of the "Origin of Species," with as little reflection, and it may be with as little justification, as so many of our contemporaries, twenty years ago, rejected them.*

Thomas H. Huxley (1896, 229)

#### **1.1. Statement of Problems**

Two different images of the future, as the dominant discourse, have been competing for South Korea's future (Yea 1999, 222). One of these ideas, modernity, has been driven by the rapid social transformation of Korea. It is closely related to the vision of future economic development. Under that vision, the ideals for South Korean society are to be discovered in the societies of advanced countries such as Japan and the North Americas. The other idea of the future, national reunification, conceives of achieving Koreaness as "projections and fantasies of future" (Grinker 1998, ix). Reunification is a decisive element in Korea's idealized future of national homogeneity. A great deal of future-oriented thinking has shed light on these two issues (Amsden 1989; Eberstadt and Ellings 2001; Grinker 1998; Kim 2006b; Kuznets 1994; Levin 1999; Noland 2000; Pollack and Lee 2000).

Images of the future have played a crucial role in various South Korean discussions about modernity and national reunification. Images of the future, which focus on a desirable or preferred Korean society, foster a pervasive sense of modernity and provide the basis for a spirit of reunification. South Korean regimes have employed positive images of the future as the basis for the ideologies and discourses of mobilization

in order to achieve their national goals. Thus, images of the future are very likely to be a salient driving force of the Korean society in the foreseeable future.

An image of the future is defined as “an expectation about the state of things to come at some future time” (Bell and Mau 1971, 23). People’s decisions and behaviors are based not on objective facts of future situations but rather on their images of the future. It is what people think the future would be like that determines decision making and behavior patterns. Boulding (1956, 7) describes the importance of future images, “the individual or the nation which has no sense of direction in time, no sense of a clear future ahead, is likely to be vacillating, uncertain in behavior, and to have a poor chance of surviving.” The future depends in many ways on images of the future. However, it does not mean that the image of the future is the only factor that brings about social change and shapes the future.

Despite their significance, there have been several problems with current future-oriented thinking related to the images of the future in Korea. The problem is that future-oriented scholarship has mainly dealt with the prediction of past trends and a single most likely future (Chamberlin 2001; Eom et al. 2006; Kwon 2009; Presidential Commission on Policy Planning 2008; Wilson and Stupnytska 2007). Chamberlin (2001, 217) identifies six trends and envisions Korea becoming “a prosperous, empowered, knowledge-era democracy” in 2010. Korea’s Presidential Commission on Policy Planning (2008, 128) issues *Vision 2030* which predicts that Korea will become a G10 by 2030 and its per capita income will reach US \$49,000 by 2030. The Goldman Sachs makes predictions based on the economic projection of Korea in 2050 (Wilson and Stupnytska 2007). It also expects that Korea’s income per capita is higher than each of the G7 and Korea will place second after the United States in terms of income per capita.

The futures of Korea mentioned above are forecasted by extrapolating the past record. A single most likely future is suggested within the context of a specific vision. Those predictions and visions are basically set on the then-trends and economic projections. They assume that current situations will continue to exist in some state and the future will be like the past trend or the future will be on the same direction as the past. Scholars of Korean future studies have, for the most part, shown little interest in

alternative futures. The future is by far more complex and erratic than tracking down present trends we usually use to predict the future. Thus, past trends are not enough to understand the future.

For instance, it was often said in the 1980s and the 1990s that “the future is female” and “tomorrow belongs to women” (Anon 1996, cited in Webster 2000, 120). Most people believed that due to the information age which featured the decline of the manufacturing industry and growth of the service industry, the amount of women would increase in the workforce and then, hold leadership positions in the economy instead of men. Even, Naisbitt and Aburdene (1990, 217), authors of *Megatrends 2000*, address that “woman dominate the information society”, but, men, however, continue to dominate the information society today (Webster 2000) and women are limited to “upward mobility and career prospects” (Wilson 1999, 529). Those who argue the dominance of women in the future are inclined to focus more on trends and technological deterministic nature. They overestimate the influence of technology and ignore the interaction between technology and society. And they do not consider the behaviors of actors which are one of main factors that create the future. Simple extrapolations from the trends lead to erroneous forecasting. Furthermore, they need to consider other factors such as gender power dynamics and a male dominated culture causing the exclusion of women from cultural opportunities and leadership roles (Wajcman 2009).

The second problem is that even though some scholars discuss the alternative futures of Korea, especially scenarios (Chamberlin 2001; Choe 1993; Choe, Eum and Jeon 2006; Noland 2000; Pollack and Lee 2000), they focus on (the) expected future events and facts rather than expected futures that are subject to formation, social relations, and power distribution. Chamberlin (2001, 194-212) develops four scenarios based on possible outcomes of then-trends in the early 2000s of Korea: “Sustaining the 1998 Reforms,” “Reform Yes, but...,” “Reform Rejected,” and “Military Coup d’Etat.” He addresses possible Koreas after the 1997 Economic Crisis. The four scenarios contain facts related to social, economic, and political indicators such as annual GDP growth, crime rate, voters, chaebol’s activities, international relations with the U.S. etc. Choe and his coworkers (2006) produce four scenarios for the year 2030. The “Vision 2030”

scenario projects Korea as 10<sup>th</sup> in terms of national competitiveness and quality of life in the world. The “Again 1997” scenario features another economic collapse of Korea, like the 1997 Economic Crisis, producing large numbers of unemployment, chronic budget deficit, deepening polarization, and high social tensions. The “Gloomy Silver” scenario addresses the uneven distribution of wealth in Korea, as most of the wealth is concentrated in the hands of corporations and the state, while the rest of the country is suffering from economic hardship. The “My Way” scenario describes the fundamental changes in social and economic fields for the isolation, including delay in globalization, failure of technological development, solving the population problems, and superb social infrastructure. Pollack and Lee (2000) present<sup>8</sup> the four alternative scenarios for the unification of the Korean peninsula as follows: “Integrated and Peaceful Unification,” “Collapse and Absorption,” “Unification through Conflict,” and “Disequilibrium and Potential External Intervention.” These four scenarios focus more on the unification process than other factors of South Korea’s future.

The scenarios mentioned above focuses more on events, incidents, and trends than ideas, identity, values, social relations, power distribution, cultural representation, regulation, and symbolic re-creation. The future is more than events. According to van der Heijden’s iceberg analysis (1996, 97-100), the world is composed of events, trends and patterns, and structure. Events are the upper part of the iceberg and visible. Trends and patterns are underneath events and under the water’s surface. Structure is the bottom of the iceberg along with supporting events, trends, and patterns. It includes resources, information, finance, culture, legislation, demography, agreements, regulation, policy, power distribution, etc. The iceberg can represent the future society as a whole. Van der Heijden emphasises the structure for creating scenarios because the structure provides more important driving forces compared to events and trends. Thus, event-focused scenarios may be superficial to understand the future. We should consider events, trends, and structure altogether on building alternative scenarios.

The event-focused scenarios are inclined to ignore human beings as an agent of creating futures. Based on this approach, the future is shaped by external environments, not human beings. It assumes that the first source of a society’s transformation is the

external environments. That is to say, it refuses to take a stance in a close relationship between human beings and external environments. As shown in the individual action-social structure debate, however, Giddens and Bourdieu, call into question that human beings and external environments can be seen as distinct. Giddens (1984) in *The Constitution of Society* proposes equal importance of agency and structure to understand social phenomena.<sup>1</sup> Bourdieu (1977) in *Outline of a Theory of Practice* does not separate agency and structure.<sup>2</sup> Agency and structure are two dimensions of the world. Giddens and Bourdieu consider illuminating the dialectical interplay of human beings and external environments. On similar ground, when we see that the future world is being realized in ways that the current world becomes stretched to the future, the future is understood as being composed of the external environments as an object and the human being as a subject. Future phenomena in society are constructed by a dialogue between subject and object or human beings and external environments. The future cannot be adequately grasped unless we understand how human beings are involved in the external environments and vice versa. If scenarios are defined as narratives to reflect the alternative future realities, the event-focused scenarios which tell the one side of the future are considerably limited in understanding the future and tend to miss the importance of the human beings that involve in the future reality.

## **1.2. Demand of the Alternative Futures**

Alternative futures are the main and the most important discourse in futures fields. The current popularity of alternative futures reflects the basic perception of the world in which people believe that the future cannot be determined solely by natural and social forces, and scientific laws. This belief that we live in a complex and uncertain world

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<sup>1</sup> Giddens (1984, 25) defines the structure as “recursively organized sets of rules and resources.” He distinguish structure and system, and points out that “the structure is not ‘external’ to individuals” (1984, 25). In this context, external environments used in this paper are not equated with the structure of Giddens. We metaphorically signify external environments as structure in terms of analogy of agency and structure.

<sup>2</sup> Bourdieu uses the concept of habitus as a mediator connecting the individual subjectivity and societal objectivity. He defines habitus as the “product of structures, producer of practices, and reproducer of structures” (Bourdieu 1977, 72).

forms the concept of an alternative future. The concept of alternative futures is closely linked to the unpredictable future and the reversal of established trends. The alternative futures are explicitly opposed to making a single prediction for the future. They are especially skeptical about extrapolated values such as linear trends or growth trends. Furthermore, the concept of alternative futures allows us to make choices between two or more things.

Daniel Bell states the importance of multiple futures in the introduction of the work *The Year 2000: A Framework of Speculation on the Next Thirty-Three Years* (1967):

What is central...to the present future studies is not an effort to 'predict' the future, as if this were some far-flung rung of time unrolling to some distant point, but the effort to sketch 'alternative futures'—in other words, the likely results of different choices, so that policy makers can understand costs and consequences of different desires (Kahn and Weiner 1967, xxv).

Why does South Korea need alternative futures now? Hitherto, Korea's future development has all been in one direction, based on the modernization theory, focusing on economic development, to catch up with the advanced countries and to follow the established Western model. This idea has played an important role in determining the path of the future. The current development trajectory of modernization that Koreans have taken for granted for the last six decades is entirely undesirable and misleading.

The western-oriented modernization paradigm assumes that continued economic progress, the spread of an open market, and technological innovations solve all problems. Everyday discourses and practices in Korea are about a living a good life, resource-intensive consumption and production, adaptation and investment in high technology, and centralized organizations. Korean's priorities have become ensuring high quality of life and increasing nominal GNP. High mass consumption, individualism, and competitiveness have become main concepts. Thus one-dimensional optimistic visions, which are based on economic determinism and technological determinism, lead to social polarization, conflicts between interests groups and regions, resources depletion, and environmental degradation. Korean life is becoming grossly over-consumption, over-

production, and over-development. In order to overcome the problems Korea faces, viable alternative ways should be considered.

The Korean digital economy continued to grow in size and scope. In 2010, Korea has ranked 13<sup>th</sup> in the world in the “digital economy rankings 2010” (EIU 2010b). Korea rose six places in the world’s digital economy, standing at 19<sup>th</sup> place in 2009. The top ten performers are, in order, Sweden, Denmark, the U.S., Finland, the Netherlands, Norway, Hong Kong, Singapore, Australia, and New Zealand. The report estimates “the quality of a country’s ICT infrastructure and the ability of its consumer, business and governments to use ICT to their benefit” (EIU 2010b, 1). Also, the Global Information Technology Report 2010-2011, published by the World Economic Forum, ranks Korea 10<sup>th</sup> out of 138 economies worldwide (Dutta and Mia 2011) from its previous place of 15<sup>th</sup> (2009-2010 Edition). The report looks at an overview of the current state of ICT readiness in the world. It points out that Korea has a leading position in ICT usage components but its market environment and legal system are far behind other members of the top 10.

South Korea shows a strong resilience in its economy despite the 2008 world economic crisis. Korea’s great dilemma is that “it falls short of Japan on quality and can’t hope to match China on price” (McKinsey 2010, 4). The Korean economy continues to show a strong world market share (rank): “Shipbuilding (1st), Motor Vehicle (6th), Steel (5th), Petroleum-Chemistry (5th), Textile (5th), IT (Semiconductor 3rd, Digital Home Appliance 5th)” (Hong 2010, 13). For example, Korea has dominated the world’s shipbuilding industry. In 2009, Korea accounted for 44%, 35% and 34% of global market share respectively in terms of new orders, completion and order books (Won 2010, 54). The Korean phone handsets producers have become major forces in the global market. Their market share jumped to 33 percent in the third quarter of 2009, from 22 percent at the end of 2007 (McKinsey 2010, 4). The Korean automobile market share in the world rose to 9 percent in the third quarter of 2009 from 6.5 percent in the final period of 2007 (McKinsey 2010, 4).

In general, Korea shows strong economic growth and leads the digital electronics, automobile, shipbuilding, and semiconductor industry in the global market. Korean manufacturers have overtaken some Japanese companies, including in the areas of

semiconductors, shipbuilding, televisions, and the Lithium-ion battery industry (Chosun Ilbo, February 7, 2012). Particularly, in 2006, Samsung, which is the best known Korean brand, surpassed the Japanese electronics giant Sony as the world's leading TV maker ( Joongang Ilbo, December 27, 2011). Japanese and Western countries are no longer considered as the future models of Korea. Likewise, Alvin and Heidi Toffler (2001) suggest an “inventing model” for Korea in their report, *Beyond the Crisis: Korea in the 21<sup>st</sup> Century*:

Today, by contrast, with the newest wealth creation system still in an early stage, **there are no proven models for Korea to follow**. While Korea can learn some things from the experience of other countries, there is no one to imitate. Each country making the transition is now compelled to invent and reinvent, to customize its strategy rather than applying someone else's. In a word, Korea needs to invent its future (p.23, emphasis in original).

Contemporary society has shown the growth of risk, uncertainty, and flexible patterns, including technological risks, terrorism, environmental degradation, and unpredictable economy. The global risks have been attracting more and more attention recently. Within the risk society discourse, there is growing evidence that futures studies have tried to adopt the risk society perspectives. Maurie Cohen (1996), for instance, attempts to combine the risk society and ecological modernization perspectives into alternative visions for post-industrial nations. Wright, et al (2008), in their book, *Safeguards in a World of Ambient Intelligence*, describe four ‘dark’ scenarios and warn about the threats and vulnerabilities in the development of Ambient Intelligence. The risk society is the main theme among these four scenarios. The World Economic Forum's report, *Global Risks 2011*, notes that economic disparity and global governance failures considerably affect the possibility of many other global risks, such as crime, corruption, food insecurity, chronic diseases, fragile state of government, and terrorism. The economic disparity leads to social and political instability and impedes economic development. According to the report, the world is more interconnected and the global risks are becoming more complex.

The changing natures of the risks, however, challenge the risk landscape. Ulrich Beck illustrates three characteristics of risk in modern society: 1) “modern risks are

typically invisible”, 2) “they have their basis in industrial overproduction”, 3) they “jeopardize all forms of life on earth” (Caplan 2000, 3).

In Ulrich Beck’s notion of a risk society, Korea has become a risk society and has since the mid-1990s (Hunt 2010, 194). During this period, Korea experienced “a series of abnormal accidents” such as “the collapse of the Samping Department Store and of the Söngsu Bridge, and a gas explosion in a Daegu subway station” (Hunt 2010, 194). Many Koreans have called their society a “republic of accidents” (Hunt 2010, 194). In 2011, Japan’s recent disastrous event, which was a nuclear reactor crisis after a powerful earthquake-triggered tsunami, caused widespread devastation and major damage to the Japanese society. Korean society has also been affected by Japan’s disaster. Koreans are more interested in safety, health, and preventing risks. In many ways most Koreans have lived in a society obsessed with risk. They have developed a culture of risk and worries about hidden dangers. The discourse of a risk society makes Koreans understand how vulnerable modern Korean society is if we do not take precautions. All Koreans feel a pressure to see new ways of accomplishing things beyond the traditional ones. Alternative futures can be a good practice for current and future generations. According to Giddens, the risk society raises more future-related issues and safety issues to avoid unexpected outcomes, control the future, to normalize the problems and control hazards.

The idea of risk is bound up with the aspiration to control and particularly with the idea of controlling the future. The observation is important. The idea of ‘risk society’ might suggest a world which has become more hazardous, but this is not necessarily so. Rather, it is a society increasingly preoccupied with the future (and also with safety), which generates the notion of risk. (Giddens 1999, 3)

### **1.3. Purpose of Research**

The purpose of this research is to develop five alternative future scenarios of Korea in the year 2030 and to address implications of these alternative scenarios for the main direction of change over Korea’s long term future. By adopting Jim Dator’s Alternative Futures Scenarios method, the five alternative future scenarios include four

alternative scenario archetypes (growth, discipline, collapse, and transformation) and one preferred future scenario.

This research addresses the key question of “what will Korea look like in the year 2030” if Korea shows continued economic growth, if Korea encounters the extreme weather, if cosmopolitan value permeates all of Korean society, and if Korea radically experiences high bio-tech development. It is also to explore a vision of the preferred future that sets out a highly desirable aspiration for Koreans. In particular, the five alternative future scenarios try to answer three sorts of sub-questions:

- (1) What is the vision of each one of five scenarios? What is the dominant discourse in the future society? What are the major issues for the public under the dominant discourse?
- (2) What are the main features of the future society in terms of society, economy, politics, and class?
- (3) What are the opportunities and challenges of each one of five scenarios? What is the preferred vision for Korea?

#### **1.4. Significance of Research**

Korea has transformed from an agricultural society to an industrial society since the 1960s, resulting in far-reaching social changes in contemporary Korean society. The outside world has considered Korea as an advanced country or a high-income country. However, as of the recent global financial crisis, the awareness of climate change, and the challenges of a nuclear North Korea, Korea has confronted a high degree of uncertainty for its future. Moreover, Korean culture is gradually moving toward post-modernity. More Koreans are trying to obtain participation and involvement for alternative futures.

There are many future-oriented works and scenarios for Korea’s futures. Most scholarships are focusing on expected future events and facts. There is not yet a scenario which provides expected social relations, discourses, issues, and subject formation. On

the other hand, scenarios address only specific topics such as unification, economic prospects, and technology forecasting. This research therefore is examining comprehensive topics about Korea's future including, economy, cosmopolitanism, natural disasters, and bio-technology. Furthermore, it also explores the vision of a preferred future desired by Korean people after envisioning the four generic alternative future scenarios and proposes some strategic action plans to create futures.

### **1.5. Chapter Outline**

This research is composed of eight chapters with an introduction and a conclusion. The six main chapters deal with three themes: a study of existing literature, the background of Korea, and creating alternative future scenarios.

Chapter 2 and 3 present an overview of previous works on future studies and scenarios that provide the theoretical background for the purpose of this research. Chapter 2 explores the nature of the future, futures terminology, the history of futures studies, and the nature of futures studies. This chapter identifies three historical developments of the modern futures studies: 1) the era of probability (the 1950s—the 1960s), 2) the era of possibility (the early 1970—the 1980s), 3) the era of uncertainty (the 1990s—the 2000s). As to the question of whether futures studies is an art or science, this chapter is based on the basic thesis that futures studies is a combination of art, science, and politics.

Chapter 3 discusses the general foundations of scenarios in terms of its definition and nature, typology of scenarios, schools of thought in scenarios, and the principles of developing scenarios. This chapter identifies four key characteristics of scenarios: 1) multiple views, 2) a sketch, 3) a process, and 4) narratives. There are three existing schools of scenarios: Intuitive logics school, La prospective school, and probabilistic modified trend school. In addition to these, the normative school and the Manoa School are suggested. Also, this chapter presents four principles of developing scenarios: 1) thinking the unthinkable, 2) novelty, 3) multiple perspectives, and 4) the systems

approach. And finally it describes Alternative Futures at the Manoa School and discusses how to develop scenarios based on Jim Dator's Alternative Futures Scenarios.

Chapter 4 explores many facets of Korea's past, present, and future. Korea's historical legacies affect the future in limited ways. The four main characteristics of Korean history are explained as: 1) Confucianism, 2) Japanese colonization, 3) anti-communism, and 4) Americanization. This chapter provides a comprehensive assessment of current emerging issues and trends of Korea for understanding where Korea is now. It deals with several future uncertainties which signal risks and opportunities for the great transformation of Korea.

Chapter 5 examines the images of the future of Korea during the pre-modern era and the modern era. The future images in the pre-modern era rely on the social political status. The ruling class's future images are linked to the Confucian utopia which exists in a remote place, while the oppressed refuse the Confucian concept of an ideal society. Instead, they seek an imaginary society against the Confucian government and the rich. Unlike the future images in the pre-modern era of Korea, the images of the future in Korea's modern era refuse the ideal past, imaginary present and a radically different future. This chapter explains the five different images of the future in the modern era: 1) "Become a developed country (continued growth image), apocalyptic discourse (collapse image), green futures (discipline society image), advanced information society (transformation society image I), and national unification (transformation society image II).

Chapter 6 presents four alternative scenarios: 1) continued growth scenario: The Republic of Samsung, 2) collapse scenario: The Great Han River Flood in Warmer Korea, 3) discipline society scenario: A Big Global Family Phenomenon, 4) transformation society scenario: The Age of Biotechnology. Those four scenarios are based on four generic images of the future and their results are the combination of images of the future, future social condition, and uncertainties.

Chapter 7 presents a preferred future scenario of Korea in 2030: Peaceful Unification as a Dream Come True. This preferred future scenario is envisioned by four

alternative scenarios in the previous chapter. This scenario describes a future where South and North Korea are peacefully unified. Economic democracy, inclusive society, sustainable development are playing significant roles as guiding principles for constructing scenarios and transforming Korea into a desirable society. Finally, this chapter suggests some strategic action plans to attain the vision of the preferred future.

## CHAPTER 2

### THEORETICAL PERSPECTIVES OF FUTURES STUDIES

*Man is a being who desires and who acts. He needs the future—into this domain he projects the image toward which his will directs his actions, the image representing his wish. But he conceives of the future as something other than a receptacle of the images he undertakes to transform into realities. Man is also a being who knows or strives to know; and he thinks of the future as a domain inhabited by future realities, or futura, of which he tries to form adequate images.*

Bertrand de Jouvenel (1967, 40)

#### 2.1. Introduction

In chapter one, we elaborate on the essential arguments of this dissertation. In this chapter, we examine the theoretical views on futures studies to understand what futures studies is. The four main sections discussed in this chapter are the nature of futures, classification of futures terminology, history of futures studies, and futures studies: art? science? or politics?

The first section discusses the nature of the futures. In particular, it describes the ontological and epistemological assumptions of the futures, focusing on possible, probable, and preferable futures. Understanding the nature of the future is a very important task because it allows people to comprehend the relationship between the key elements of futures studies, theoretical perspectives and debates, and methods of futures studies.

The second section investigates ten terms of future terminology: futurism, futurology, futuristics, futuribles, prospective, futures field, prognostics, futures research, futures studies, and foresight. The term “futures studies” is used in various ways by different groups. Despite its importance and valiant attempts, futures studies has not established a standard terminology for futurists and future practitioners to describe futures-oriented work as a discipline.

The third section briefly examines the history of futures studies. Modern futures studies evolved after the end of World War II. This section identifies three historical developments of modern futures studies: 1) the era of probability (the 1950s—the 1960s), 2) the era of possibility (the early 1970—the 1980s), 3) the era of uncertainty (the 1990s—the 2000s).

The last section discusses whether future studies an art or science. This section has accepted that futures studies is an art, science, and as well as politics.

## **2.2. Nature of Futures: Ontological and Epistemological Perspectives**

This section gets started with what the nature of the future is and how we can perceive it. The nature of the future varies. It is closely related with the ways of how we understand the futures. Hugues de Jouvenel (2001, 12-13) distinguishes the nature of the future into a realm of freedom, a realm of possibility and a realm of will. He emphasizes human's active roles in shaping the future. He believes that the future is “constructed rather than to be divined” (de Jouvenel 2001, 13). Cornish (1977, 95) defines the future as non-existence: “the future refers to a period of time that has not yet arrived, hence the future, by definition, does not exist.” The future is not real and only exists in human's ideas. He emphasizes the ontological aspects of the future. McHale (1969) expresses that “the future of the past is in the future; the future of the present is in the past; the future of the future is in the present.” He highlights the dynamic nature of the time continuum from past/present to future. He conceives that “the future is compounded of past and present” (McHale 1969, 19). It is based on the deterministic assumption of the past/present to the future. We believe that the nature of the future is being beyond human's roles, non-existence, and the time continuum.

We usually hear that the future is open; the future is invisible; the future is intangible; the future is our hope and dreams; the future is unknown; the future is imperfection. The future is closely associated with time travel and imaginary space. The future seems to exist in some orderly form of continuation following from the past/the present. But, it is paradoxical. We always think of it and yet we know little about it. We

always try to improve our ability to look forward and we cannot predict it. It is nonexistent and we are always affected by the notion of the future. It is not a part of our society physically and yet it plays a pivotal role for social transformation. Future-oriented practices have been used since the time immemorial and none of these seem satisfactory much.

Future thinking is considered an outstanding characteristic of human ability. McHale (1969, 3) states that “the future is an integral aspect of the human condition. Man survives, uniquely, by his capacity to act in the present on the basis of past experience considered in terms of future consequences.” Bell (1997a, 142-3) says that “future thinking is essential for human action. We cannot consciously act without thinking about the future.” Maslow, who is an American psychologist, mentions that “thinking about the future and planning for the future are central attributes of a healthy human personality” (Cocks 2003, 135).

However there is a debate whether animals have future-oriented capabilities in psychological and behavioral fields (Raby and Clayton 2009). Roberts (2007) maintains that birds and nonhuman primates can anticipate the future and have a sense of future planning. Especially, experiments with scrub jays, which are a species of corvid, show that animals can have “mental time travel” which is the ability to remember past and imagine future events. On the other hand, Suddendorf and Corballis (2008, e1) propose the Bischof-Köhler hypothesis that “only humans can flexibly anticipate their own future mental states of need and act now to secure them.” In other words, mental time travel is only a human ability.

Regardless of whether animals have future thinking or not, we can sometimes see animal foresight as a precursor of disasters in movies, novels, and news reports. Many reports showed that bizarre animal behaviors had appeared before the natural catastrophes. For instance, people from Bang Koey in Thailand observed that a herd of buffalo suddenly headed to the top of a nearby hill before the breakout of the 2004 Indian Ocean Tsunami (Kaplan 2007, 34). Strange animal behavior was seen at the Coyote Lake earthquake, California, in 1979 (Kerr 1980, 695). Dogs, horses, and cats showed unusual behavior before the Coyote Lake earthquake. Animal’s earthquake foresights are

traced back to the Greek in 373 BC (Kaplan 2007, 34). Rats, dogs, snakes and weasels left the city of Helice just before the earthquake struck.

The concept of the future can lie in paradoxical, complicated and universal traits. It is necessary for us to examine the ontological and epistemological positions on the future to understand what the nature of future is because they reflect the fundamental views about the future. The ontological and epistemological positions are closely related with the main purposes of futures studies: the identification of possible, probable and preferable futures. They provide the rationales of why futurists explore alternative futures and analyze images of the future. Moreover, a clear knowledge of ontological and epistemological assumptions can help to understand the relationship of key elements of futures studies, to avoid confusion over theoretical debates and approaches to future phenomena, and to be able to recognize other futurist's stance.<sup>3</sup>

All disciplines begin with ontology to produce valid knowledge. Ontology is the theory of being. It precedes epistemology in production of knowledge. It deals with the questions of whether the social reality exist, "what it looks like, what units make it up and how these units interact with each other" (Grix 2002, 177). In the futures studies context, ontology might be expressed as the following questions: what is the nature of the futures to be explored?; does the world of futures exist outside our perceptions?; which elements of the futures are fundamental?; how are they related to each other?

Ontology can be divided into two groups: objectivism and constructionism. Objectivism claims that "social phenomena and their meanings have an existence that is independent of social actors" (Bryman 2001, 17). Constructionism, on the other hand, assumes that "social phenomena and their meanings are continually being accomplished by social actors" (Bryman 2001, 18). Ontology typologies are difficult to classify in a precise manner because a number of different typologies have been suggested: realist and idealist (Blaikie 2007, 13), foundationalist and anti-foundationalist (Marsh and Smith 2001, 529), and materialist and idealist (Lewis-Beck, Bryman and Liao 2004, 767).

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<sup>3</sup> We adopt three roles of ontological and epistemological assumptions from Grix (2002, 176).

Generally speaking, the ontological assumption concerns whether the social reality is an independent existence or a social construction.

Ontological assumptions are crucial because they reflect a worldview of futurists and underpin the theoretical perspectives and methods that futurists adopt. For instance, many futurists treat images of the future as an important element to arrive at a better understanding of the future. Futurist's basic concern of the images of the future is associated with the constructivist ontology. The adherents of the constructivist ontology do not believe that there is a future reality outside our language and ideas, while objectivist ontology assume that the knowledge can be obtained by results of a form of reflection of external objects. According to constructivist ontology, there is no objective true over the future because the future has not existed. Thus, many futurists intended to try not to pursue the predictions for a future reality and not to get laws of future events. Instead, the emphasis is on the content of normative futures and development of the way to create the future people want. Jim Dator deliberates why future studies concerns in images of the future as follows:

'The future' cannot be 'studied' because 'the future' does not exist. Futures studies...studies ideas about the future (what I usually call 'images of the future') which each individual and group has...These images often serve as the basis of actions in the present...They often change over one's lifetime. Different groups often have very different images of the future. Men's images may differ from women's. Western images may differ from non-Western images, and so on. (Dator 2005a, cited in Hicks and Holden 2007, 501)

One of the things futures studies tries to do is to help people examine and clarify their images of the future—their ideas, fears, hopes, beliefs, concerns about the future—so that they might improve the quality of their decisions which impact it”(Dator 1996, 109).

Epistemology is “concerned with the theory of knowledge, especially in regard to its methods, validation and the possible ways of gaining knowledge of social reality” (Grix 2002, 177). In short, it deals with the question of “how we come to know what we know” (Grix 2002, 177). It emphasizes on “the knowledge-gathering process” and is engaged in developing new theories and methods that are better than competing theories

and methods (Grix 2002, 177). In the futures studies context, epistemology might be addressed as the following questions: how do we obtain knowledge of the future?; how do we use the future methods to produce reliable future knowledge?; what are the possibility and limitations of futures studies?

Epistemology is divided into three claims: positivism, interpretivism, and realism. Positivism is “an epistemological position that advocates the application of the methods of the natural science to the study of social reality and beyond” (Bryman 2001, 12). The positivists assume that the social world exists objectively and the real relationship between social phenomena can be discovered by using proper methods (Marsh and Smith 2001, 529). This position emphasizes explanation and is to pursue the scientific laws which explain cause and effect relationships, using rigorous scientific methods (Marsh and Smith 2001, 529). Interpretivism asserts that social science and natural science are very different and therefore social scientists try to “grasp the subjective meaning of social action” (Bryman 2001, 13). The interpretivists assume that the social world and meanings are created and understood by people. This position emphasizes understanding rather than explanation (Marsh and Smith 2001, 529). The study of the social world needs different logic and methods from those of natural science and is to understand interpretations of people and their world views (Bryman 2001, 13). Thus it is hard to generalize the social phenomena and relationships. Realism shares features of both positivism and interpretivism. Realism, like positivism, holds that the social world is an external reality and social science can follow the same approach of the natural science (Bryman 2001, 13). However, unlike positivism, it assumes that “there are deep structural relationships between social phenomena which cannot be directly observed but which are crucial for any explanation of behavior” (Marsh and Smith 2001, 529). Realism, like interpretivism, accepts that social science is different from natural science and the social reality can be interpreted.

Ontology and epistemology are very important principles in futures studies because they can provide main assumptions of futures studies. Typologies of futures studies are the results of ontological and epistemological assumptions. We can find out various typologies of futures studies in futures studies literature (see Table 2.1). Börjeson

et al. (2006, 724) regards typologies as “important tools for communicating, understanding, comparing and developing methods for futures studies.” The typologies in Table 2.1 are considered alongside ontological, epistemological, and methodological assumptions. They primarily provide accounts in order to identify and to describe the different approaches as well as to distinguish them to each other. Although they have different criteria and classifications, they may share a common set of the view that futures studies examines possible, probable, and preferable futures. Those three perspectives reflect current thoughts of the nature of the future, show how futurists perceive the futures, and represent the way the knowledge of future is accumulated.

Table 2.1 Analyzing Typologies of Futures Studies

Author	Future Studies Typologies	Criteria
Andersson (1973)	Scientific predictions, trend extrapolation, heuristic methods	Methods
Sandberg(1976)	Technical, hermeneutic and emancipator/critical	Interest of knowledge
Amara (1981)	Possible, probable, preferable	Premise and goal stressed
Inayatullah (1990)	Predictive-empirical, cultural-interpretive, and critical-post-structuralist	Discourse
Mannermaa (1991)	Descriptive, scenario paradigm, and evolutionary	Paradigms
Masini (1993)	Extrapolation, utopian, and vision	Values
Bell (1997a)	Positivism, critical realism, and post-positivism	Epistemology
Marien (2002)	Possible, probable, preferable, identifying present trends, panoramic view and questioning all the others	Purposive categories
Slaughter (2004)	Empirical/analytic, critical/comparative, activist/participatory, multicultural/global	Traditions or paradigms

Three perspectives of futures studies are discussed in order to understand the nature of futures studies. The first perspective is possible futures. The possible future is about what could happen, and thus futurists are to “conceive and describe possible paths” (Amara 1981, 26). This position is associated with “the eventualities mode of thinking” which is “characterized by the openness to several different developments” (Dreborg

2004, 19). It takes objectivist ontology and realist epistemological views. It considers the future as a real object of knowledge, but also as a social construction by people. We cannot fully discover the future because the future is constituted of observable and unobservable phenomena. The objects which are hidden under the surface cannot be directly observed but they exist in the future. Futures studies needs to put various interpretations because future phenomena are different to those of natural science. Observations and data that futurists obtain can be interpreted by future perspectives and theories. Thus the futures studies is to seek multiple forms of the future.

Advocates of possible future perspectives consider the future as a field of uncertainty and openness. The field of uncertainty is that the future is not fully shaped ahead of time. Futurists do not pursue making predictions and generalizations but possible events and unexpected consequences. The field of openness is that everyone can get access to the future; the future is subject to human choices. Futurists are able to pay more attention to human's intentions and their interpretations of circumstances. Possible future perspective is embodied in explorative scenarios (Dreborg 2004, 19).

Most futurists employ scenarios to create images of the future using all of the methods in futures studies. Bell (1997a, 317) describes scenarios as "the end of product of all the methods of futures research." Particularly, van der Heijden's iceberg analysis applies objectivist ontology and realist epistemological views into developing scenarios. According to iceberg analysis (van der Heijden 1996, 97-100), the world is composed of events, trends and patterns, and structure. Events are the upper part of iceberg and observable. Trends and patterns are beneath the events and unobservable. The unobservable structure is the bottom of the iceberg and supporting events, and trends and patterns. He says that scenarios should be considered unobservable trends and structure as well as observable events.

The second perspective is probable futures. The probable future is about what is likely to happen, and so futurists are to "examine particular paths in detail (Amara 1981, 26). This position is associated with "the predictive mode of thinking" which is "to realize or at least get an indication of what will happen in order to be better prepared" (Dreborg 2004, 19). This probable future perspective adopts objectivist ontological and

positivist epistemological views. The future is a real object of future knowledge to be detected by human efforts. The objectivity of the future knowledge is sought. The future reality is formed from the realm of experience like observations and data in the society. The proponents of probable future perspectives believe that the principles of natural science are able to be applicable to futures studies, and futurists could discover the laws that demonstrated how futures come about and change. Explanation and prediction are placed in high priority.

They consider the future as deterministic because they assume that anything in the future is governed by processes and forces in accordance with the law of cause and effect. They largely use the trends and statistics (Zeigler 2002, 60) and explain the observed pattern with predictive modeling and extrapolation of trends (Dreborg 2004, 19). They highlight the importance of continuity from past and present to future. In some sense history, the mainstream of current situations and probable futures are closely related to each other. John Naisbitt, who first coined the term “megatrends” in the early 1980s, addressed that “the most reliable way to anticipate the future is by understanding the present” (Naisbitt 1982, 2, cited in Zeigler 2002, 61). By the emphasis of understanding the present Naisbitt refers to the distinctive characteristics of probable future perspective: future nature is a field of continuum.

The third perspective is preferable futures. The preferable future is about what is most desirable to happen, and therefore, futurists are to “make choices to bring about particular feature” (Amara 1981, 26). This position is associated with a “visionary mode of thinking” which “means to envisage how society at large, some sector of it or some activity (private or public) could be designed in a better way than its present mode of functioning” (Dreborg 2004, 19). This perspective is based on constructivist ontology and interpretivist epistemology. It challenges the notion of probable futures. Instead, it sees the future as a human construct and the future represents an interpretive device. People do not merely accept the situation. Rather they actively react to them on the basis of their interpretations. De Jouvenel (1967, 41) believe that “what I shall look at is the way our mind treats the future.” The future is essentially a subjective object and futures studies should stress the subjective understanding that people perceive and react to the future

rather than the explanation of the future reality. In this context, the importance is on human values and choices in this approach. Thus, it seeks to study the images of the future, focusing on the desirable future.

Regarding human's active roles, there are two natures of the future: "a field of liberty and power" (de Jouvenel 1967, 5). The field of liberty means that humans are "free to conceive that something which does not now exist will exist in the future." The future is not determined and we can create a number of possible ways to solve present problems and to live in the future with harmony. Jouvenel's notion of liberty is linked with human creativity. The field of power refers to that humans have "some power to validate *their* conception (though, naturally, not all conceptions indiscriminately!)." Future thinking or future projects such as sustainable development, conserver society, and advanced information society will substantially determine the nature of future society. Humans with desirable visions can have power to influence the future society. The desirable future has been a long history, such as "from Plato to Thomas More and Bacon, to the utopian-scientists and to many other thinkers" (Masini 1993, 45). Polak (1973) states the importance of ethical values and positive images of the future for the rise of civilization. The favored research method for the preferable future is backcasting which begins with desirable future societies and discusses how we can reach those societies.

### **2.3. Classification of Future Terminology**

In the exploration of the future, we have the terminology applied in various ways according to region, time, and group: futures studies, futures research, foresight, futurology, future movements, futuristics, futuribles, prognostics, futurism, etc. There is no consensus on the precise term of futures studies. No-standard of terminology reflects that futurists do not reach a general agreement of what futures studies is. Besides, futurists are called different names: futurologist, prospectivists, foresight practitioners, and horizon scanners (Sardar 2010, 178). Masini (1993, 54) offers some reasons of how futures studies is diverse in terminology: "contrary to other disciplines, there is no universally accepted terminology of Futures Studies, which may be because it is a

relatively new discipline or that the common agreement on a single theory has yet to be concluded.”

What is the significance of terminology in futures studies? The classification of future terminology may help to understand the nature of futures studies clearly (de Jouvenel 1967, 12). The terminology is related to the history of futures studies. “The use of this terminology reflects the evolution of philosophical and ideological as well as geographical factors” (World Futures Studies Federation et al. 1986, 28). Different terminologies are intended to have different assumptions and principles. Even each terminology has its preferences in research purpose and methodology. In addition, the diversity of terminology may cause communication problems between futurists and between futurists and the readers due to the different concepts and assumptions of how to do futures studies.

According to Wagner (1991, 15), the founder of futures studies was H.G. Wells, an English novelist, who wrote *Anticipations of the Reaction of Mechanical and Scientific Progress upon Human life and Thought* in 1901. The main purpose of the book is to “describe the development of the world for the 100 years following 1901” (Crabtree 2007, 41). He argued “a systematic exploration of the future” (Wagner 1991, 16) and suggested “a megalopolis stretching from Boston to Washington D. C.” and “flying machines” (Crabtree 2007, 41). The French futurist Bertrand de Jouvenel regarded him as the most important figure to inspire the thoughts of ‘possible futures’ (Colquhoun 1996, 27). In 1907, American sociologist Gilfillan proposed a name of the study of the future as mellontology, a word coming from “the Greek word for future events” (Cornish 1977, 254). Many people paid no attention to his term. Mellontology term is not popular in futures field. There are some terms commonly used by futures studies community for the discipline of futures studies.

The term ‘Futurism’ was originated by Filippo Tommaso Marinetti who was a leader of an Italian art movement (Bell 1997a, 69). He presented the *Foundation and Manifesto of Futurism* in 1909 to “shape his vision of a new and revolutionary artistic practice (Berghaus 1996, 15). “He attacked established values (set fire to the library shelves...flood the museums’) and called for the cultural rejuvenation of Italy by means

of a new art that would celebrate technology, speed, and all things modern” (Chilvers 2004, 271). He tried to pursue new thoughts which disconnected the past and connected the future. Futurism as an art movement is quite different from the new field for exploring futures. Nevertheless, the latter also is called futurism. Also its practitioners are known as “futurists” (Bell 1997, 69) rather than “futurolgists”.

According to Glenn (1994), futurism is not a proper and popular term in fields dealing with futures. First, it has an image of the pioneer of the new art movement. Second, “ism” connotes an ideology like communism. Third, “futurists tend to want to open our minds to new possibilities. “–isms” limit what is possible.” Some scholars use the term futurism (Pennington and Shostak 1970, Boulding 1976, Valaskakis 1998). In particular, Mills and Bishop (2000, 12) propose applied futurism which is “the practical application of futurism.” “Applied futurists work for specific clients while more general futurists publish their results as part of the intellectual discussion of our time” (Mills and Bishop 2000, 12).

The futures movement, as the underlying conviction and collective settings for the study of future, began with the term, “futurolgy,” which was coined by Flechtheim in 1943 (Flechtheim 1966, preface). Flechtheim (1967, 264) writes that futurolgy does “embrace (1) all types of prognoses, projections, linear programming, etc., (2) all planning procedures in economics, education, traffic etc., (3) an assessment of goals, norms, and values pertaining to the future.” His futurolgy comprehensively includes pure science, applied science, and philosophy (Flechtheim 1967, 264). Moreover, he emphasized futurolgy’s critical roles: “the constructive function of a radical criticism of the status quo and the need for an orientation of the present toward the future” (Flechtheim 1967, 268). He considered it a broadly systematic science. French futurist Bertrand de Jouvenel (1967, 17) rejected the concept of futurolgy because he regarded futurolgy as pursuing predictions: “there is a “science of the future” able to set forth with assurance what will be.” Dutch scholar Fred Polak also criticized it due to its orientation of rigorous science (Cornish 1977, 255).

Some futurists in Europe used the term futurolgy, but American futurists did not adopt it much (Bell 1997a, 69). Finnish Futurist Malaska strongly supports the notion of

futurology because of his belief that futures studies is “a scientifically oriented field of knowledge” (Malaska 2000). He defines that “futurology can be regarded as the scientifically disciplined mode of futures thinking” (Malaska 2001, 227). Social scientists are more likely to use futurology instead of futures studies or other terms. They conceive that futures studies should be a scientific study of the future like sociology, biology, etc. In particular, futurology has got popularity from sociologists because “the notions of the future and social change” have been a main topic of sociology since its inception (Westwood 2000, 185). British Sociologist Giddens (1990, 51) states, in his book, *The Consequences of Modernity*, that ““futurology”—the charting of possible/likely/available futures—becomes more important than charting out the past.” Most social science-related dictionaries take the term futurology to explain the study of the future (Horowitz 2004; Kuper and Kuper 2005; Marshall 1998). The *New Dictionary of the History of Ideas* defines Futurology as “futurology is the study of the future to obtain knowledge of it on the basis of present trends” (Horowitz 2004, 850). Social science often confines futures studies as the realm of trends analysis and extrapolations from the present, with suspicion.

The term futuristics was widely used during the 1960s and 1970s with futurology and futurism (Sardar 2010, 179). Because of the etymology of futuristics, it may have been preferred by those who want to make it into a science or at least a systematic study, like economic, politics, and logistics. Cornish, founder and former president of the World Future Society, strongly supported it during the 1960 and 1970s. He predicted that “futuristics will win acceptance” among several alternative terms (Cornish 1967, 250). He defined the futuristics as “a field of activity that seeks to identify, analyze, and evaluate possible future changes in human life and the world” (Cornish 1977, 258). He considered it “the discipline or field of activity that emerges from futurism” (Cornish 1977, 258).

The Anthropologist Maruyama, who attempted to adopt future perspectives to anthropology, proposed cultural futuristics and human futuristics. He believed that futuristics was dominated by ethnocentric which “expresses the views of futurist in industrialized countries” (Maruyama 1978a, xvii). Futuristics was needed to accept both

perspectives in developing countries and anthropology to avoid the risk of ethnocentrism (Maruyama 1978, xvii-xviii). In addition, human futuristics was “a study of future cultural alternatives, limitations, and choice” (Maruyama 1978b, 33). In human futuristics, he emphasized people’s goals, imagination, will and choice because future cultures cannot be predicted and determined (Maruyama 1978b, 33). In particular, education is the most important part in order to develop attitudes and capacity for providing future design (Maruyama 1978b, 57).

Bertrand de Jouvenel proposed futuribles while he took a position against futurology. The concept of the futuribles comes from his book, *The Art of Conjecture*. He does not believe that prediction is possible and humans can get certain futures. Instead, humans make an effort to bring “what may happen” rather than “what will happen” (de Jouvenel 1967, 16). The futuribles is the intellectual activity of forming opinions about the future (de Jouvenel 1967, 16). The result of the futuribles is “a fan of possible futures” (de Jouvenel 1967, 16). The possible futures could not be predetermined but human imaginations can shape them through fantasies and reflections of the present. Human imagination is an essential part of the futuribles to represent the past and the present and to summon a future reality (de Jouvenel 1967, 25). The intellectual construction of a likely future is an art and not a science. Thus he favors the term “art of conjecture” (de Jouvenel 1967, 17).

De Jouvenel’s term, futuribles, is possible futures; the futures studies cannot be scientific, but it can and should be rigorous; alternative futures can be produced by forecasting trends, looking for emerging issues, and imagining differing consequences. The futuribles conception is relevant to modern futures studies. Malaska and Virtanen (2005, 12) state the contributions of futuribles that “growth of the popularity of scenario writing since the 1960s demonstrates this well, as exemplified by the sample of the references of recognized experts, such as Michel Godet, Ian Wilson, Eleonora Masini, Jerome Glenn and Theodore Gordon, and by several reports to the Club of Rome since the 1972.” Cornish (1977, 83) points out de Jouvenel’s influence on international futures studies: “De Jouvenel provided the vital connections and essential intellectual foundation that enabled the study of the future to become an important intellectual activity not only

in France but in Italy, the United States, and elsewhere.” De Jouvenel established Futuribles International (formerly Association Internationale Futuribles) in 1960 which published a journal *Futuribles* and supported future-oriented works (Cornish 1977, 83). Despite the pivotal roles of futuribles to the modern futures studies, “futuribles” never caught on in the United States and is limited to Western Europe” (Bell 1997a, 69).

Prospective (*La prospective* in French), like futuribles, is a French-based future term. It was coined by a philosopher, Gaston Berger, who was a main figure in French futures studies during the 1950s (Cornish 1977, 80). He used the word ‘prospective’ to indicate five future-oriented attitudes: 1) to look far away, 2) to look breadth wise, 3) to look in depth, 4) to take risks, 5) to take care of mankind (Godet and Roubelat 1996, 164). The most distinctive trait of prospective is “its voluntary divorce from the present and its systematic exploration of alternative futures” (Valaskakis 1988, 340). Berger conceived that the nature of the future was more discontinuous than continuous: “the past is what has been done; the future is what is to be done.... To turn toward the future, instead of looking at the past, is not simply to make change of scene, it is to pass from “seeing” to “doing” (Cornish 1977, 81). The future is totally different from the present. Human choices and goals are the most important factors in shaping tomorrow. Thus, it underscores “generating good questions” rather than “obtaining good answers” (Valaskakis 1988, 340). It is closely related to the planning process (Valaskakis 1988, 341). Berger and his followers influenced French intellectuals and governmental life (Cornish 1977, 82). In particular, public issues, including education, the environment, urbanization and regional planning, were affected by the prospective methodology (van der Heijden 2002, 128).

The legacy of Berger was succeeded by Pierre Masse, Bertrand de Jouvenel, and Michel Godet (van der Heijden et al. 2002, 128). Notably, Godet, who is Professor of Strategic Prospective at the Conservatoire National des Arts et Métiers in Paris, has proceeded a particular way of prospective since the 1970s. He considers that “prospective is neither forecasting nor futurology, but a mode of thinking for action and against fatalism” (Godet 1994, 29). “The plotting of a desired future” is the core element in shaping the future (Godet 1994, 25). Thus he proposed strategic prospective whose aim is

“to transform anticipation (the exploration of the possible futures (futuribles) into action” (Bain and Roubelat 1994, 346). There are two reasons for coining the term “strategic prospective”: 1) there is no proper translation of *La prospective* in the English, 2) it gives “business leaders a sense of continuity with *strategic planning or strategic management*” ” (Bain and Roubelat 1994, 346). Recently the usage of strategic prospective has slightly evolved over time. Godet, in his book, *Creating Futures*, addressees that “our current use of *la prospective* would best be translated by strategic scenario building”(2001, 2). Godet and his colleagues (2008), in the LIPSOR Working Papers, identify “prospective” with “strategic foresight”.

Amara (1981, 25) introduces ‘futures field’ as an equivalent of futurism, futurology, and futuristics. He defines futures field as followings: 1) “any systematic attempts to improve our understanding of the future consequences of present developments and choices.” 2) “any efforts to systematic our assumptions and perceptions about the future” (Amara 1974, 289-290). He divides futures fields into three features: visionary, analytical, and participatory (Amara 1974, 291). He prefers it to other terms of representing the study of the future. He believes that the term ‘futures field’ is a broader concept than that of ‘futures studies’ and ‘futures research’ (Amara 1981, 25). And futures research can be seen as a narrow sense of analytical part of the futures field because of the word ‘research’ (Amara 1974, 289).

Michael Marien, however, rejects the term futures field. He argues that futurists do not share “a common academic background” and it is extremely fragmented (Marien 1985, 13, cited Bell 1997a, 68). Instead he calls it a “mutlifield (Marien 1985, cited in Marien 2002, 263), or “a very fuzzy “multifield,” or the key integrative core” (Marien 1996, 364). His critique to futures field goes beyond terminology preferences, rather focusing on the lack of its coherent and rigorous researches: “Nor have I ever seen any agenda for how FS could become more of a ‘field’, or a stronger field. Rather, I suspect that statements about a ‘field’ are made unconsciously in the hope that calling it a ‘field’ will make it so” (Marien 2002, 263).

Contrary to Marien, Bell believes that there are same backgrounds in futures studies. He defines ‘field’ as “an intellectual endeavor or a sphere of activity or interest,

especially within a business or profession” (Bell 1997a, 68). It is not necessary that futures studies should be “unified” or “well established” to become a field. Bell (2002) argues that futures studies is ‘alive and well’ (p. 437) and most futurists have a consensus on the scope and purposes of futures studies such as “investigation of possible, probable, and preferable futures” (p.442) and wide agreements like the importance of “past trends and current changes” (p.443). Moreover, he states that “all fields of inquiry today have a strong tendency toward fragmentation and, compared to some other fields, futures studies is no more, and perhaps less, fragmented than others” (Bell 2002, 438). By Bell, the fragmentation is no more than a criterion of whether futures studies is a distinct field or not.

Prognostics was used in the former ‘Socialist’ countries of Eastern Europe for representing their efforts in futures studies (Masini 2006, 1160). Prognostics was coined by the Dutch scholar Fred Polak (van der Helm 2005, 506). He defines prognostics as “the science which, with advanced methods and instruments, aims at exploring the future and acquiring probable knowledge of the future” (Polak 1969, 21). “It is also the science which tries to control the future, based on this systematic anticipation, by purposively guiding the future by socio-dynamic techniques”(Polak 1969, 21). Along with the image of the future, he emphasizes historical knowledge “as an indispensable aid to reliable knowledge of the future” (Polak 1969, 19). His prognostics deals with the scientific study of the future such as the probability of the future.

Futures research and futures studies are the widely accepted terms in the futures community. Futures research has become a preferred term for academia, especially in the United States (McHale 1978, 9). The World Future Society often used it during the 1960s (Sardar 2010, 181). Helmer (1983, 114) considers futures research as “a branch of operations research”. The main function of the futures research is to “provide decision makers with operationally meaningful assistance in the form of information and analysis” in terms of long-range plans (Helmer 1983, 114). In this context, futures research is closely related to a decision-aid tool based on the long term forecasting. Regarding the terminology, it has two connotations. One is that the term ‘research’ is intended to refer to “the respect for data-gathering and sense-making that must underlie any serious

attempt to grapple with the future” (Fowles 1978, x). Second is that it looks to confine “the field to scholarly or scientific research” (Cornish 1977, 157).

Despite the limited meanings of the terminology, van der Duin (2006, 39) put forward the usage of futures research based on three reasons:

- 1) “Multiplicity: the term futures refers to thinking in multiple futures (instead of just one) which is nowadays very common in studies of the future.”
- 2) “Multidisciplinarity: the term futures also suggests that the possible futures are considered from a social, cultural, economic, political, and technological point of view.”
- 3) “Investigation: the term research implies that we do not adopt an a priori standpoint with regard to the question whether or not it is possible to predict, create or explore the future, emphasizing instead that the future can be investigated and knowledge about the future can be gained which can serve as a valuable input to today’s decisions about the future.”

Futures studies is the most popular and is a very modest term in the futures field (Cornish 1977, 257; McHale 1978, 9). McHale prefers to use the term futures studies. It signifies “a more open-ended inquiry” because it can avoid “the more rigorous connotations of “research” with its implications of scientific objectivity and value neutrality” (McHale 1978, 9). He also regards it as “the more modest and ambiguous term” because it can contain “many elements—prediction, conjecture, imaginative extrapolation, and normative projection” (McHale and McHale 1976 136). On the other hand, its ambiguity can contribute to improve communications between different countries (Bain and Roubelat 1994, 346). According to McHale and McHale (1976 136), futures studies is concerned with “a range of alternative futures”, “alerting functions”, and “explicit sets of value consideration and preferences.”

Foresight has gained ground and has become a fashionable term since the 1990s (Cuhls 2006, 192; Major, Asch and Cordey-Hayes 2001, 91). Irvine and Martin, in his book, *Foresight in Science: Picking the Winners*, use the term foresight to “describe strategic forward-looking technology analysis for policy-making” (Georghiou et al. 2008, 8). According to them, foresight is “to look into the longer-term future of science, technology, and economy and society with the aim of identifying the areas of strategic research and the emerging generic technologies likely to yield the greatest economic and

social benefit” (Irvine and Martine 1984, cited in Anderson and Jørgensen 2004, 5). There are three major objectives in foresight: “science and technology priority setting,” “the connectivity and efficiency of the innovation system,” “shared awareness for future technologies, opportunities and strategies” (Barré 2002, cited in cited in Anderson and Jørgensen 2004, 5-6). Foresight emphasizes the priority setting in science and technology, participation of policy making, and the formation of strategy. Thus many practitioners who adopt foresight use terms “foresight” and “technology foresight” interchangeably.

The Australian futurist Slaughter, who established the Australian Foresight Institute, has contributed to spread the concept of foresight to academic futures studies and other areas. He believes that futures methods are used superficially and limitedly. He considers ‘environmental scanning’ and ‘strategic foresight’ as good examples of practically applied futures studies (Slaughter 2002, 103). He states that:

Strategic foresight is the ability to create and maintain a high-quality, coherent, and functional forward view and to use the insights arising in organizationally useful ways; for example, to detect adverse conditions, guide policy, shape strategy, and to explore new markets, products, and services. It represents a fusion of futures methods with those of strategic management (Slaughter 2002, 104).

#### **2.4. History of Futures Studies**

Future-oriented thoughts are universal and can indeed be traced back to the beginning of human prehistory (Bell 1997a, 2). Ferkiss (1977, 5) states a human’s inherent nature of a future-oriented tendency:

Throughout human history men have desired to know the future. In every society, even the most backward-looking and custom-bound, men and women have sought—necessarily—to anticipate the effects of their actions, to know whether or not game would appear, crops would flourish, or children grow to maturity. It is impossible to act in the present at any level without some image of the future.

Human’s desire to grip the future has showed in a variety of practices. Divination, prophecy, and prediction have existed in all cultures throughout history. For instance,

forms of ancient divination are the Chinese I Ching, astrology, fortune-telling by cards, and palmistry (Ashe 2001, 64); Delphi was a site of Apollo's chief oracular shrine to obtain a prediction in Greece (Ashe 2001 61); the collective tradition of prophets in Judaism, Islam, Christianity formed the background of their religious practice; Nostradamus, who was a French prophet in the 16<sup>th</sup> century, predicted future events taking place over four centuries later (Popkin 1984, 118). Still, he is a kind of syndrome and current interest when political and military disasters occurred. Some people have been fascinated by his predictions.

Modern futures studies, as "a full-scale futures movement" (Bundy 1976, 66),<sup>4</sup> had developed after the World War II. Many of core assumptions, concepts, purposes, and names were generated and contested after World War II. Some development of futures studies drew on historical background to reflect how people think of futures and social background to reflect why people need futures-oriented thoughts. The modern futures studies did not merely originate after the World War II. The tradition of future-oriented thoughts can be traced back from ancient times to industrial periods. There are four long traditions: religion, utopia, historicism, and science fiction.<sup>5</sup>

Future-oriented thoughts have been embodied into all religions. As Ferkiss (1977, 5) points out, the historic religions such as Judaism, Christianity and Islam, indicated that human's future is in the hands of an eternal all knowing God. Most believers strongly expect that the present and the future should be dramatically intervened by God. Also human's fate is predetermined by God. In particular, in Christianity, the expectation of the second coming of Jesus and apocalyptic eschatology are core doctrines. In this context, human futures are to be left completely in the hands of God. There is no historical freedom in the words of Schelling. Schelling, who was a German philosopher, emphasizes human freedom for creating the world against the nature of God (Hudson 2003, 3-4). It is associated with human actions and reasoning. To a certain degree, these

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<sup>4</sup> Bundy (1976, 66) defines futures movement as "all those organized attempts, mainly by institutions, to plan, forecast, study, and predict the future.

<sup>5</sup> Ferkiss (1977, 6-9) proposes two modern Western cultures to affect the emergence of futures studies: the Utopian tradition and science fiction tradition. We elaborate his suggestions by adding two more traditions.

religious traditions might affect antihumanistic and predetermined tendency in futures studies. They are prone to ignore the importance of human roles and needs in futures works. As Godet (1994, 30) states, “the passive attitude to the future is a legacy of religious fatalism.” Humans have no alternative but to follow the purpose of God.

Utopian tradition is able to provide normative and preferred futures to futures studies. It brings our desires, hopes, future possibilities, and critical challenges to current conditions into natural and social sciences (Hudson 2003, 4). The same rationales can be applied to futures studies. Plato’s *Republic* suggests futures vision based on justice; Augustine’s *City of God* proposes a perfect society based on love (Masini 2006, 1158); Francis Bacon’s *New Atlantis* offers an ideal science-based community located on an imaginary island on the emphasis of human knowledge (Cornish 1977, 55). Thomas Moore’s Utopia is “an imaginary society situated on a faraway island, a democratic and classless society of generally virtuous men and women” (Wagner 1996, 958). Thus, Cornish (1977, 54-56) considers utopianism as the beginnings of modern futures studies.

Historicism is another element to affect modern futures studies. According to Popper (1957, 3), historicism is “an approach to the social sciences which assumes that *historical prediction* is their principal aim, and which assumes that this aim is attainable by discovering the ‘rhythms’ or the ‘patterns’, the ‘laws’ or the ‘trends’ that underlie the evolution of history.” Popper’s criticism of historicism lies on Hegel and Marx who supported a deterministic philosophy of history. Historicists assume that history is determined by specific conditions and that there are laws for the development of history (Sandberg, 1976, 50-51). Condorcet suggests the law of the progress of reason (Bell 1997b, 33). He predicts that the future would see the improvement of freedom and the reduction of inequality (Bell 1997b, 35). Comte proposes the law of three stages which describes human history through three phases of development: the theological, metaphysical, and scientific. Marx believes that human history evolved according to specific socioeconomic formations. He forecasts the end of capitalism and the rise of socialism. Goldthorpe (1971, 279) asserts that many futures studies, including Kahn and Wiener’s *The Year 2000*, are under the historicist influence. Accordingly, futures studies concentrates more on technological and economic forecasting (Goldthorpe 1971, 280).

Deterministic tendencies and the pursuit of evolutionary sequences in futures studies are closely related with historicism tradition.

Science fiction is a way to provide alternative futures for social, cultural, and technological developments in futures studies (Cornish 1977, 62-65; Ferkiss 1977, 9; McHale 1978, 7-8). Most science fiction has been pessimistic. Edgar Zamiatin's *WE* (1924) and Huxley's *Brave New World* (1932) address enslaved humankind by scientific and technological progress. On the other hand, utopian themes can be found throughout French author Jules Verne's writings and Edward Bellamy's novel *Looking Backward 2000-1887* (1888). In addition, some of them forecasted new inventions. The British novelist Bulwer Lytton includes domestic robots, television, sleep teaching devices, flying machines, and equality for all in his book, *The Coming Race* in 1871. There are close relations between futures studies and imaginative literature. Science fiction was a vehicle of futures insights and played important roles for the functions of forecasting.

Modern futures studies in the sense of systematic study started at the end of the World War II (Clarke 1978, 74; Masini 2006, 1159; Schmidt-Gernig 2002, 233). At this time, the framework and approaches for futures studies were developed. And futures studies proceeded as a "quasiformal discipline" (McHale 1978, 8). According to German historian Schmidt-Gernig (2002, 235-237), there are three reasons why the development of futures studies shifted into high gear after World War II. The most important reason is an unprecedented growth of social and economic sectors such as GNP, mass consumerism, and technological innovations. Second is the legacy of World War II. The intense and successful economic, military, and social planning was continued after the war and intensified during the Cold War. The military operations research and systems analysis primarily contributed to futures studies. The last reason being the introduction of the paradigm of information, especially cybernetics, which is "the science of communication and control in animate and inanimate systems", provides futures studies with systems thinking, including the way of thinking for feedback loops. The cybernetic approach is closely related with the information or knowledge society.

To examine the historical development of modern futures studies, three developmental phases are identified: 1) the era of probability (the 1950s – the 1960s), 2)

the era of possibility (the early 1970 – the 1980s), and the era of uncertainty (the 1990s – the 2000s). Each developmental phase is reviewed in terms of five elements: paradigm, background, main topics, important futurists, and institutional activities.

The emergence of modern futures studies is equated with the history of the Western futures studies of the '50s and '60s. It may refer to the era of probability. The era of probability marked a period of “developing a science of forecasting” (Cornish 1977, 83) and “the scientification of the future” (Anderson 2010) for the economic and technological development in the United States and Europe. Forecasting was looking for what was the most likely or probable future conditions. The forecasting dominated futures studies assumed that the future was the extension of the past, and historical data by extrapolation could be made into meaningful prospects.

After the post war societies, rapid economic growth looked at a new market and portfolio management (Burns 2003). Reconstruction and modernization required a new type of political system, including new technologies of government (Anderson 2010). During the Cold War, nuclear threats or new security issues increased greatly (Cornish 1977, 84). Technology and science advancement was the top priority ahead of the enemy. “In the 1950s and 1960s, the technological character of looking to the future was dominant and terms like ‘technology forecasting’ and ‘technological forecasting’ were very popular” (van der Duin 2006, 38). Overall, Western society needed to call for new way of thinking from traditional planning to forecasting. Forecasting could provide decision-makers with long-term strategic visions and provisions.

The RAND Corporation, the prototype of the future-oriented “think tanks”, founded in 1948 and worked in the Air Force Project RAND (Ferkiss 1977, 10). The RAND profoundly contributed to futures studies for preventing war and convincing national security (Cornish 1977, 84-85): military long-term technological forecast, institutionalization of policy-oriented futures studies, and the mother of think tanks, such as the System Development Corporation and the Hudson Institute. In particular, in the 1950s, the RAND Corporation originally developed the Delphi and other scenario methods. Norman Dalkey and Olaf Helmer used the Delphi method as a technological forecasting procedure at the RAND Corporation (Cornish 1977, 85). In 1964, the

publication of Gordon and Helmer's, *Report on a Long-Range Forecast*, received a world-wide reputation, which was a typical exemplar of the method and contained forecasting for technological events for 2000 and beyond (Gordon 1994, 2). Since then, Delphi methods have been used in thousands of occasions for governments, industry, and academia. Herman Kahn, who was in charge of the civil defense and strategic planning, developed the scenario for the US Air Defense System Missile Command (van der Heijden et al. 2002, 126). In 1960, Kahn applied this scenario method in *On Thermonuclear War* (van der Heijden et al. 2002, 127).

International futures discourse was embedded in the form of organizations, conferences, research institutes, and periodicals. The organizations were Futuribles International (formerly Association Internationale Futuribles, 1960, France), the World Futures Studies (1966, the US), the World Futures Studies Federation (1967, Europe), Club of Rome (1968), the Czechoslovak Futurological Society (1968), the Japan Society for Futurology (1968), and the Korean Society for Future Studies (1969); for conferences, International Future Research Conference Oslo (1967), International Future Research Conference Kyoto, Japan (1970); for research institutes, the Science Policy Research Unit (1966, UK), the Institute for the Future (1970, the US), the Hawaii Research Center for Futures Studies (1971, the US); for periodicals, *Revue Futurable* (1967, French), *The Futurist* (1967).

Educational programs in Futures Studies emerged at American colleges and universities. Alvin Toffler (the New College for Social Research in New York City), Jim Dator (1967 at Virginia Polytechnic Institute and State University), and Wendell Bell (Yale University) introduced futures courses. Particularly Jim Dator, he has taught futures studies at the University of Hawaii since his move to Hawaii in 1969 and served as the director of the Hawaii Research Center for Futures Studies in 1971.

As a result of the biggest development of futures studies in decades, there were several publications devoted to futures studies ranging from neo-Malthusians or growth pessimists to cornucopians or growth optimists: Harrison Brown's *the Challenge to Man's Future* (1954), Fred Polak's *The Image of the Future* (1961), Dennis Gabor's *Inventing the Future* (1964), Marshall McLuhan's *Understanding Media* (1964), Herman

Kahn and Anthony J. Wiener's *The Year 2000* (1967), Erich Jantsch's *Technological Forecasting in Perspective* (1967), Bertrand de Jouvenel's *the Art of Conjecture* (1967), Paul Ehrlich's *Population Bomb* (1968), Alvin Toffler's *Future Shock* (1970), Donella H. Meadows' *the Limits to Growth* (1972). IRADES's *Social Forecasting: Documentation 1972; Ideas, Men, Organizations, Activities* (1972).

The second developmental stage of futures studies may refer to the era of possibility which began in the early 1970s and lasted through the 1980s. The era of possibility was characterized by “the development of scenarios” (van der Heijden et al. 2002, 129) and “exploration of divergence” (Slaughter 2004, 102) for proposing new and different images of the future. Whereas the first stage, the era of probability, focused mainly on forecasting, the second stage, the era of possibility, was closely related with scenarios. Scenarios are “a collection of alternative stories or images that describe alternative future possibilities, future events and future environments” (Callanan and Gannon 2007, 93). Scenarios consider alternative future possibilities. An important characteristic of scenarios is not probability but possibility so that scenarios value the breadth of future possibilities as much as we can imagine. The scenario-based approach supposes that the future is never past tendency, rather it is based on radical breaks. It tries to deliver the possible stories of discontinuity between the present and the future.

The growing popularity of the scenario approach was driven by two main aspects: the pessimistic message of *The Limits to Growth* and 1973 oil crisis (van der Heijden et al. 2002, 129-131). The Club of Rome published a report, *The Limits to Growth*, in 1972, which produced computer modeling scenarios for the future global economy and environment. The report talked about how unlimited economic growth and population growth caused global dangers such as scarcity of natural resources, environmental deterioration, malnutrition, and economic collapse. Its apocalyptic discourse created a sensation in the world. After one year of *The Limits to Growth*'s publication, the oil crisis of 1973 brought a strong question on “the fundamental validity of the ‘predict and control’ paradigm” (van der Heijden et al. 2002, 131). The oil crisis challenged traditional economic forecasting of the future. The crisis completely changed the way of thinking of futures. Furthermore, the Royal Dutch/Shell Group adopted the scenario

method to explore the possibility of an oil crisis in 1972 (van der Heijden et al. 2002, 131). The scenario method allowed the Royal Dutch/Shell Group to prepare for the oil crisis allowing them to become a major oil company. Through the Royal Dutch/Shell Group success story of utilizing scenarios, the scenario approach became an important tool to allow business management to discuss the future or futures of the company.

As the results of the paradigm shift, futures studies could extend its subjects and application into global issues, more normative futures, and business management. *The Limits to Growth* triggered global debates about future between the “neo-Malthusian pessimists” and “technological optimists” (or “cornucopians”). The neo-Malthusians believe that the human industrial civilization will collapse due to the growing consumption of limited resources (McNeely 1997, 12). According to this prediction, “ecological and economic turmoil are inevitable, resulting in the collapse of populations and civilizations”(McNeely 1997, 12). On the other hand, technological optimists do not assume the existence of limits in material growth. Technological advancement will solve problems and improve material well-being (McNeely 1997, 12). *The limits to Growth* was countered by *Models of Doom* (Cole et al. 1973) and *The Doomsday Syndrome* (Maddox, 1972).

The tension between the neo-Malthusians and the technological optimists grew to explore alternative future scenarios about how to deal with population, resources, and economy. Technological optimist views were presented by the *The Next Two Hundred Years: A Scenario for America and the World* (Herman Kahn et al. 1976), and *the Ultimate Resource* (Simon 1981). Herman Kahn and his colleagues projected the life in America and in the world in the next 200 years in terms of prosperity of exponential growth. The OECD Inerfutures Project and Julian Simon rejected the thesis of limits to growth also. In particular, Julian Simon had a faith of human ingenuity and technological capability. The neo-Malthusian perspective gave a warning to the public and actively attacked the technological optimists. For example, the Worldwatch Institute published *State of the World* reports (produced annually since 1984) (Carter 2007, 45) and the UN’s World Commission on Environment and Development issued *Our Common Future*

(1987). In 1980, *The Global 2000 Report to the President*, sponsored by the U.S. government, opened with ominous forecasts (McQuillan and Preston 1998, 5):

If present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically, and more vulnerable to disruption than the world we live in now. Serious stresses involving population, resources, and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today.

*The Limits to Growth*, which was well known of the global modeling exercise, had a significant impact on established disciplines such as economics, sociology and political science (Chichilnisky 1990, 178) and launched “the foundation of a series of scenarios studies on the survival of mankind” (van Steenberg 2000, 335-336). As consequences of *the Limits to Growth*, global modeling received credibility as “a policy-relevant method of analysis” from the popular press and the environmental movement (Edward 2010, 370). Global modeling can be perceived as “one of the first expressions of social scientific concern with the globalization processes” (van Steenberg 2000, 335). During the 1970s and 1980s, national governments, the UN programs, universities, and research institutes supported a number of global modeling projects (Cole 1987, 404-405). Global modeling widely applied to futures scenarios, thus creating the alternative future courses of population, world resources, pollution, poverty, industry, and technology.

The first wave of global models can be seen in *the Limits to Growth* (1972), *A Blueprint for Survival* (1972), *Mankind at the Turning Point: The Second Report to the Club of Rome* (1974), and *Intefutures: Facing the Future—Mastering the Probable and Managing the Unpredictable* (1979) (van Steenberg 2000, 335-336). The first wave focuses on the “ecological problematique” (van Steenberg 2000, 335). It shows that global modeling is one of the best ways to study and solve problems on a planetary scale. The second wave of global models responded to new concerns about new international economic order to advocate the Third World perspectives and reduce the gap between the rich and the poor nations (van Steenberg 2000, 336). Some examples are *Catastrophe or New Society? A Latin American World Model* (1976), *Reshaping the International Order: A Report to the Club of Rome* (1976), and *The Future of the World Economy: A*

*United Nations Study* (1977) (Steenbergen 2000, 336). The third wave of global models came to in the 1990s. The relative decline of global modeling in the 1980s was led by the decreasing influence of global models, a serious economic crisis, and “the decade of a no-nonsense mentality, of paradigm, of short-term thinking, of piecemeal engineering and of skepticism concerning the possibilities of changing economic structures” (van Steenbergen 1994, 45-46). *Millennium: Winners and Losers in the Coming World Order* (1990), *World Economy 1990-2000: The Growth Imperative* (1992), and *Scanning the Future: A Long-Term Scenario Study of the World Economy 1990-2015* (1992) had entered the new wave in the 1990s (van Steenbergen 1994, 45-46). They brought in new paradigms for the global models (van Steenbergen 1994, 49-51). The third wave captured a far more optimistic view than that of previous models. It stressed more on the internal relationship among the North Americas, Western Europe and Japan, rather than the relationship between the rich and the poor nations. It considers the economic competition between the three economic giants more rather than rich/poor country relationships.

The development of normative futures is the second feature of futures studies in the era of possibility. The main theme of normative futures is the vision of an ‘after industrial society’ which expects the emergence of a new society, based on how information technology changes society. The future of an emergence of a new type of society was diversely labeled as “post-civilized society” (Boulding 1964), “post-economic society” (Kahn and Wiener 1967), “the knowledge economy” (Drucker 1969), “Information Society” (Masuda 1971, cited in Targowski 2005 ), “the Post-Industrial Society” (Touraine 1971 and Bell 1973), “the Wired Society” (Martin 1978), “the Telematic Society” (Nora and Minc 1980), “Third Wave Societies” (Toffler 1980), “Information Economy (Porat 1977), “Network Nation” (Hiltz and Turoff 1978), “Anticipatory Democracy” (Toffler 1970 and Bezold 1978). The various images of a future society reflect that the commentators have different preferred futures, place different emphases on the dimension of future society, and different ideas on the relationship between society and technology.

The floating and contrasting future images of a post-industrial society can be seen in Bezold and Olson’s possible four scenarios (Marien and Jennings 1989, 166): “the

highly optimistic high-tech information society”, “optimistic creative society”, “the disappointing things bog down scenario”, and “the pessimistic 1984 and beyond scenario.” The first two scenarios are highly optimistic. The optimistic view of the post industrial society is a booming economy, rapid technological progress, and no major privacy problems. This is well described by Drucker’s *The Age of Discontinuity* (1969), Bell’s *the Coming of Post Industrial Society* (1973), Kahn and his associate’s *The Next Two Hundred Years* (1976), Porat’s *The Information Economy: Definition and Measurement* (1977), Toffler’s *The Third Wave* (1980), and Naisbitt’s *Megatrends* (1982). All gave profound insight on what the rising society would be like, and provided the belief that the new society would provide more opportunities for many. Information would play a pivotal role for the new society. Daniel Bell emphasized the significance of the service industry and theoretical knowledge as main characteristics of a post-industrial society. On the other hand, the last two scenarios presented pessimistic futures with slow technological process, economic hard time, and strict social control. Examples of this interest in detecting gloomy future technology are evident in publications such as Touraine’s *The Post-Industrial Society* (1971), Ferkiss’ *The Future of Technological Civilization* (1974), Macrae’s *America’s Third Century* (1976), Lamm’s *Megatraumas: America at the Year 2000* (1985), and Shaiken’s *Work Transformed: Automation and Labor in the Computer Age* (1985). The French futurist sociologist Touraine proposes that the post industrial society would be a “programmed society” governed by a technocratic class by knowledge and bureaucratic power. Ferkiss also specifically argues against the threats of political freedom by technology.

The third feature is the deep involvement of the business community in the futures thinking. The futures thinking has become a popular corporate activity for the development of strategy after the dramatic success at the Royal Dutch/Shell Group in the early 1970s. According to Dror (1973, 536), futures studies contributes significantly to business management by “improving background information, stimulating new ways of thinking and providing decision inputs.” The UNIDO *Technology Development Manual Vol. II* (2005, 226) briefly addresses how the company does respond to the uncertain environment:

In the last two decades several large enterprises in such diverse sectors as energy, automotive, telecommunications and information technology have established foresight groups and strategic planning processes, which analyse the long-term prospects of new technologies and their impact on markets and corporate strategies. DaimlerChrysler's Society and Technology Research Group (STRG) is one of the first future research groups to be established within a company. Since 1979 it has investigated, in close cooperation with its customers, the factors shaping tomorrow's markets, technologies and products. Its focus is social science-based futures and business environment research to support strategy and product development processes.

Linneman and Klein (1979) discovered that in 1977, approximately 22 percent of the Fortune 1000 companies in the U.S. used scenario methods for their planning processes. Their follow-up survey showed that by 1981, 47 percent of Fortune 1000 companies used scenarios and Fortune 100 companies accounted for more than 75 percent (Linneman and Klein 1983). Europe also conducted a survey on the use of scenarios to the 1100 European companies. In 1981, 36 percent used the scenario method (Malaska, Meristö and Hasen 1984) and in 1985, 40 percent (Meristö, 1989). The survey showed that scenario practices in corporations became popular and more U.S. companies adopted scenarios methods than European companies. The Southern California Edison Company, for instance, found that the scenario method was more adequate than the traditional forecasting methods for business planning (Mobasheri, Orren and Sioshansi 1989)

Since the early 1970s, alternative futures have become a dominant part of futures studies. Periodicals, centers, and institutions of futures studies flourished. According to the Future Survey Annual 1988-89 (Marien and Jennings 1989, 191), 420 future relevant periodicals listed were active and 34 discontinued periodicals. General futures research periodicals include:

1. *The Futurist* (World Future Society, 1967), World Future Society Bulletin (WFS, 1967-1984; succeeded by futures Research Quarterly)
2. *Futures: The Journal of Planning and Forecasting* (Butterworths-UK, 1969)
3. *Technological Forecasting and Social Change* (Elsevier, 1969)
4. *Forum of Correspondent and Contact* (International Center for Integration Studies-NYC, 1971)

5. *Futuribles* (Association Internationale Futuribles-Paris, 1975)
6. *Futurics: A Quarterly Journal of Futures Research* (Minnesota Futurists-Minneapolis, 1977)
7. *Futures Canada* (Canadian Assn. for Futures Studies, 1977)
8. *Future Survey/FS Annual* (World Futures Society 1979)
9. *World Futures* (Gorden & Breach, 1981; successor to the Philosophy Forum)
10. *Impact Assessment Bulletin* (International Assn. for Impact Assessment-Georgia Inst. Of Technology, 1981)
11. *Journal of Forecasting* (Wiley, 1983)
12. *International Journal of Forecasting* (Elsevier, 1985)
13. *Futures Research Quarterly* (World Future Society, 1985; successor to World Future Society Bulletin)
14. *Project Appraisal* (Beech Tree Publishing-UK, 1986)

Several futures studies institutes were launched in some countries, sometimes serving as a Think Tank and fulfilling commercial needs, along with developing visions for alternative futures. The Copenhagen Institute for Futures Studies was founded in 1970 by Professor Thorkil Kristensen, the former Minister of Finance and the Secretary-General of the OECD. Futurist John L. Petersen founded the Arlington Institute a nonprofit, future-oriented research institute. The Institute for Alternative Futures was founded by Clem Bezold, Alvin Toffler, and James Dator in 1977. Peter Schwarz founded the Global Business Network in 1987 with a former colleague, Jay Ogilvy, to specialize in scenarios (Ringland 1998, 227). The students of futures have steadily increased through the graduate programs. The University of Houston at Clear Lake provided the first master's program in studies of the future under Jim Fowles and Chris Dede in 1974. The University of Hawaii offered a Master's program in Alternative Futures in the Department of Political Science in 1977.

The third developmental stage of futures studies can be labeled as the era of uncertainty which began in the 1990s, with the end of the Cold War, through the ever deepening process of globalization and rampant spread of information technology, to the present. This stage represented a period of unprecedented change and emerging complexity. James Gleick's chaos theory and Waldrop's the science of complexity led futures studies to new perspectives and possibilities (Greene and Caracelli 2003, 102). The chaos and complexity of the world encouraged the understanding of complex, nonlinear, and unpredictable futures, detecting unknown opportunities and threats, and

prepare for discontinuities. Besides, globalization caused a paradigm shift from a national context to a global one. New perspectives and possibilities about futures studies embraced foresight, critical futures studies, and global future images.

The development of foresight already mentioned in section 2.2. Foresight is action oriented and closely connected to strategic management. Foresight practices are carried in business (corporate foresight), a national scale (national foresight), and civil society (civil foresight).

Corporate foresight is basically “futures studies for business” (Neef and Daheim 2005). It maintains “the analysis of long-term prospects in business environments, markets and new technologies, and their implications for corporate strategies and innovation” (von der Gracht, Vennemann and Darkow 2010, 381). Many companies have carried foresight activities with their own strategic (planning) departments or foresight divisions: Siemens AG, DaimlerChrysler AG, BASF AG in Germany, Lucent Technologies, 3M, GE, DuPont in the US, Nokia in Finland, or Philips in the Netherlands (Chuls and Johnston 2006; Johnston and Bate 2003, 67; Marcus 2009, 64). Examples are Siemen’s *Horiozons 2020: A Thought-Provoking Look at the Future* (Scharioth et al. 2005), BMW’s *The Future of Mobility* (Institute for Mobility Research 2002, 2005, and 2008), and Shell’s *Energy Scenarios* (van der Veer 2005; Shell International BV 2008). Corporate foresight uses patent analysis, literature analysis, scenarios, surveys, Delphi, and technology roadmaps (Chuls and Johnston 2006). Scenarios and technology roadmaps are the best known and widely used methods (Chuls and Johnston 2006).

National foresight is a form of large-scale national exercises in foresight activities; it is the implementation of foresight focusing on national interests and dealing with national issues. It is used to support national economic, technological, and social development. Along with the growing literature of foresight study, many countries have conducted large scale foresight on the national level (Grupp and Linstone 1999). Since the Delphi activity in 1971, Japan has conducted a Delphi survey every five years (Major, Asch and Cordey-Hayes 2001, 92). Many countries emulated the Japanese model of Delphi. Germany and France used the questionnaire of the Japanese Delphi and collaborated with the NISTEP (National Institute of Science and Technology Policy) of

Japan (Chuls 2003, 22; Heraud and Chuls 1999, 56). Korea is another example that follows the Japanese model (Flanagan 1999, 24). Foresight has become the most desired policy device. Foresight activities are still managed in Japan, the U.S.A., The Netherlands, Germany, France, the U.K., Italy and Australia (Greisler and Stupak 2007, 107). The Canadian Association for Futures Studies (CAFS) changed its name into Foresight Canada (Sardar 2010, 179). Even a recent European study of “Advancing Foresight Methodologies” (COST Action A22) identified foresight with futures studies (Georghiou, et al. 2008, 9).

Civil foresight is futures practice for civil society. It is the area of foresight not undertaken by either corporate foresight or national foresight. National foresight focuses on priority setting in national policies. Corporate foresight emphasizes strategic formation dealing with the future impact on company profits. Civil foresight is interested in moral responsibility and generating good civil society visions. It is sometimes counterpoised to companies or governments. The civil foresight has promoted by the growing civil society, the global economic instability, and pressures on environmental issues like global warming. The future of society, thus, needs the perspective of civil society. The National Council of Voluntary Organizations (NCVO) in the UK introduced a Voluntary Sector Foresight Project to support voluntary and community organizations for better strategy and decision-making.<sup>6</sup> The Carnegie UK Trust’s publication, *The Shape of Civil Society to Come*, which is the report of the Commission of Inquiry into the Future of Civil Society, explores the future of civil society (Carnegie UK Trust 2007). The Cardio & Vascular Coalition (CVC), which is an alliance of 41 voluntary sectors and professional organizations, produced *Destination 2020: A Plan for Cardiac and Vascular Health* in 2009.

The emergence of critical futures studies opened the new way for futures thinking in the era of uncertainty. Critical futures studies was explicitly developed by Australian futurist Richard Slaughter (Slaughter 2004, 104-106). Traditional futures approaches, such as prediction, forecasting, and scenario-building, focus on the empirical and external.

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<sup>6</sup> Third Sector Foresight website. [www.3s4.org.uk](http://www.3s4.org.uk) (March 20, 2012).

They overlook the social construction of the future and symbolic functions. Instead, the critical futures studies stresses “the importance of the ‘inner’ meaning in understanding the ‘outer’ world” (Curry 2007, 341) and emphasizes “the re-negotiation of meanings associated to future alternatives” and “emancipation from current power structure” (Arnaldi 2008, 111). Slaughter’s critical futures studies came from Habermas and the hermeneutic tradition (Inayatullah 1990, 128).

The Pakistani futurist Sohail Inayatullah also made important contributions to the critical futures studies, differing from Slaughter’s approach. Inayatullah’s approach is derived from Michel Foucault and post-structuralists (Inayatullah 1990, 128). He used deconstruction, analysis of power and critical discourse for examining how the future is constructed in the present discourses and how the future related discourses shape the future (Inayatullah 1990, 128-130). He developed the Causal Layered Analysis (CLA) to see a deeper insight of current trends and problems, look at different meanings of data and information, and yield “transformative spaces for the creation of alternative futures” (Inayatullah 1998). The CLA has four levels: the litany, social causes, structure and the discourse/worldview, and metaphor or myth (Inayatullah 1998). There are various topics and areas by which the CLA are applied: business (Saul 2002), demography (Terranova 2004), education (Bussey 2008; Milojević 2005; Gray 2006; Watson 2009), environmental issues (Boyd 2008), forestry (Ariell 2010), Japanese studies (Wright 2010), and new approaches in social research (Grbich 2004, 63-64). The CLA is becoming popular and its applications are increasing continuously. The CLA is a multi-layered method which complements different methods and provides various perspectives for the purposes of research. It drives a deep insight of policies based on dominant discourses.

The third feature of the era of uncertainty is the popularity of great transition thesis and global future images. The discourse of new millennium made international efforts to see the global futures, especially great transition. Paul Raskin and his colleagues in the Global Scenario Group believe that the human history encounters a new type of transition, ‘the planetary phase of civilization’ (Raskin et al. 2002, 2). The powerful images of the global future are largely linked to globalization, the progress of ICT, and global crisis. Global future images may be of specific issues (global warming or

terrorism), or entire global societies, or negative images or positive images. The Global Scenario Group presented three global future scenarios: Conventional Worlds, Barbarization, and Great Transitions (Gallopín et al. 1997). These scenarios respectively imply a continuation of the current situations, fundamental social change and collapse of civilization, and fundamental social transformation and evolution to a higher stage.

Global future images can be divided into three categories: optimistic global futures, pessimistic global futures, and sustainable global futures. Optimistic global futures are based on the global free-market economy and advanced technology for prosperity and opportunity. It is closely related to the neo-liberal global futures. Global economic organizations, such as IMF, the World Bank, and WTO, play an important role. The neo-liberal visions of a borderless world for capital are the main theme in this optimistic growth position (Pieterse 2000, 9). This perspective is expressed in “Kenichi Ohmae’s *The Borderless World* or the world as duty-free store” (Pieterse 2000, 9). The optimistic global futures are represented by the following scenarios: the Dutch Central Planning Bureau *Scanning the Future* ‘Global Shift’ scenario (1992), the Intergovernmental Panel on Climate Change (IPCC) SRES ‘A1’ scenario (Nakicenovic and Swart 2000), the United States National Intelligence Council (NIC) *Global Trends 2015* ‘Inclusive Globalization’ scenario (2000), Hammond’s ‘Market World’ scenario (1998), Gallopín and Raskin’s ‘Market Forces’ scenario (2002), and OECD’s *The World in 2020: Toward a New Global Age* (1997). Technologization and globalization are main features of those scenarios.

Pessimistic global futures are based on the complete discontinuity of current situations due to conflict, poverty, natural disasters, natural resources exhaustion, pandemic diseases, and economic crisis. Journalist Robert Kaplan’s Atlantic Monthly article “the Coming Anarchy” (1994) and Michael T. Klare’s book *Resource Wars* (2002) reveals a pessimistic collapse position that rising population and resource scarcity will result in turmoil such as disease, civil instability, and violence (Peoples and Vaughan-Williams 2010, 94). Many pessimistic images are closely related to the claims against neo-liberal globalization. Jeremy Rifkin’s *the End of Work* addresses the pessimistic views that new technology destroys the world economic infrastructure and the computers

replace the human labors resulting in ‘jobless growth’ (Pieterse 2000, 10; Lee 2009, 261). Other examples are Daly and Cobb’s ‘environmental risk’, Greider’s ‘the risk of global oversupply’, and Attali’s ‘tensions between the market and democracy’ (Pieterse 2000, 10). The pessimistic global futures are represented by the following scenarios: Allen Hammond’s ‘Fortress World’ scenario (1998), Gallopin and Raskin’s ‘Barbarization’ scenario (2002), and the Dutch Central Planning Bureau *Scanning the Future* ‘Global Crisis’ scenario (1992).

The third image, a sustainable global future, is linked with a conserver society which stimulates “decentralization, self-reliance, sustainability and harmony of man within nature” (Hancock 1980, 321). Sustainable global futures are competing with images of neo-liberal standpoints for future development. There are generally two different approaches for sustainable global futures (Morita et al. 2001. 139). One is for ‘low consumption’ which is to promote a conservers society to reduce consumption: Ted Trainer’s *the Conserver Society: Alternative for Sustainability* (1995). Second is for ‘our common future’ thesis which is to increase economic activity for improved equity and environmental quality: Gallopin and Raskin’s ‘Great Transition’ scenario (2002), Allen Hammond’s ‘Transformed World’ scenario (1998), the Dutch Central Planning Bureau *Scanning the Future* ‘Balanced Growth’ scenario (1992), the Intergovernmental Panel on Climate Change (IPCC) SRES ‘A2’, ‘B1’ and ‘B2’ scenario (Nakicenovic and Swart 2000), and World Business Council for Sustainable Development (WBCSD) Global Scenarios 2000-2050 ‘Jazz’ scenario (1998).

In the remarkable futures activities of foresight, critical futures studies, and global future images, new periodicals and organizations make futurists or future-oriented scholars responsive to the major issues confronting regional communities and global society. For periodicals there are, the *International Journal of Foresight and Innovation Policy*, which was founded in 2004. It aims to deal with “knowledge creation, diffusion and utilization in innovation policy”.<sup>7</sup> *Foresight: The Journal of Future Studies Strategic Thinking and Policy* was published in 1999 to “demonstrate more clearly the utility of

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<sup>7</sup> World Futures Studies Federation website:  
[http://www.wfsf.org/index.php?option=com\\_content&view=category&id=99&Itemid=123](http://www.wfsf.org/index.php?option=com_content&view=category&id=99&Itemid=123) (March 29, 2012).

clear thinking about the future in shaping decisions in business and government” (Blackman 1999, 4). It stands on the middle range approach which is aimed at integrating “highly mathematical forecasters” and “all manner of visionaries” (Blackman 1999, 4). In 2009, the World Future Society created a new journal, *World Future Review: A Journal of Strategic Foresight*, incorporated by Futures Research Quarterly and Future Survey. For organizations, in 1999, Richard Slaughter launched the Australian Foresight Institute to “create the next generation of foresight practitioners in Australia” and “support progress toward what we termed ‘social foresight’” (Slaughter 2006, 5). The Association of Professional Futurists was established in 2001 to build professional futurist networking and to “improve the image and performance of the field” (Hines 2004).

## **2.5. Futures Studies: Art, Science, Or Politics?**

This section opens with thought- provoking questions, which help to maintain a conscious awareness of what the nature of futures studies is, raised by Ogilvy (2002, 115):

“If there is such a thing as futurology—a disciplined *logos* or discourse about the future—is it an art, a science, or, as many suspect, nothing more than hopes and fears dressed up as science? To put the question very concretely: If futures research is a legitimate field of disciplined inquiry, then why are there so few courses or departments of future studies in our major universities? Why is futures research not recognized by academics as one among the many disciplines?”

He tried to review the current contradictions of futures studies which has constantly pursued disciplined inquiry and utterly inspired alternative futures while it already has abandoned predictive science.

The question of whether futures studies is an art or science has long been both fascinating and disturbing to the futures community. The debates are closely related with the nature of futures studies and the validity of the knowledge in futures studies (Arnaldi 2008, 111). The question of science or art is, more or less, parallel to the discussion on ‘field or not’ (see 2.2. classification of futures terminology). Some futurists say that

futures studies is an art because the future does not exist and therefore cannot be predicted. Futures studies is an art of conjecture or a question of imagination and creativity. Daniel Bell, Harold Lasswell, De Jouvenel, Gaston Berger, and Peter Schwartz support this view point (Arnaldi 2008, 110; Bell 1997a, 167). They describe its purpose as not seeking the true future knowledge but informing alternative futures. For example, Schwartz, in his book, *The Art of the Long View* (1991), points out that the main purpose of scenarios is not better predictions but better decisions. Using scenarios as a main tool of futures studies should be able to provide a long view in a world of great uncertainty along with alternative images of the future. On the other hand, other futurists, such as Malaska (2001), Polak (1969), Rescher (1998), and Ferkiss (1977) describe it as a science. They tried to apply the concept of objective knowledge to futures studies like other social and natural sciences. There are no big differences between inquiry focusing on the past and present, and inquiry focusing on the future. They are looking at the scientific results of the future using principles of research. They adopted a broad definition of science: “If we thus define science broadly as a system of organized knowledge concerning the facts of a particular subject, Futurology may pass as a science not so different from some of the humanities (for instance musicology) or of the social sciences (for instance history or political science)” (Flechtheim 1966, 72).

As a third way or an eclectic mix of art and science, some futurists, such as Loveridge (2009), Bell (1997a), Ogilvy (1996), Cornish (1967) have commonly proposed that futures studies is a combination of science and art, in other words, the mixture of quantitative data and systematic analysis, and reflective intuition and fantastic imagination. According to Bell, science and art have different purposes that strongly contribute to futures studies. The art provides the futures field with subjective experience such as, intuition, creativity, imagination, etc., while the science furnishes it with objective categories of knowledge such as technical and rigorous, rational and dehumanizing, and codified aspects (Bell 1997a, 169-170). He affirms distinctly that “the problem is that the distinctions are false” (Bell 1997a, 170). He wants no gap between science and art to exist. He desires futurists to be more than artists or scientists. He believes that for futures studies, art supplies a complementary faculty to science and science becomes alive on the ground of art.

The debate over whether futures studies is an art or a science reflects the confusion of the basic nature of futures studies. Most debates, however, ignore the political aspects. The basic thesis in this section is that futures studies is a combination of art, science and politics. Amara (1978, 42) sees futures studies as the integration of three essential questions: “What choices do I have? (the art of the possible).” “What do I know (the sciences of the probable).” “What do I prefer? (the politics of the preferable).” Also, Toffler, in his book, *Future Shock*, suggests the triangulation of science, art and politics for the worldwide futurist movement (1970, 460):

Every society faces not merely a succession of *probable* futures, but an array of *possible* futures, and a conflict over *preferable* futures. The management of change is the effort to convert certain possibles into probables, in pursuit of agreed-on preferables. Determining the probable calls for a science of futurism. Delineating the possible calls for an art of futurism. Defining the preferable calls for a politics of futurism.

Anderson (1977, vii) emphasizes a more broadly defined politics:

Political activity is not confined to the affairs of government. It is present in every human association. In essence, we act politically whenever we make decisions on behalf of other people and not for ourselves alone. Politics means planning and organizing common projects, setting rules and standards that define the relationships of people to one another, and allocating resources among rival human needs and purposes.

Politics is closely connected to public life and activity. It is involved in the decision making processes and in a power struggle between different interests for social change and preservation. Futures studies is quite explicitly linked to considerations of discursive controversy and political practice. Mannermaa (1986, 659) addresses the relationship between futures studies and political arena, including political policy making, planning, and development:

Futures research is basically a normative activity, and the role of values in futures research is more emphasized than in social sciences generally. The normative character of futures research was clearly expressed in the definition of ‘futurology’ given by Ossip K. Flechtheim, who initially ‘invented’ this concept in 1943. According to Flechtheim the task

(‘mission’) of futurology is to prevent wars, eliminate hunger and misery, struggle against the exploitation of people and nature, democratize society, work against estrangement and create a new man, Homo humanus. Flechtheim thought that futures research should influence future society so that it is essentially different from the past, expressly a better one. In this normative society, present problems are solved and ideals realized by means of a critical and systematic study.

One of the main goals of futures studies is to create normative futures. Normative futures are related to a preferred society, good society, or desirable society which should be achieved in the future. Normative futures can tell how we could achieve the vision of a desirable society and how visions could fit into a political process for transforming visions into reality. For the development and implementation of visions, a wide variety of societal groups, such as political parties, religious groups, professional associations, social movement groups, and women and youth organizations, are to discuss and negotiate about what a good society should be. They propose ideas and prospects on visions of the future society. They criticize the existing system, policies, and programs. The process of reforming and transforming societies get involved in political practices including voting, campaigning, public participation, consensus building, public debates, and modification of competing visions. The national vision is a shared long-term agenda for a national goal. The national vision therefore would mobilize and allocate social, political, and economic resources. Individuals and interest groups struggle to achieve their interests and there are power struggles for resources and priority due to limited resources and opportunities. Normative futures would bring new issues. According to Rosenstone and Hansen, the public actively participate in political activities when they feel that they have a personal stake in an issue (Sawyer 2001, 107). Accordingly, the products of futures studies can drive collective political action for political mobilization.

The primary purpose of futures studies is to assist the decision-making process (Cornish 1977, 220). Futures studies is to help policy-makers, decision-makers and citizens to make better decisions about future developments and events. Dror (1970) proposes a ‘policy-oriented futures studies’ and argues that a good futures studies can play vital roles in policy-makers and the policy-making process. Futurists can lead to

better decision-making and problem-solving process in the following ways (Cornish 1977, 220-221):

1. Providing useful frameworks for decision-making and planning.
2. Identifying future dangers and opportunities.
3. Suggesting a variety of possible approaches to solving a problem.
4. Helping to assess alternative policies and actions.
5. Enabling people to see the present.
6. Increasing the degree of choice.

Futures activities' assistance to decision-making is inherently involved in the political process. The production of futures studies deals with current and futures policies. It should make a choice among alternative futures. This choice cannot satisfy all the people in society. The resources and opportunities are limited. Thus, "such decisions produce winners and losers, mechanisms are also required to persuade people to accept the decisions (and the decision-making process itself), and/or enforce the decisions (on the losers). Further, since decisions affect people's life-chances (by impacting on who emerge as winners and losers), struggles ensue over who occupies key decision-making positions" (Louw 2010, 9). Futures studies' impact on the political process includes decision-making, struggle, legitimacy, and enforcement

Futures studies cannot pursue predictions, but it has to seek rigorous scientific process. Futurists of 'science' tend to conceive themselves as able to predict the future with systematic research. We can make our own future. The future therefore belongs to those with imagination, creativity, and insight. Futurists of 'art' are prone to imagine themselves capable of making a better future with imagination. We must understand, in futures studies, art and science as mutual supporters. Furthermore, the outcomes of futures studies affect the world, while they are affected by outside power relationship and resources. The futures studies is linked into greater political activity because it is relevant to setting up agenda priority and negotiate interest groups, political parties and other institutions. The legitimacy of futures activities is needed to obtain the consensus of all societies for the realization of the future. If the futures studies is far away from the politics, how we can reach a good society which social members want and how can we prove that a futurist's thoughts are relevant, sustainable, and attainable? Thus the

collapse or fragmentation of mutual interaction among three aspects may cause considerable hindrance to be what futures studies is.

## CHAPTER 3

### GENERAL FOUNDATIONS OF SCENARIOS

*Scenarios draw on science—our understanding of historical patterns, current conditions, and physical processes—and on the imagination to conceive, articulate and evaluate alternative pathways of development and the environment. In so doing, scenarios can illuminate the links between issues, the relationships between global and regional development, and the role of human actions in shaping the future. It is this added insight, leading to more informed and rational action, that is the foremost goal of scenarios, rather than prediction of the future.*

UNEP (2004, 2-3)

#### **3.1. Introduction**

During the last decades, the “scenarios,” “scenarios method,” “alternative futures scenarios,” “scenario technique,” “scenario building,” “scenario planning,” “scenario analysis,” and “scenario learning” have been increasingly emerged and widely applied to every sphere like the public and private sector, and global, national and regional areas as a prominent tool for creating alternative visions, doing strategic planning, and choosing the right decision. Masini and Vasquez (2000, 49) critically observed the popular recognition and practice of scenarios as the following:

Of course, in fact they are, but as such they have become a sort of Swiss pocket knife of multiple uses, or a magic wand that supposedly makes it possible to rapidly visualize the future, like a soup to be served up quickly at table. Consultants and professionals with 1 or 2 years’ experience behind them embark on carrying out exercises, very often without distinguishing the terminology or fully understanding futures studies.

The phenomenon of growing popularity of the scenarios is able to represent that scenarios have gradually acquired the knowledge power when we simply follow the traditional definition of power as “the ability to produce an effect” (Litfin 1994, 16). The scenario methods are broadly accepted among the academia, policy makers, and business

managers as an instrument of future knowledge production. The processes and outcomes of scenarios produce the value of consensus and are gaining the persuasive competences. In particular, they affect policy decisions under the global risk era based on the uncertainty. We are also getting used to reflecting ourselves on the culture of scenarios which encompasses thinking unintended consequences, asking what if questions, and considering long-term feedback.

On the other hand, the popularity of scenarios can be considered as a panacea to explore the future. Along with the overabundance of using scenarios, the scenario has afflicted “a methodological chaos” which is lacking in methodological rigor including “a set of theories, principles and practical rules commonly accepted by at least the vast majority of the theoreticians and of the practitioners” (Martelli 2001, 4). The lack of methodological rigor is in part related with methodological pretensions. Application of the scenarios to any future work can be seen as attaining the credibility and usefulness of the scenarios. Godet and Roubelat (1996, 169) state “the dangers of entertainment scenarios” on the misuse of scenarios. The premise of methodological pretensions serves as the central barrier to useful analysis of constructing sound scenarios. The limited perceptions of scenarios as a set of future techniques no longer provide relevant, provocative, and productive stories about the future.

In this chapter we will explore the variety of general foundations of scenarios which can constitute some of the key elements of scenarios. Some of these are the basic nature of scenarios. Others exist in the form of typology of scenarios. Scenario typologies can help us recognize not only similarities between scenarios but also their differences. Scenario typologies give us the capability to compare the different characteristics of scenario practices. Some of them involve the schools of thoughts in scenarios which represent the different paradigm of scenario practice. Some of them are principles of developing scenarios. Creating scenarios are based upon a number of principles. This chapter will summarize four principles of alternative futures scenarios. The main concern of this chapter is to examine the Manoa School’s alternative scenarios method. This research uses Jim Dator’s Alternative Futures Scenario method to create four alternative futures scenarios and a preferred future scenario.

### **3.2. Definition and Nature of Scenarios**

It is hard to be clear about what precisely scenarios are about, due to the contextual and protean nature of scenarios. Scenarios can provide not the direct sources but the context for exploring the future. Scenario practices are apt to be affected by the situations and subjective interpretations. The use of scenarios is different from regions, time, and their purposes. The protean nature means that the concept of scenarios has been used in a variety of ways according to the levels of circumstances and analysis. Thus “the confusion over the definitions and methods of scenarios” is a controversial issue and becomes a major challenge for the future of scenarios (Millett 2003, 16). Bishop and colleagues (2007, 6) articulate three main confusions in the use of scenarios as follows: “scenario development vs. scenario planning,” “scenario vs. alternative future,” and “methods vs. techniques.”

Kahn, who is described as a father of scenarios, introduced the term ‘scenarios’ into the world as a way to imagine the future, while working at the RAND Corporation in the 1950s. His thinking of scenarios originated with the assumption of extreme futures like nuclear war between the US and the Soviet Union (Millett 2003, 17). He tried to prove through the use of scenarios that “much military planning was based more on wishful thinking than reasonable expectations” (Millett 2003, 17). The original meaning of scenarios by Kahn indicates that scenarios are not for prediction or forecast, rather they are for “alternative paths resulting in alternative outcomes” (Millett 2003, 17). His concept of alternative futures in scenarios can be found in the following (Kahn and Wiener 1967, 264).

The scenarios are not and should not be interpreted as forecasts. They are a means of improving our understanding of the long-term global, regional or national consequences of existing or potential trends or policies and their interaction.

In the same book, Kahn and Wiener (1967, 6) provide more detailed definition of scenario: “Scenarios are hypothetical sequences of events constructed for the purpose of

focusing attention on causal processes and decision-points. They answer two kinds of questions: (1) Precisely how might some hypothetical situation come about, and (2) what alternative exist, for each other, at each step, for preventing, diverting, or facilitating the process?” With Kahn and Wiener’s definition, we can draw three elements about the characteristics of scenarios (Vriens 2004, 273). First, “more than one possible future is constructed.” Second, “scenarios explicitly generate possible strategic courses of action to deal with the various futures indicated.” Third, that focusing on the causal processes means that scenarios should demonstrate “how the present might evolve into different possible futures.”

After Kahn’s introduction of scenarios, there are numerous views of definitions for scenarios. In general, the definition of a scenario can be roughly divided into two strands: an inquiry-driven definition and a strategy-driven definition. The inquiry-driven definitions are based on questions, queries, and image of futures. The main purpose of this definition is to promote imagination and raise curiosity in order to develop future-related questions. In this context, scenarios would provide answers to all possible questions for future generations. This definition involves usually creating alternative scenarios of the future and identifying preferred futures. According to Rotmans and his associates (2000, 810-811), scenarios are “archetypal descriptions of alternative images of the future, created from mental maps or models that reflect different perspectives on past, present and future development.” Scenarios do not predict the exact outcomes of the future, but rather they provide possible alternatives for the future. So creating the future is one important goal of scenarios. Also, scenarios question conventional world views and beliefs and lead people to explore critical uncertainties. Therefore, scenarios are used to “categorize the rich array of images of the future” (Dator 2002, 10). They help people consider alternative paths and expect the significant risks.

Strategy-driven definitions of scenarios could be called scenario planning or scenario building. Its main purpose is to avoid surprise and enable decision makers to develop different possibilities for establishing organization’s strategic planning. Most business companies use this approach. This involves usually problem solving and a project-based approach. In contrast with inquiry-driven scenarios, strategy-driven

scenarios react to the external environment and influences. Schwartz (1991, 4) described scenarios as “a tool for ordering one’s perceptions about alternative future environments in which one’s decisions might be played out”. According to Ringland (1998, 2), scenarios are “part of strategic planning which relates to the tools and technologies for managing the uncertainties of the future”. Schoemaker (1995, 25) defines the use of them as “a disciplined method for imagining possible futures that companies have applied to a great range of issues”. The strategy-driven definition can regard scenarios as a business tool for helping managers to tackle risk and uncertainty in turbulent times.

Although varied definitions of scenarios exist, it is useful to understand the nature of scenarios. The world suffers no consensus of what scenarios are, how we apply them to futures practices, how we verify the production of scenarios, and how we respond to them in a daily-based life or in a decision making moment. In a fundamental sense, understanding scenarios requires an understanding of the basic elements of scenarios. We would find four essential characteristics of scenarios: multiple views, sketch, process, and narratives.

The key characteristic of scenarios is multiple views of the future. Scenarios should not look for a single future but various alternative futures. Scenarios are distinguished from single future outlooks such as predictions, forecasts, and projections. The multiple views of the futures are closely related to the nature of the future: the future is unknowable; we cannot predict the future; human choices play an important role for creating the future. For these reasons, most futurists do not use a single scenario but envisage several alternative scenarios.

There are no valid criteria about what is the ideal number of scenarios. As shown in Table 3.1, the range for the number of scenarios is more than two and less than ten in accordance with “the definition of the inquiry and the goal of the project” (Pillkahn 2008, 201). Most scenario practices show three to five scenarios. A relatively large number of scenarios can confuse decision makers. They tend to “blur and lose their meaningful distinctions as decision tools” (Schwartz 1991, 247). Too small a number of scenarios cannot provide the variety of information and alternative perspectives required. They cannot capture unmanageable complexity or surprise. Consequently, multiple views of

the future are important to make us to see information and perspectives about highly uncertain and largely controllable futures.

Table 3.1 The Number of Scenarios Is Derived from the Definition of the Inquiry and the “Philosophy of the Future”

Number of Scenarios	Evaluation
1	Most likely scenario. Although convenient from the point of view of the strategist, It is nonetheless false. There are no probable scenarios
2	Two scenarios are usually a matter of two extreme scenarios that will be difficult to handle in the context of evaluation.
3	There is a risk of orienting oneself to the middle scenario.
4	Possible, good cost-benefit ratio
5	Possible
More than 5	Possible, but the cost of drafting and evaluating may increase to a level that is no longer justifiable.

Source: Pillkahn (2008, 200).

Second, the scenario is a sketch or an outline (Wilson 1978, 226). Scenarios should provide a big picture of the future. The term scenario originates in the world of the theater (Lutz 1995, 2). By the definition of the Oxford English Dictionary, scenario is “a sketch or outline of the plot of a play, giving particulars of the scenes, situations, etc” (Lutz 1995, 2). Therefore, “scenarios seeks only to map out the key “branching points” of the future, to highlight the major determinants that might cause the future to evolve from one “branch” rather than another, and to sketch in the prime consequences of a casual chain” (Wilson 1978, 226). So, selectivity is crucial for developing scenarios (Wilson 1978, 226). Selectivity and focus of specific issue, discourses, and concerns will make us avoid unnecessary complexity.

A third characteristic is that scenarios are a process. They are not the final products of future knowledge, rather a series of future practices taken to achieve goals of shaping the futures. Scenarios could be called futures conversations.<sup>8</sup> Scenarios have

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<sup>8</sup> The concept of futures conversation is adopted from van der Heijden’s words: strategic conversation. He suggests strategic conversation in his book *Scenarios: The Art of Strategic Conversation* (1996), to express the importance of strategy’s continuous activity as a organizational learning.

developed a series of conversation about the futures. Many scenarios practices are carried by a series of workshop, accompanying with group collaboration. The scenario workshop participants, including leaders, experts, etc., collaborate to develop scenarios and share their thoughts about the threats and opportunities in the future. During the workshop, they can develop futures-oriented thinking and attitudes for their organizations and themselves. They can apply the results of scenarios and new paradigms to decision making. Thus scenarios require reflective thinking and iterative improvement. Fahey and Randall (1998, 3) suggest scenario learning to put the importance of engagement of scenarios into decision making: “We advocate that all organizations seeking to learn from the future use a methodology that combines scenario development with the decision-making processes of strategic management”. Accordingly, scenarios are a process because they are a strong communication device among scenario developing participants and a dialogue to bridge the contents of scenarios into decision-making.

Fourth, scenarios are narratives. Stories are the framework of scenarios. When scenarios explain complex and meaningful alternative futures, they employ stories and other type of narratives, such as paintings, storyboards, graphics, digital images, miniatures, etc. Gallopín and Raskin (2002, 10) state that, “scenarios are stories about the future with a logical plot and narrative governing the manner in which events unfold.” Schoemaker (1993, 195) defines as “focused descriptions of fundamentally different futures presented in coherent script-like or narrative fashion.” In those contexts, scenarios have a strong quality of narrative. Scenarios are a future story used to explain something about the imagination and creativity for the future society. Narratives can be powerful means of engaging the imagination (Lempert, Popper and Bankes 2003, 12).

In ancient times, the principle vehicle was storytelling, which involves “developing and communicating explanations of the way things were and how they came to be” (Lempert, Popper and Bankes 2003, 12). When we encounter futures works, our understanding of the futures are very limited due to the lack of pre-knowledge in the given futures. It is hard for us to make sense of what alternative scenarios illustrate. In addition, the interpretations of the contents of scenario vary according to the audience’s worldview, history, culture, and circumstances. Stories are to represent more than facts

and information (Soin and Scheytt 2006, 64). They provide us with dramatic insight about emotional and symbolic meanings. The quality of narratives yields the transmission of in-depth understanding for the future imagination. The images of the future told by stories enter people's mind and change their traditional wisdom or previous ways of thinking. Hence, scenarios are the most eminent tool to explore dimension of alternative futures.

### **3.3. Typology of Scenarios**

Scenario typology is a classification of purpose, process of development, and issues for looking at the different types of scenario practices. Many definitions of scenarios are of necessity vague. They cannot cover all of possible characteristics which are involved in scenario practices. They are the abstract idea of scenario practices. Typologies can offer alternative concepts to what scenarios are. They are to supplement scenario definitions. They help us understand the more complex phenomena in scenario practices. Thus, they are sometimes better concepts than definitions to grip the range of scenario activities. However, despite the advantages of using scenario typologies, there are two problems connected with typology (van Notten 2004, 23): 1) “because typologies reflect a field's state of play at a fixed point in time, they become outdated as the field they address evolves,” 2) “most typologies do not capture sufficiently the diversity and flexibility in contemporary scenario development.”

With these advantages and problems in mind, different scenario typologies can be examined in the scenario literature. Some of the early attempts to develop typologies classify scenarios by nature of scenarios and the way scenarios are built. Ducot and Lubben (1980) propose three axes for scenario types: exploratory—anticipatory, descriptive—normative, and trend—peripheral. Scenarios vary according to three axes. In general, engineers and managers tend to use the exploratory-descriptive-trend sort, while citizen groups like to use anticipatory-normative-peripheral scenarios. Huss and Honton (1987a) suggest three major categories in terms of methods: Intuitive logics, trend-impact analysis, and cross-impact analysis. Others have focused on the use of two different types

such as decision scenarios-framework scenarios (Duncan and Wack 1994); forecasting-backcasting (Dreborg 1996); exploratory-anticipatory (Godet and Roubelat 1996); strategic planning scenarios-visioning scenarios (O'Brien and Meadows 1998).

Bishop, Hines and Collins (2007) comprehensively discuss typologies based on techniques. They find eight categories of techniques, including a total of 23 variations, as the following: judgment, baseline, fixed scenario, event sequences, backcasting, dimensions of uncertainty, cross-impact analysis, and systems modeling (Bishop, Hines and Collins 2007). They prove scenario typologies to be limited but show the diversity in the scenario practices. Over the past five decades, methodologies and practices in scenarios have evolved into multi-dimensional aspects and scenario demands have been increasing steadily (Börjeson et al. 2006; Bradfield et al. 2005; Rotmans et al. 2000; van Notten et al. 2003). The expansion of the categories in the scenario typologies reflects the increased complexity of scenario practices and shows the location of various aspects of scenario development.

In particular, since the 2000s, the multiplicity of scenario typologies has been developed to contribute to theoretical developments in scenarios. They have tried to provide some rationales for constructing types and evaluating typology approaches. There are well-known literatures for scenario typologies. Van Notten and his associates (2003) propose multiple typologies which are categorized by three arching themes and fourteen scenario characteristics (see Table 3.2). The first overarching theme is a project goal (van Notten, et al. 2003, 426). It is related with a scenario's objectives and demands of the scenarios. It should answer the why question. It can be divided into two spectrums: exploration and decision support (sometimes a combination of the two). Exploration scenarios contain awareness raising, the stimulations of creative thinking, and gaining insight. Decision support scenarios suggest concrete strategic options. The second overarching theme is process design (van Notten et al. 2003, 427). Process design is related with "the degree of quantitative and qualitative data used, or the choice for stakeholder workshops, expert interviews, or desk research" (van Notten et al. 2003, 427). It has two dimensions: the intuitive approach and the formal approach. The intuitive approach is qualitative scenario development and considers scenarios as an art. So, the

development of stories and storylines are important. On the other hand, the latter is quantitative scenario development and uses quantified knowledge and computer simulation. The third one is scenario content (van Notten et al. 2003, 427). It addresses “the nature of variables and dynamics in a scenario, and how they interconnect” (van Notten et al. 2003, 427). Complex scenarios deal with “an intricate web of causally related, interwoven, and elaborately arranged variables and dynamics” while simple scenarios may be limited to the extrapolation of trends (van Notten et al. 2003, 428). Sometimes the latter can deliver a stronger message than the former.

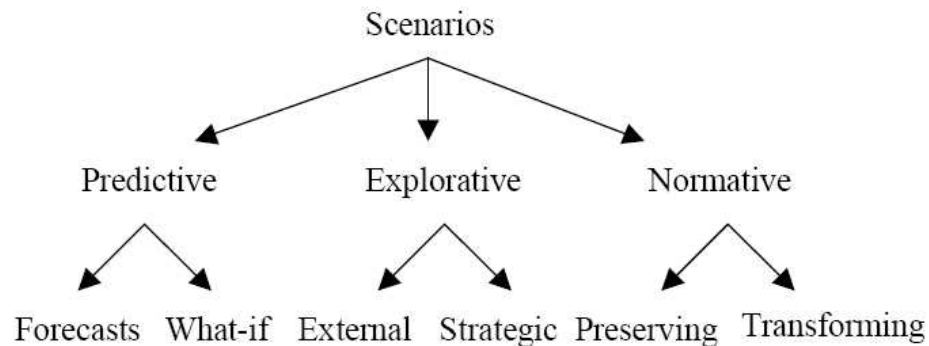
Table 3.2 Van Notten Scenario Typology

Overarching themes	Scenario	Characteristics
A Project goal: exploration vs decision support	I. II. III. IV. V.	Inclusion of norms? : descriptive vs normative Vantage point: forecasting vs backcasting Subject: issue-based, area-based, institution-based Time scale: long term vs short term Spatial scale: global/supranational vs national/local
B Process design: intuitive vs formal	VI. VII. VIII. IX.	Data: qualitative vs quantitative Method of data collection: participatory vs desk research Resources: extensive vs limited Institutional conditions: open vs constrained
C Scenario content: Complex vs simple	X. XI. XII. XIII. XIV.	Temporal nature: claim vs snapshot Variables: heterogeneous vs homogeneous Dynamics: peripheral vs trend Level of deviation: alternative vs conventional Level of integration: high vs low

Source: Van Notten et al. (2003, 426).

Börjeson and his colleges (2006) divide scenarios into three categories according to the nature of the scenario: predictive, explorative, and normative (see Figure 3.1). The three categories respond to three questions: “What will happen?”, “What can happen”, and “How can a specific target be reached.” Each of three categories is divided into two subtypes.

Figure 3.1 Börjeson et al. Scenario Typology



Source: Börjeson et al. (2006, 725).

Predictive scenarios try to predict what will happen in the future (Börjeson et al. 2006, 726). They are closely linked to the concepts of probability and likelihood. They focus on a short time horizon. They consist of two types of scenarios: forecasts and what-if. Forecasts are based on the question, “what will happen, on the condition that the likely development unfolds?” (Börjeson et al. 2006, 726). They represent a reference scenario including high and low scenarios. What-if is based on the question, “what will happen, on the condition of some specified events?” (Börjeson et al. 2006, 726). It provides one of two or more scenarios. Explorative scenarios try to explore what can happen from a variety of perspectives (Börjeson et al. 2006, 727). They are related to the examination of a wide scope of possible developments. They focus on a long-term perspective. They have two types: external scenarios and strategic scenarios. External scenarios are based on the question, “what can happen to the development of external factors?” (Börjeson et al. 2006, 727). They focus on “factors beyond the control of the relevant actors” and help to develop policies and strategies (Börjeson et al. 2006, 727). Strategic scenarios are based on the question, “what can happen if we act in a certain way?” (Börjeson et al. 2006, 727). Their aim is to “describe a range of possible consequences of strategic decisions” (Börjeson et al. 2006, 728). Normative scenarios are stories of specific targets (Börjeson et al. 2006, 728). They focus on certain future situations or objectives and how these could be reached. Normative scenarios are divided into two types: preserving and transforming scenarios (Börjeson et al. 2006, 728). Preserving scenarios are based on the

question, “how can the target be reached, by adjustments in current situations?” (Börjeson et al. 2006, 728). Preserving scenarios, thus, are the future visions within a prevailing structure of the system. Transforming scenarios are based on the question, “how can the target be reached, when the prevailing structure blocks necessary changes?” (Börjeson et al. 2006, 728). They are totally different future images in the current system. Dramatic social changes are needed.

The discussion of scenario typologies above proved that scenario typologies have become more and more diversified and complex. Despite the broad literatures, there is no single accepted typology or there is no general consensus regarding which typology is better or not. However, some common factors in scenario typologies can be captured in Table 3.3.

Table 3.3 Main Elements of Scenario Typologies

Method of scenario	Qualitative (intuitive)—Quantitative (formal)
Purpose of scenario	Exploration—Decision support
Logical process of scenario	Forecasting—Backcasting
Nature of futures	Predictive—Explorative—Normative
Character of change	Gradual change (continuity)—Radical break (discontinuity)

### 3.4. Schools of Thought in Scenarios

Schools of thought can be defined as “a knowledge tradition that includes a specific ontology (belief system) and congruent methodologies (approaches to research and practice)” (Parse 1997, 74). In this context, the schools of thought can provide the range of different thinking of groups of scenario practitioners, and substantial knowledge of scenario practice phenomena that is accepted by the scenario community. Most scenario practitioners have adopted a specific school of thought in order to decide how to do developing scenarios. It is hard to develop good scenarios if the schools of thought in scenarios are not understood well, just as it is hard to create good scenarios without proper creativity and imagination.

Bradfield et al. (2005) propose three schools of thought for scenarios: Intuitive logics school, La prospective school, and probabilistic modified trend school. Their classification is not comprehensive to cover all of scenario practices because of their focus on scenarios in business. There is no mention about the normative school and the Manoa School. Social, political, and environmental-oriented scenarios should be considered. Thus, here are five schools of thought examined: Intuitive logics, La prospective school, probabilistic modified trend, normative, and the Manoa School.

Intuitive logics school, like probabilistic modified trend school, is a USA-based scenario approach inspired by Herman Kahn's scenario concepts (Bradfield et al 2005, 797-799). It was introduced by Pierre Wack, a planner at Shell Francaise, and practiced by SRI International, Royal Dutch Shell, and Global Business Network (GBN) (Bishop, Hines and Collins 2007, 5; Bradfield et al. 2005, 799; Huss and Honton 1987a, 21). Peter Schwarz's book *The Art of the Long View* (1991) and Van der Heijden's book *Scenarios: The Art of Strategic Conversations* (1996) contributed to the popularity of scenarios (Bishop, Hines and Collins 2007, 5). Shell's success story with scenarios, during the oil crisis in the 1970s, spurred the use of scenarios to support strategic planning by numerous other private sectors. Therewith, it is sometimes called as "methodology of scenario planning" or the "Shell approach" (Bradfield et al. 2005, 799-800).

According to Ringland (1998, 26), the intuitive logics school has a basic assumption: "the basic assumption within scenario planning is that we are looking for the unexpected." Scenarios can be seen as tools for strategic planning and organizational learning (Ringland 1998; Schoemaker 1995; van der Heijden 1996). Scenarios may help decision-makers identify important uncertainties. The intuitive logics school uses a semi-rationality combined by intuition and analysis instead of supreme rationality (Schoemaker 1991, 551). It relies on intuition processes rather than rational processes. That is the reason why the term intuitive logics is chosen. Its methodological orientation is a process-oriented approach rather than a result-oriented approach (Bradfield et al. 2005, 806). It is taken to gain the insights and learning from the scenario process rather than the reliability of scenario results. For the techniques, it employs brainstorming, 2 x 2 scenario matrix, morphological analyses, STEEP, and SWOT analysis. There are three

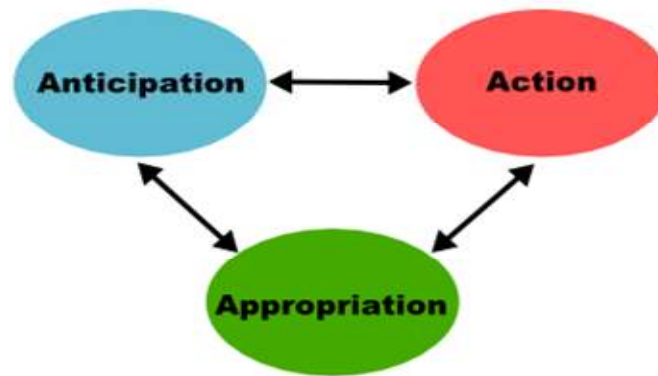
well known intuitive logics school case scenarios: The Mont Fleur Scenarios in South Africa (le Roux et al. 1992), Global Scenarios to 2025 (NIC 2008) and Global Scenario Group's Great Transition scenarios (Raskin et al. 2002). The Mont Fleur scenarios were developed by all community members, including political office bearers, academics, trade unionists, and business people, in South Africa in 1991-1992 (le Roux et al. 1992, 7). The Mont Fleur scenario project significantly helped the establishment of South Africa's democracy from apartheid (Kahane 1998, 323). The National Intelligence Council's Global Scenarios to 2025 project has significance in new challenges of US foreign policy and strategy. It tends to increase the prevalence of scenarios in global politics for the foreign policy-makers. Global Scenario Group's Great Transition project suggests four possible scenarios for a global future. Their scenarios are good examples to examine the sustainability paradigm for a profound transformation of society.

La Prospective school is a French-based scenario approach and was developed by Gaston Berger. It has a same history of the term Prospective mentioned in Chapter 2.2 'Classification of Futures Terminology'. This school emerged from the reaction to the repeated failure of traditional forecasting (Bradfield et al. 2005, 802). Pierre Masse and Bertrand de Jouvenel followed the legacy of Gaston Berger. And Godet has further developed and promoted the La Prospective school and has applied it to "strategic action and the corporate vision" (Ratcliffe and Sirr 2003, 4). His most famous works are *From Anticipation to Action* (1991) and *Creating Futures* (2001). He can be considered as a Renaissance man and a most well-known polymath in French scenarios area.

La Prospective school basically assumes that "everything is more and more interdependent" and "the whole, as distinct from the sum of the parts, is reflected in each part" (Godet 1982, 294). Contrary to the linear thinking of forecasting, the La Prospective school sees everything as interdependent. It is critical to keep an entire system in mind for creating futures. La Prospective is closely associated with strategy. Godet (2000, 4) calls it a strategic prospective. It stresses "the importance of long-range and alternative thinking in strategic decision-making processes" (Godet 2000, 4). Thus, La Perspective school considers scenarios as a strategic management tool (Godet 2001), like the intuitive logics school. Also, it is based on three principles: anticipation (prospective thought),

action (strategic will) and appropriation (collective mobilization) (Godet 2001, 17), which can be identified as the Greek Triangle (see Figure 3.2).

Figure 3.2 The Greek Triangle



Source: Godet (2001, 17).

The La prospective scenarios enable people's anticipation to take action through appropriation. It encompasses rational, intuition and emotion. Both qualitative and quantitative methods are employed to connect strategic management to develop exploratory and normative futures. Since the early 1970s, Godet has developed scenarios methodology of strategic prospective with computer-based tools and has contributed to the theory and practice of prospective scenarios (Godet, Durance and Gerber 2008). The La Prospective school intends to focus on "a probabilistic method to compute cross-impact" (Ringland 1998, 217). According to Godet and Roubelat (1996, 166), the La prospective school adopts quantitative methods as follows: 1) "Asking the right questions and identifying the key variables: futures workshops and structural analysis with MICMAC method", 2) "Analysing trends and actors' strategies: retrospective studies and MACTOR method", 3) "Reducing uncertainties to likely scenarios: morphological analysis, experts methods (Delphi, cross-impact)", 4) "Identifying and assessing of strategic options: multicriteria analysis and MULIPOL method" (Godet and Roubelat 1996, 166). Those quantitative oriented methods result in outcome orientation and the importance of the end products (Bradfield et al. 2005, 806 and 808).

Fabrice Roubelat and Philippe Durance continue the tradition of La Prospective school. Fabrice Roubelat, associate professor at the University of Poitiers in France, works with Michel Godet (Godet and Roubelat 1996) and published several articles (Roubelat 2000, 2006, and 2009; Marchais-Roubelat and Roubelat 2008). He defines scenario as a networking process to challenge strategic paradigm and emphasizes a participatory nature of La Prospective approach within experts, strategists and managers (Roubelat 2000). Philippe Durance, associate professor at the Conservatoire national des Arts et Métiers (CNAM) in France, has also collaborated with Michel Godet (Durance and Godet 2007 and 2010; Godet and Durance 2011). Durance and Godet attempt to connect scenarios with two purposes of foresight: a tool for strategy and communication (Durance and Godet 2010). In this context, they place importance on the process rather than the end products of scenarios. La Prospective school is found in Europe, including France, Italy, and Spain, and South America (Godet 1982, 293). In South America, Brazilian government agencies and companies have adopted La Prospective approaches and methods (de Figueiredo Porto, Marques and Santos 2010). Especially, ELETRONORTE, the state-owned electrical utilities company, created the social and energetic scenarios of Amazonia for 1998-2020 (1999), adopting structural analysis, the MACTOR method and morphological analysis (de Figueiredo Porto, Marques and Santos 2010, 1552-1554).

The probabilistic modified trend school is based on the USA-based scenario approach. It was originally developed by Olaf Helmer and Ted Gordon working at RAND (Bishop, Hines and Collins 2007, 9). Olaf Helmer (1967, 2) assumes that “the future is no longer viewed as unique, unforeseeable, and inevitable; there are instead—it is realized—a multitude of possible futures, with associated probabilities that can be estimated and, to some extent, manipulated.” He tried to find out “future trends in terms of probability” to make proper planning for the future (Helmer 1967, 2). The probabilistic modified trend school sees the future as “an object of systematic exploration and planning” (Helmer 1983, 19). Olaf Helmer (1983, 21) suggests “The Future of X” in his book *Looking Forward* to present the generic character of futures studies. Thus, generic forecasting is the utmost goal of the probabilistic modified trend school and systematic approach can achieve its goal.

This school encompasses trend-impact analysis (TIA) and cross-impact analysis (CIA) (Bradfield et al. 2005, 800-801). Gordon (1994) defines TIA as “a forecasting method that permits extrapolations of historical trends to be modified in view of expectations about future events.” It is based on an extrapolation of a time series without unexpected events. The TIA practiced by the Futures Group, a management consulting firm, in Glastonbury, CT (Huss and Honton 1987b, 223). The Futures Group forecasted sales of cancer therapy pharmaceuticals and offered computer software package to companies (Huss and Honton 1987b, 225-226). Helmer and Gordon developed a cross-impact matrix for the Kaiser Aluminum Co. in 1966 (Huss and Honton 1987b, 227). It began with an idea that “it was unrealistic to forecast an event in isolation from the occurrence of other key impacting events” (Huss and Honton 1987b, 226-227). It built models with using cross-impact method for measuring interrelated effects of trends. CIA further practiced by the Battelle Memorial Institute using IFS (Interactive Future Simulations—previously known as BASICS), by Enzar at the University of California using INTERAX(Interactive Cross-Impact Simulation), and by Duperrin and Gabus using SMIC (French acronym for Cross Impact Systems and Matrices) (Bradfield et al. 2005, 801).

A number of products in academia and applications in industry and other areas have been developed for use in CIA. CIA has been applied to a number of scenario case studies and other future-oriented studies, such as urban transportation technology (Kaya, Ishikawa and Mori 1979), the Italian public videotext service (Sapio 1995), global warming mitigation options (Hayashi et al. 2006), the future of Hong Kong (Blanning and Reinig 1999), and social change in Japan (Ishikawa et al. 1980), a Delphi-CIA approach (Banuls and Salmeron 2007), a fuzzy approach to CIA (Asan, Bozdog, and Polat 2004), and a patent-based CIA (Choi, Kim and Park 2007). Contrary to popular use of CIA, the application of TIA is limited. Literature research of TIA shows that TIA is not widely applied (Hennen and Benninga 2009, 19). They found that in a review of CAB abstracts, only one reference existed from 1984 to 2009; the *International Journal of Forecasting* includes also one reference; the *Journal of Forecasting* has no reference after 1996; *Technological Forecasting and Social Change* contains 17 references.

Normative school is more than the paradigm of normative scenarios discussed in Chapter 3.2 the Typology of Scenarios. It is more than the preferred images of futures society or images of desirable futures. This school is future practices to develop and apply the moral values for creating future scenarios. It should consider universal values for the existing and future generations. It is focusing on the images of the future about how the future ought to be from the point of view of moral values and moral ideals. This school assumes that human actions are the most important factor for the shape of the futures. The futures lie in the human hands. The main purpose of scenarios is creating images of the future to provide general directions for change. The desires and hopes can motivate people to move out current situations for reaching goals and visions. Polak (1973, 6) argues the importance of vision for guiding human actions: “Once he became conscious of creating images of the future, he became a participant in the process of creating this future.”

The normative school has a long genealogy, tracing back to Plato’s *Republic* and Thomas More’s *Utopia*. As far as I know, the normative school as a form of scenario can be originated by Amory Lovins, a consultant physicist. He published an article in *Foreign Affairs* entitled “Energy Strategy: The Road Not Taken” (1976) and a book, *Soft Energy Paths* (1977). He claims soft and hard energy paths. Soft energy paths are a low energy demand society, as a desirable society, that relies on soft energy technologies, including renewable energy technologies. Hard energy paths are expanding energy consumption. The concepts of soft and hard energy paths provide important perspectives to create desirable future society. Furthermore, Lovins’s backward looking analysis inspired backcasting method with “how desirable futures can be attained” (Robinson 1982, 337).

There are some thinkers to enrich the normative school. In 1973, the Science Council of Canada uses the term conserver society in the report, *Natural Resource Policy Issues in Canada* (Orfald and Gibson 1985, 38). The concept of a conserver society is a unique Canadian contribution to the aspiration of balanced development between environment and growth (Orfald and Gibson 1985, 38). Valaskakis et al.’s book, *The Conserver Society* (1979), identified five scenarios (Slaughter 1996, 92). Three scenarios are for conserver society: Scotch gambit (do more with less), the Greek ideal (do the

same with less), and The Buddhist scenario (doing less with less and doing something else). Two scenarios are for mass-consumption society: the "Squander society" (do less with more), and "Big Rock Candy Mountain" (do more with more). The conserver society thesis suggests the transformed society from a consumer society to a conserver society. It challenges dominant value of the materialism in the West. It emphasizes the reduction of increased inequality and centralized power for sustainability. Robertson's *The Sane Alternative: A Choice of Futures* (1978) outlines five scenarios: business as usual, disaster, the totalitarian conservationist, the hyper-expansionist (HE) future, the sane, humane, and ecological (SHE) future. He offers the SHE scenario as a preferred future. It is a decentralized society and the equilibrium economy is the central part of the SHE society. The normative school suggests a dramatically transformed future society, ideal conditions of future society, and means to achieve goals. Normative values and ideal conditions do not merely constitute the normative school. They are essential part of all of scenario schools.

There are many literatures of desirable future societies. Cavanagh and Mander (2002) wrote a book, *Alternative to Economic Globalization: A Better World is Possible!*, compiled by the International Forum on Globalization (IFG). The book criticizes the vision of existing corporate-driven economic globalization based on the neo-liberalism and suggests alternatives and principles for sustainable society based on anti-globalization movement. Ten principles are new democracy, subsidiarity, ecological sustainability, common heritage, human rights, jobs/livelihood/employment, food security and food safety, equity, diversity, precautionary principle. It strongly objects both of corporate power and corporate-state collusion, but tries to create alternative system, including alternative business structure for local citizens. In order to end the global corporate rule, it proposed the strong states and the reformed United Nations. The visions of the IFG consider the radical changes in political economic system in global level to tackle the unsustainable trends.

Regarding the future of work, there are several literatures available (Handy 1984; Hanna 1986; Jenkins and Sherman 1979; Rifkin 1995; Robertson 1985; Zuboff 1988). For instance, the discussion about the future of work can be seen in two ways (Hannah

and Harris 1995/96). First is Daniel Bell's post-industrial society thesis. The development of technology will improve the quality of life and working conditions. The workforce would be upskilled. Thus, people will have more leisure time. The other hand, Harry Braverman thesis asserts the centralization and management authoritarianism in the future workplace. The workforce would be further deskilled. People will experience the degradation of quality of life. Ulrich Beck (2000, 38-62), a German sociologist, reviews popular future models of work:

- Scenario 1: from the work society to the knowledge society
- Scenario 2: capitalism without work
- Scenario 3: the world market—the neoliberal jobs miracle
- Scenario 4: the fixed location of work—a globalization risk
- Scenario 5: sustainable work—the ecological economic miracle
- Scenario 6: global apartheid
- Scenario 7: the self-employed—the freedom of insecurity
- Scenario 8: individualization of work—disintegration of society
- Scenario 9: the multi-activity society
- Scenario 10: the free-time society

Andre Gorz, in his book *Paths to Paradise: On the Liberation from Work* (1985), argues that “the older technologies led to the centralization and hierarchies of power, whereas the new microelectronics technology can lead to organization of work in decentralized setting” (Applebaum 1992, 342). Technology would cut down more labor time in the future and provide more free time to devote to a wide range of lifestyle (Applebaum 1992, 343). He envisions the transformed future society which has the potentials for small-scale enterprise with freedom and autonomy (Applebaum 1992, 343).

A new kind of society is presented by Rolf Jensen in *The Dream Society* (1999), which put the importance of imagination, emotion, and storytelling in the future economy. He suggests the paradigm shift from the information society to the dream society. He states the characteristics of the dreams society (Jensen 1999, 84):

We are in the twilight of a society based on data. As information and intelligence become the domain of computers, society will place more value on the one human ability that cannot be automated: emotion. Imagination, myth, ritual - the language of emotion - will affect everything from our purchasing decisions to how we work with others. Companies

will thrive on the basis of their stories and myths. Companies will need to understand that their products are less important than their stories.

The last school of thought is the Manoa School. This school is based on the Hawaii Research Center for Futures Studies (HRCFS). This approach lays its foundations in the work carried out by Jim Dator. An important premise of the Manoa School is the idea that “any useful idea about the futures should appear to be ridiculous”. A core concept in the Manoa School is alternative futures” (Dator 2009). Jim Dator suggests four generic alternative futures: continued growth, collapse, disciplined society, and transformational society. Such futures emphasize on a fundamental transformation in thoughts and attitudes to economy, politics, environment, culture, and technology along with unconventional views. According to Inayatullah (2009, 78), Dator’s alternative futures are a more of a comprehensive concept than a scenario:

Scenarios are different from Alternative Futures, which is, as Dator suggests (2008), a far broader concept, being based on historical archetypes, deep patterns that reoccur through time.

In fact, the Manoa School is closely associated with the normative school. However, unlike the normative school where they focus directly on normative propositions on what the future ought to be like, the Manoa School focuses on developing preferred future after experiencing examples of the four generic alternative futures. Most products of preferred futures are created without careful consideration of alternative futures. The four generic alternative futures are empirically-derived. They derive from lengthy and ongoing analysis of many actually-existing images of the future. Thus the Manoa School approach is able to get a relatively sufficient-robust preferred future compared to the normative school approach. Also, the Manoa School recognizes the importance of varieties in futures and equal possibilities of alternative futures. Thus there are no best-case scenarios and worst-case scenarios (Dator 2009, 6-7). It generally perceives the limit of their role in normative prescription for developing scenarios and creating futures.

An important element in the success of the Manoa school has come from the establishment of the HRCFS which was supported by the Hawaii State Legislature in 1972 (The HRCFS 2009). The HRCFS has made several contributions to provide the foundations of futures studies and to conduct futures research for public and private sectors. For instance, in 2006, the HRCFS created four alternative futures of Hawaii as part of constructive effort to develop the Hawai'i 2050 Sustainability Plan (Candy, Dator and Dunagan 2006). The four scenarios are following: "Future One: Orange Hawaii 2050" (an economic success story), "Future Two: Silver Hawaii 2050" (economic and social collapse caused by the collapse of global financial markets); "Future Three: Maroon Hawaii 2050" (an ecologically sustainable, culturally vibrant, and economically efficient society); "Future Four: Blue Hawaii 2050 (realization of the full potential of artificial intelligence). In 2008-2009, the HRCFS undertook the "Campuses 2060: Futures of Higher Education" Project with the UHM College of Architecture (Dator, Yeh and Park, forthcoming). The project developed "Four Versions of a University within Four Alternative Futures": "Hawaii Grow 2060: Grow and Succeed" ("Hawaii is a thriving, growing community within a prosperous and growing world"), "Hawaii Begin 2060: Survival" ("Hawaii is a thriving, self-sufficient, post-collapse community of new beginnings"), "Hawaii Sustain 2060: Slow... but Steady!" ("Hawaii is struggling towards environmental, energy, and food sustainability"), and "Hawaii Transform 2060: Beyond Singularity to Dynamic Cosmic Diversity!" ("Hawaii is a dynamic part of a changing, diverse inner solar system").

The Manoa school approach is expanding into the private sectors. The Institute for the Future (IFTF), which is a California-based think tank, adopts Dator's alternative futures scenarios. The followings are the IFTF's projects in terms of four archetypes, growth, constraint, collapse, and transformation: Health and Health Care 2020 Project (2009)<sup>9</sup>, "Alternative Futures Scenarios of Well-being Ecosystems in 2012" (IFTF 2011a), "Four Futures of Food: Global Food Outlook Alternative Scenarios Briefing" (IFTF 2011b). Furthermore, the Institute for Alternative Futures (IAF), which is a Washington DC based think-tank, has applied Dator's future thinking to a poverty issue,

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<sup>9</sup> The project official website, <http://hc2020.org/> (August 20, 2012).

“Poverty 2039: Exercises in Pro-Poor Foresight” (Troumbley and Frey 2011). These poverty scenarios explore the three images of the world in “a state of continued growth (alpha), collapse (beta) and transformation (delta) in the year 2039” (Troumbley and Frey 2011).

The Manoa school emphasizes the images of the future and emerging issue analysis. The images of futures that people perceive provide real expectations such as hope and fear for constructing scenarios. The images of the future enable scenarios to take shapes in specific examples, events, and discourse, and customers to directly engage with scenarios. Emerging issues symbolize the social representation of the novelty in the future. The Manoa school alternative futures method conducts an environmental scan for the impact of innovation, invention, and discovery. The Manoa school suggests the dynamic future societies which are derived from the robust research and the real world.

Table 3.4 presents main figures of schools of thoughts in scenarios in summary form.

Table 3.4 Main Figures of Schools of Thought in Scenarios

	Intuitive logics school	La Prospective school	Probabilistic modified trend school	Normative school	Manoa school
Founder	Pierre Wack	Berger	Olaf Helmer and Ted Gordon	Amory Lovins	Jim Dator
Thinkers	Peter Schwarz, Van der Heijden	Pierre Masse, Bertrand de Jouvenel, Michel Godet	the Battelle Memorial Institute, Enzar, Duperrin and Gabus	James Robertson Valaskakis et al.	The Institute for the Future, the Institute for Alternative Futures
Doers	Le Roux et al., NIC, Global Scenario Group	Fabrice Roubelat, Philippe Durance, ELETRONORTE	Bartolomeo Sapio, Hayashi et al. Blanning and Reinig	John Cavanagh and Jerry Mander, Andre Gorz, Rolf Jensen	Stuart Cany, Jake Dunagan, Rex Troumbley, Heather Frey

In general, the domain of scenarios has five major schools of thought about what scenarios are and what constitutes scenarios. Table 3.5 outlines the main points of intuitive logics school, La Prospective school, probabilistic modified trend school,

normative school, and Manoa school. The first believes that scenarios are tools as a strategic planning. It concentrates on how scenarios help to make better strategic decisions in uncertain environments. The second sees scenarios as a strategic management tool. It emphasizes human actions and choice to arrive at the desired objective. The third considers scenarios as generic forecasting. It focuses on formal procedures of how scenarios are made using quantitative techniques. The fourth suggests that scenarios are alternative images of the future. It stresses the moral imagination and creativity. Alternative images of the future are always based on specific moral order. The fifth is to suggest the implications of four generic alternative futures and to aim the development of a preferred future.

Table 3.5 Five Schools of Thought in Scenarios

	Intuitive logics	La Prospective	Probabilistic modified trend	Normative	Manoa
Core assumption	Looking for unexpected	Everything is interdependent (systems thinking)	Future can be estimated and manipulated	Basic element of the future is human ideas	“Any useful idea about the futures should appear to be ridiculous”
Purpose	Tools as a strategic planning or learning organization	A strategic management tool	Generic forecasting	Creating images of the future to provide general direction for change	Developing preferred future after experiencing examples of the four generic alternative futures
Core concept	Uncertainty	Human action	Plausibility	Moral imagination	Alternative futures
Methodological orientation	Process orientation: Deductive and inductive	Outcome orientation: Deductive and inductive	Outcome orientation: Inductive	Process orientation: Deductive	Process orientation: Deductive
Nature of scenarios	Descriptive or normative	Descriptive	Descriptive	Normative	Normative

### 3.5. Jim Dator’s Futures Visioning Process

#### 3.5.1. Components of a Futures Visioning Process

This research employs the Manoa School's Alternative Futures Scenarios method for building scenarios. A main aim of alternative futures is to help "an organization or community plan for and move towards its preferred future" (Dator 2009, 1). The concrete concepts of alternative futures are embodied in "a futures visioning process." Jim Dator suggests components of a futures visioning process for communities to define their own futures and experience their preferred futures. The specific visioning process is following (Dator 2009, 2-3):

- 1) *Appreciating the past*: It is involved in "a discussion of a common understanding of the history of the community or group."
- 2) *Understanding the present*: It is "a discussion of the problems and possibilities of the present."
- 3) *Forecasting aspects of the futures*: It is "a discussion of possible challenges and opportunities from the futures."
- 4) *Experiencing alternative futures*: It is "an experience in one or more of at least four alternative futures that are based upon different mixes of the trends, emerging issues, challenges and opportunities from the future, and also based upon different idea about how the world works." (see 3.4. 3 Experiencing Alternative Futures: Four Generic Alternative Scenarios)
- 5) *Envisioning the futures*: It is "a futures visioning exercise in which participants now are better prepared to envision a preferred future for the community or group 20-50 years hence, based on the past, present, and alternative futures discussed previously."
- 6) *Creating the futures*: It is "a discussion and decision of what to do now and in what sequence in order to begin moving the community/group towards the preferred future"
- 7) *Institutionalizing futures research*: It is involved in "setting up some kind of an ongoing 'futures' unit which can keep the future-oriented process going."

### **3.5.2. Four Generic Alternative Scenarios**

The Alternative Future Scenarios method stresses images of the future because they exist everywhere humans live and they dominate human culture (Dator 1979, 375). According to Dator, all images in all cultures can be categorized into four generic images: continued growth, collapse, disciplined society, and transformational society. The four generic alternative futures are not the main purpose of Dator's method. Four generic alternative futures are only a part, but an essential part. They are one of the last

steps in developing the process of developing a preferred future (that is, a normative future). The following paragraphs describe in detail the content of the four generic images (Dator 2009, 8-10):

- 1) Continued growth: “The “official” view of the future of all modern governments, educational systems, and organizations. The purpose of government, education, and all aspects of life in the present and recent past, is to build a vibrant economy, and to develop the people, institutions, and technologies to keep the economy growing and changing, forever.”
- 2) Collapse: “There may be many and different reasons that people fear (or hope for?) collapse: economic, environmental, resource, moral, ideological, or a failure of will or imagination. Or collapse may come “from the outside” by invasion from foreigners—or even outer space (meteors, for example)”; “the “collapse” future is not and should not be portrayed as a “worse case scenario”. Many people welcome the end of the “economic rat-race” and yearn for a simpler lifestyle. Moreover, in every “disaster” there are “winners” as well as “losers”. One point of this entire exercise is to consider how to “succeed” in and enjoy whatever future you find yourself, by anticipating, preparing for, and moving affirmatively toward it.”
- 3) Disciplined Society: “It often arises when people feel that “continued economic growth” is either undesirable or unsustainable”; “we should orient our lives around a set of fundamental values—natural, spiritual, religious, political, or cultural—and find a deeper purpose in life than the pursuit of endless wealth and consumerism”; “life should be “disciplined” around these fundamental values of (for various examples) “aloha”, “love of the land”, “Christian charity”, *Ummah*, *Juche*, or some other ideological/religious/cultural creed.”
- 4) Transformation Society: It “focuses on the powerfully transforming power of technology—especially robotics and artificial intelligence, genetic engineering, nanotechnology, teleportation, space settlement, and the emergence of a “dream society” as the success to the “information society”; “it anticipates and welcomes the transformation of all life, including humanity from its present form into a new “posthuman” form, on an entirely artificial Earth, as part of the extension of intelligent life from Earth into the solar system and eventually beyond.”

Using scenarios, which is called “deductive forecasting,” is an attempt to see “the general characteristics, in each of the four alternative futures, of any present role or institution by deducing it from each of these four generic societal images” (Dator 2002,

11). For example, scenarios can get a sense of the future possibility of a nation if the current economic conditions collapse, if the state maximizes its role of social and economic activity, and if multiculturalism permeates all of Korean society.

There are three reasons to use this scenario method to see the future of South Korea. First, this method emphasizes the human actors who can construct images anticipating futures, while other scenario methods, such as scenario planning, are based on social and economic driving forces. Scenario planning intends to ignore the deep relationship between actors and structures (Wright 2004, 12). Because the futures are closely associated with human choices and actions, the aspects of human actors should be considered for the construction of scenarios. Second, this scenario method is relevant to the narration of long-term changes in Korea. Its society, which is conceived as a powerful imaginary entity that determines the actions of the individuals and is constructed by structurally related groups and institutions, and other patterned relations, is elaborated and reshaped in the long-term process. Social change and some forces affecting Korea are interdependent. The scenarios of Korea should be developed to consider social change. The four generic images in this scenario method reflect a considerably wide array of possible social changes in Korea. Third, this scenario method, unlike other scenario methods, does not pursue a worse-case future and a best-case future. Decision makers who will use scenarios are thus allowed to examine “their own existing assumptions” for each of the alternative scenarios (Candy, Dator and Dunagan 2006). Therefore, it helps people towards a future of their own making.

### **3.5.3. Framework of Five Scenarios**

This research elaborates four alternative scenarios based on four generic alternative futures images and a preferred future scenario. As shown in Table 3.6, four images of the future in South Korea are available. First of all, these scenarios examine the question of what will happen to Korea if Korea shows continued economic growth (continued growth society), if Korea encounters the extreme weather events (collapse society), if cosmopolitan values permeate all of Korean society (disciplined society), and

if Korea radically experiences high bio-tech development (transformational society). Four alternative scenarios are not the end of work in this research. After creating four alternative scenarios, preferred future scenario is elaborated, because we cannot develop a sufficiently-robust preferred future without first experiencing examples of the four generic alternative futures. Thus, final scenario, ‘*Peaceful Unification as a Dream Come True*’ is addressed as a preferred vision of the Korean society.

Table 3.6 Development of Five Alternative Scenarios

Four Generic Images	Korean Future Images	Scenarios	Main Driving forces
Continued growth society	Continued economic growth society	The Republic of Samsung	Economy
Collapse society	Extreme climate society	The Great Han River Flood in Warmer Korea	Ecology
Disciplined society	Cosmopolitan society	A Big Human Global Family Phenomenon	Social-cultural
Transformational society	High biotech society	The Age of Biotechnology	Technology



Preferred society	Unification society	Peaceful Unification as a Dream Come True	Governance
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### 3.6. Principles of Developing Scenarios

#### 3.6.1. Thinking the Unthinkable

One of the most valuable concepts in the alternative futures is thinking the unthinkable. Kahn asserts this concept in his books, *Thinking about the Unthinkable* (1962) and *Thinking about the Unthinkable in the 1980s* (1984). The unthinkable thought refers to the idea that all possible alternatives should be examined regardless of whatever the given situations are and even very foolish things are considered seriously. It is closely related to the challenge of the dominant views and conventional beliefs to see the futures in the totally different way of thinking. The unthinkable connotes the nature of discontinuity, denying the current situations and accepting new ones, for creating the

future. According to van Notten (2004), discontinuity is ubiquitous in history and social change itself is discontinuous and unforeseen. He cites “the fall of the Asian tigers, the emergence of the Internet and mobile telecommunication, and the presidency of Nelson Mandela” as examples of discontinuity (van Notten 2004, 4). The following future-oriented scholarship emphasizes a vital role for discontinuity to be ready to see alternative futures and surprise ideas (van Notten 2004, 4): “*The Age of Discontinuity, The Fourth Discontinuity, The Great Disruption, and Inevitable Surprises*”. In this context, Jim Dator's second law of the future, “any useful statement about the futures should appear to be ridiculous,” should be required as a maxim for creating alternative futures.

The unthinkable is found almost everywhere around the world. The collapse of the Soviet Union at the early 1990s radically changed the world’s economic and political environment, in particular, resulting in the end of the Cold War. The terrorist attack on September 11, 2001, provided the major turning point of United States foreign policy, driving the war on terrorism. It, states Leon Fuerth, who was a former national security advisor to Vice President Al Gore, was “a demarcation point as stark as B.C. and A.D. in U.S foreign policy” (Litwak 2002, 76). The consequences of the 9/11 attack showed steps beyond the United States foreign policy. Americans used the rhetoric of “everything has changed” and “the world will never be the same” as a metaphor of its shock to the United States (Litwak 2002, 77).

The infamous story of the Titanic disaster in 1912 is the most well-known tale of tragedy, loss, and the unthinkable. Eaton and Haas (1996, 7) describe the legend and reality of the Titanic as followings:

#### **TITANIC**

The very name conjures up thoughts of disaster and doom, of inevitable fate, of man’s fallibility.

#### **TITANIC**

The world’s newest and most beautiful passenger liner, whose maiden voyage from the Old World to the New was cut short by collision with an iceberg, resulting in a loss of 1,523 lives.

*Titanic*. If the ship had not been lost in one of maritime history’s most memorable disasters, her name would probably still have lived today, but for rather different reasons. The luxury and comfort of her passenger

accommodation exceeded those of any vessel of her day. Her size was greater than any other ship. Her equipment and engines, the integrity of her construction, were the best money could buy.

The Titanic, at that time, represented the very best of available technology, so she was deemed unsinkable. She was believed to be the safest ship ever built. She was the largest and most luxurious ship in the world. This unsinkable ship sunk on the floor of the North Atlantic Ocean. “The Titanic has become a metaphor for the disastrous consequences of an unqualified belief in the safety and invincibility of new technology” (Hawthorn 1996, cited in Annas and Elias 1999, 98). The overconfidence of technology caused the terrible disaster of the Titanic. We can learn some lessons from the sinking of the practically unsinkable ship. The Titanic failed to identify emerging issue like iceberg as an early warning signal which might affect her maiden voyage to New York. They are able to provide good indicator of future social change toward an unknown direction. The second lesson is that the Titanic could not imagine the unanticipated consequences. The myth of technological superiority blocked imagining the possibility of unintended and unexpected consequences like the ship’s sinking. We can’t exactly identify possible futures because the world is an increasingly complex system accompanying with human’s mistakes, contingency, and unintended consequences. For the future, thinking the unthinkable and imagining the surprise are more than conventional wisdoms and rationality.

### **3.6.2. Novelty**

Novelty is a very important element for creating futures and developing futures knowledge. Hans Toch, a social psychologist, emphasizes the novelty for good predictions: “Accurate prediction is related to the individual’s ability to foresee novelty and change” (Huber and Bell 1971, 287). Peter Schwartz, cofounder of GBN, states that: “Anyone can create scenarios. But it will be much easier if you are willing to encourage your own imagination, novelty, and even sense of the absurd—as well as your sense of realism (Scarce, Fulton and the GBN Community 2004, 22). Jim Dator teaches in his

class that five percent of the future phenomena would be driven by continuations, fifteen percent by cycles, and eighty percent by novelty. His 'Second Law of the Future' best symbolizes the significant role of novelty for the futures: "Any useful idea about the futures should appear to be ridiculous."

However, it is not an easy way to define and study what it is. There are no discussions about the topic of novelty. What do you mean when you say that something is novel or new in futures studies or future events? How do we perceive that novelty affects the futures? How does it play a role in shaping the future? How do we identify novelty or newness? Is the novelty always standing against past or trend?

Wikipedia defines novelty as the following: "the quality of being new", "something novel", "striking, original or unusual", and "a mere innovation." In common knowledge, novelty means newness or originality. Olivier Luminet (2009, 61) has a different definition of novelty: "Novelty refers to two aspects: unexpectedness and exceptionality." His definition is more related with "disruptiveness with respect to one's ordinary routine" (Luminet 2009, 61). It signifies the discontinuity of trends or the current situations. Alfred North Whitehead has closely associated the novelty with creativity. Whitehead (1978, 21) illustrates creativity as "the principle of novelty" as the following.

'Creativity' is the principle of novelty. An actual occasion is a novel entity diverse from any entity in the 'many' which it unifies. Thus 'creativity' introduces novelty into the content of the many, which are the universe disjunctively. The 'creative advance' is the application of this ultimate principle of creativity to each novel situation which originates.

According to Whitehead, novelty is a main element for creativity. Novelty is a mediator to actualize creativity. Without novelty, creativity cannot exist. The reality can appear through the novelty. Thus, novelty is a critical factor for the present becoming the past and transforming into the future. Lucinda A. Stark Huffaker suggests generative novelty and constructive novelty, based on Whitehead's concept. Generative novelty is "made possible by God's intervention or participation in every moment of creation" (Huffaker 1998, 34). Constructive novelty is "the creation of something new from

existing materials, the “emergent synthesis of a previous multiplicity” ” (Huffaker 1998, 34).

The discussions above show the importance of novelty for shaping the future. But, not all novelty contributes to the future. Novel things need to be adopted by the people as reality. People provide proper reactions to novel things. They believe that the novel things have the potential values. If people reject novel things, they are only unique ideas or things. They remain on the isolated island. They cannot affect the future. For the first time, some novelties generate strong attention and surprise the people. Sometime later, the novelty disappears. Other novelties, for the first time, have no interest to the people. Sometime later, they are considered new and important. Thus, novelty should be considered along multiple dimensions: newness, unusualness, unconventionality, adaptedness, transformation. Fobes (1996, 20) emphasizes the newness of an idea and the value of the new idea:

Creative geniuses such as Benjamin Franklin, Leonardo da Vinci, and Nikola Tesla did not simply create new things; they created things of value. Franklin invented the Mona Lisa, and Tesla invented the alternating-current electric motor. It is the value of what these people created that sets them apart from unremembered people who created what was new, but without much value.

### **3.6.3. Multiple Perspectives**

Scenarios emphasize the multiple perspectives. Scenarios are not predictions or forecasts. They represent alternative futures and different perspectives for challenging conventional wisdom. Some scenario literatures describe the benefits of multiple perspectives: “The multiple perspective approach enriches any scenario connected with future choices and alternative developments” (Coates 2000, 120); “Scenarios resemble a set of stories built around carefully constructed plots. Such stories can express multiple perspectives on complex events, with the scenarios themselves giving meaning to these events” (Mietzner and Reger 2005, 221); “Without multiple perspectives, each of the sets of scenarios, and the scenario-building process itself, would have been less informative” (Bennett and Zurek 2006, 292).

Multiple perspectives are typically associated with multiple levels, multiple methods, and multiple approaches. Cook (1985) proposes multiplism for enhancing research:

In a world where one way of conducting research was universally considered to be “correct,” scientific practice would be easy. Researchers would simply do what is correct. It is the current absence of total certainty about what constitutes correct practice that leads to the advocacy of multiplism in perspectives and methods (p. 22).

The fundamental postulate of multiplism is that when it is not clear which of several options for question generation or method choice is “correct,” all of them should be selected so as to “triangulate” on the most useful or the most likely to be true. If practical constraints prevent the use of multiple alternatives, then at least more than one should be chosen, preferably as many as span the full range of plausible alternative interpretations of what constitutes a useful question or a true answer (p. 38)

He put forwards using multiple methods and multiple theories about human phenomena because no one method is perfect, the world is uncertain, and the aptness and suitability of social science theory are questioned. Harold A. Linstone, the editor-in-chief of *Technological Forecasting and Social Change*, introduced multiple perspectives into futures studies (Coates 2000, 120). He proposes a framework for multiple perspectives to overcome the pitfalls of using a technical perspective as the dominant paradigm (Linstone 2009). He suggests the integration of three perspectives: Technical, organizational and personal (see Table 3.7). The technical perspective is concerned with a science-technology world view, problem solving, objective data, logic, analytical approach and probable futures. The organizational perspective is concerned with group world view, action, justice, value and preferable futures. The personal perspective is concerned with personal factors (including power, influence, prestige), intuition, morality, images and possible futures. The main purpose of the multiple perspectives is to enrich technical perspective with organizational and personal perspectives.

Scenarios have the distinct characteristic of multiple perspectives. First and perhaps most importantly, scenarios use multiple theoretical frameworks. Scenarios are

multiple images of the future because the futures cannot be predicted. Scenarios are looking for alternative possible futures. Thus, unlike social sciences, which are firmly grounded in the rationality and attainment of truth, it is not necessary that scenarios should be on the essence of the rationality and true-seeking task. Scenarios are looking for multiple true and looking at different perspectives for a number of future situations. Different types of rationality can be related with different images of futures. Even illogical reasoning, moral choice, and breakthrough ideas may be associated with creating scenarios. Mona Lisa Schulz, a physician, practicing psychiatrist, emphasizes intuition as an irrational knowledge in her book *Awakening Intuition* (Judd 2004, 113). She defines intuition as “the process by which subtle insights come into our senses, minds, bodies and dreams, containing ideas which have no relationship to fact or rational reasoning processes” (Judd 2004, 113).

Table 3.7 Characteristics of Multiple Perspectives

	Technical (T)	Organizational (O)	Personal (P)
World view	Science-technology	Unique group or institutional view	Individual, the self
Objective	Problem solving, product	Action, process, stability	Power, influence, prestige
Mode of inquiry	Observation, analysis, data and models	Consensual, adversary, bargaining and compromise	Intuition, learning, experience
Ethical basis	Logic, rationality	Justice, fairness	morality
Scenario types	probable	preferable	Possible
criteria	Analytic(reproducible)	value	image
Orientation	Exploratory(extrapolative)	participatory	perceptual
creator	Think-tank teams	stakeholders	individuals

Source: Adopted from Linstone (2009, 8).

Second, scenarios use multiple methods. Scenarios can be divided into three areas: qualitative scenario methods, semi-qualitative methods, and quantitative scenario methods. Qualitative scenario methods are based on “soft data (that is, non-quantifiable variables) and reasoning” (Lindgren and Bandhold 2003, 166). Semi-qualitative methods are “quantified on the basis of qualitative reasoning”; Trend-impact and cross-impact analyses are good examples (Lindgren and Bandhold 2003, 167). Joseph Alcamo (2008)

develops “Story and Simulation”(SAS) approach to combines storylines with quantitative modeling groups. Quantitative scenario methods are based on “the assumption of causality that can be captured in regression or system models” (Lindgren and Bandhold 2003, 167). In general, scenario practitioners collect and analyze both quantitative and qualitative data. The results of scenarios show a mixed approach, including quantitative and qualitative methods. Third, scenarios use multiple stakeholders. Scenarios allow single or multiple stakeholders to express their opinions and worldviews. Scenarios bring a multi stakeholder workshop for dialogue and agreement among multiple stakeholders. Participatory scenario development, which is a process based on the participation of stakeholders to explore the futures, are popular approach (van Notten 2004, 34).

#### **3.6.4. The Systems Approach**

We generally use the word ‘system’ to say a variety of objects like ‘solar system’, ‘education system’, ‘nervous system’, and ‘heating system’. System is a combination of parts interrelated purposefully. According to Anderson and Johnson (1997, 2), “system is a group of interacting, interrelated, or interdependent components that form a complex and unified whole.” Stroosnijder and van Rheenen (1993, 341) describe a systems approach as “studying the system as an entity made up of all its components and their interrelationships, together with relationships between the system and its environment.” In this context, a systems approach is focused on the interaction and the relationship of its parts as a whole. Systems can lose their characteristics when systems are separated. Furthermore, a systems approach stresses context (Olsson and Sjöstedt 2004, 314). It understands objects in the terms of their relationship with other objects and external environment.

Kenneth Boulding, an economist and systems thinker, identifies seven different levels of systems in his book *The Meaning of the Twentieth Century* (1964) (Lindgren and Bandhold 2003, 115). Table 3.8 shows seven different levels of system in a hierarchy and network of living systems. Seven levels of systems are distinguished on the basis of the degree of complexity. For example, society is more complicated than

organization or group. In other words, society has more the number of elements and relations than organization or group. Besides, seven levels of systems elucidate how each level relates to each other and to the whole.

Table 3.8 Boulding’s Seven Levels of Open Living Systems

Level 1. Cell	The basic unit of life
Level 2. Organ	The organic system within bodies
Level 3. Organism	Single organisms such as humans, animals, etc.
Level 4. Group	Teams, departments, families and similar member based bodies
Level 5. Organization	Companies, community, private and public organizations
Level 6. Society	States, countries, nations, regions within nations
Level 7. Supranational systems	Global systems, continents, international regions, Earth

Source: Lindgren and Bandhold (2003, 115).

Scenarios are based on systems thinking (Lindgren and Bandhold 2003, 114-119). Future scenarios can best be developed in systems approach. The multiple images of the future can best be illustrated in holistic approach. The future is very complex and dynamic. It is affected by multiple factors. We should consider the complexity and dynamism for the development of future scenarios. Human actions and choices can affect many elements which constitute the future. Systems approach identifies the influence of various dimension of the social, economic, technological, and cultural environment on the future. It advocates a balanced approach between human agents as future actors and physical environment as objects of system. For instance, level 5 to 7 in Table 1 are appropriate for development of scenarios (Lindgren and Bandhold 2003, 115). Organization, society, and supranational systems are good objects of scenario description. Their relations and reactions are should be considered for the scenarios. Sometimes, individual stakeholders and action groups in the level 3 and 4 are relevant too (Lindgren and Bandhold 2003, 115-6).

Systems approaches see everything as connected with everything else. They recognize the phenomenon of changing environments over time and in space, considering the delay between system’s actions and consequences. It properly supports the development of scenarios. Systems approaches can be characterized by four principles.

First, a systems approach emphasizes the big picture. It prompts scenario practitioners to look at the big picture and complex future situations. Leonard and Beer (1994, 1) states that “adapting a systems approach means putting the emphasis on “the big picture” or the whole and considering the functions of a system’s parts based on their relations with one another and within the system’s larger context.” When we create scenarios, we have to focus on the larger systems surrounding the issues and topics of scenarios. Second, systems approaches focus on the circular causality (Leonard and Beer 1994, 2). The futures are better understood in the light of circular causality rather than the ways of linear causality. Linear causality is where A causes B and B causes C, but B cannot cause A and C cannot cause B. It is logically step-by-step thinking process. On the other hand, circular causality is where A causes B, which causes C, which in turn causes A. Also C causes B. Creating futures are more relevant to circular causality rather than linear causality. The scenario process itself is closely related to the feedback process. The products of scenarios might affect the decision making process which causes the paths of the future to change. Scenario workshops also influence stakeholders in organizations and societies to result in new thinking and future-oriented thinking. Third, systems approaches assume that there is no one truth or best set of answers (Leonard and Beer 1994, 1). It looks at multiple truths and answers. Some solutions create new problems. Even, the best solutions can make problems worse, while apparently bad solutions may make problems better in the long term.

Why do we need a systems approach? There are two reasons. First is the increasing complex system of the world. Systems in the world are complicated by the rapid change of environments through globalization, the speed of communication, and the development of technology. Systems thinking highlights that complex systems are becoming more unexpected and unpredictable, in terms of their parts and in regards to the total relationship of their parts. Second are limitations of linear thinking that dominated the ways of thinking and traditional science. Linear thinking is only focused on narrow sides of separated parts of the system. Linear thinking cannot understand the nature of the system and does not explain how complex systems composed of a lot of parts are connected by interrelationships. Table 3.9 shows the differences between a reductionist approach and systems approach.

Table 3.9 Reductionist Approach and Systems Approach

Reductionist Approach	Systems Approach
Focuses on parts	Focuses on wholes
Linear causality A causes B	Circular causality A causes B causes C causes A
Observer status objective	Observer status subjective
Context not very relevant	Context highly relevant
One 'true' or best answer	Multiple truths and answers
Externalities not important	Externalities important
Problems solved	Problems dissolved

Source: Leonard and Beer (1994, 1).

To sum things up, scenarios do not predict the exact outcomes of the future, but rather they provide possible alternative for the future. They also question conventional world views and beliefs and lead people to explore critical uncertainties. They are a tool for helping people and society see the big picture and the long-term view in the reality of fast change and high uncertainty. Scenarios are stories with multiple perspectives to cover a variety of possibilities. Scenario stories provide us with dramatic insight which triggers social change. Status quo is not a nature of scenarios. The main purposes of scenarios are to help make better decisions about the future and make better adaptations to social change. Thus, alternative scenarios are trying to think the unthinkable about the future in terms of long-range perspectives.

Scenarios are designed to look at complex future situations through the scenario developing process. Developing scenarios start by exploring driving forces behind historical legacy and main trends. Historical legacy affect the way we think and behave about the future. Current trends shape society and affect the direction of the path the future takes. Furthermore, future uncertainty is one of the important factors in understanding the future and creating scenarios. Various combinations composed of historical legacy, trends, and future uncertainty entails different sets of scenarios about how the future could unfold.

## CHAPTER 4

### BACKGROUND ON SOUTH KOREA

*But even now it is manifest and clear that there are neither times future nor times past. Thus it is not properly said that there are three times, past, present, and future. Perhaps it might be said rightly that there are three times: a time present of things past; a time present of things present; and a time present of things future. For these do coexist somehow in the soul, for otherwise I could not see them. The time present of things past is memory; the time present of things present is direct experience; the time present of thing future is expectation.*

Augustine (2002, 229)

#### 4.1. Introduction

This chapter presents the general background of Korea in the context of where Korea has come from, where Korea is now, and what challenges that Korea faces in the future. In other words, it tries to answer Korea's past, present, and future. Human life is made by society, by historical legacy, and by future imagination. Decisions should be made in the present, considering both the past and the future, but decisions play out in the future. Past, present, and future hence are closely interrelated to each other.

The past is an important element for understanding the future because the past affects the future. The past is a memory of human experience. Without the past, we cannot figure out who we are. For instance, Japan encountered an earthquake, tsunami and nuclear crisis in March of 2011. The disaster killed more than 20, 000 people (The New York Times, March 9, 2012). The disaster devastated the entire country. Japanese people will suffer from trauma in the future. As the sociologist Erikson stated, "the trauma that people experience from disasters may outweigh the actual loss of physical property—memories of such events can haunt people for many years" (Kendall 2010,

562). Robertson (1978, 30-31) holds the view that the past places the important stance to see the future:

Looking back to the fall of the Roman Empire may throw some light on the possibilities for our future today. But there is a more telling approach. If we do indeed stand at the beginning of a new future, then we must also be standing at the end of an old past. What is this past that we are leaving? The more clearly we identify it and the better we understand its nature, the more clearly we shall understand the future upon which we are now entering.

Futurists deal with the past in terms of historical and systematic aspects. For the historical ones, they use the materials of the past, on the other hand, for the systematic ones, they figure out the stages of historic course. That does not mean that the past can solely explain or tell the future or utterly affect the future because the main elements composing futures are the past, the present, and the future. When we try to look ahead of the future, history and tradition affect the future.

On the other hand, the present is based on the direct experience, which is now and in the current moment. The present cannot be existed or have a real meaning without the past and the future. May (2005, 43) describes well the way of linking the past and present, and the both to the future:

The present is where the future and past meet, the place of their mingling. The linear conception of time offers a certain privilege to the present. It is the only point of time that actually exist at a certain moment, even if its duration is too small to conceive. The present is the model for the proper unit of time. It is the (ideal) instant that is attached to those instant that are no longer and those that are not yet in order to form the line that is time. For the existential view of lived time, the present would be empty if it were not for the pull of the future and the weight of the past that give it its character. The present does not define the character of future and past. It is defined by them.

The future is an anticipation of future events, trends, and structure. The future is closely related with expectation. The expectation of future and the fear of the future can influence our current decision and behaviors. For instance, Social psychologist Taylor

(1989) highlights the importance of the role of future image for recovering from tragic or near-tragic events. He points out that optimistic images of the future can lead people to a high-level of motivation, minimize the risks, and help them better adjust to the circumstances. Furthermore, the future can give a new interpretation to the past. The past is reconstructed by the future. The past experience determines the future choice. In this context, good understanding futures can be undertaken in relations to past history, experience present, and expectations of the future. Past, present and future react upon each other. The dialectical relations between past, present, and future should be considered to grasp the alternative future realities.

#### **4.2. Appreciating Past: Where Korea is Coming From**

In this section, a general overview of the historical legacies is presented to understand the past of Korea. I briefly review the main findings of the historical legacies. Table 4.1 present respectively the four historical legacies which are described in the text.

Table 4.1 Key Historical Legacies of Korea

	Contents
Confucianism	Moral code of conduct Loyalty and filial piety Hierarchical interpersonal relationship The importance of education
Japanese Colonization	A pattern of conflictual engagement between the repressive state and the resistant civil society High-growth oriented development A love-hate relationship with Japan
Anti-Communism	A primary product of the Korean War Fear of Soviet Union and the North Korea To repress the pro-democracy movement
Americanization	Internalization of American values The dominance of the English language A heavy dependence on American academic community

##### **4.2.1. Confucianism**

Korea is known as the most Confucian society in the world (Hahm 2004, 279; Kim 2006b, 50; Rozman 2002). The Confucian cultural tradition still contributes to Korean daily life in subjects such as women's rights (Kang 2004), the formation of civil society (Kim 2007), planning educational programs (Ryu and Cervero 2011), and corporate culture (Kee 2008). According to Robinson (1991, 115, cited in Ryu and Cervero 2011, 140), despite the fact that Confucianism "no longer dominates Korean political and social life as a prescriptive orthodoxy, it has gone underground and continues to covertly shape behavior and social organization in Korea."

Confucianism emphasizes a moral code of conduct and empathy or humanism (Sitaraman 2009, 216). Confucianism highlights "personal virtue and greatness of mind, soul and character," while Taoism highlights "a blending of self with nature" (Callicott 1994, 75). Confucianism is primarily concerned with personal virtues rather than individual rights as a moral code of conduct because the basic assumption of Confucian morality is that "a person is inherently connected to others" (Park and Shin 2006, 343). In this context, the Confucian ideal person should consider social relationships to other people, his or her social duty, the collective welfare, and the interests of communities (Park and Shin 2006, 343). According to Seth (2006, 151-152), Korean Confucianism recognizes three cardinal virtues (*samgang*) and five ethical norms (*oryun*):

The basic ideals of Confucianism centered around proper social relationships. Three cardinal principles (*samgang*) guided these social relationships: loyalty (*ch'ung*) of subjects to their ruler, filial piety (*hyo*) toward one's parents, and maintaining distinction (*yo'l*) between men and women. Distinction meant that women had to display chastity, obedience, and faithfulness. Another Confucian formulation that defined the relationships that held society together was the five ethical norms (*oryun*): *yi* (righteousness and justice) that governed the conduct between ruler and ministers (subjects); *ch'in* (cordiality or closeness) between parents and children; *pyol* (distinction) between husbands and wives; *so* (order) between elders and juniors; and *sin* (trust) between friends. The ethical norms of Confucianism emphasized the importance of family relations, the hierarchical nature of society, the necessity for order and harmony, respect for elders and for authority, the importance of a clear distinction between men and women, and the subordinate status of women.

Given the governing three cardinal virtues and five ethical norms, the individual is not an independent person, but rather understood as involved in a series of vertical human relationships (Hurh 1998, 15). Confucian society embraces hierarchical interpersonal relationships and justifies social inequality as ideal for social order and harmony. The central ideas of Confucian values are loyalty and filial piety. Loyalty governs all social relationships between rulers and subjects, parents and children, and men and women. Loyalty to authority or leading groups is considered a good virtue. The ideal Confucian should show respect to authority, employers, and seniors. They will sacrifice themselves for the interests of superiors in age and social status. The importance of filial piety places the family and lineage as a fundamental factor in Korean society. Children are expected to honor and obey their parents. “Family ties in Korea still constitute the central element in the life of Koreans and their organizations, particularly in the economic sector, where family-owned and –operated conglomerates predominate” (Oh 1999, 14). The sense of filial piety is extended to elders and leaders by showing respect. In this way, sometimes, loyalty and filial piety are regarded as the same. Most Koreans call the president the father of the nation.

As Oh points out (1999, 13), key Confucian legacies are authoritarian, paternalistic, and family-centered. Lucian W. Pye, in his book, *Asian Power and Politics: The Cultural Dimensions of Authority*, examines the influences of Confucianism in Asian culture. Confucianism contributes the concept of power and therefore, Asian politics are based on the Confucian model of paternalistic authority. Also Korean politics reflects the Confucian tradition (Pye 1985, 58): “The Koreans have a strong attachment to disciplined and formal manners, to deference, and to a stiff and aloof style of authority: yet Korean culture also tolerates brashness and cockiness toward authority, boldness of action by leaders, and self-assertiveness by practically everyone.”

Contrary to the negative perception that Confucianism is a major obstacle for modernization, the Confucian tradition can actually be seen as a major driving force for modernization in Korea (Park 1999). The concept of Asian values is the main discourse to support the thesis that the Confucian tradition promotes economic development in Asia. The proponents of Asian values claim that, “Confucianism has a special pertinence to the

modernization process and to the practical formulation of human rights concepts in Asia” (De Bary 1998, 10). They list several characteristics of Confucian or Asian values as following: “the importance of family, emphasis on unity or harmony, hard work, thrift, and the importance of education” (Park and Shin 2006, 343). The term “Asian values” is another expression of Confucian virtues. They are representative ideas of Confucian capitalism or Confucian democracy. Confucian capitalism signifies East Asian industrial society, while Confucian democracy describes East Asian political society. The discourse of Confucian capitalism and Confucian democracy is seeking proper rationales for East Asian political/economic way and reveals the rise of East Asia as a civilization (Jang 2007, 47).

#### **4.2.2. Japanese Colonization**

The Japanese colonization of Korea is another historical event that helps to understand contemporary Korea. Japanese rule began in 1910. In 1945, Korea was liberated from Japan after 35 years of colonial rule as a result of the end of World War II. Koreans struggled against oppression, exploitation, and discrimination of Japan during the colonial period. According to Edy (1999, 71), “collective memory, the meaning that a community makes of its past, is home to critical aspects of political culture, community tradition, and social identity. It informs our understanding of past events and present relationships, and it contributes to our expectations about the future.” Koreans are still suffering from the collective memory of Japanese colonial rule: “the “distorted” history textbooks, the inadequate apology and compensation for Koreans, for the Korean wartime “comfort” women, sexual slavery, the unequal legal status of those of Korean ancestry in Japan, and the territorial conflict over Dok Island” (Lee 2002). Anti-Japanese views are prevalent in the public. Koreans have extremely different images of Japan and the Japanese which include: “repulsion and fascination”, “detestation and adoration”, and “distant but close” neighboring country (Lee 2002). These contradictory images reflect the extremely negative Korean feelings regarding Japanese colonization.

On the other hand, there are serious debates of whether Japanese colonization modernized Korean society (Shin 1996, 39). Some Japanese and Western scholars support the colonial modernization theory that Japan stimulated Korean modernization. Thus Japanese colonization was beneficial to Korea. Contrary to the colonial modernization theory, most Korean scholars criticize Japanese colonization “for disabling indigenous development and for Korea’s distorted, dependent development” (Cho 1973, cited in Shin 1996, 39). Furthermore, Shin (2006, 57) argues that the debate of whether Korea was modernized or exploited by Japan would be fruitless. Most industrial development has been transplanted and thus not indigenous. He suggested that the dynamic relations between indigenous and foreign forces should be examined to understand the Korea’s path of modernization. Even if Korea’s colonial past showed a positive and a negative heritage in terms of economic aspects, Korea is still deprived of political autonomy by the Japanese colonization (Mason et al. 1980, 85-86). The lack of political autonomy caused political instability during the late 1940s to the early 1960s. Koreans did not have the opportunities to develop effective political institutions. Thus, it was hard to achieve economic growth without political stability.

The legacy of Japanese colonization continues to affect Korean society and its individuals’ lives today. We can figure out some impact of Japanese colonization on Korean society. First, a pattern of conflictual engagement between the repressive state and the resistant civil society emerged and developed (Kim 2000b, 24). The Japanese colonial state held unlimited power over legislative, judicial, administrative, and military affairs. It was far stronger than the traditional monarchy of the Joseon Dynasty. Korea’s strong state is a product of Japanese colonization. In addition, it also generated “a highly resistant and military civil society”. Despite harsh state suppression, the number and power of Korean labor and peasant classes increased and succeed in their organizations. They could show the violent mass actions against Japanese colonialism. Second, the Japanese colonial past influenced the Korean model of development, which was characterized by a high-growth political economy (Kohli 1994). This high-growth oriented development evolved into post-colonial Korean society, especially Park Chung Hee regime. Korean regimes adopted colonial patterns through a state-driven export economy, state-business alliances for production and profit, and the corporatist patterns

of worker control. Furthermore, later Korea tried to emulate post war Japan as a “reference society”. Third, Korea has had a love-hate relationship with Japan as an emotional legacy of colonialism (Peterson and Margulies 2010, 177). Koreans show consideration for Japanese economic power and innovative energy, while they remember Japanese colonial exploitation. The collective memory of Japan’s colonialism to Korea caused the key source of tension and significant political obstacles to both countries (Hundt and Bleiker 2007, 62). Despite the close relationship between Korea and Japan, the emotional legacy may result in future security challenges such as a volatile North Korea and a possible clash between the U.S and China (Hundt and Bleiker 2007, 62).

#### **4.2.3. Anti-Communism**

Anti-communism is a primary product of the Korean War which was, “the most decisive turning point in modern Korean history (Choi 1993, 21-22). The Korean War marked tremendous suffering, death, and destruction. Anti-communism reflected the fear of the Soviet Union and North Korea, and Korea’s potential communization. Korean anti-communism was further fueled when world politics engaged in a full-scale Cold war and the South Korean state tried to legitimize their authoritarian nature, to repress political opponents, and to dominate domestic markets and civil society. According to Choi (1993, 22), anti-Communism functioned as a strong state ideology: “Anti-communism, articulated and experienced in everyday life, became the premier motif for ideological legitimization of the South Korean state.”

This statement demonstrates how powerful Korean anti-communism is as hegemonic discourse (Shin 2010, 54): “In South Korea, the authoritarian state monopolized discourse and policy toward the North, leaving little room for opposing views. Anticommunism, including intense anti-North Korea rhetoric and thought, became an indispensable element of the South Korean national identity.” Anti-communism has been reinforced by several forms of discourse and practice, including the rhetoric, school textbooks, and national security laws. The red complex is a strong anti-communism rhetoric which is purposely promoted by the South Korean government. The red is a

symbol of communism. The red complex is a term profusely used for “South Korea’s excessive ideological phobia toward communism or North Korea” (Jho 2008, 36). The authoritarian governments, ultra-right wing groups, and conservative media labeled progressive reformers, workers, and trade union activists as “p’algaengee” (red person) to make their political gains. Even the government’s torture of political dissidents was justified by anti-communist rhetoric. The use of red complex rhetoric also was used to discredit the pro-democracy movements. Therefore it made the public supportive of the authoritarian government’s actions and kept them committed to the anti-communist cause.

The reproduction of anti-communism was carried out through the educational system, especially school textbooks. Many parts of South Korean textbooks are designed to inspire anti-communism and show the hostility of the South towards North Korea (Grinker 1998; Hart 1999; Kim 2006c, 79). The textbooks repeatedly describe North Koreans as, “the beast-like communist spy” and “evil Communists” (Hart 1999, 75). North Korea was one of the most dehumanized countries and an object of a direct threat to South Korea. Anti-communist education was taken from the word of an elementary school song in 1970 (Grinker 1998, 127), which says:

Ah ah, how could we forget. The day our enemies tramped on our country.  
Blocking them with our bare fists and red blood. Stomping on the ground,  
shaking with righteous indignation. Now we will pay you back, our  
enemies of this day. We will run and run after the retreating enemy. And  
our country and people will shine. When we defeat each and every man  
among our enemies.

Korean National Security Law is a useful control tool to criminalize communists and to provide heavy penalties for those who support and praise for North Korea. Its primary aim is to “prevent anti-state acts from threatening the security of South Korea” (Kraft 2006, 628). National Security law has contributed to maintaining security in Korea. And it functions as a political obstacle to cooperate between North and South Korea. On the other hand, it has also been used to restrict individual freedom and to repress political dissidents.

After the post-Cold War of the late 1980s, along with Korea's democratization, South Korea showed a sign of gradually weakening anti-communism and implemented a "northern policy for the diplomatic normalization with China and Russia (Shin and Burke 2008, 154). Kim Dae-jung government (1998-2003) pursued "sunshine policy" of reconciliation with North Korea. However, North Korea's nuclear crisis posed a serious threat to South Korea. High tensions remain between the U.S. and North Korea. Thus, the cold war structure still remains on the divided Korean peninsula. Anti-communism has posed the powerful political force in South Korea. It is responsible in significant measure for present and future Korean policies and continues to inform the decision making process.

#### **4.2.4. Americanization**

Americanization is necessarily an ambivalent phenomena in Korea. Koreans are confronted with the dilemma of Americanization. Many Koreans are adopting American culture and undergoing in the process an internalization of American values. In contrast, they consider American influence as "being dominant, promoting of subservience, and destructive" (Kim and Park 2005, 258). Koreans view America as a material civilization. Second, Koreans have a prosperous new world image of America. America was a major supporter for Korea's national building and modernization. Korea's alliance with the U.S. has contributed to the Americanization of Korea. Nevertheless, anti-Americanism continues among some Koreans. Many Korean politicians cannot proclaim that they are pro-America, even though they prefer American policies and have a pro-American orientation. Third, Koreans identify modernization with Westernization and Westernization with Americanization. Koreans consider modernization as Korea's transformation from an agricultural society to an industrial society. They enthusiastically followed the model of Western countries for modernization. America was the idealized image of the advanced West. Accordingly, Korea's modernization more or less equated with Americanization. Koreans eagerly absorbed American civilization. However, the discourse adopted by Koreans was 'Geundaehwa' (modernization' or 'Segyehwa' (westernization) instead of 'Migukhwa' (Americanization). These reflected the

paradoxical images of America between American cultural superiority and the ill effects of American capitalism.

Korea's modernization began in 1945 after the liberation from Japanese colonization (Kwak 2003, 91). The liberation led the period of American military government (1945-1948) into Korea. The U.S. attempted to introduce American-style political, educational, and economic institutions into Korea. The ensuing Korean War (1950-1953) had inflicted such dramatic destruction and devastation, and permanent division. Korea recovered from the ruins of war with massive U.S. assistance. During the war and reconstruction period, the heavy influence of U.S. economic and political presence helped to achieve the modernization of Korea (Kwak 2003, 91). For example, US economic and military aid to Korea amounted to more than \$5.8 billion in the period 1955-1967 (Heo and Roehrig 2010, 162). In 1958, US military assistance accounted for 17 % of GNP in Korea, soaring from 12.7% in 1956 to 13.3% in 1957 (Li 2002, 23). Korea became the 3<sup>rd</sup> US-aid receiving country after Vietnam and Israel at that time. Along with Korea's economic planning, the U.S economic, political, and military presence considerably contributed the rapid economic development in Korea. Thus, many Koreans tended to identify Westernization with Americanization.

American values and cultures were widespread in the Korean society: "Korea has more personnel with economics doctorates from U.S. institutions than does the American government" (Beer 1990, 248); "the American sports of baseball, basketball and handball became more popular among the Korean public" (Ha 2004, 142); "the South Korean economy is so dependent on the U.S. economy that there is a popular saying, "If the U.S economy sneezes, South Korean economy catches a cold"" (Kwon 2003, 76); "the pro-Christian and pro-American (by extension) influence on Korean Christianity which is even willing to abandon some of its cultural past and historical heritage" (Kim 2008, 20 (fn 38)).

Many Koreans conceived that the adoption of American ways was to improve their own standing in Korean society and made them to place in the sense of modernity. The Americanization was so dominant and overwhelming that to some Korean scholars, it was considered a form of neo-colonialism much like the Japanese colonial days (Kang

2001). Nae Hui Kang (2001, 129-130) criticizes the impact of Americanization since the US military government introduced the American way of life, as the following:

As a result, studying in the United States became a shortcut to joining the new ruling elite. "America" was a model not only in knowledge production; as American power turned out to be insurmountable, the American way of life became an inevitable model for Korean people. In the mid-1950s, domestic musicians active in the music clubs of the Eighth Army in Yongsan, Seoul, began to introduce American popular music, and Hollywood movies also made people feel the American way of life as the most viable.

There are more stories of how the Americanization has an impact on Korean society in the areas of language and academy. The use of English words in Korean daily life is a growing phenomenon (Park 2004). English in Korea is a symbolic measure of one's competence, job success, social mobility and international competitiveness (Lee 2010, 246-247). Koreans see fluent usage of English as being modern and linked to living a high quality of life. Through English, Koreans internalize American values as both universal and preferential. The following statement shows how English affects and constructs Korean identity and how Koreans embrace American values (Kim 2005c, 442):

"Grandeur," "Dynasty," "Prince," "Enterprise," and "Chairman" are the names of automobiles made by local corporations, and "best," "super," "superior," "high," "excellent," "premium," "nice," and "absolute," the most favored adjectives ("royal" battery). And Gold and Wise, Luxury, First Lady, and Prestige are magazines strewn with advertisements for imported items and information on first-class restaurants, bars, and sports clubs. English is also used to deceive, to disguise local products as imported or licensed by foreign companies. "Absolute," "Damiant," and "Imperial" are Korean milk and baby formulas, and many other products are born with English names, since presumably English names bring higher sales.

American knowledge has had cumulative effects on the Korean academy. Western-centrism led to an identity crisis in the Korean academic community (Kang 2006, 116-118). The Korean academic community showed a heavy dependence on the American academic community. Especially, Korean political science primarily modeled

American political science. It translated American textbooks and borrowed knowledge about political theories and systems from American political science. Most political science faculty members are trained in the US. The influence of the US political science profession on Korea was significant and is continuing. Also, Korean sociologists were faced with academic dependency on American sociology (Kim 2009, 47). It caused “employment discrimination against Korean practitioners in favor of US-trained ones” (Kim 2009, 47). Thus, Korean scholarship is full of references of American academic work. America is the primary foreign source of Korean academy. As a result of academic Americanization, an understanding of other countries was not deep. Korean scholars undertaking studies of the developing and developed countries, except the U.S, were uncommon. Korean opinion leaders, intellectuals, and students have believed that American perspectives are useful when getting their own views on how to deal with Korean problems.

#### **4.3. Understanding Present: Where Korea is Now**

In this section, we identify a general overview of the long-term trends and emerging issues for understanding and mapping the present of Korea. Trends are patterns or phenomena moving in a general direction or with a tendency that continues long after they have first appeared (Firminger 2003, 1). They are influential forces that shape the future of Korea in all areas for the next 10-20 years. In other words, trends are to provide some knowledge about the alternative futures. They can define the current and future development of society. That is why future studies uses trends. Table 4.2 presents the clustering of key trends which affect four alternative scenarios and one preferred scenario.

Table 4.2 Key Stable Trends of Korea

Trends	Contents
Population	Declining population, Aging population Rapid urbanization
Energy	Growing demand for more energy Decreasing solid fuel and electricity Increasing renewable energy and gas

Economy	Knowledge-based economy Globalization
Environment	Global warming Extreme weather
Culture	Postmodern culture: the convenience culture, the rise of consumerism, and the culture of social networking
Technology	The era of converging technologies Social network technologies and applications
Governance	Toward democratic governance

Emerging issues, in contrast, are “currently existing small and seemingly insignificant issues and events that can tell us about the changes in the future” (Hiltunen 2006, 65). They are precursors, like ideas, events, and problems, which are ahead of well-established trends. They are sometimes weak, obscure, crazy, or even ridiculous, and appear in unexpected places and organizations (Dator 2005b, 205). Emerging issues are currently unimportant, even ridiculous issues but they are going to affect important influences to the futures. They are drawn from the nature of novelty and result in the questions of social, technical, ethical, and legal issues. The importance of the emerging issues is that early awareness and anticipation allow for people to research issue, understand their choice, and identify alternative futures. In this context, emerging issues, which is examined in this section, are categorized by a STEEP analysis—an analysis of social, technological, economic, environmental, and political factors.

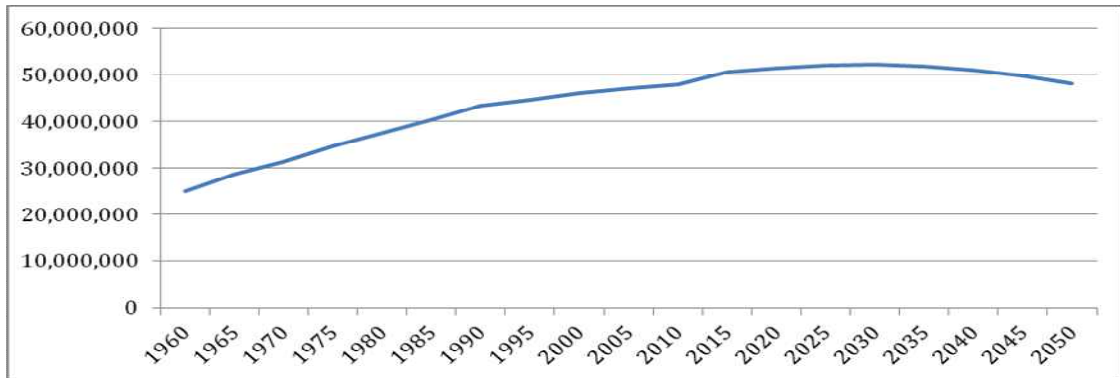
### **4.3.1. Trends**

#### **4.3.1.1. Population**

Population trends are one of a critical factor to consider when thinking about future development. Korea’s demographic trends can be characterized by declining population, aging population and rapid urbanization. In the past 50 years Korea has experienced a continuous increase in population growth and then its population growth has slowed down due to the effects of economic growth and the low birth rates (see Figure 4.1). In 2010 the population of Korea was estimated at 48.0 million, 23.0 million more than in 1960. However, with increasing life expectancy and low birth rates, Korea

is about to face unprecedented demographic change: a declining population and population aging. In considering the decline of population, the Korean population is expected to reach 48.0 million in 2050. The population will reach its peak in 2030 (around 52.2 million), then will slightly decrease from 2031 to 2050.

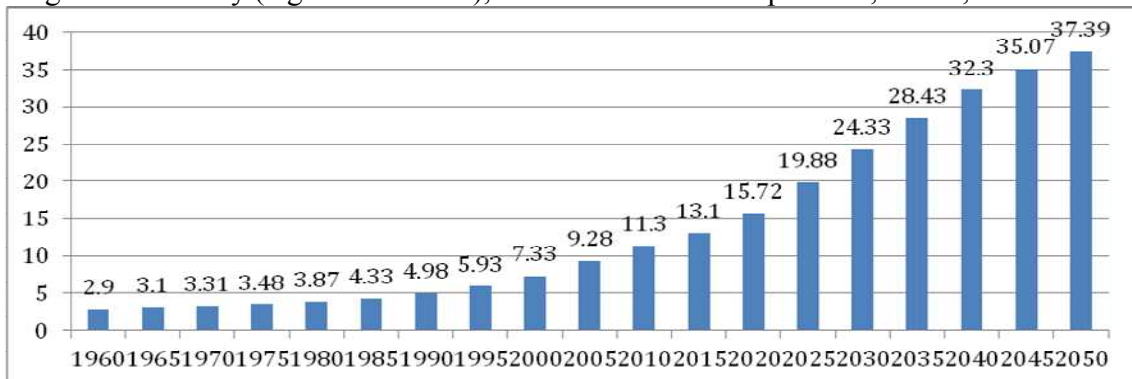
Figure 4.1 Total Population, Korea, 1960-2050



Source: Korean National Statistical Office (KNSO), each year.

In 2010, the elderly (aged 65 and over) in Korea accounted for 11.3 percent of the population. This percentage is lower than other developed countries, such as Japan (23.0 %), Italy (20.4 %), Germany (20.4 %), France (16.8%), and Sweden (18.2%) (Statistics Bureau of Japan 2011, 16). But the number of elderly people is expected to grow dramatically over the next 40 years (see Figure 4.2). According to Korean government projections, the elderly will increase to 37.4 percent in 2050 from 11.3 percent in 2010. Korea will be the oldest country by 2050.

Figure 4.2 Elderly (Aged 65 & Over), as a Percent of the Population, Korea, 1960-2050



Source: Korean National Statistical Office (KNSO), each year.

Korea, like other nations, has been experienced rapid urbanization since the 1960s (see Table 4.3). Urban population has risen from 39.1 percent in 1960 to 90.8 percent in 2009, an increase of more than 34.76 million people. In 2009, Korea's urbanization reached 90.8 percent, which is remarkably higher than 74.9 percent of the urbanization rate in more developed regions (UN 2010).

Table 4.3 Trends of Urbanization

(Unit: 1,000 persons, %)

Year	Total Population	Urban Area		Rural Area
		Population	Ratio (%)	Population
1960	24,989	9,784	39.1	15,205
1970	31,435	15,750	50.1	15,685
1980	37,449	25,738	68.7	11,711
1990	43,390	35,558	81.9	7,832
2000	47,964	42,375	88.3	5,579
2009	49,773	44,549	90.8	4,590

Note: 1) Urban population means those in metropolitan, city, country of over 20,000 persons.

2) Urban population means those living in City Planning Area in 2000

Source: The Housing and City Bureau, Ministry of Construction and Transportation (cited in Kim 2005b, p.12 and added 2009 data from Korean National Statistical Office (KNSO).

Korean urbanization has been faster than almost any other country's urbanization (Jacques 2009, 104):

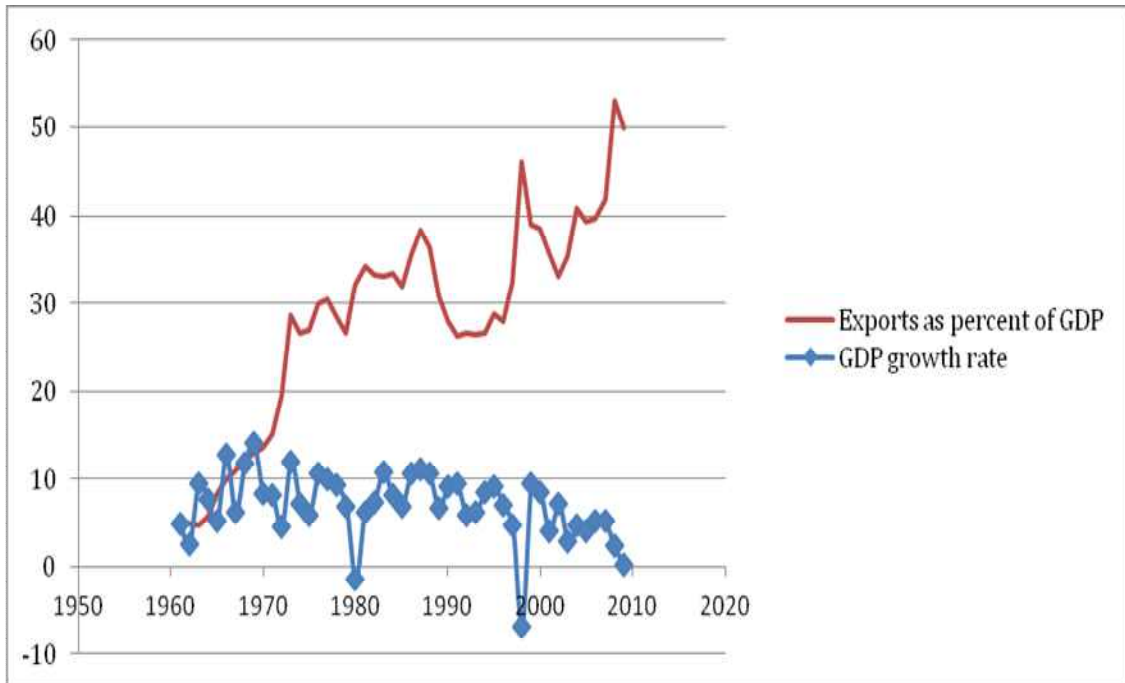
If we take South Korea as our point of comparison (with a population broadly similar to that of Britain and France), the proportion of its population living in cities increased by 62% in 44 years, compared with 52% for England over a period of 110 years, 34% over 60 years for Germany (and 38% over 100 years), 19% over 60 years for France (and 49% over 120 years), and 28% over 60 years (and 43% over 100 years) for the United States. In other words, the rate of urbanization in South Korea was well over twice that of Germany's—the fastest of these European examples—and was achieved in approximately two-thirds of the time; it was three times quicker than France's, taking roughly two-thirds of the time, and twice as quick as that of the United States in two-thirds of the time.

Compressed urbanization led to a heavy concentration of the population in Seoul, the capital of South Korea, and its surrounding area. The Seoul metropolitan region developed into a center of political, economic, cultural, educational, and technological power. It accounted for 48.6 percent of the national population on 11.8 percent of land as of 2005 (OECD 2010, 164). Nearly half of the Korean population lives in the Seoul metropolitan region. “This massive agglomeration in the capital region is greater (certainly in terms of primacy) than in Tokyo, Jakarta, Shanghai and Hong Kong-Guangzhou” (Choe 2005, 63). The Seoul metropolitan region’s predominance causes serious problems: spatial polarization between “the excessive concentration in the Seoul Capital Region and serious depopulation in rural areas”; impediment of “realizing territorially balanced development and equitable distribution” (Raftery and Anson 2004, 395). Thus, some people who are living outside the Seoul area half-seriously call Korea as the Republic of Seoul.

#### **4.3.1.2. Economy**

Salient economic trends suggest that the Korean economy is moving toward a knowledge-based economy in the era of globalization. Korea has experienced rapid economic growth since the 1960s (see Figure 4.3). Korea had an average growth in GDP of 6.9 percent per year from 1961 to 2009. But, after the 1997 economic crisis, economic growth showed a noticeable deceleration. GDP growth averaged 3.9 percent from 1998 to 2009 due to the reduced domestic demand and its mature economy. The downward trend of GDP growth rate indicates that future output growth will decrease. On the other hand, since the 1960s, exports as a percent of GDP steadily increased. Exports have continued their upward trend in Korea. In particular, even after the 1997 crisis, exports as a percent of GDP had an average 41.1 percent per year from 1998 to 2009 because of the rise of China and other Asian countries. According to UNDP (2006), export-led growth strategies may bring some problems such as jobless growth, a rise in inequality, higher unemployment, and food insecurity.

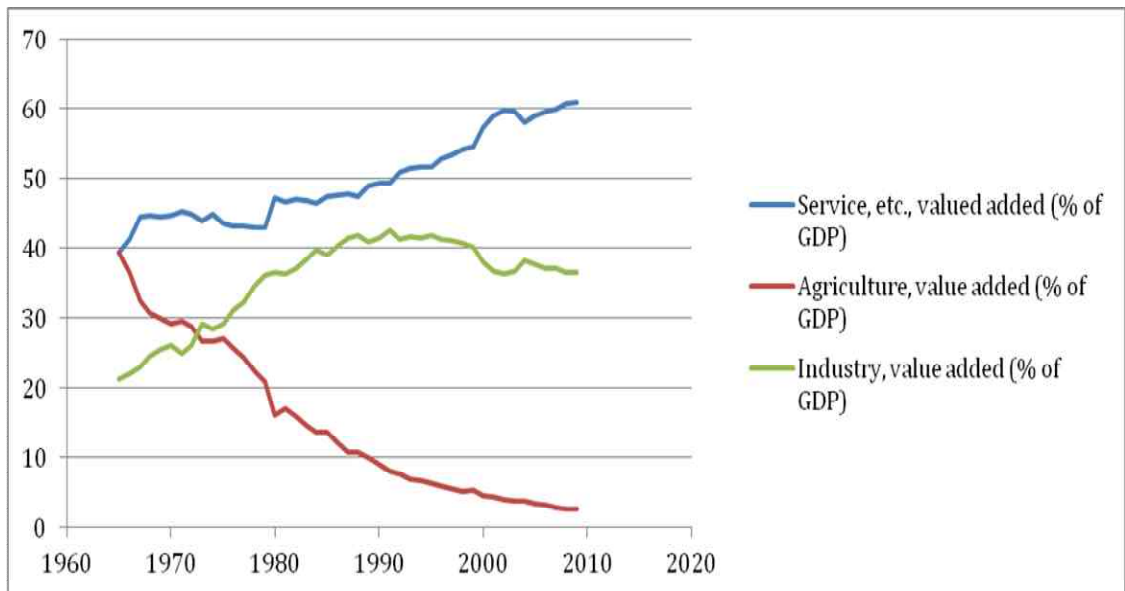
Figure 4.3 GDP Growth Rate and Exports as Percent of GDP (1961-2009, %)



Source: World Development Indicators (World Bank).

The structure of the Korean economy has undergone significant shifts over the past decades towards a service economy, particularly in knowledge-based areas. Comparing the shares of the three main sectors, agriculture, industry, and services, in the country's total output (Figure 4.4), Korea has continuously showed substantial growth of the service sector. The proportion of the service sector in total value added rose from 39.33 percent in 1965 to 60.88 in 2009. The share of the service sector is likely to get closer to the OECD average of 72 percent (OECD Stat Extracts, 2010) in the future. The role of agriculture, which accounted for 2.6 percent in 2009, is reduced sharply while that of industry increased and then decreased since the 1990s. The service sector is the largest part of the Korean economies' production, accounting for over 60 percent of total economic activity. The structural change is driven by trade liberalization since the 1980s and deregulation or privatization after the 1997 economic crisis (IMF 2006). The service sector's share in total output can be expected to continue in view of the dominance of the knowledge-based economy.

Figure 4.4 Share of the Sectors in Total Value in Korea



Source: World Development Indicators (World Bank).

Table 4.4 shows Korea's Knowledge Economy Index (KEI), developed by the World Bank's Knowledge Assessment Methodology (KAM). The KEI is an aggregate index that provides evidence about readiness of a country or region towards the Knowledge Economy (Chen and Suh 2007, 10). Korea's KEI for the year 2005-2006 is 7.82 and ranks 29<sup>th</sup> in the 145 countries included in the KAM database. Korea's KEI is lower than that of the average G-7 (8.72) and high-income countries (8.23) and relatively higher than that of the average East Asia and Pacific region (6.41). It slightly fell from the 26<sup>th</sup> position (7.94) in 1995 to the 29<sup>th</sup> (7.82). This shows a low performance as compared to the year 1995. Comparing other emerging Asian countries like China and India (KEI Rank 81 and 109), Korea is ahead of many other countries, whereas, Korea has a lot of things to come up with the G-7 and high-income countries.

Table 4.4 The Knowledge Economy Index for Selected Countries

Country	Most recent (2005-2006)		1995		Change from 1995	
	Rank	KEI	Rank	KEI	Rank	KEI
Denmark	1	9.52	1	9.54	0	-0.02
Sweden	2	9.51	4	9.49	2	0.02

Finland	3	9.37	3	9.51	0	0.14
Netherlands	4	9.35	5	9.46	1	-0.11
Norway	5	9.31	9	9.29	4	0.02
Canada	6	9.17	11	9.23	5	-0.06
United Kingdom	7	9.10	6	9.41	-1	-0.31
Ireland	8	9.05	15	8.99	7	0.06
United States	9	9.02	2	9.53	-7	-0.51
Switzerland	10	9.01	7	9.39	-3	-0.38
Australia	11	8.97	10	9.27	-1	-0.30
Germany	12	8.96	13	9.12	1	-0.16
Iceland	13	8.95	18	8.63	5	0.32
New Zealand	14	8.92	8	9.35	-6	-0.43
Austria	15	8.91	12	9.17	-3	-0.26
Belgium	16	8.80	14	9.10	2	-0.30
G-7 (average)	-	8.72	-	9.12	-	-0.40
Luxembourg	17	8.64	19	8.59	2	0.05
Taiwan, China	18	8.45	25	8.23	7	0.22
Singapore	19	8.44	21	8.49	2	-0.05
Japan	20	8.42	17	8.87	-3	-0.45
Estonia	21	8.42	28	7.87	7	0.55
France	22	8.40	16	8.94	-6	-0.54
Hong Kong, China	23	8.32	23	8.28	0	0.04
Spain	24	8.28	22	8.32	2	-0.04
High-income countries (average)	-	8.23	-	8.35	-	-0.12
Slovenia	25	8.15	30	7.81	5	0.34
Israel	25	8.01	20	8.51	-5	-0.50
Hungary	27	8.00	32	7.39	5	0.61
Czech Republic	28	7.97	31	7.64	3	0.33
<b>Korea, Rep.</b>	<b>29</b>	<b>7.82</b>	<b>26</b>	<b>7.94</b>	<b>-3</b>	<b>-0.12</b>
Italy	30	7.79	24	8.23	-6	-0.44
East Asia and the Pacific (average)	-	6.41	-	6.96	-	-0.55

Source: KAM, August 2011. [http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp) (August 10, 2011).

Korea's knowledge-based economy is closely related to the rising contributions of the information technology industry in light of two aspects: the communications infrastructure and the impact of the ICT revolution (Oh and Larson 2011, 8-9). For Korea's communications infrastructure, Korea built information highways in 1995 and had the highest broadband internet penetration in the world. Over 95 percent of all Korean households have high-speed Internet access. Furthermore, Korea initiated Internet Protocol Television (IPTV) and almost 90 percent of Koreans use mobile phones for

calling, texting, and mobile Internet use. Table 4.5 presents the contribution of IT to GDP growth in Korea. The growth rate of the IT industry is much higher than that of overall economy. It means that IT adds value to the Korean economy at a rate higher than other sectors. During the period 1998-2000, the IT industry had the highest growth rates and emerged as the new driving force for the new economy. The share of the IT industry in GDP rose from 5.9 percent in 1997 to 8.3 percent in 2009. Since 1997, the IT industry has contributed on average about 1.2 percent increase to GDP annually.

Table 4.5 Contribution of IT to GDP Growth

(Unit: Percent)

	97'	98'	99'	00	01'	02'	03'	04'	05'	06'	07'	08'	09'
GDP growth	5.8	-5.7	10.7	8.8	4	7.2	2.8	4.6	4	5.2	5.1	2.3	0.2
IT growth	10.8	22.6	33.2	34.5	8.7	15.9	13.7	17.1	11.7	12.6	8.7	6.8	5.3
Ratio of IT to GDP	5.9	7.2	7.9	8.7	8.1	8.2	8.3	8.8	8.6	8.5	8.2	8	8.3
Contribution	0.7	1.3	2.4	2.7	0.8	1.3	1.1	1.4	1	1.1	0.7	0.6	0.4

Source: Bank of Korea (2010), cited in Oh and Larson 2011, 9.

Another salient economic trend is globalization, indicating that the Korean economy is rapidly being reorganized and is reacting to the global market economy. According to the KOF Index of Globalization,<sup>10</sup> from the Konjunkturforschungsstelle in Zurich, Korea ranked 54<sup>th</sup> among 208 countries surveyed in the area of overall globalization in 2011(see Table 4.6). Belgium is the world's most globalized country. The United States is in 27<sup>th</sup> place, Japan in 44<sup>th</sup>, and China in 73<sup>th</sup>. Korea ranked lower than Belgium, the United States, and Japan, and higher than China. In the KOF Index of Economic Globalization, Singapore is in 1<sup>st</sup> place, the United States in 50<sup>th</sup>, Korea in 79<sup>th</sup>, Japan 92<sup>th</sup>, and China 103<sup>th</sup>. While Korea remains modest in overall globalization, its economic globalization is less integrated in the global economic system than other countries. Furthermore, Korea is somewhat higher in the ranking of political globalization and is much less globalized as far as social globalization is concerned.

<sup>10</sup> The KOF index is based on 25 variables that measure the three main dimensions of globalization: economic, political and social.

Table 4.6 2011 KOF Index of Globalization

Overall Globalization Index	Country	Belgium	U.S.	Japan	Korea	China
	Rank	1	27	44	54	73
	Score	92.60	79.84	69.14	65.57	60.99
Economic Globalization	Country	Singapore	U.S.	Korea	Japan	China
	Rank	1	50	79	92	103
	Score	96.80	71.64	61.59	57.71	50.88
Social Globalization	Country	Switzerland	U.S.	Japan	Korea	China
	Rank	1	25	48	86	89
	Score	92.36	78.36	66.90	53.38	53.28
Political Globalization	Country	France	U.S.	Korea	Japan	China
	Rank	1	15	32	34	41
	Score	98.43	93.60	89.17	88.60	86.65

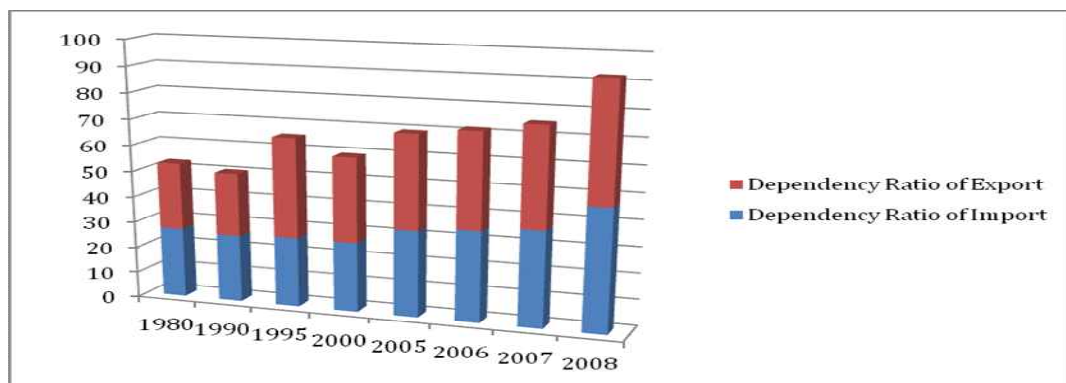
Source: the KOF Index of Globalization. August 2011, <http://globalization.kof.ethz.ch/> (August 11, 2011).

Korea's economic globalization is measured by global trade and foreign direct investment (FDI). Globalization can be seen as a process to accelerate flows of capital, people, and information beyond the state's boundary. In this context, global trade and foreign direct investment are the main elements of this process. The foreign trade dependency ratio of Korea, which is the value of total trade as a percentage of GDP, rose from 52.8 percent in 1980 to 92.3 percent in 2008 (see Figure 4.5). The trade dependency ratio is one of the most important characteristics used to measure the degree of economic globalization. Its higher numbers point out that the economy depends more on international trade than domestic demand. The trade dependency ratio was 50.3 percent in 1990 and steadily rose, reaching 75.1 percent by 2007. But it jumped to 92.3 percent after the global financial crisis in 2008. Korea is highly trade-dependent. In 2008, trade in Korea is equivalent to 92.3 percent GDP.

Foreign direct investment (FDI) is "investment from outside a country into a particular economic entity in that country with the goal of establishing a lasting presence" (Barrington et al. 2010, 88). It contributes to the significant increase of global capital flows and the internationalization of business. Figure 4.6 shows trends in Korea outward and inward FDI flows. Korean outward and inward FDI flows were moderate until the late 1980s due to "the country's restrictive FDI regime and its capital controls" (Hill and Jongwanich 2009, 11). Both FDI flows have been growing steadily since the 1990s.

Korea's FDI outflows exceeded inflows in 1990. The rapid growth of outward FDI fell abruptly owing to the 1997 Asian economic crisis, and FDI inflows exceeded outflows. Inward FDI flows reached around \$10 billions in 1999 with a high record. Since then, they experienced many ups and downs in the 2000s. From 2001, outward FDI started to surge quickly and exceeded inward FDI again due to "the aggressive globalization strategy Korean Multinational Corporations in industries such as electronics, automobiles, and machinery"(Shin, Mirza, and Kim 2009, 104). It reached over \$20 billion in 2008

Figure 4.5 Trade Dependency Ratio



Note: 1) Customs clearance basis, 2) Ratio of Exports to current GDP, 3) Ratio of Imports to current GDP

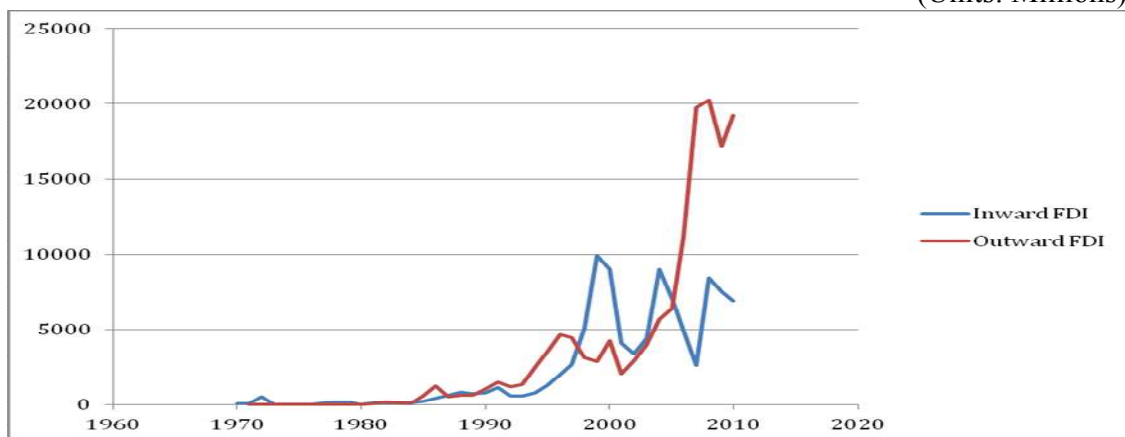
Source: Korea International Trade Association.

[http://www.kita.net/newtri2/center/uppdf/5-23\\_20090911112720133.pdf](http://www.kita.net/newtri2/center/uppdf/5-23_20090911112720133.pdf)

(August 11, 2011).

Figure 4.6 Inward and Outward Foreign Direct Investment Flows in South Korea, 1970-2010

(Units: Millions)



Source: UNCTAD Statistics

<http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx> (August 13, 2011).

The 2007 edition of the OECD's periodic Economic Survey of Korea describes Korea's FDI trends (OECD 2007, 150):

The \$46.5 billion of FDI inflows into Korea between 1998 and 2005 were more than double the amount received during the previous 35 years, and much larger than the \$ 10 billion received between 1991 and 1997. As a result, the stock of inward FDI rose from 2% of GDP in 1990 to 8% in 2005, according to UNCTAD (2006).

#### **4.3.1.3. Technology**

The domain of technology has showed a new paradigm from the era of information technology to the era of converging technologies. Information technology became the main driving force of social development. Emerging trends of global technology would be converging technologies: integrative innovation in information technology, biotechnology, nanotechnology, and cognitive science (Nordmann 2004; Roco, Bainbridge, and National Science Foundation 2003). Convergent technologies are defined in detail as the following (Roco, Bainbridge and National Science Foundation 2003, 1-2):

The phrase “convergent technologies” refers to the synergistic combination of four major “NBIC” (nano-bio-info-cogno) provinces of science and technology, each of which is currently progressing at a rapid rate: (a) nanoscience and nanotechnology; (b) biotechnology and biomedicine, including genetic engineering; (c) information technology, including advanced computing and communications; and (d) cognitive science, including cognitive neuroscience.

Information technology provides the basic conditions for the computer, cell-phones, and the internet; biotechnology developments pave the way for “in-vitro fertilization, genetic screening, more targeted pharmaceuticals and genetically modified crops”; nanotechnology contributes to the development of individual atoms, new materials, and miniaturization about everything (Nordmann 2004, 7). The RAND

Corporation technology report, *the Global Technology Revolution 2020, In-Depth Analyses: Bio/Nano/Materials/Information Trends, Drivers, Barriers, and Social Implications*, suggest integrated technology implications: (Silberglitt et al. 2006, xvii)

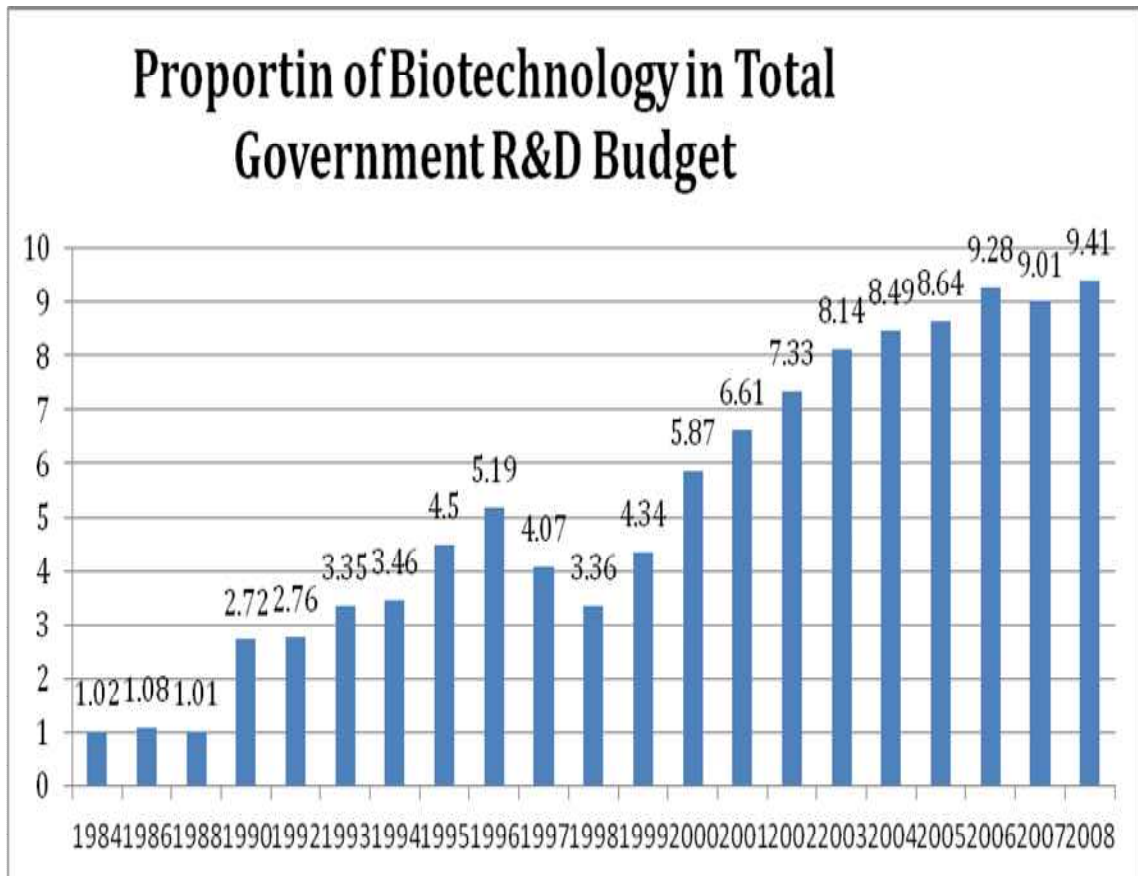
- Personalized medicine and therapies
- Genetic modification of insects to control pests and disease vectors
- Computational (or “in-silico”) drug discovery and testing
- Targeted drug delivery through molecular recognition
- Biomimetic and function-restoring implants
- Rapid bioassays using bionanotechnologies
- Embedded sensor and computational devices in commercial goods
- Nanostructured materials with enhanced properties
- Small and efficient portable power systems
- Mass-producible organic electronics, including solar cells
- Smart fabrics and textiles
- Pervasive undetectable cameras and sophisticated sensor networks
- Large, searchable databases containing detailed personal and medical data
- Radio frequency identification (RFID) tracking of commercial products and individuals
- Widespread bundled information and communications technologies, including wireless Internet connectivity
- Quantum-based cryptographic systems for secure information transfer

According to this report, Korea shows a high level of science and technology capacity, and many drivers and few barriers to technology implementation, along with the U.S., Canada, Germany, Israel, Australia, and Japan (Silberglitt et al. 2006, xxiii). The place of Korea on technology capability implies that Korea is rapidly developing converging technologies and shifting its society into a Korean knowledge society with converging technologies. The Korean government strongly supports R&D of biotechnology, nanotechnology and environmental technology to promote its economy into new high-technology growth areas (OECD 2009b, 210).

Biotechnology: The development of biotechnology in Korea was encouraged by the Biotechnology Promotion Law of 1983 with government-funded research (Yoon, Cho and Jung 2010, 337-8). The government investment for biotechnology R&D was dramatically increased in the 1990s (see Figure 4.7). Biotechnology R&D investment increased from 1.02 percent to 9.1 percent in the proportion of the total government

research budget between 1984 and 2008. The scale of biotechnology R&D investment has been over 9 percent since 2006.

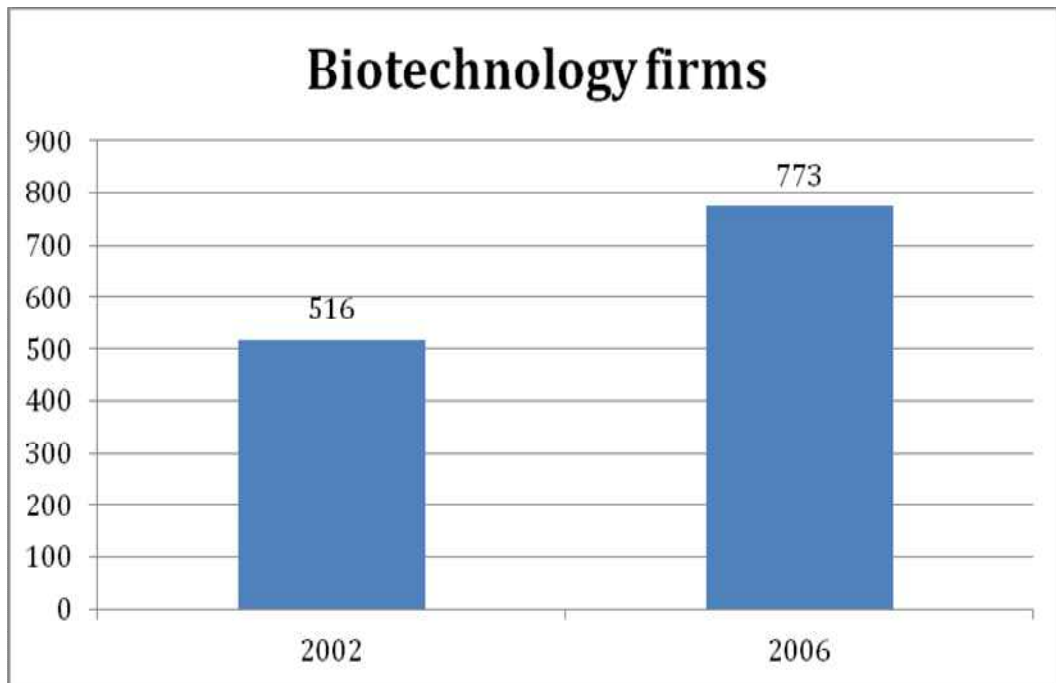
Figure 4.7 Government Investment in Biotechnology Research and Development



Source: Yoon, Cho and Jung (2010, 338).

The number of biotechnology companies has also steadily increased over time. As shown in Figure 4.8, the number of biotechnology companies, which use “biotechnology to produce goods or services and/or to perform biotechnology R&D” (OECD 2009a, 19), increased from 516 in 2002 to 773 in 2006. The number of biotechnology companies in 2006 was 49.8 % higher than that of 2002. They deal with biopharmaceuticals, bio-foods, bio-chemicals, bio-environments, bio-energy and resources, bio-process and bio-equipment, and bio-electronics and bioinformatics (OECD 2009b, 110). The biopharmaceuticals accounted for more than 60 percent (OECD 2009b, 110).

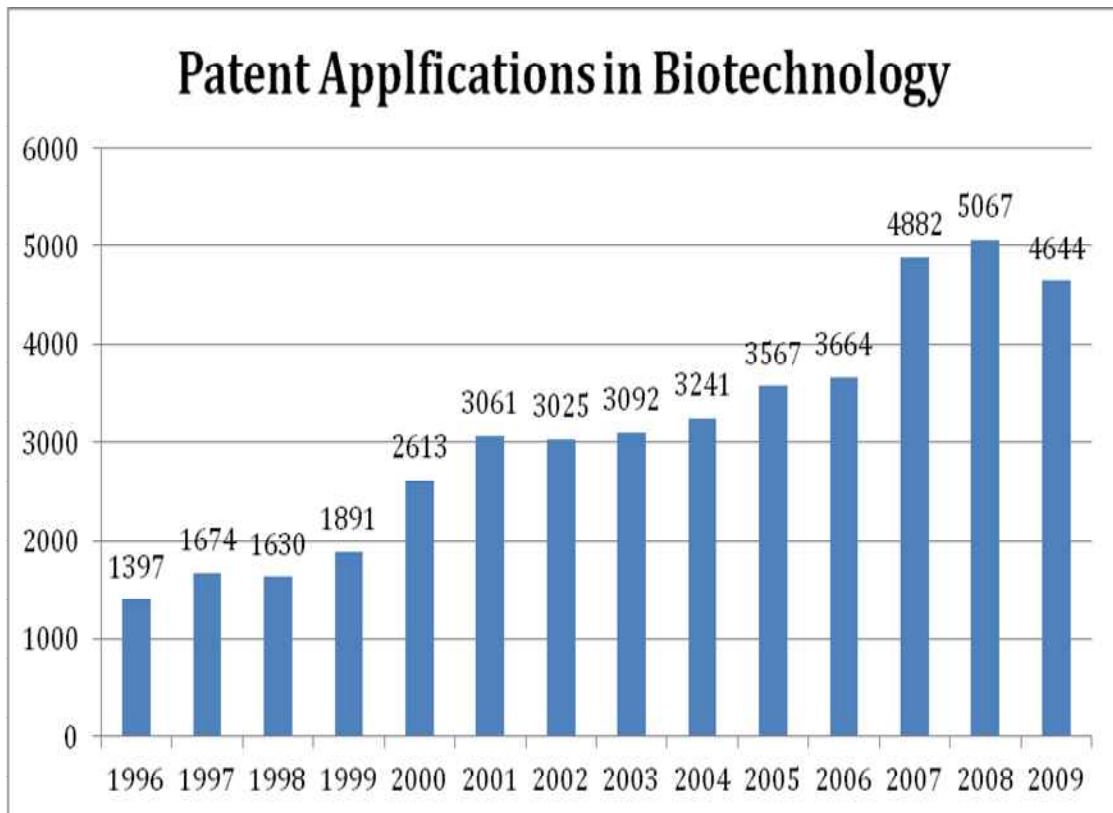
Figure 4.8 Biotechnology Firms in Korea



Source: OECD (2009a, 19).

Korea's bioindustry strength can be represented by the number of registered patents. Since 1996, the number of patent applications in biotechnology has been steadily increasing each year (see Figure 4.9). Korea biotechnology patenting grew until 2008, then started to decrease in 2009. In 2009, domestic entities accounted for 74.4 percent of the applications registered while the foreign entities accounted for 25.6 percent. Compared with other countries, the technology strength of Korea's biotechnology is ranked 14<sup>th</sup> in the world in terms of the number of patents in 2006-2010, jumping up from having been ranked 17<sup>th</sup> in the 1998-2001 period (MEST 2011, 15). Even though the level of biotechnology is far behind the advanced countries, biotechnology in Korea has obtained a significant level of new development. Particularly, in 2002, the International Vaccine Institute, a UN-supported center, was established in Seoul (Chand 2010, 53). It contributes to providing vaccines for developing countries and is an important platform for biotechnology (Chand 2010, 53).

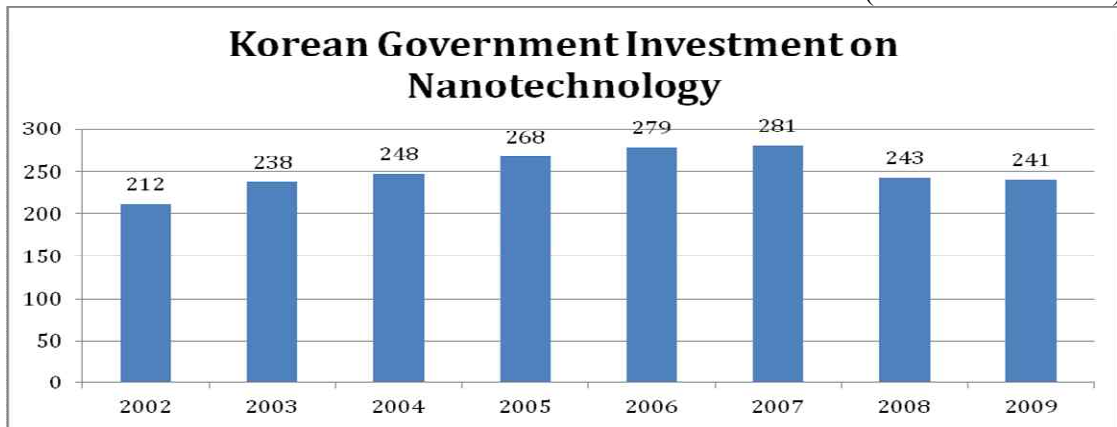
Figure 4.9 Patent Applications in Biotechnology in Korea



Source: Korean Industrial Property Office, <http://www.kipo.go.kr>

Nanotechnology: Investment, R&D activities, and new products for nanotechnology were promoted by the Korea Nanotechnology Initiative (2001), Nanotechnology Promotion Bill (2002), and Revise/Supplement Korea Nanotechnology Initiative (2005) (MEST 2009, 5). The Korea Nanotechnology Researchers Society (KoNTRS, 2003) and five National Nano Technology Centers have contributed to build the infrastructure and stimulate national and international collaboration (Sandhu 2007, 455; Wieczorek 2007, 219). The Korean government invests highly in nanotechnology with the goal of becoming a leading country in the world. The government's annual funding for nanotechnology is around 251 billion Korean won (see Figure 4.10). The period 2002-2005 focused on building infrastructure for the R&D of nanotechnology while the period 2006-2009 focused on R&D investment (MEST 2009, 6). The Korean government funding of nanotechnology decreased slightly since 2008.

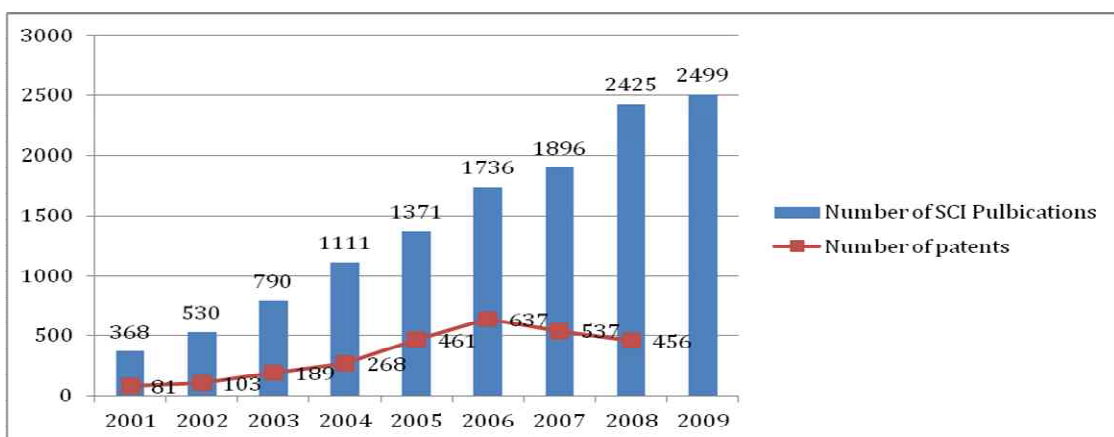
Figure 4.10 Korean Government Investment on Nanotechnology  
(Unit: Billion KRW)



Source: MEST (2009, 6).

Figure 4.11 shows the development of publications in the Science Citation index (SCI) database and the number of patents filed on nanotechnology in the USA by Korea. The number of SCI publications on nanotechnology has rapidly increased. The number of SCI publications in 2009 is 6.8 times the number it was in 2001. The number of patents granted in the US has risen from 81 in 2001 to 637 in 2006 and then, decreased in 456 in 2008. The respect to the data on publications, the number of patents shows less dramatic increase. The difference indicates that Korea's nanotechnology is in early state that many works on nanotechnology has focused on long-term aspects rather than practical applications.

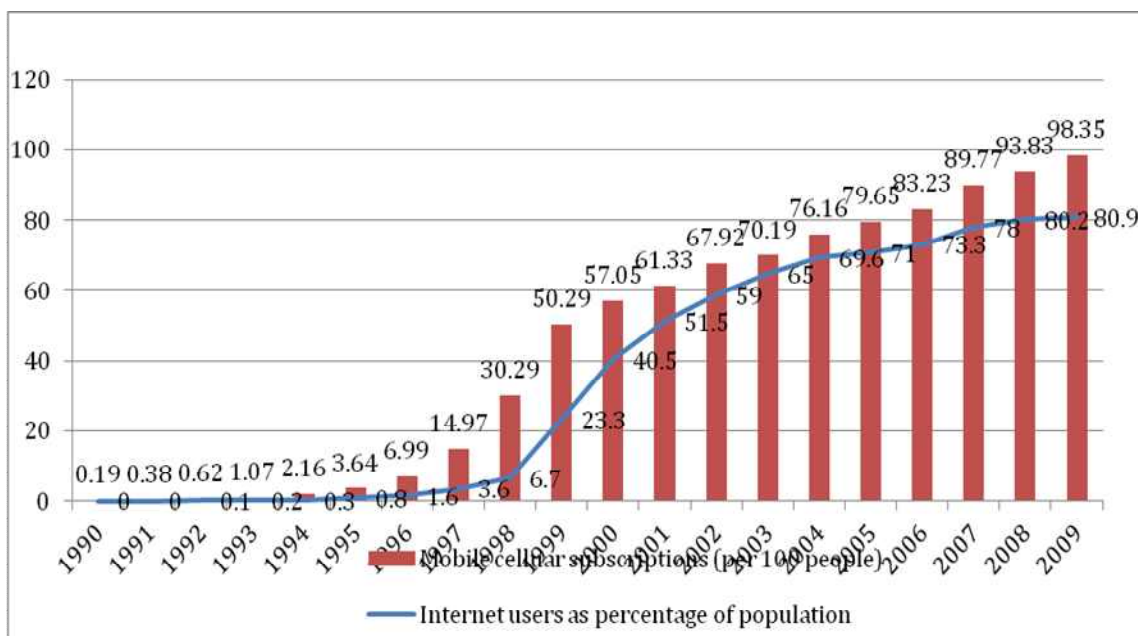
Figure 4.11 Publications in SCI and Patents in Nanotechnology



Source: MEST (2009, 12).

Information technology: Korea has experienced dramatic changes in the development of information and communication technology. Korea is considered a leading country in broadband Internet and mobile phones. Korea's Internet penetration rate (per 100 people) has increased significantly since 1992, rising from 0.1 percent in 1992 to 80.9 percent in 2009 (see Figure 4.12). Korea's Internet penetration rate is higher than the OECD average and also has the highest rate among the East Asian newly industrializing economies (NIEs) (Hong, Ko and Volynets 2007, 88). Mobile cellular subscriptions are jumping up from 0.19 percent (per 100 people) in 1990 to 98.35 percent in 2009. In 2007, Korea's mobile phone subscriptions show relatively high penetration in Asian countries: Japan (82 %), Singapore (134%), Taiwan (106%), and Hong Kong (149%) (Hong, Ko and Volynets 2007, 88).

Figure 4.12 Korea ICT Development Trends: 1990-2009



Source: World Development Indicators (World Bank).

Social network technologies and applications are spreading fast in Korea with the further development of smart devices. Penetration of smart devices such as, smartphones, tablets, smart TVs, netbooks, etc, skyrocketed in the last three years. For instance, the number of smartphone subscribers in Korea surpassed 20 million in October 2011 (Reuters, October 30, 2011). The smartphone market has grown quickly since Apple's iPhone was introduced in Korea in November 2009. Social networking technologies (Twitter, Facebook, Google Maps, MySpace, Flickr, YouTube, and Cyworld (Korea)) are popular and contribute to building instant online communities. Table 4.7 shows the worldwide growth of social networking sites. Each country is growing at an average of 42 % during the period 2009-2010. Korea ranks as the tenth largest market worldwide for social networking. The number of social networking sites rise 57 percent in the past year, more than the average growth rate of the social networking sites.

Table 4.7 Analysis of Social Networking Sites

Social Networking Sites Worldwide	Growth of Social Networking Sites		
	July-2009	July-2010	Percentage Change
United States	131,088	174,429	33
China	N/A	97,151	N/A
Germany	25,743	37,938	47
Russian Federation	20,245	35,306	74
Brazil	23,966	35,221	47
United Kingdom	30,587	35,153	15
India	23,255	33,158	43
France	25,121	32,744	30
Japan	23,691	31,957	35
South Korea	15,910	24,962	57

Source: Ahman (2011, 127).

#### 4.3.1.4. Culture

Korea's culture, like other western countries, is changing from modern culture to postmodern culture. Van Raaij (1993, 541) defines postmodernity as, "an era without a dominant ideology but with a pluralism of styles. Social and technological changes create four dominant postmodern conditions related to fragmentation of markets and experiences, hyperreality of products and services, value realization later in the

consumption cycle, and paradoxical juxtapositions of opposites.” Major features of a postmodern culture in Korea are the convenience culture, the rise of consumerism, and the culture of social networking.

Korean society is dominated by convenience culture. Convenience culture is connected with personal comfort. According to Tierney in his book, *The Value of Convenience: A Genealogy of Technical Culture*, comfort refers to “a state of physical and material well-being, with freedom from pain and trouble, and satisfaction of bodily needs” (Slack and Wise 2005, 29). He argues that the value of convenience is associated with modern technological culture with the desire for ease (Slack and Wise 2005, 28). Korean society has high expectations to be comfortable, and to undertake an easy life through technologies. Korea’s delivery services are popular with no delivery cost, including office documents, take-out meals, newspapers, milk, books, cameras, TVs, clothes, and even cars, by phone or on the Internet. Most ordered items are delivered within a couple days at most. The delivery culture is growing fast with a rapid increase of internet penetration, and other ICT devices. An Internet web blog describes Korea’s convenience culture as the following:

One of the biggest (+)'s of living in Korea is the culture of convenience. Restaurants will send *ajossis* (a middle-aged man, added by author) on scooters to your door without a delivery charge (even if you only order a \$3 *kimchijjigae*), and come back later to collect the plates. They even deliver McDonald's here. If you order something online from a Korean company, expect it to arrive at your doorstep within a couple of days.<sup>11</sup>

Another example of the convenience culture comes from the obsession with wellbeing. Wellbeing is closely related with the satisfaction of bodily needs in terms of mental health and physical health. Modern rationality is seeking economic growth and financial security for a good life, while postmodern rationality is looking for well-being, body, and health (Jung 2011, 65). *Momjjang* syndrome, which means “the socio-cultural phenomenon of having a good body in South Korea,” has become a dominant social-

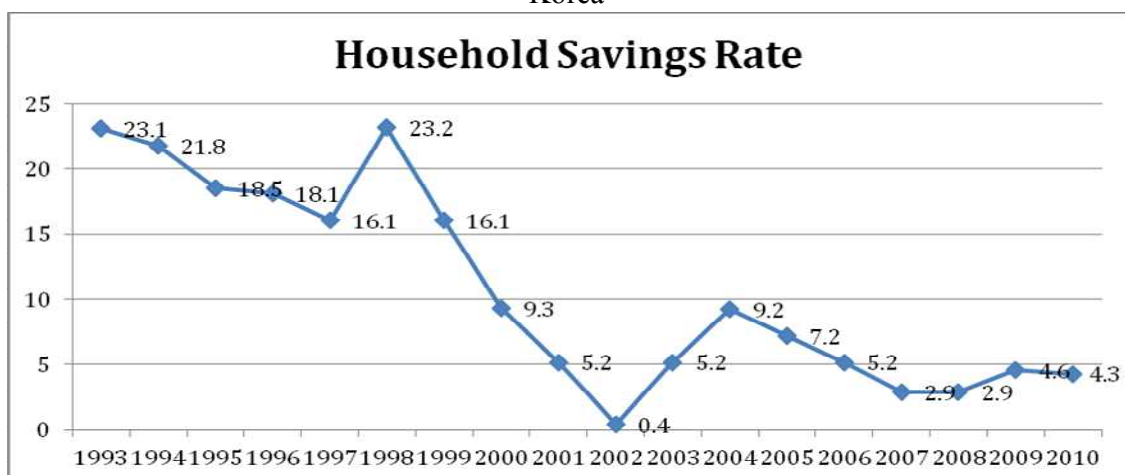
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<sup>11</sup> Source: <http://leeskoreablog.blogspot.com/2010/03/convenience-culture.html> (November 5, 2011).

cultural trend since the early 2000s (Jung 2011, 64-65). The wellbeing trend can be seen in the lifestyle for happy life: “eating organically grown foods, drinking purified water, using healthful materials for housing interiors, joining health clubs, exercising yoga or *chigong*, spending a family weekend on a country farm, and the like” (Koo 2007, 9). Organic food market and the well-being-based healthcare product market show one of the fastest growth markets. Most food and beverage companies use the word wellbeing in their products.

Nowadays, consumption is more important than production in Korea. Korea built the production-oriented value during the modernization era. Korea’s production oriented industrial structure has been changed into consumption-oriented society. The growth and expansion of consumption are main characteristics in Korea. Koreans believe that the level of personal consumption is a critical criteria of their happiness and wellbeing. According to Pierre Bourdieu (Southerton 2001, 180), consumption plays important roles for class distinction and identity formation. In Korea, middle class and younger generations have led the culture of consumerism (Kim 2000a, 63). Figure 4.13 shows that Korea household savings rate as a percent of disposable household income has been trending down, dropping from 23.1 percent in 1993 to 4.3 in 2010. The decline in household savings reflects the rise of consumption and the increase of household debt. In general, the household saving ratio is correlated with the rise of consumption.

Figure 4.13 Household Savings Rate as a Percent of Disposable Household Income in Korea



Source: OECD Economic Outlook (2011).

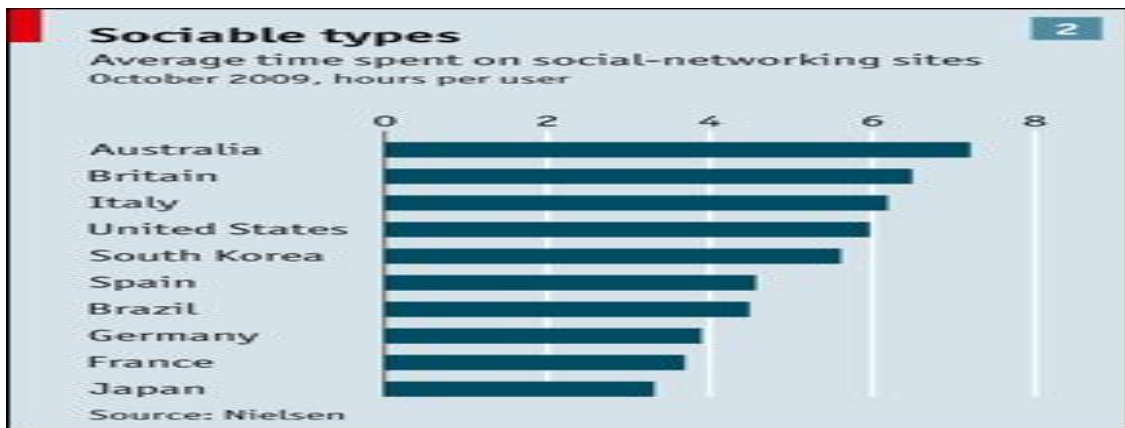
The contemporary consumerism is characterized by the extent of leisure activities (Kim 2000a, 61). Korea's leisure spending steadily increased over the decades: "The Bank of Korea (BOK) reported that Koreans spent 34.2 trillion won on entertainment and cultural activities in the first three quarters of 2010. The number accounts for 8.74 percent of the real consumer spending of households, according to the BOK. The spending on leisure activities managed to remain at 2 percent or so in the 1970's, but skyrocketed to 7 percent in the early 2000's and 8 percent in the late 2000s" (Kang 2010). However, Korea's leisure spending fell below other major countries. In 2007, Korea's leisure spending in its nominal GNI accounts for 4.9 percent, lower than the 5.7 percent of the US, the 10.9 percent for Japan, and the 17.9 percent for the UK (Hong 2010, 10).

The third feature of the current cultural trends is the rise of social network culture in Korea. Social network services (SNSs) are becoming a global phenomenon. For instance, Facebook, the most popular social networking site, has more than 800 million active users; the average Facebook user has 130 friends; more than 2 billion posts are added per day; it has over 250 million photos uploaded per day.<sup>12</sup> Social networking sites are SixDegree, Livejournal, Friendster, LinkedIn, Trib.net, MySpace, Friendster, Cyworld (Korea), QQ(China), Mixi (Japan) (Kim and Yun 2008, 299). The SNSs have fully involved in the lives on a daily basis and have the potential to connect easily others, redefine social relationships, and share information. In 2009, the National Internet Development Agency of Korea (NIDA) (2009) reports that 61.3 percent of respondents among the Internet users of 12-49 are SNS users with cafés, clubs, Internet communities, blogs-minihompys, instant messaging (IM), social networking services, and virtual reality services. According to the Nielson Company, Koreans spent more than 5 and half hours on social networking sites in October 2009 (see Figure 4. 14). The spending time of social networking in Korea was the fourth highest in the world, following Australia, Britain, Italy, and the US. Koreans spend more time on social-networking sites than on email.

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<sup>12</sup> Facebook Homepage, <http://www.facebook.com/press/info.php?statistics> (October 1, 2011).

Figure 4.14 Average Time Spent on Social-Networking Sites



Source: The Economist. 2010. A World of Connections, Special Report. January 28. [http://www.economist.com/node/15351002?story\\_id=15351002](http://www.economist.com/node/15351002?story_id=15351002) (October 3, 2011)

The SNSs have played critical roles in cultural practices. Kelli Burns (2009, ix-x) describes the impact of the SNSs on the pop culture:

We are watching video clips on YouTube of our favorite television moments, reading blogs for the latest celebrity news, and listening to trades from our favorite musician's MySpace page. Likewise, our fascination with popular culture spills over into our personal expression as we create mashups of music and movie trailers; list our favorite books, television shows, music, and movies on Facebook; and friend a favorite actor on MySpace.

Besides, the SNSs change the nature of popular culture (Burns 2009, x). Previous mass communication was controlled by media conglomerates, while the SNSs lead to the decentralization of mass communication. Thus the delivery mechanism of pop culture moves from mass media to the smaller and intimate settings in the online. People are more actively participating to create and redefine culture.

#### 4.3.1.5. Environment

According to the World Health Organization's report (Prüss-Üstün and Corvalán 2006, 9), environmental risks are important factors to cause disease, death and disability,

accounting for 24 percent of the disease burden (healthy life years lost) and 23 percent of all deaths (premature mortality) globally. Environmental risk factors include indoor and outdoor air pollution, lead, water, sanitation, hygiene, climate change, and other occupational factors (injuries, noise, carcinogens, airborne particulates, and ergonomic stressors) (Prüss-Üstün and Corvalán 2006, 27).

In particular global warming engenders severe weather conditions like drought, heat waves, flood, and wildfire, increasing threats to humans, plants, and animals. In 2007, the Intergovernmental Panel on Climate Change (IPCC) considered world climate change to be “worse than we thought.” (Adam 2007). The report said that world temperature would raise 4 degrees Celsius by the end of the century. A global temperature rise would generate “loss of food production”, “increased flooding,” “melting ice,” “more disease,” “loss of land species,” “water shortages,” and “hurricanes more powerful” (Adam 2007). The climate change would lead to more frequent and severe natural disasters. Climate change is even expected to drive warfare due to resource scarcity (Schwartz and Randall 2003).

Table 4.8 states the comparison of Korea’s climate change with the global level. Korea’s CO<sub>2</sub> emissions, temperature, precipitation, and sea level show a faster increase than those at the global level. Korea’s annual CO<sub>2</sub> emissions are higher than the global mean CO<sub>2</sub> emissions. Korea’s mean temperature near the Earth’s surface rises 1.5 °C during the past century while the global mean temperature increases 0.74±0.18°C. The sea level has risen by 50 cm around the Korean Peninsula over the past century. The effects of global warming are more obvious in Korea than any other country in the world.

Table 4.8 Climate Changes in Korea

Contents	Korea	Global mean
Annual mean CO <sub>2</sub> (ppm)	389 (2005)	379 (2005)
Air temperature rise (from 1905 to 2005)	1.5 °C	0.74±0.18°C
Annual precipitation (mm)	1166 (1920) → 1501(2006)	
Sea level rise (mm/yr)	1-6	1.3-2.3

Source: World Health Organization’s country file, <http://www.wpro.who.int/NR/rdonlyres/CB06DB47-3CFC-471F-936B-BBB5C6BDBD1D/0/KOR1.pdf> (November 7, 2011).

In Korea, like other countries, extreme weather is becoming common and its cost has dramatically increased. For instance, in February of 2011, Korea's east coast was hit by the heaviest snowfall in more than a century to cause widespread chaos (Chosun Il Bo Daily Newspaper, July 14<sup>th</sup>).<sup>13</sup> Seoul, the capital of Korea, experienced heavy downpours, killing 39 people and with eight people missing in July of 2011(Chosun Il Bo Daily Newspaper, 2011, July 28<sup>th</sup>).<sup>14</sup> It is the heaviest rainfall since Korea started collecting weather data in 1907. In general, flooding, precipitation, drought, and storms have become more frequent and severe. Also, the cost of extreme weather has rising rapidly over the past five decades (see Table 4.9). The damage cost from extreme weather in the period 2001-2008 totals 22, 900.1 million Korean won. It is three times higher than that of the period 1991-2000 and 18 times in the period 1961-1970.

Table 4.9 The Cost of Extreme Weather Events in Korea  
(Unit: Million KRW)

Year	1961-1970	1971-1980	1981-1990	1991-2000	2001-2008
Cost	1,276.7	2,033.6	5,809.3	6,953.8	22,900.1

Source: Lee, Jeehoon. 2010. "Extreme Weather Economics." *SERI Economic Focus*, 278(February 2). Seoul: Samsung Economic Research Institute.

#### 4.3.1.6. Energy

Like other countries, energy security is a main concerns in Korea as a non-oil producing country. In particular, increasing energy prices, increased demand for global energy, and global climate change put has made energy security a top policy priority. The 2008 edition of *the World Energy Outlook* addresses well the importance of the relationship between energy, economy and environmental situations (OECD IEA 2008, 51):

It is not an exaggeration to say that the future of human prosperity hinges on finding a way of supplying the world's growing energy needs in a way that does not irreparably harm the environment. Until recently, it looked as

<sup>13</sup> Source: [http://english.chosun.com/site/data/html\\_dir/2011/02/14/2011021401078.html](http://english.chosun.com/site/data/html_dir/2011/02/14/2011021401078.html) (November 7, 2011).

<sup>14</sup> Source: [http://english.chosun.com/site/data/html\\_dir/2011/07/28/2011072800435.html](http://english.chosun.com/site/data/html_dir/2011/07/28/2011072800435.html)(November 7, 2011).

if we had plenty of time to meet that challenge. No longer. Surging oil and gas prices have drawn attention to the physical and political constraints on raising production — and the vital importance of affordable supplies to the world economy. And the latest scientific evidence suggests that the pace of climate change resulting from manmade emissions of greenhouse gases — the bulk of which come from burning fossil fuels — is faster than predicted. The urgent need for a veritable energy revolution, involving a wholesale global shift to low-carbon technologies, is now widely recognised.(p.51)

Since the early 1960s, Korea has suffered from a considerable energy shortage due to the poor energy resources and rapid economic development, while the energy consumption per capita has steadily increased. In terms of energy supply in Korea, coal and hydraulic power only accounted for 3.5 percent of the total energy supply in 2010, while the majority (96.5 percent) of the energy supply had to be imported (KEEI 2011, 5). If the nuclear power is treated as indigenous production, overseas dependency is decreased down 84.3 percent (KEEI 2011, 5). Overall, over 80 percent of Korea’s energy is imported. With no domestic oil reserves, Korea has to import all of its crude oil. Crude oil accounts for the largest share of Korea’s total energy consumption. Table 4.10 shows global ranking of Korean refining industry. Korea ranks 4<sup>th</sup> in oil imports, 9<sup>th</sup> in oil consumption, and 6<sup>th</sup> in refinery capacity in 2010.

Table 4.10 Global Ranking of Korean Refining Industry in 2010  
(Unit: 1,000 b/d)

Ranking	Oil Import		Oil Consumption		Refinery Capacity	
1	US	12,454	US	19,528	US	17,290
2	China	5,674	China	9,377	China	10,521
3	Japan	4,853	Japan	4,422	Russia	5,555
4	<b>South Korea</b>	3,170	India	3,338	Japan	4,723
5	India	3,078	Russia	3,041	India	3,796
6	Netherlands	3,061	Brazil	2,274	<b>South Korea</b>	2,835
7	Singapore	2,814	Saudi Arabia	2,664	Italy	2,396
8	Germany	2,580	Germany	2,483	Brazil	2,115
9	France	2,128	<b>South Korea</b>	2,249	Germany	2,108
10	Italy	1,857	Canada	2,234	Saudi Arabia	2,100

Source: World Oil Gas Review (2011) and BP Statistics (2011) (cited in Kang and Bae 2012)

Table 4.11 shows the pattern of energy consumption since 1975. From 1975 to 2010, primary energy, which is an energy lost in production, increased by nearly 9.5 times and final energy, which is an energy of the product delivered to the consumer, soared by nearly 8.3 times. During the same period, the sources of Korea's energy have shifted. Coal shows the rising and falling behavior mode. Coal, which comprised 29.3 percent of Korea's primary energy in 1975, was gradually increased until 1985, when it comprised 39.1 percent. Since then it has decreased, constituting about 18.7 percent of supply in 1995. Then it has become somewhat more significant, increasing up to 28.9 percent in 2010, due to the high oil prices. Crude oil, comprising well over average 50 percent of Korea's supply during the 1970s to 1990s, began to be replaced by nuclear power and natural gas starting in the mid-1970s and the mid-1980s respectively. In the 2010, crude oil provided just 39.7 percent of the primary energy. Natural gas and nuclear power have offset oil as an energy source. Natural gas jumped more than three-fold of its share of energy supply between the 1990s and 2000s. Nuclear power has become more important as an energy source despite the political debate about the environmental problems. It accounted for 21.2 percent of the total energy supply in 2010. The share of energy supply provided by renewable energy has increased from 1 percent in 1999 to 2.3 percent in 2010. In sum, still, coal, crude oil, and natural gas remain as the most important source of primary energy in Korea. Crude oil have provided declining shares while coal; coal and natural gas has significantly expanded their share; nuclear power has maintained a stable share; renewable energy is growing continuously but having no serious impact on Korea's energy market.

Table 4.11 Major Energy Indicators

Year	Energy consumption (1,000TOE)		Composit of primary energy(%)					
	Primary energy	Final energy	Coal	Oil	LNG	Hydro	Nuclear	Renewable energy
1975	27,553	23,424	29.3	56.8	-	1.5	-	-
1976	30,193	25,836	29.4	58.6	-	1.5	-	-
1977	34,193	29,527	28.2	61.7	-	1	0.1	-
1978	38,088	32,418	26	63.3	-	1.2	1.5	-
1979	43,242	36,971	27.4	62.8	-	1.3	1.8	-
1980	43,911	37,597	30.1	61.1	-	1.1	2	-

1981	45,718	38,952	33.3	58.1	-	1.5	1.6	5.5
1982	45,625	38,711	33.9	57.6	-	1.1	2.1	5.3
1983	49,420	41,337	33.4	55.9	-	1.4	4.5	4.8
1984	53,535	44,998	37.1	51.6	-	1.1	5.5	4.7
1985	56,296	46,998	39.1	48.2	-	1.6	7.4	3.6
1986	61,462	50,524	38	46.4	0.1	1.6	11.5	2.4
1987	67,878	55,197	34.8	43.7	3.1	2	14.5	1.9
1988	75,351	61,033	33.4	47	3.6	1.2	13.3	1.5
1989	81,660	65,875	30	49.6	3.2	1.4	14.5	1.3
1990	93,192	75,107	26.2	53.8	3.2	1.7	14.2	0.9
1991	103,619	83,803	23.7	57.5	3.4	1.2	13.6	0.6
1992	116,010	94,623	20.4	61.8	3.9	1	12.2	0.6
1993	126,879	104,048	20.4	61.9	4.5	1.2	11.5	0.5
1994	137,234	112,206	19.4	62.9	5.6	0.7	10.7	0.7
1995	150,437	121,962	18.7	62.5	6.1	0.9	11.1	0.7
1996	165,212	132,003	19.5	60.5	7.4	0.8	11.2	0.7
1997	180,638	144,432	19.3	60.4	8.2	0.7	10.7	0.7
1998	165,932	132,128	21.7	54.6	8.4	0.9	13.5	0.9
1999	181,363	143,060	21	53.6	9.3	0.9	14.2	1
2000	192,887	149,852	22.3	52	9.8	0.7	14.1	1.1
2001	198,409	152,950	23	50.7	10.5	0.5	14.1	1.2
2002	208,636	160,451	23.5	49.1	11.1	0.6	14.3	1.4
2003	215,067	163,995	23.8	47.6	11.2	0.8	15.1	1.5
2004	220,238	166,009	24.1	45.7	12.9	0.7	14.8	1.8
2005	228,622	170,854	24	44.4	13.3	0.6	16.1	1.7
2006	233,372	173,584	24.3	43.6	13.7	0.6	15.9	1.9
2007	236,454	181,455	25.2	44.6	14.7	0.5	13	2
2008	240,752	182,576	27.4	41.6	14.8	0.5	13.5	2.2
2009	243,311	182,066	28.2	42.1	13.9	0.5	13.1	2.2
2010	262,609	193,832	28.9	39.7	16.4	0.5	12.2	2.3

Source: KEEI. 2005 and 2011. Yearbook of Energy Statistics. Euiwang-si, Korea: KEEI.

#### 4.3.1.7. Governance

The governance can be defined as “the manner in which power is exercised in the management of a country’s economic and social resources for development” (World Bank 1991, 1). The UNDP’s Regional Project on Local Governance for Latin America defines governance as “the rules of the political system to solve conflicts between actors and adopt decision (legality)” (Council of Europe 2009, 13). In this section, the governance trends indicate the general trends of governance as “the use of institutions,

structures of authority and even collaboration to allocate resource and co-ordinate or control activity in society or the economy” (Council of Europe 2009, 13 ).

Korea’s governance model has rapidly transformed from an authoritarian government to a democratic government. During the period of industrialization (1961–1987), Korean society can be characterized as having a strong state and weak society. This period was ruled by the military-dominated governments of Park Chung Hee and Chun Doo Whan. Moon (2005) describes this period as “militarized modernity,” and shows how the state treated men and women differently and how the states’ disciplinary power was practiced on the civil society. The early part of this period featured “lack of mass participation” and strong student activism (Kim 2000b, 51–54).

In the 1980s, many elements seemed to have effects on the relationship between the state and society: the rise of the middle class, increased influence of the business community, and continuity of social movements. In particular, the continued economic growth gradually made a contribution to Korean transformation. A large number of Koreans were educated, and college enrollment was high. The rising middle class were strong members of civil society and inclined to have a sense of liberal political values. Furthermore, with increasingly decentralized economic planning, Korea was slowly privatizing a number of state-owned firms. The economic power of the business community against the state certainly grew. Thus Korea entered democratic transition and experienced deepening democratization.

Despite the consolidation of democratic values, there were unique factors that distorted a democratic-oriented decision-making process: ICT development and neo-liberal globalization. ICT development promotes political democratization and globalization, and leads to a global society or broken national borders. However, it simultaneously provides new tools to facilitate control of citizens’ lives by the government, while globalization provides reasons for greater protection of the national economy by the state in response to the liberal world economy.

Along with the increasing power of the society against the state, Korean civil society showed the remarkable progress for the past two decades. Jennifer S. Oh (2012, 528-529) describes the impact of Korean civil society on politics:

In the summer of 2008, more than 1,800 civic groups participated in a series of candlelight vigils protesting prospective imports of U.S. beef. At their peak, the vigils gathered about one million people from diverse socioeconomic backgrounds, with even more people engaging in various online discussion forums. And collectively, a coalition of progressive political parties, civic groups, and online discussion groups called the “People’s Action for Countermeasures against Mad Cow Disease” pressured the government into renegotiating the issue of beef imports with the U.S. government. The popular protest over U.S. beef reflects an increasingly active civil society that has emerged since democratization in 1987.

Korea’s democratic governance can be founded at the Economist Intelligence Unit’s democracy index (see Table 4.12). The democracy index showed Korea’s improved democracy to full democracies from flawed democracies. Korea’s democracy ranks 20th in the world in 2011, up eleven places from 2006. Korea scored 8.11 point on average out of 10.0 as a full democracies, up from 7.88 points in 2006. Korea has a highest score among Asian countries, surpassing Japan (22<sup>nd</sup>, 8.08) and India (40<sup>th</sup>, 7.28). Norway was named the most democratic country with an overall score of 9.8, followed by Iceland (9.65), Denmark (9.52), and Sweden (9.58). The U.S. ranked 17<sup>th</sup>, just ahead of the United Kingdom (19<sup>th</sup>). North Korea obtained the lowest score with 1.08, classified as an “authoritarian regime”.

Table 4.12 The Economist Intelligence Unit’s Index of Democracy, Korea: 2006, 2008, 2010.

Year	Types of regime	Rank	Category scores					
			Overall score	Electoral process and pluralism	Functioning of government	Political participation	Political culture	Civil liberties
2006	Flawed democracies	31	7.88	9.58	7.14	7.22	7.50	7.94
2008	Full democracies	28	8.01	9.58	7.50	7.22	7.50	8.24
2010	Full democracies	20	8.11	9.17	7.86	7.22	7.50	8.82

Source: EIU (2008 and 2010a) and Kekic (2007).

### **4.3.2. Emerging Issues**

#### **4.3.2.1. Social Factors**

##### **A legal minefield for Korean reunification**

North Koreans sued over a late South Korean's inheritance. The South Korean escaped North Korea during the Korean War, leaving his children behind in North Korea. They won the case even though they lived in North Korea. South Korea accepted the North Korean's property rights. After the unification, similar legal claims may happen in North Korea and South Korea. An estimated 10 million Korean people have been separated by the Korean War. The unification may allow the reunion of the separated families. Some North Korean children who were separated from their parents may call for the property rights or heritage of their parents living in South Korea. On the other hand, before the Korean War, the North Korean government confiscated all land owned by traditional landlords and capitalists as well as other private property without any monetary compensation. Some Korean people whose parents who had their land confiscated by the North Korean government can insist on the return of their heritage of land or claim compensation to the united government. In conclusion, this case can become a reference guide of the future property debate in the process of the unification.

Source: Andrei Lankov, *The Asia Times*, July 30, 2011

<http://www.atimes.com/atimes/Korea/MG30Dg01.html>

##### **We are not stragglers but objectors; the declaration of refusal of the college entrance exam by the invisible schoolbag strap group.**

The invisible 'schoolbag strap' group, who tried to change the world by rejecting the university entrance exam, held a press conference on November 1, 2011 and insisted on creating a social movement that rejected the college entrance examination and change a society and educational system which imposes competition and educational background. They criticized Korea's college entrance exam and grade-oriented school culture and the

intuitional malfunctions in the higher education system. Korean society has shown high educational attainment and educational zeal due to the belief that going to a good university is the golden key for success. Particularly, entering top-ranked universities is privileged because it is a gateway to the most preferred jobs. Educational fever is a significant social phenomenon with the rapid expansion of the private after-school market. It has caused many social problems including high expenditure for private tutoring, the collapse of the public school, exam-driven education policies, etc. This new movement which stands against the current education discourse may help reform the education system and alleviate the test-driven education system.

Source: The Seoul Newspaper, November 2, 2011

<http://www.seoul.co.kr/news/newsView.php?id=20111102010016>

#### **4.3.2.2. Technological Factors**

##### **Faster than light neutrinos**

Scientists at the OPERA (Oscillation Project with Emulsion-Tracking Apparatus) experiment in Gran Saso, Italy, discovered neutrinos travel faster than light. While in the traditional view, the speed of light is a constant and therefore there is nothing faster than light as discovered by Albert Einstein in this Theory of Special Relativity. If the findings of the OPERA experiment are accurate, it will fundamentally change the traditional paradigm of how the universe works. It would be the most important scientific discovery of the 21st century. The results of OPERA would challenge Einstein's Special Theory of Relativity which is a basic principle of modern physics. It may lead to new paradigm shift in physics, breaking accepted scientific paradigm and promoting new discovery and a new way of thinking.

Source: The Guardian, September 23, 2011.

<http://www.guardian.co.uk/science/2011/sep/23/faster-light-neutrinos>

### **SNU researchers transplant pig's pancreas to monkey**

A group of doctors of Seoul National University College of Medicine successfully transplanted a pig's pancreas to a monkey. It may lead to new treatments for diabetics. Their discovery can develop into the commercial production of the antibody into a drug and dramatically improve treatment for type-2 diabetes. Diabetes is becoming not only common but also serious as a world pandemic. Diabetes has a significant impact on both individuals and society. Its impacts are associated with increased cost of health care and diminished quality of life. If the new discovery leads to drug development, this will result in the emergence of Korean companies as a global provider and help people with diabetes live long and healthy lives.

Source: The Korea Herald, October 31, 2011.

<http://www.koreaherald.com/national/Detail.jsp?newsMLId=20111031000837>

### **South Korean scientists create glowing dog**

Korean scientists created a glowing dog with a cloning technique that could help cure human diseases such as Alzheimer's and Parkinson's. They used somatic cell nuclear transfer technology to substitute genes that cause fatal human diseases with genes that cure diseases. Their findings may have significant impact on the biotechnology industry and the pharmaceutical industry. Like diabetes, there is no cure for Alzheimer's disease and Parkinson's disease. They are the two most common neurodegenerative diseases. They threaten healthy aging. The dramatic increase of an aged population could accelerate the impacts of Alzheimer's disease and Parkinson's disease on society. This new discovery may offer promising opportunities to overcome Alzheimer's disease and Parkinson's disease. It may also promote the biotechnology industry and create new business with technological breakthrough.

Source: The Huffington Post, July 27, 2011

[http://www.huffingtonpost.com/2011/07/27/south-korean-scientists-glowing-dog\\_n\\_910574.html](http://www.huffingtonpost.com/2011/07/27/south-korean-scientists-glowing-dog_n_910574.html)

#### **4.3.2.3. Economic Factors**

##### **Here's a local currency model that Greece can learn from**

“An alternative currency introduced in a wealthy German region as a school project eight years ago has turned into a hot commodity thanks in part to the eurozone crisis with 600 businesses and 3,000 people trading ‘Chiemgauers’ instead of euros.” It was designed to promote local business. It exchanges with the euro on a one-to-one basis. “It has negative interest rates and begins to lose value — 2 percent every three months” for keeping money to circulate. It is known as a successful alternative currency in the world. The alternative currency may help the national or regional debt crisis, partly by stimulating the local economy. It may focus on facilitating the exchange of the other goods rather than a means for personal gains, resulting in less consumption and being away from temptations. Thus it may provide a radical vision to Korean society.

Source: Firstpost. Economy, November 8, 2011

<http://www.firstpost.com/economy/heres-a-local-currency-model-that-greece-can-learn-from-126055.html>

##### **S Korea's main opposition demands economic democracy**

The Democratic United Party, which is a main opposition party, pledged itself to economic democracy to attract voters in the April parliamentary election. Economic democracy is closely related with limiting the role of the chaebol and reducing the widening income gaps. It is simply known as democratizing economy or regulating economic power. Economic democracy is going to be a major issue in the presidential election of December 2012. Main political parties, presidential candidates, academia, and interest groups are engaged in a debate on economic democracy. It is a very elusive concept. Everybody has

different definition of economic democracy. However, it suddenly became a main issue or main discourse which reflects the zeitgeist. The economic democracy debate has focused on anti-chaebol regulations. Social economic justice has gained a lot of attention from the public and policy makers. Thus, the economic democracy debate may result in the redistribution of policies and contribute to correct deficiencies in distributive economic justice in Korea.

Source: Firstpost.com, February 27, 2012.

<http://www.firstpost.com/fwire/s-koreas-main-opposition-demands-economic-democracy-226260.html>

#### **4.3.2.4. Environmental Factors**

##### **Fear of Mt. Baekdu Eruption Grows**

According to Korean scientists, Mt. Baekdu, which is located on the border between North Korea and China, shows clear signs of the eruption in the near future. Chinese researchers expect a potential volcanic eruption between 2014 and 2015. The large volcanic eruption will have a direct effect on East Asia and even may lead to the collapse of North Korea. The massive volcano eruption may trigger plagues and a mass exodus, resulting in a change in the existing social order of North Korea. The following passage remarks on the effect of the volcanic eruption on the world (Decker and Decker 1991, 121):

The eruption in about 1600 B.C. of Thera, an island in the Aegean Sea near Greece, apparently contributed to the decline Minoan power on Crete and the rise of Mycenacan power on mainland Greece, thus affecting the entire early course of Western civilization. A major eruption near the present city of San Salvador in Central America in about A.D. 300 changed the direction of Mayan civilization, while the eruption of Tambora and Krakatau in Indonesia in the nineteenth century killed thousands of people and produced worldwide atmospheric effects that have led scientists to realize that an individual volcanic eruption can affect the entire globe.

Source: Chosun Ilbo, June 22, 2010

[http://english.chosun.com/site/data/html\\_dir/2010/06/22/2010062201235.html](http://english.chosun.com/site/data/html_dir/2010/06/22/2010062201235.html)

### **New ‘Sars-like’ coronavirus identified by UK officials**

“A new respiratory illness similar to the Sars virus that spread globally in 2003 and killed hundreds of people has been identified in a man who is being treated in Britain.” So far, two people have been infected with this virus. The World Health Organization is on watch for an outbreak in the disease because treatment for the virus is unknown and the virus is also associated with severe illness. If the virus spreads easily from person to person, the virus may be a serious threat to the world’s health. For instance, severe acute respiratory syndrome (SARS) was identified in 2003. It quickly spread to Asia, Australia, Europe, Africa, and North and South America. Thousands of people were affected. Hong Kong and Singapore closed their schools. The SARS seriously affected the Hong Kong economy. If the new coronavirus becomes a global phenomenon, it would raise serious concerns of global economic and political stability, and global health threats.

Source: BBC News online, September 24, 2012.

<http://www.bbc.co.uk/news/health-19698335>

#### **4.3.2.5. Political Factors**

##### **The nature of the ROK-US alliance may be transforming into a regional alliance against China.**

South Korea and the US agreed to hold high-level talks for discussing issues of common interest in the Asia-Pacific region. Many experts believe that the US’s proposal for high-level talks is intended to change the role of their alliance as a deterrent against North Korean threat into one against the rise of China. The changing nature of the ROK-US alliance will have significant impact on the relationship between South Korea and China. High tension has existed and still exists between China and the US: The Spratly islands dispute in the South China Sea and Taiwan’s status. If China and the US get into a

conflict, South Korea is caught dangerously between them due to Korea's increasing dependence on China.

Source: The Hankyoreh Newspaper, October 9, 2011

<http://hani.co.kr/arti/politics/diplomacy/499932.html>

### **Twitter proves a mighty force in election again**

Twitter and other social networks played an important role in the October election for mayor in Seoul. Twitter encouraged the participation of young voters in the election process. Social network services contributed to the victory of an independent candidate in Seoul's mayoral election against a ruling party candidate. The power of social media can promote SNS democracy in Korea and may introduce a new political party via the Internet. Social media and other technologies can support citizen's groups and lead to the formation of new political parties.

Source: The Korea Times, October 27, 2011

[http://www.koreatimes.co.kr/www/news/nation/2011/10/117\\_97457.html](http://www.koreatimes.co.kr/www/news/nation/2011/10/117_97457.html)

### **East Asia electricity cooperation as a win-win strategy**

The establishment of an East Asia Super Grid was presented at a November 11, 2011 workshop as part of the Hankyoreh-Busan International Symposium. The research paper proposed an East Asia-wide Super Grid of high-voltage direct-current cable linking Mongolia, Russia, China, North Korea, South Korea, and Japan for sustainable power generation and regional peace. The Super Grid electricity system collects renewable energy from remote areas such as deserts and other sun-rich areas, and sends the electricity to areas of consumption. The cross-border power interconnection may help the electricity market, mitigate global warming, and contribute to economic efficiency.

Source: The Hankyoreh Newspaper, November 22, 2011

[http://hani.co.kr/arti/politics/politics\\_general/506698.html](http://hani.co.kr/arti/politics/politics_general/506698.html)

### **South Korea opens cyber-war school**

The Korean military created a cyber-warfare school in collaboration with Korea University to prepare in the event of a cyber-attack from North Korea. Korea tries to build a new model for training for a cyber-war. It may help fight against the growing amount of cyber-attacks from North Korea and other foreign countries. Cyber threat represents a serious potential of economic and national security challenge in the 21<sup>st</sup> century. It is likely to surge due to the increased networking between technologies and the high dependency on information infrastructure. It also triggers other hazards. This education program can secure national cyber-security and develop skilled cyber workforces.

Source: Times Live, June 29, 2011

<http://www.timeslive.co.za/scitech/2011/06/29/south-korea-opens-cyber-war-school>

### **China to send troops to N Korea: Report**

“North Korea and China have discussed the issue of stationing a small number of Chinese troops to protect China-invested port facilities” in the Rason special economic zone near the East Sea. Chinese troops are to protect Chinese facilities and its people. The presence of Chinese troops in North Korea may allow China to intervene in a North Korean contingency. In other words, China will have a significant impact on the future of North Korea and the two Korea’s unification. China plays an important role in North Korea’s policy toward South Korea and the U.S. Furthermore, the North Korea-China alliance and the ROK-US alliance will raise tensions in case of any worst scenario. For instance, if there is a serious conflict between the South and North, China will be easily plunged into a military confrontation with South Korea or the U.S. The Chinese armed forces stationed in North Korea may bring about possibility of military conflicts on the Korean peninsula.

Source: Press TV, January 15, 2011.

<http://www.presstv.ir/detail/160227.html>

#### **4.4. Forecasting Aspects of the Futures: What Korea Takes into Future Challenges**

In this section, we identify five future challenges that may substantially influence the future of Korea. Future challenges can be identified with future uncertainties. Uncertainties are defined as “important forces whose outcomes cannot be predicted directionally” (Schoemaker and Tomczyk 2006, 94). One of the main purposes of building scenarios is to help people, organizations, and communities cope with the issue of uncertainty. In particular, alternative future scenarios can manage uncertainties in social, economic, political, and technological dimensions.

Today, living in a globalized and postmodern world, with the information age, Korea is faced with several challenges which signal risks and opportunities. The challenges attempt to draw the great transformation of the future, not only by providing new interpretations of the past, but also by offering new visions of what the future might for Korea. The future is always challenged by unintended consequences, poor decision making, new inventions and ideas, and changed values. In relation to challenges, I want to discuss five important issues which will evoke considerable effects on the future of Korea: An aging society, the rise of the multi-polar world, North Korean challenges, export dependence, and the lack of natural and energy resources.

##### **4.4.1 Aging Society**

In the past two decades, Korea has experienced a demographic revolution. Korea is one of the world’s most rapidly aging societies and its fertility rate is falling at a record pace to a level well below the replacement rate of 2.1 children per family (Howe, Jackson and Nakashima 2007). In 2000, Korea became an aging society where the number of

people over 65 years old is 7.3 percent of its total population (Kim 2005b, 1). In 2014, Korea will become an aged society where the elderly account for 14 percent of the total population (Kim 2005b, 1). In 2026, Korea will become a super aged society where they account for 20 percent (Lowe-Lee 2009). Furthermore, “by 2050, Korea is expected to become one of the most aged nations in the world, with the elderly population reaching 38% of the total population” (Lowe-Lee 2009).

The two main causes of the Korean aging society are low fertility and rising longevity. Low fertility means fewer people of working age and fewer potential mothers in the future. The consequences of rising longevity have led in the increase of the number of the old in the population which means more years spent in retirement and “the burden placed on workers of supporting those aged who do not work” (Wray 2006). Like other developed countries, such as Germany, Italy, and Japan, Korea has experienced unprecedented demographic change and has grappled with the huge size of the elderly population as well as a sharply shrinking youth population. According to projections by the Korean National Statistical Office, Korea’s total population may decrease after 2020. As a result, the consequences of falling fertility have widely spread ‘the fear of the population decline.’

Why is the rise of an aging society in Korea critical right now? Why are we worrying about the population decline? The issue of aging society would derive some challenges to Korea. According to Schiff and Syed (2008), Korea’s rapid aging population could result in the threats of economic potential and enormous fiscal pressures. In the aging society, the working-age adults are expected to decline within the next decade. It leads to an increase in the old-age dependency ratio (the ratio of the elderly to the working-age population) that produces low economic growth. Furthermore, an aging Korea could increase age-related expenditures such as pensions, health care, and long-term-care that confine economic performance (Schiff and Syed 2008, 8).

But this is only part of the story. Regarding the relations of population and economic growth, we should consider Julian Simon’s argument in his book, *The Ultimate Resource 2*, that “population growth does not hinder economic development or reduce the standard of living” (1996, xxxi). His argument stands against the common thesis of

negative correlations between population and economic growth. During the era of globalization and the knowledge economy, however, more human power could give a great variety of creative and inventive ideas for national wealth. The number of well educated people with skills and competence is vital for social progress and economic growth (Keeley 2007, 17). As the global war for talent signifies, talent has become a global commodity (Michaels, Habdfiedl-Jones, and Axelrod, 2001). The shrinking workforce will likely face a critical loss of knowledge and severe shortage of skills. In addition, “from a super-long-term perspectives, output per worker in the world will converge at a certain level, and the GDP of any country can be determined by the number of workers in that country” (Okamura, Onuma and Takehana 2010). The size of the population would be good for economic growth.

The third challenge is related with the issue of population and security (Kennedy 1993, 34). A shrinking young population affects the future availability of military manpower and thus military strategy. It will reduce the available manpower pool in military service. In a smaller military, manpower would place Korea in a state of relative strategic weakness under the rise of North Korea threats and the situations surrounding by the Great Power rivalries in the Korean peninsula. Even though today’s high-technology has rapidly transformed military areas under the metaphor of cyber war, network-centric warfare, and nuclear contests, relative population size correlates with the size of the army and accordingly with military power.<sup>15</sup>

The fourth challenge is about the issue of population and international migration. An ageing population and low fertility rates may result in far-reaching international migration from low-income countries to Korea. Since the late 1980s, the number of migrant workers has dramatically increased in Korea due to the rising demand among employers for migrant workers to solve the problems of a labor shortage as well as the rising needs of the immigrant workers for higher wages (Yoo and Uh 2001, 3). In

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<sup>15</sup> Just in case: “Korea’s population can be comparing the population trends of the North, In 1950 the ratio of the South to the North was 00:00. By 1990 it had declined to (or increased to) under 2:1. By 2015 it is projected to be just over 1.5:1. By 2050, although no calculations are available, it is conceivable that Japan and by then a unified Korea will have essentially equivalent populations”

addition, international marriage is becoming more popular. The percentage of international marriages showed a three-fold increase from 4.6 percent in 2001 to 13.6 percent in 2005 (Lee, Seol and Cho 2006, 166). International marriage is causing a huge increase in the number of Koreans of mixed ethnicity. The statements described above indicate that the number of migrant workers and foreign wives will continue to increase in the future and their impacts will become significant for all area of Korean society. Hence, international migration may cause the social instability and contentions in Korea due to the strong ethnic nationalism in an ethnically and culturally homogeneous society.

#### **4.4.2. The Rise of the Multi-Polar World**

The contemporary global order has transformed from the unipolarity of US dominance to a multipolarity of several regional powers of comparable strength, which signifies an important development in international politics (Fry 2010; Haass 2008; Zakaria 2008). In other words, the influence of the US as a lone superpower has been significantly reduced, while the role of regional superpowers such as China, EU, Russia, India, and Brazil rises. Richard Haass (2008, 44) of the Council on Foreign Relations writes that, “the principal characteristic of twenty-first-century international relations is turning out to be nonpolarity: a world dominated not by one or two or even several states but rather by dozens of actors possessing and exercising various kinds of power. This represents a tectonic shift from the past.” The power shift means that the imperatives of state behavior on economic growth, security including energy, and sustainability can be distinguished in the age of multipolarity from the age of unipolarity. In particular, Korea as a weaker state will be significantly affected by the global structure of power.

The upcoming global order is drawn on the interaction between geopolitics and geo-economics (Kvint 2009, 251). The geoeconomics and global business are more emphasized than the geopolitics for the global order. The rise of new emerging markets can provide a significant impetus for global production, consumption, trade, capital flows, the workplace, and supply chains. According to Goldman Sachs, China will be the largest economy by 2050, followed by the United States, India, Brazil, Mexico, Russia, and

Indonesia (Wilson and Stupnytska 2007). Thus, global economic power is shifting from the G7 countries to emerging economies in Asia and Latin America. This multipolar economic world can lead to “a new degree of complexity to policy-making” (Accenture 2007). Korea should consider more countries for planning and implementing economic development. Economic problems cannot be solved within the context of Korean national policy-making. Fundamental change in economic growth strategies has become unavoidable for Korea, which is a highly export-dependent country. Korea needs to seek out new markets and compete in new markets. The multipolar global order creates a more unpredictable and unstable economic environment comparing to the unipolar global order.

This global political transformation will shift international relations in complicated and unpredictable ways. Jiyul Kim (2001, 253) explains why the multipolar world creates a high degree of uncertainty: “a multipolar order suffers from the simple fact that it is harder to achieve consensus when you have more than two voices and thus the possibility of misunderstanding or conflict be larger.” Korea has developed a strong regional partnership with the United States through the Korea-US alliance for almost six decades. The Korea-US alliance provides Korea its national interests like protection from the North’s threats for peace, the achievement of modernization for prosperity, and promotion of liberty for democracy. In the multipolar world, Korea may confront the possibility of shifting alliances because the loyalty of ally, under the multipolar world, is always questioned and today’s ally may easily become tomorrow’s adversary. The change alliance can lead to high tension between the powers and even result in war (Rajagopalan 2005, 297). For example, even with the solid existence of a Korea-US alliance, Korea and China have developed close strategic ties due to their common concerns for Japanese military potential and their growing economic partnership (Ross 1999, 85). In 2009, China was the largest export market to Korea, followed by the United States and Japan.<sup>16</sup> At the same time, China became the most major importer to Korea, followed by Japan and the United States. Now the importance of China as an

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<sup>16</sup>Background note for South Korea by the Department of State website. <http://www.state.gov/r/pa/ei/bgn/2800.htm> (January 3, 2011)

economic partner for Korea is more than the United States. China and Korea have developed a more intimate economic relationship since their normalization in 1992.

Some commentators expect that Korea will fall on the Chinese side after Korean unification (Kim 2001; Ross 1999). According to Kim (2001, 254), there are three reasons for Korea to get close to China: “given Korea’s long cultural and historical association with China, the long land border they share, China’s growing importance as a trade partner (likely overtaking the US in 50 years), Korea’s enduring enmity toward Japan, and perhaps a growing resentment toward the US”. Inoguchi and Bacon (2005, 125) state that in the near future, Korea would make a strategic choice as to whether to side with a United States-Japan alliance or a China axis.

At any rate, it is highly possible that the Korean peninsula would get involved in the great power struggle between the United States and China over the dominance of East Asia, for they are mutually exclusive in their national interests. In addition, Korea has no natural resources and is in close proximity to other Asian great powers. And historically, the Korean peninsula has been in the battlefield of a great power rivalry due to its geopolitical location. These conditions mean that Korea has a very limited leverage to sustain economic development and strategic autonomy. Korea needs new and adequate strategies to new circumstances in the multipolar global order. In multipolar world, Korea can confront the strategic choices like search for new alliances and constant instability like conflict between great power rivalries. The instability of the multipolar world, however, will also bring great opportunities for Korea.

#### **4.4.3. North Korean Challenges**

The challenge of North Korea is a fulcrum of uncertainty for South Korean futures. Basically, North Korea itself has brought a structural political uncertainty to the Korean peninsula since the division of Korea into the South and the North right after the ending of Japan’s colonization of Korea in 1945. The discourse of ‘Another Korean War’ has revealed highly on the Korean peninsula in the end of 2010 after the sinking of the South Korean warship Cheonan and South Korea’s Yeonpyeong Island bombing by

North Korea. In March of 2010, a North Korean torpedo attacked the Cheonan, a South Korean naval vessel, with the loss of 46 South Korean sailors (McDonald 2010). In November of 2010, North Korea attacked homes and military facilities on South Korean island, which is located in disputed waters off the peninsula's west coast, killing two marines and two civilians. This incident was the first direct artillery attack on South Korea territory since the war ended in 1953 (Breen 2010). These two incidents have destabilized the inter-Korean relationship. The escalation of tensions between the two Koreas has involved the apocalyptic rhetoric of the war. Thus, news media including CNN have told the world that the two Koreas were on "the brink of war" (Korea Times, December 16, 2010).

Beyond the possibility of 'Another Korean War,' North Korea is poised on the most significant challenge of creating and forecasting the Korean future. A continued and potential crisis or transformation could erupt on the Korean peninsula in the next couple of decades for four reasons: a possible Korean unification, North Korea's nuclear development, North Korea's isolated and secretive nature, and North Korea's sudden power shift.

First, Korean unification can lead South Korea and North Korea to undergo a monumental transformation as well as lead to immediate challenges. Many scholars assume Korean unification will happen within a decade or two at most (Kim 2001; Manning 200; NIC 2008). If the unification process is working well in the future, the unified Korea will become an economic and political powerhouse making Northeast Asia and world history. In contrast, if Korean unification is a contested process, the unified Korea will encounter economic hardship and political turmoil due to the prodigious economic cost of achieving a unification agenda and the conflicts between South Koreans and North Koreans. In the worst case, the unified Korean state can fail to handle domestic and global issues adequately so that economic or social pressures put the unified Korea at higher risk of experiencing political or social upheavals.

Second, North Korea's nuclear development constitutes a direct challenge to the security and national interests of South Korea and other regional countries. Although the North is in poverty and is unstable, its nuclear weapons and missile development are a

major threat to South Korea, Japan, and the United States. The challenge of nuclear development by North Korea creates a deep mistrust between the South and North. It deteriorates bilateral relations and prevents progress on reconciliation and improving mutual economic and political development. Even some South Koreans have a sense that the North is a foreign country or an enemy country based on the different national identity. The continued development of nuclear weapons and missile delivery capabilities directly challenge the global nonproliferation regime and U.S. leadership (Pritchard, John and Snyder 2010, 3). The provocation of the North Korea could lead to war with the United States. Furthermore, the nuclear domino effect should be considered as to the consequences of North Korea's nuclear armament. North Korea would spark nuclear arms races in Northeast Asia, in particular, Japan and Taiwan, resulting in the change of Northeast Asia and the global order.

The third daunting challenge is closely related with the isolated and secretive nature of the North Korean government (Oh Hassig et al. 2004). We cannot easily understand or explain how the North Korea elite governs the country and what kind of decision making mechanism works, due to the lack of information and misinformation. The isolation of North Korea makes it difficult to get information about the North Korea. The world is always surprised by North Korea's policy actions because they cannot be foreseen. The unpredictability ascribes to the secrecy of the North Korean government and its reluctance to release official data, even though we accept the difficulties of predicting the future of global politics. Moreover, the totally different politics and culture in North Korea from Western capitalist societies have contributed to the formation of broad images on the unpredictability of North Korea.

Fourth, North Korea has faced a change in leadership. North Korean leader Kim Jong-il suddenly died in December 2011. Kim Jong-un, the youngest son of Kim Jong-il, took over the leadership after his father. He is very young and untested. Under the leadership of Kim Jong-un, the future of North Korea is uncertain because it is not known if North Koreans and the military will accept him as their new leader, whether he will take a more aggressive stance towards outside countries than his father, and whether the new leadership will undertake dramatic reforms.

#### 4.4.4. Export Dependence

The history of Korean economic development has been based on the rule of dependency rather than self-sufficiency since industrialization in the 1960s. The export dependence refers to that Korea's economic growth has been subject to the export markets abroad. It means that Korea's economy is affected by the conditions of other countries. This export dependent development is intensified by the dependency on imports for most of its primary energy resources. Regarding Korea's dependence on exports, there are some debates over whether Korea's export-oriented economic growth will be sustainable in the future.

Skeptics for export-led growth have argued that the Korean economy may be less viable or lie on significant instability from global economic and financial turmoil. This stance is closely related with export pessimism. For instance, Korea, during the 2000s, consistently enjoyed trade surpluses with the single exception of 2008. As the result of the global financial crisis, in 2008, Korean economy recorded a trade deficit of US \$ 13,268 million.<sup>17</sup> In addition, the annual real GDP growth was 2.5 percent, the third lowest rate of growth since 1970 (Hwang 2009, 47). Most sectors of the economy reported declines with private consumption and investment. This global economic downturn reflects Korea's economic vulnerability to external factors, especially exports. Furthermore, Korea's trade dependence, which refers to trade to GDP ratio, reached about 85 percent, ranking fifth in the OECD countries in 2010 (The Korea Times, December 20, 2010).<sup>18</sup> The trade dependence was in the 50-60 percent range from 1990 to 2007; after the year of 2007, trade to GDP ratio kept at above 80 percent (The Korea Times, December 20, 2010). The meaning of rising trade dependence is that the Korean economy is "becoming increasingly externalized," and is "more vulnerable to the actions of other governments" (Winham 2005, 14)

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<sup>17</sup> Korea International Trade Association website: <http://global.kita.net/> (November 8, 2011).

<sup>18</sup> Source: [http://www.koreatimes.co.kr/www/news/opinion/2011/01/202\\_78330.html](http://www.koreatimes.co.kr/www/news/opinion/2011/01/202_78330.html) (November 9, 2011).

On the other hand, overdependence on exports in Korea's economy is not very vulnerable to external shocks as the skeptics assume because of Korea's export diversification, a well-educated workforce, and high technology (Rhee 2010). For instance, the rise of emerging markets, such as the BRICs (Brazil, Russia, India and China) and VISTA (Vietnam, Indonesia, South Africa, Turkey and Argentina) as major players in the world economy provides strong evidence for the proposition of bright prospects of growth. Along with the strong push of the export-oriented growth strategy, Korea clearly has seen remarkable growth performance over the past decade, often growing twice as fast as other OECD countries, and has become a world economic power. Particularly, it was able to bounce back quickly from the financial crisis of 2008 compared to other countries. Thus, the Asian Development Bank (2010, 41) forecasted that Korea is expected to grow from 3.9% to 4.2% annually between 2011 and 2030. Goldman Sachs offered an optimistic prospect that in 2050, Korea would join the 'rich' club, with income of \$65,000 or more, having a GDP per capita of over \$96,000, right after the U.S. (Wilson and Stupnytska 2007, 10-11).

Despite its continued strong economic performance, Korea's export environments are not always favorable and overdependence on exports is a strong economic challenge in terms of a longtime horizon. As Sheldon Filger's assertion that the global economy may fall into depression due to budget deficits and national debts to GDP levels of major advanced and developing economies, the global economy will be in deep uncertainty in the future (Filger 2009). The export-oriented Korea would be exposed to the major target of protectionism under a global recession. Furthermore, rising energy prices and intensifying global competition to get food would decelerate and threaten Korea's economic performance because of the dependence on imports for all of its oil and its low food self-sufficiency rate.

Historically, Korea has experienced three major economic crunches since the 1960s: the 1997 Korean crisis and two earlier events of financial crisis in 1970-1972 and 1980-1982 (Chang and Yoo 2000). The crises were inextricably caused by the burden of foreign borrowing, high interest rates, major export markets in recession, and mismanagement of financial markets. In addition, the contribution rates of Korea's export

to the GDP growth has already decreased from 5.1 percent in 1995-1999 to 4.3 percent in 2000-2004, to 3.0 percent in 2005-2009 (Rhee 2010, 44-45). These figures indicate the future limits of Korea's export oriented growth. In short, Korea has a one dimensional economy relying on exports. The Korean export-led economy may be seriously harmed whenever the global economy is going down badly or other bad economic situations like high prices for oil and food.

#### **4.4.5. The Lack of Natural and Energy Resources**

The challenge of lacking natural and energy resources has been a long term issue because Korea, as a resource-poor country, must import most of its oil, natural gas, and other essential materials. Most Koreans conceive that the lack of natural resources is the most important obstacle for development and regard the lack of resources contributing to poverty or bitterness. Historically, the Korean government has seen that energy has played an important role for economic development and national security. The rhetoric of 'lack of natural resources' has been universal in Korea since the industrialization of the 1960s. The resource scarcity has provided a significant rationale for Koreans to be industrious and to focus on education as a major source of sustainable economic development. Because of the lack of resources, the Korean government drove the export-oriented economic strategy which was a good means for accumulating capitals for production and investment.

But, as shown by resource curse thesis, or the paradox of energy, which resource-rich countries tend to have less economic growth than resource-poor countries (Sachs and Warner 1997), resource abundance cannot guarantee more economic growth and better development outcomes. For instance, despite their poor resources, the newly industrializing countries of Hong Kong, Singapore, Korea, and Taiwan succeeded remarkably well, while Mexico, Nigeria and Venezuela as the oil-rich countries went bankrupt (Sachs and Warner 1997). Thus, natural resource scarcity is no longer a critical impediment to economic growth in Korea. The lack of natural and energy resources becomes less important by propounding technological advancement. Advanced

technologies like renewable energy, biofuels, and clean coal would effectively replace for traditional natural and energy resources. Doomsday forecasts like resource shortfalls and energy crisis generated national anxiety over the lack of resource. They awakened the importance of the worst case scenarios, captured the public attention on energy issues, and put energy-related policies on the top priority in the government's agenda.

If energy scarcity is not a significant factor for economic success and the importance of natural resources has been reduced, why should we take into account natural and energy resources for Korea's alternative futures? Why have resource issues remained a top priority on the Korean national agenda in terms of highly strategic resources? In general, we assume that the natural resources are the necessary tools and natural capitals to deal with the challenges confronting Korean society in the future, and meet the needs of the present generations as well as the future generations. Beyond the general assumptions, there are three reasons for Korea to tackle the challenges of natural and energy resources: high energy prices, new energy alliances, and new energy technologies.

High energy prices are most likely projected in the future due to the plateau of production and growing consumption. According to U.S. Energy Information Administration (EIA 2010), world energy consumption is projected to increase by 49 percent from 495 quadrillion British thermal units (Btu) in 2007 to 739 quadrillion Btu in 2035. The global demand for energy is growing, particularly as related to economic growth in China, India, and other developing countries. Total non-OECD energy consumption increases by 84 percent at the same period, while OECD countries show a 14 percent increase (EIA 2010). Due to the rapid growth of energy consumption, world oil prices will increase from \$59 per barrel in 2009 to \$133 per barrel in 2035 in the Reference case (EIA 2010). The high oil price will cause inflation, low growth and stock market instability. Especially, it will negatively affect the Korean export because of the increase of production costs.

Second, as Henry Kissinger's assertion that competition over energy resources will be the most likely cause of international conflict (Daniel 2005), energy security has become a key element to forge international relations. Each country is steadily pursuing

new alliances in terms of petropolitics for stable and securing energy supply. The emerging “axis of oil” represents the significance of oil-focused international relationships, such as “a growing geopolitical partnership between Russia (a major energy producer) and China (the paradigmatic rising consumer) against what both perceive as excessive U.S. unilateralism” (Leverett and Noel 2006, 62-63). An Islamic-Confucian coalition is a future possible alliance between “Middle East producers needing Asian markets and Asians safeguarding secure supplies” (Manning 2000, 60) The coalition may challenge the Western-dominated global order. Korea, as a poor-resource country, is to rethink the international relations or the established alliance in terms of energy security perspectives in the future.

Third, new energy technologies which replace traditional energy resources would give new Korean future vision by attaining future energy independence and providing resolutions for energy scarcity. The new technologies may include biofuels, clean coal, hydrogen, and nuclear fusion, etc. They are driven by the pressure of high oil prices as a result of the desire to reduce.

## CHAPTER 5

### IMAGES OF THE FUTURE IN SOUTH KOREA

*The rise and fall of images of the future precedes or accompanies the rise and fall of cultures. As long as a society's image is positive and flourishing, the flower of culture is in full bloom. Once the image begins to decay and lose its vitality, however, the culture does not long survive.....The primary question then is not how to explain the rise and fall of culture, but how to explain the succession of shifting images of the future. How do virile and forceful images of the future arise, and what causes them to decline and gradually fade away? Furthermore, how do the successive waves of optimism and pessimism regarding the images fit into the total cultural framework and its accompanying dynamics?*

Fred Polak (1973, 19)

#### 5.1. Introduction

Images of the future have primarily provided the base of constructing alternative futures in future studies (Bell 1997a; Dator 2002; Dator and Rodgers 1991; de Jouvenel 1967; Kahn and Wiener 1967). Jim Dator (1996, 109) asserts that “one of the things futures studies tries to do is to help people examine and clarify their images of the future—their ideas, fears, hopes, beliefs, concerns about the future—so that they might improve the quality of their decisions which impact it.”

This chapter examines the relationship between images of the future and social change, and the images of the future in Korea, in order to evaluate the impact of future images on the society and how Koreans envision their desirable futures. This chapter consists of four main sections. The first section investigates the crucial role that images of the future play in individual and social development. The second section defines what a utopia and dystopia are to provide the conceptual framework for what they mean and also what they consist of. The last two sections investigate the images of the future of Korea in terms of pre-modern and modern Korea. The real images of the future by

Koreans help us identify key features of their desirable futures. Also we can compare the differences between pre-modern Koreans and modern-Koreans in images of the future.

## **5.2. Images of the Future and Social Change**

Images of the future are defined as “shared public images of the cosmos, God, man, social institutions, the meaning of history, and others of similar scope” in terms of the time dimension of the future (Polak 1973, 14). They are a kind of public mind for forming identity, directing behaviors, and making decisions. They are sometimes considered to be equivalent to expectations, anticipations, hopes, and fears (Bell 1997a, 82).

What is the value of images of the future? The impact of future images on the world can be considered in terms of individuals and society. On the individual level, future-oriented people are likely to take more benefits than present-oriented people (D’Alessio et al. 2003, 335):

Dominant present orientation has been related to many negative consequences for individuals, such as mental health problems, juvenile delinquency, addictions and crime, especially when present-oriented individuals are living in a predominantly future-oriented society. Future orientation has been seen as related to a number of positive consequences for individuals, such as higher socioeconomic status, superior academic achievement and fewer risk-taking behaviours.

Images of the future can provide people with a sense of understanding and control about the future. It is a critical and influential part of a belief system. Scheier, Weintraub and Carver (1986) examine the coping strategies of optimists and pessimists. Their findings show that optimists do a better job than pessimists when they encounter stress. Optimism is associated with problem-focused coping, seeking social support and positive aspects of the stressful situation while pessimism is focused on denial, distancing and stressful feelings. Generally, optimism is closely linked with a more optimistic vision of future, which may result in better performance or successful work.

On the societal level, images of the future are considerably important in understanding social change. According to Fred Polak (1973), there is a close relationship between the images of the future and culture. If a society has positive images of the future, its culture has flourished. When a society has negative images of the future, its culture has decayed. Positive images of the future produce beneficial results. Images of the future determine attitudes toward the present and the future. Thus, they guide the action of all people in society and have an impact on the actualization of the future. Images of the future illustrate how uncertainties and unknowns could become certain and known under given circumstances. They prompt people to achieve their long-term goals. Images of the future are a powerful means not only for destroying and changing present-oriented and negative mindsets, but also for suggesting “dimensions of quite comprehensive transformations of existing societies” (Livingstone 1983, 180).

Furthermore, images of the future help to overcome cultural obstacles for social change. According to Paul Kennedy, Yale historian (1993, 17), most societies have experienced cultural obstacles to change because people have felt that “an impending transformation threatens existing habits, ways of life, beliefs, and social prejudices.” Social change means that people inevitably try to meet the demand of changing societies such as priorities, identities, beliefs, social relationships, the pattern of consumption, the goal of child education, and retirement in personal and social aspects. Thus people exhibit some degree of reluctance to change. Images of the future, however, could make people easily accept the altered circumstances and explain how the images of future deal with the cultural obstacles.

For instance, early modern Korean nationalism was a product of anti-imperialism during the nineteenth century (Robinson 1988, 14). It began to take the form of anti-imperialism in order to maintain political autonomy and tradition against powerful external forces, such as Japan, China, and Russia. In this context, the concept of a nation was formed in a then-future vision of Korean society in self-determination. These images of the future had to do with the construction of nationalism and the elaboration of collective identities. Nowadays, ideas of a multicultural society or a new rhetoric of alternative nationalism have been initiated by images of the future; the new alternative

nationalism that emerges would be shaped by changes in the economic, political, demographic, and cultural situation. It could also be influenced by external factors like globalization. Successful long-range alternative futures for Korean nationalism should include knowing what Korean society expects in the future and the structures it will encounter.

### 5.3. Utopia and Dystopia

Images of the future are typically divided into utopias and dystopias. In order to signify an imaginary society, the term utopia was coined by Thomas More in his book *Utopia* in 1516 (Wagner 1996, 958). It literally means “no place.” It denotes a perfect society that does not exist anywhere. In other words, it can be seen as an idealistic, fantastic, and unrealistic future society. Regarding the term utopia, we should consider the concept of eutopia. Eutopia literally means “good place” (Hager 2003, 44). It is a name of an imaginary island of More’s *Utopia*. It is a “happy land” that can be eminently achieved in the real world (Hager 2003, 44). Thus, it is a positive utopia (Sargent 2005, 11). However, considering the contemporary understanding that utopia denotes writings, programs, and platforms for an ideal society, code, constitutions (Manuel and Manuel 1979, 2), utopia and eutopia can be dealt with as almost identical. Utopia is a more generic term for representing an imagined society than eutopia.

Utopia is apparently in conflict with Christian eschatology. The former is looking at an ideal society on Earth while the latter is pursuing one in Heaven (Liakos 2007, 20). The modern day conservative Christian church openly supports the status quo instead of revolutionary change. Therefore, Christian eschatology has focused on the death of the individual instead of the utopian desire for a better worldly life (Chung 2009, 12). The most famous examples of utopian societies are Tommaso Campanella’s *City of the Sun* (1602), Francis Bacon’s *New Atlantis* (1624), Edward Bellamy’s *Looking Backward* (1888), William Morris’s *News from Nowhere* (1890), H. G. Wells’ *A Modern Utopia* (1905), B. F. Skinner’s *Walden Two* (1948), Ernest Callenbach’s *Ecotopia* (1974), Urshla

K. Le Guin's *The Dispossessed* (1974), Marge Piercy's *Woman on the Edge of Time* (1976) (Booker 2005, 625; Jennings 1996, 958-9).

The term dystopia (or cacotopia), which was coined by John Stuart Mill in an 1868 parliamentary debate, means 'bad place' (Claeys 2010, 107). Dystopia is defined in two ways: "a place or condition in which everything is as bad as possible," and "the form of anti-utopias—satirical or prophetic warnings against the proposed "improvement" of society by some political faction, class interest, technology, or other artifact" (Jennings 1996, 211). Dystopia is openly called as 'anti-utopia' or 'negative utopia' (Claeys 2010, 107).

Dystopian discourse is very popular nowadays. The apocalyptic discourse of the end is typically a dystopian view of contemporary situations. The contemporary world can be called "an apocalyptic age" because of "widespread fatalism in the face of perceived threats to the social order" (Carey 1999, 2). The apocalyptic discourse can be seen under the following rhetorical dimensions: natural catastrophe, nuclear disaster, flu pandemics, and economic and technological collapse. Many films, such as *Independence Day*, *Armageddon*, *the Day After Tomorrow*, *Volcano*, *Deep Impact*, *The Terminator* trilogy, *The Matrix* trilogy, *I*, etc, portray the collapse of the world and depict possible futures. Those efforts to express finality are intended to interpret the current circumstance in terms of the long-term future. The best known examples of dystopian fiction are Eugene Zamiatin's *We* (1924), Aldous Huxley's *Brave New World* (1932), and George Orwell's *Nineteen Eighty-Four* (1949) (Jennings 1996, 211). The Old Testament Book of Jonah as well as the Club of Rome Report, *The Limits to Growth* (1972) and its 1992 sequel, *Beyond the Limits* could be understood as dystopian visions outside fiction (Jennings 1996, 211-2).

Utopian and dystopian images portray what the desirable societies and undesirable societies likely might be. These future images provide us with what our hopes or fears are. Hopes reflect the possibilities of future development while fears reflect the problems or threats of the present. Despite the name and metaphor, dystopia is not simply viewed as the opposite of utopia. "A true opposite of utopia would be a society that is either completely unplanned or is planned to be deliberately terrifying and

awful” (Gordin, Tilley and Prakash 2010, 1). Dystopia is a wrong utopia or it is a utopia that fits into a specific part of a society.

According to a Foucauldian perspective, “the opposite of utopia is the real world of heterotopias that stand against the delusions of utopia” (Ross 2008, 207). Foucault defines heterotopias as “a site that undoes the usual order of space” (Tonkiss 2005, 132). The concept of a heterotopia challenges idea of a utopia. It confronts “homogeneity, sameness and uniformity, in short, of homotopia” (Faubion 2008, 47). Thus heterotopias are closely associated with pluralistic futures as opposed to official futures and a single future. Heterotopia represents alternative futures, and challenges conventional wisdom. It offers profound grounds to navigate alternative futures, including utopian and dystopian futures because futures cannot be predicted and scenarios challenge the conventional view of the futures.

In addition, utopia and dystopia are limited in time and space. Utopian thinking is not applicable universally. A utopia by different groups and regions is going to be a dystopia to other groups and regions. For instance, “The hopes of communism became the dystopia of Stalinism. The positive images projected by fascism became the dystopia of the camps. The utopian dreams of Pol Pot became the dystopia of Kampuchea. The utopian dreams of the African nationalist movement turned into a series of military dictatorships. The dream of a Boer utopia became the dystopia of South Africa throughout most of the century. The dreams of a post communist capitalist utopia in Eastern Europe and the former Soviet Union have often become dystopias of corruption and poverty. The dream of a Shiite utopia in Iran has become yet another authoritarian dystopia.” (Sargent 2005, 1-2) So we cannot say utopian and dystopian thoughts are universal. They can be conceived and facilitated in given societies. There is a significant problem that distinguishes a utopia and dystopia because they are mutually dependent of each other and are relative concepts.

#### **5.4. Images of the Future I: Pre-Modern Era**

Previous sections reveal the importance and functions of images of the future and discuss what utopia and dystopia are, and how they differ. In this section, I examine the images of the future in pre-modern Korea. The investigation of images of the future in pre-modern Korea with questions of utopia and dystopia carries out pre-modern Korean's views of societal futures. It is to discern social circumstances people hope to live in. The Joseon Dynasty is the last dynasty in the pre-modern Korean history. In general, this section focuses on the societal futures of Joseon Dynasty. It concerns visions of the future held by the ruling class and the opposed class. Thus we can speculate the actual orientation of the image of the future that exists among the pre-modern Koreans.

Pre-modern Korea is represented by the Joseon Dynasty (1392-1910) which lasted over 500 years. From its beginning, the Joseon Dynasty was explicitly based on Neo-Confucianism as the ruling ideology. Confucianism was much more than the dominant ideology. It was a philosophy, a major source of cultural influence, and a social principle of the Joseon Dynasty. Confucian values served as a great inspiration to Joseon Dynasty leaders and people. Even if the Neo-Confucianism emphasized the status quo and social order, the prospect of a better society did exist in Confucianism. The idea of a Confucian utopia is linked with words from *The Analects* of Confucius: "ruling without enforcing law," and "spontaneous harmony unsupported with punishment" (Chung 2001, 27). The Confucian utopian society, in general, embraces humanity and harmony. It favors human values and manners rather than coercive measurements. It focuses more on the thoughtful governance of the ruler instead of the duty of the ruled. The important maxim of *the Analects* reads:

子曰:

Master said:

道之以政 齊之以刑 民免而無恥

If led by the law and enforced by punishment,  
people attempt to escape and do not feel ashamed.

道之以德 齊之以禮 有恥且格

If lead by virtue and enforced by rituals,  
people grow a sense of shame and become good.

Source: <http://askakorean.blogspot.com/2011/02/confucianism-and-korea-part-iii.html>  
(March 3, 2011).

The ways to achieve a Confucian utopia is to follow the perfect model of ancient times in China (Longxi 2005, 214). The ancient kingdom of Zhou under the reign of King Wen exemplifies the ideal society by Confucius. Confucius praised “a wonderful time in antiquity and the admiration for the benevolence of ancient sage kings constitute in the Chinese tradition something almost parallel to the lost paradise of Eden” (Longxi 2005, 215). Under the influence of the Chinese tradition, kings and Confucian scholars in Joseon Dynasty considered the ancient regime of Yao and Shun, the mythical founder of Chinese civilization, as a Confucian ideal state (Kim 2010a). Yao and Shun’s leadership and policies become the fundamental principles of what politicians do for the public or how they employ good governance. Furthermore, current Korean politics openly mention Sage-kings, Yao and Shun, when Korea encounters political corruption and instability and there is deep discontent with authority in politics. The days of Yao and Shun are criteria by which to judge politics.

The most famous representation of utopia in Joseon Dynasty is the hand scroll “Dream Journey to the Peach Blossom Land” (*Mongyu dowondo*), which was painted by An Gyeon, the official painter of the Joseon court, during the Early Joseon Dynasty (Ahn 1974; Lee 1991, 334; Lee. 2006). It tells of a mysterious utopia secluded from the world. It was commissioned by Prince Anpyeong, or Yi Yong (1418-1453), third son of King Sejong of the Joseon Dynasty. The prince had a wonderful dream of a peach blossom land that looked like a secular paradise where people were perfectly happy with a simple agricultural life. He asked An Gyeon to paint a picture of his dream. The prince’s dream was heavily inspired by the Chinese utopian poem, “The Peach Blossom Spring”, written by Tao Yuanming (365-427). The story of the Dream Journey to the Peach Blossom Land was almost the same as the Peach Blossom Spring, which is that “this happy land, where men live in harmony with their neighbors, and are secure against the envy and malice of outsiders; where every man tills his own fields and pays no taxes; where the old and the young do not toil and where all have a sufficiency” (Minfor and Lau 2000, 515). The Dream Journey to the Peach Blossom Land became a symbol of utopia in Joseon Dynasty.

Figure 5.1 An Gyeon (1418-after 1464). Dream Journey to the Peach Blossom Land



Dated to 1447. Handscroll; ink and light color on silk. Central Library, Tenri University, Nara, Japan

Source: <http://blog.ohmynews.com/js1029/269280> (March 13, 2011).

Contrary to the Dream Journey to the Peach Blossom Land, which stands up for the ruling class, the social utopia *Tale of Hong Gildong*, written by Heo Gyun (1569-1618) speaks for the oppressed class (Chung 2007, 80; Lee 1996, 56; Wollock 2011, 254). Hong Gildong was the illegitimate but talented son of a high government official. He was prevented from getting government office jobs due to his birth as the son of a second wife. He became a bandit leader, a Korean Robin Hood who stole from the rich and helped the poor and the weak. He challenged the corrupt feudal power and the ruling class. Eventually he established a utopian society called the nation of Yuldo which was “characterized by the elimination of the class society and thereby the liberation of the oppressed” (Chung 2007, 80). The nation of Yuldo is a vision of a classless society. However, it is different from Marx’s utopian society where the state has disappeared. It is not a perfect society of the future, but rather a radically different future from the present. It pursues the imaginary present. This utopian vision made the *Tale of Hong Gildong* the

most popular novel among the oppressed in the Joseon Dynasty. This story reflects the imaginary society of the oppressed against the Confucian government and the rich.

In the Joseon Dynasty, we found two different images of the future depending on social and political status. For the ruling class, the image of the future was restricted by the realization of Confucian principles. The progress of ideas was a part of the past history of good Ancient Chinese regimes. The past utopia, or the ideal past, continued to offer directions for the understanding of the present and achievements in the future. In addition, the Confucian utopia was influenced by Taoism and the understanding that utopias exist in remote places or a kind of apolitical space. Its hope relied on the golden age of the past.

On the other hand, for the oppressed, their image of the future was linked to actualizing the ideology of the oppressed. They sought to change Confucian society into something better for commoners. They boldly denied the Confucian concept of an ideal society. They sought a dramatically different society. Their idea of progress was based on concepts of democratic equality such as more liberty and less injustice. The future's progress relied on human efforts rather than fate or the past. The oppressed paid more attention to a vision of an alternative beyond reality or the desire for dramatic transformation. They tried to offer the dream of a better future and provide a motive for challenging the ruling class.

### **5.5. Images of the Future II: Modern Era**

Unlike future images from pre-modern Korea, the images of the future in Korea's modern era refuse the ideal past, imaginary present, and radically different future. Instead, they focus on the long-term future-oriented vision and are designed to build desired new orders. Modern South Korean history shows the unprecedented extent of modernization. The modernization process has helped South Korea transform from one of the world's poorest countries to one of the richest countries. In particular, technological development and economic advancement are the most important factors to drive the society. Korean modernity is a project of economic growth based on technological advancement.

Furthermore, Korea has been suffering from the national division between South and North even after the liberation in 1945 from the Japanese occupation. Korean unification is a long-cherished national desire. Those historical and social backgrounds have helped to create the new social, economic, and political images of the Korea future.

Key aspects of images of the future depicted by Koreans are the possibility of a peaceful reunification with North Korea, the transformation into an economic superpower, the development of an advanced information society, and the creation of a multi-ethnic society. Most Koreans hold positive images of the future of South Korea, but some Koreans have negative images due to the low birth rate, aging society, social polarization, and ethnic conflicts. There are some gaps between expected images of the future and desired images of the future. Reunification is one of the most desired futures. On the other hand, being an economic superpower is one of the most expected futures. Many Koreans expect South Korea to emerge as an economic superpower. They assume that South Korea will secure economic prosperity in the future but reunification between the two Koreas will be a tough task. To examine the image of the future of Korea, this section will review five images: Become a developed country (continued growth image), apocalyptic discourse (collapse image), green futures (disciplined society image), advanced information society (transformational society image I), and national unification (transformational society image II). Those images are based on Jim Dator's four generic future images.

### **5.5.1. Continued Growth Image: “Become a Developed Country”**

With Korea's rapid industrialization in the 1960s, Korea's national vision has been “become a developed country” (Kim 2010b). The vision of “Become a Developed Country” is an official view of Korea's future. It is closely related with economic growth based on the modernization trajectory. According to Jim Dator (2009, 8-9), most governments and education institutions continue to prioritize economic development per se:

The purpose of government, education and all aspects of life in the present and recent past, is to build a vibrant economy, and to develop the people, institutions, and technologies to keep the economy growing and changing, forever.

In this same logic, the Korean government has made efforts to achieve the economic development goal. For instance, in 1991, The Presidential Commission on the 21<sup>st</sup> Century, which was established in 1989 by a special directive of the President, equated economic growth with advancement (Bae et al. 1991):

Korea should maintain a high economic growth rate. The expansion of the economic based for national development is one of the most important prerequisites for building an advanced society. By sustaining the trend of modernization and development throughout the remainder of this century, Korea can enter the threshold of becoming a developed country. Simply to catch up with the income level of the advanced economies, the Korean economy must continue to grow at a higher rate than the rate of those advanced countries for several years in the future. One of the primary economic policy objectives of Korea will be to pursue a sustained high rate of economic growth. However, it's almost obvious that the Korean economy will not be able to maintain its high growth rates of the 1960's and 1970's. Currently, protectionism abroad is widespread and continues to rise. Developing countries, such as China and south-east Asian countries, are now emerging as strong competitors in the international markets. Korea is losing her competitive power because of high wage. Korea has to switch her economic strategy from labor-intensive industries to high-tech industries.

This image of Korea's future as, "an advanced society" is connected with economic expansionism. However, Korea's economic growth vision had undergone fundamental changes due to globalization. In 1994, the Korean government tried to promote ideas of globalization and implemented practices of globalization among the Korean population. It pursued a substantial number of globalization-driven reforms. Thus globalized Korea has become the new image of the future. This future image includes a post-industrial society and leads to a new direction towards advancement and linear evolution. The statement below reflects the Korean government's views on globalization (Kihl 2005, 161):

Those in government who wanted to carry out the structural reform of the economy, to make the national economy more competitive in the global political economy, viewed globalization as a process that could be beneficial. Globalization, to them, was a key to the future success of Korea's economic development. Many also considered globalization an inevitable and irreversible force, to which the country had to respond sooner rather than later.

The vision of a globalized Korea, which emerged at the end of the twentieth century, is driven by neo-liberalism and materialistic worldviews. However, due to economic prosperity and democratic consolidation, the future image of an advanced Korea has changed from one of economic growth to a one of balanced growth. In 2010, the Samsung Economic Research Institute survey found that Korean's concept of advancement weighed more of post-modern values such as wealth, comfort, culture, and happiness (Kim 2010b):

A nation's advancement can be defined as a state in which growth and social integration are harmoniously enhanced with highly cultured citizens. There is no doubt that growth and integration are universal economic and social values that Korean society needs to pursue. The experience of the previous governments shows that securing broad public support is possible when growth and integration are promoted in a balanced way. Moreover, highly cultured citizens are one of the essential components of advancement as voluntary participation of the public can be a powerful force. According to the SERI Survey, the public pointed out that a nation's ideal advancement is to allow its citizens to lead pleasant, comfortable lives along with some financial comfort, 33.8% of the respondents replied financial comfort, and 32% said pleasant and comfortable lives. When asked to pick two images, more respondents picked pleasant and comfortable lives over financial comfort.

### **5.5.2. Collapse Image: Apocalyptic Discourse**

The collapse of a society is an important topic and a widespread concern. Goodchild (2009) speaks on the significance of the state of collapse:

Systemic collapse, societal collapse, the coming dark age, the great transformation, the coming crash, the post-industrial age, the long emergency, socioeconomic collapse, the die-off, the tribulation, the

coming anarchy, perhaps even resource wars (to the extent that this is not an oxymoron, since wars themselves require resources) — there are many names, and they do not all correspond to exactly the same thing, but there is a widespread belief that something immense and ominous is happening.

Some commentators delineate the collapse images in the near future due to “nuclear war, resource depletion, economic decline, ecological crises, or sociopolitical disintegration” (Tainter 1988, 3). The collapsing future images often reflect the contemporary fears and issues in society. In this context, two collapse images can be found in Korean society: population crisis and environmental collapse.

### **Population Crisis: A Demographic Disaster**

Like other western countries and Japan, Korea has experienced a rapid aging population with a low birth rate (see 4.3.1 Aging Society). Media, government agencies, and academia have paid attention to population aging trends (Asia Economy, May 31, 2011; Hong 2007; Korea National Assembly Budget Office. 2009; Lee 2011; Yoon et al. 2010; Yonhap News 2011). They have seen the population aging trend as a national crisis or an impending risk. The perceived population crisis is associated with financial and economic problems. In other words, the aging population causes the rise of health care costs, the rising cost of public pensions, the shrinking labor force, and declining productivity. An aging population can prove to be a national crisis in which Korea has to struggle to survive with low growth potential and generational conflict.

In an extreme case, Korea will become an empty nation as the result of a huge exodus to other countries. According to Eom and his colleagues (2006), in their book, *Exodus Korea: What Will Korea Look Like in 2050*, predict that Korea will be a super-aged society due to the low birth rate. The exodus scenario envisions the younger generations suffering from an overburdening tax and leaves Korea to avoid providing economic support to seniors through the taxes. In this context, the aging population has generated the discourse of a demographic disaster. Most Koreans are seeking various alternative policies, “including improved daycare, better maternity leave, and baby

bonuses, as well as simple exhortations to women to have more children,” for solving aging population problems (Paik 2009, 75).

### **Environmental Collapse**

The image of environmental collapse is closely linked with environmental breakdown and complete catastrophe, including global warming, global pandemics, and extreme weather events. It assumes that ecological degradation leads to environmental collapse. Environmental collapse and civilized demises are tightly interconnected.

In April, 2012, Korea released the dystopian film, “Doomsday Book”, which is a science fiction anthology film. It tells three short stories: “the first about a robot achieving enlightenment, the second about a zombie invasion and the third about a meteor wiping out mankind” (Screen Daily February 11, 2012). Below is the official description of the film:

Two acclaimed Korean directors unfurl three unique stories of human self-destruction in the modern high-tech era. In a hope to restore the humane compassion in the insusceptible modern age, the film displays an alternative form of genuine humanity. And thus you are stepping into the world of future, where a series of unexpected stories awaits you. All these stories originate from the earth. From the very earth you live on. (Screen Daily February 11, 2012)

In the “Doomsday Book”, two stories represent the environmental disasters that lead to catastrophic consequences. The first film is *A Brave New World*. A zombie virus, which is generated by genetic modification, is spreading across the nation. Koreans suffer from the mysterious virus and Korea is in a state of panic. The movie revolves around a researcher named Yoon Seok-Woo, his companion, and the media trying to figure out the source of the virus. The second story is *Happy Birthday*. An asteroid hits the earth and destroys it. The story features a Korean family going down to an underground bunker to avoid the asteroid. After seven years, they are coming back to the surface to rebuild civilization. The Doomsday Book is the first apocalyptic film in Korean cinema. It reflects a fundamental fear that Koreans are facing. *A Brave New World* reflects

technological disasters, such as genetic mishaps, computer viruses, and nuclear accidents that are caused by human greed and error. *Happy Birthday* reflects natural disasters, such as floods, tsunamis, and volcanic eruptions that are caused by acts of God. It resonates with the fear that Korea would have when confronted with disasters. It invites Koreans to understand and prepare for the worst-case scenarios.

### **5.5.3. Discipline Society Image: Green Futures**

Currently, green growth is the most popular discourse within South Korea. The state, business community, and civil society have echoed the call for green technology, green culture, green life, green projects, and green enterprises as a new path for Korea. According to UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific), green growth is “environmentally sustainable economic growth for the well being of all.”<sup>19</sup> Although the EU and North American countries stress the Green New Deal, green growth is initiated by the Asia-Pacific region focusing on “sustainable economic progress to foster low-carbon, socially inclusive development.”<sup>20</sup> As Thomas Friedman (2008) proposes in his book, *Hot, Flat and Crowded*, a green revolution is needed in the energy-climate era; society must transition from “Code Red”, a reference to the response against the communist threat, to “Code Green”, a green earth metaphor that implies “clean power and energy-efficient systems” (p.8). In Korea, there are three major images of green future: those of the state, the business communities, and civil society.

#### **The State Discourse**

The Lee Myung-bak government (2008-2013), which succeeded the Roh Moo-hyun government in 2008, produced a different paradigm to adjust to changing conditions inside and outside Korea. The new paradigm seeks global warming solutions and envisions a new energy paradigm. President Lee announced Korea’s new vision, ‘Low

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<sup>19</sup> UNESCAP Green Growth website. <http://www.greengrowth.org/> (December 10, 2010).

<sup>20</sup> UNESCAP Green Growth website. <http://www.greengrowth.org/> (December 10, 2010).

Carbon, Green Growth,’ on August 2008 (Presidential Commission on Green Growth 2009). The Green Growth will guide South Korea in the direction of becoming “one of the seven green powerhouses by 2020 and top five by 2050.” This represents a rapid shift from traditional quantity-oriented development paradigms, with fossil-fuel based growth, to a quality-oriented developmental paradigm, focused on renewable energy resources and ecological efficiency. The Presidential residence of Cheong Wa Dae is newly called the ‘green office,’ referring to efforts to cut more than 20 percent of its carbon dioxide emissions by 2012, providing a symbol of the government’s strong will for green growth. Furthermore, the government established the Presidential Committee on Green Growth to implement the Green Vision in February 2009. It formulated the ‘National Strategy on Green Growth and Five-Year Action Plan’ and developed ‘a new form of governance for Green Growth.’ Further, the vision of ‘Low Carbon, Green Growth’ is described as ‘ECOREA’ which is a compound of the prefix “ECO” and the name of the nation, “Korea” (Ministry of Environment 2008). The government set specific targets to increase the current technological level of 60% of the technology for climate change of developed countries to 80% by 2012, to improve 20% for the ratio of renewable energy by 2030 from the 2.24% in 2006, and to enter the world’s four major countries that produce green cars (Ministry of Environment 2008). The vision of Korean Green Growth is based on the philosophy of harmonizing environmental conservation and economic growth for the sake of sustainable development.

In order to facilitate the strategy of the new vision, the Lee administration is pushing to enact a new law, entitled the "Basic Law on Low Carbon Green Growth,” which is able to effectively tackle global climate change and gives comprehensive directions to become a green nation.<sup>21</sup> The government established the EGG (Experience of Green Growth) Hall, which is a permanent exhibition installed by the Korean government in August 2009. The EGG Hall aims at “publicizing Low Carbon, Green

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<sup>21</sup> Diplomacy magazine website, [http://www.diplomacykorea.com/magazine/sub.asp?pub\\_cd=200902&c\\_cd=4&srno=484](http://www.diplomacykorea.com/magazine/sub.asp?pub_cd=200902&c_cd=4&srno=484) (December 10, 2010)

Growth and understanding the green growth in their daily lives.”<sup>22</sup> In addition, in order to spread the goals, values, and resources of green growth, the government has begun green culture campaigns. The concept of the green culture campaigns can be seen clearly in the brochure produced by the Korean government.

Korea will bring up Green Citizens, reflecting the concept of Green Growth in primary and secondary school curriculum. Ecological culture education and experience programs will be introduced and children's songs and games will be developed to help them understand and learn the concept.<sup>23</sup>

Overall, the Korean government’s green growth vision is based on solving environmental problems. According to Dryzek (1997, 13), solving environmental problems is defined by “taking the political-economic status quo as given but in need of adjustment to cope with environmental problems, especially via public policy.” The state recognized the environmental problems, including global warming, environmental pollution, and global energy competition. In addition, greenism is going to global trends. The Korean government treats the green growth vision as tractable within the basic framework of the economic growth. An official Korean government brochure says that "green growth will enable another miracle on the Korean Peninsula to succeed the miracle on the Han River."<sup>24</sup> The government action plans are actively supporting new technology as a new growth engine, concentrating on investment of industry, and not on civil participation and social consensus, to decrease carbon dioxide emissions via green technology.

### **The Business Community**

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<sup>22</sup> The Presidential Committee on Green Growth (PCGG) website. <http://www.greengrowth.go.kr/english/> (December 10, 2010).

<sup>23</sup> Korean government’s brochure on Green Growth Korea, [http://gin.confex.com/recording/gin/2009/pdf/free/4db77adf5df9fff0d3caf5cafe28f496/paper2775\\_1.pdf](http://gin.confex.com/recording/gin/2009/pdf/free/4db77adf5df9fff0d3caf5cafe28f496/paper2775_1.pdf) (December 10, 2010)

<sup>24</sup> Ibid.

The business community constructs and propagates its own images of the future that reflect their world views. These images are built on the social-economic needs of the business community. Under the Korean government’s drive for green growth big companies like Samsung Group and LG Group announced a variety of plans to develop a green economy. For example, POSCO, the world’s fourth-largest steelmaker, inaugurated a “green growth committee” for green management on June of 2009 (Korea Herald, August 12th, 2009). POSCO promoted for employees bicycle commuting and quit smoking campaigns to reduce carbon dioxide emissions. Another green management story can be seen in an advertisement of Kumho Asiana Group, one of the largest conglomerates in South Korea (Figure 5.2). A man is walking with green foot prints heading for a destination. The caption reads: “Kumho Asiana, opening the door to green management for the future.” We can see the foot patterns leading to the green future. A smaller caption offers:

“The sky, land, mountains, water, air... if we use them well everything in this world can become green energy! We believe that if the green future is to be beautiful and give joy we must be creative. Kumho Asiana will continue to walk to the path of green management for the future.”

Figure 5.2 “Kumho Asiana, Opening the Door to the Green Management for the Future”



Source: The Enterprise & Media. November 06, 2009, <http://www.biznmedia.com/news/articleView.html?idxno=22895> (December 20, 2010).

The caption of the commercial states that Kumho Asiana is working hard to achieve green growth, which is the nationally driven campaign to overcome the current situations of the Korean economy and meet global needs to adjust to climate changes.

Many companies engage in projects overtly designed to promote the green economy spirit. Samsung is one of them. Samsung Electronics, the world's largest electronics company and the flagship subsidiary of the Samsung Group, announced the "Eco-Management 2013" plan for green management.<sup>25</sup> Its core objectives are as follows: 1) "reducing greenhouse gas emissions and cutting indirect greenhouse gas emissions," 2) "investing 5.4 trillion KRW," 3) "trying to achieve 100 percent eco-friendliness of products," 4) "exceed existing benchmarks and develop green partnerships with suppliers and partners." Also, the company announced the specific vision, "Creating New Value through Eco-Innovation," and the program slogan, "Planet First."<sup>26</sup>

The green economy of Samsung Electronics is well-reflected in a recent advertisement (Figure 5.3). This advertisement includes the visual and textual rhetoric of images of green economy. The caption reads "A Heart-Racing Tomorrow," representing optimism for the results of green economy. According to the smaller caption, Samsung Electronics is presenting an environmentally friendly LED TV which uses less power, thus South Korea will experience the bright future with a natural sense of LED TV. The photos present many tall skyscrapers, green lights of street lamps, happy kids holding a basket with stars, and a Samsung HD LED TV with a green screen. This advertisement is not only to promote sales, but also to create positive images of the company, an image of loving nature and protecting the environment.

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<sup>25</sup> Samsung Group website, [http://www.samsung.com/us/aboutsamsung/news/newsIrRead.do?news\\_seq=14161&news\\_ctgry=irnewsrelease](http://www.samsung.com/us/aboutsamsung/news/newsIrRead.do?news_seq=14161&news_ctgry=irnewsrelease) (December 20, 2010).

<sup>26</sup> Korea Press Release Network website, <http://www.koreanewswire.co.kr/?job=news&no=418097> (December 20, 2012).



democracy' or the 'greening of democracy,' which are usually not emphasized in the official discourse of green growth by the state and business community. According to Chung (2009, 49), green democracy is defined as a balance between democracy and greenism. It means that Korean politics should look at sustainability as a substantive factor of democracy. Civil society places a high importance on environmental goals to extend Korean democracy. Thus civil society challenges some assumptions and questions whether green growth vision is really shared by the whole society. Many scholars and social movement activists criticize the green growth vision initiated by the state. According to Yun (2009), the Korean government's green growth vision is not much concerned about "ecological tax reform for economization of ecology and citizen's participation in decision-making processes." The vision is not really green because the government vision is more focused on promotion of nuclear energy and renewable energy for the related industries and not interested in the real competitive energy reduction campaign.

There is another sense in which something pursues a real green Korea against industrial society. Dator and Park (2009), in their report to Korean Telecom, *Through a Brushwood Door: Should Korea Become a Conserver Society?*, point conserver society as model for sustainability. The report introduces the concept of the conserver society, which presents a direct challenge to the consumer society which dominates Korean society. It finds out three concepts of the conserver society from Korean history: "a deep concern for future generations; self-fulfillment in harmony with nature; and the virtue of moderation" (Dator and Park 2009, 43). Their work offers substantial change to "the old Continued Economic Growth path" which is "no longer sustainable" (Dator and Park 2009, 49)

Civil society's vision of green growth employs the sustainability discourse. According to Dryzek (1997, 14), sustainability represents "imaginative attempts to dissolve the conflicts between environmental and economic values." Korean civil society largely tries to combine ecological protection and economic development. It believes that its more participation to green growth policies in the state is the most important part and civil society should be major players in bringing about green growth vision. Civil society

is more focused on political democracy to achieve a green life vision because the current Lee Myung-bak government ignores the existence of civil society. In terms of civil society, real democratization is a main driving force to reach the green vision.

#### 5.5.4. Transformation Society Image I: Advanced Information Society

Korea, like other Asian countries including Singapore, Japan, and Malaysia started IT infrastructure investment in the early 1990s (Grewal 2008, 130). Since the 1997 South Korean economic crisis, the vision of an information-society has spread in an effort to overcome the crisis and confront the influence of globalization. The South Korean government has pushed future-oriented information policies, such as Cyber-Korea of 1999, e-Korea of 2002, and u-Korea of 2006, in order to develop the nation into an advanced country (NCA 2006, 9, cited in Grewal 2008, 131, see Table 5.1).

Table 5.1 Information Society Policies in Korea, 1994-2006.

Vision/Plan	Year	Discursive Emphasis
Korea Information Infrastructure(KII)	1994	Promoting Information.
Master Plan for Information Promotion	1996	Promoting Internal infrastructure and use.
Cyber Korea 21	1999	Reforming Society with information revolution in the post-financial crisis era.
e-Korea Vision 2006	2002	Maximizing digital competitiveness
Broadband IT Korea Vision 2007	2003	Maturity of Information based on broadband use.
IT839 Strategy	2004	Building new IT growth infrastructure.
u-Korea Master Plan	2006	Starting the journey toward the ubiquitous network society

Source: NCA (2006, 9, cited in Grewal 2008, 131).

An advanced information society is the image of the future behind policies aimed at improving national competitiveness. In particular, the vision of an information society is described as “ubiquitous Korea” (u-Korea). Ubiquitous Korea emphasizes the universal access to information and service as a major precondition for an ideal information society. It will employ “building ambient intelligence into all parts of the human environment, including housing, the workplace, transportation system, health care and recreation” (Oh

and Larson 2011, 113). “Ambient intelligence envisions an era in which small computing and sensing devices are built into everyday objects and materials are networked so that they can communicate with each other and with the internet” (Oh and Larson 2011, 113). We can see the concept of u-Korea through its master plan:

The Vision of the ‘u-KOREA Master Plan’ is transforming Korea into an advanced country by realizing the world’s FIRST u-Society based on the world’s BEST u-Infrastructure. Under the vision, the Plan provides advancement goals of five areas – government, land, economy, social environment, and individual life; and optimization goals of four engines – globalization, industrial infrastructure, social infrastructure, and technology development. The ultimate goal of the ‘u-KOREA Master Plan’ is to achieve a society where all people can benefit from a safer ubiquitous society (4U: Universal, Usable, Unisonous, Upgraded) through advancement of the five areas and optimization of the four engines (NCA 2006, 14, cited in Grewal 2008, 149-150).

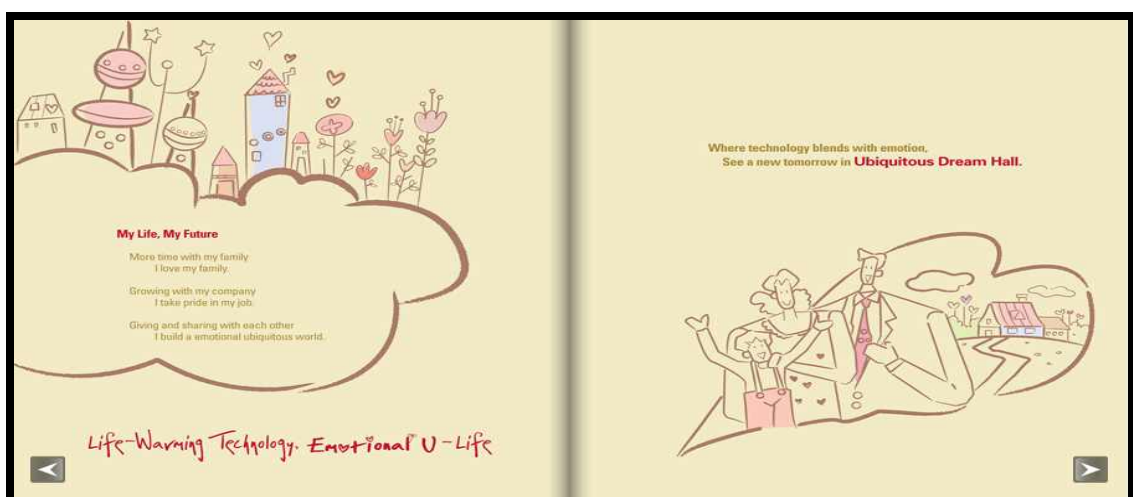
The future images of u-Korea were echoed in the mass media. The media’s future images showed steps beyond just an information society. They used the rhetoric of “digital homo sapiens” (UPI 2006), “the world’s most wired country” (Onishi 2006), “technology heaven” (Kelly 2006), and “high-tech utopia” (O’Connell 2005). They also said, “Robots will be in every South Korean household between 2015 and 2020” (Onishi 2006); “Having access to a fully networked home encourages outrageous thinking and possibilities” (Kelly 2006); and “Imagine public recycling bins that use radio-frequency identification technology to credit recyclers every time they toss in a bottle; pressure-sensitive floors in the homes of older people that can detect the impact of a fall and immediately contact help; cellphones that store health records and can be used to pay for prescriptions” (O’Connell 2005).

A representation of u-Korea is the Ubiquitous Dream Hall (UDH), which is a permanent exhibition set up by the Korean Ministry of Information and Communication and leading Korean information technology companies (Jouhki 2008, 174). The UDH leads people to experience a future digital lifestyle and the newest IT technologies at 3-D image halls such as u-Home, u-City, and u-Business. The UDH brochure includes the visual and textual rhetoric of the vision of u-Korea and justifies the development of u-

Korea to the public (Jouhki 2008). The drawing shown in Figure 5.4 (Jouhki 2008, 176), in the brochure presents floating hearts, flowers, buildings with hearts, antenna with stars, and a happy family. The caption on the bottom left says, “Life-Warming Technology, Emotional U-Life.” All this rhetoric produces images of future u-Korea focusing on the technology combined with emotion and alluding to a warm and successful life in South Korea.

Many sources mentioned above were optimistic about the future of South Korea adopting information and communication technologies. The development of technology and science has been represented as the overriding driving force for a global and information society. The future of South Korea is equated with the development of technology and science. The Korean government and mass media put out some slogans emphasizing the importance of technology and science to the public sphere: “The one who possesses superior scientific and technological skills will shape the future” (Kim 2006a); “Korea’s future will be determined by the fusion between information technology and biotechnology” (Chosun Ilbo 2005); and “the future lies in basic and original technology” (Oh 2008). Those strong national visions and rhetoric lead Korea to world-class industries characterized by effective policy implementation and high motivations. Korea has become a high income country and has enjoyed a high quality of life.

Figure 5.4 Introduction to UDH



(The brochure of the Ubiquitous Dream Hall, cited in Jouhki 2008, 176)

The image of the future for the advanced information society, which highlights the role of scientific mindsets and the impact of technological development on social change creates the future imagination of an information society. The main idea of the advanced information society is that information and technology revolutions will lead Korea to evolve into an information society from an industrial society and into a post-modern society from a modern one. This premise is influenced by the modernization theory, as the developing countries are likely to emulate the developed countries in industrialization. Modernization theory is based on the idea that society follows the developmental trajectory of the West (Rostow 2000, 130). As modernization theory would suggest, Korea's vision of an information society is designed to create the possibility of catching up with the advanced countries. We can see the evolutionary vision of social, political, and economic development in u-Korea. Thus, the future image of the advanced information society is closely related to a concept of linear progress or uni-linear evolution toward a better society through technological development. The main drawback to this linear thinking is that "certain new tendencies in the present are seen as key elements of the future, while countervailing and divergent processes are not taken into account" (Bechmann 2000, 44). There are no alternative futures. This perspective emphasizes the role of technology and science for the development of Korea. It is also linked with a functionalist way where "techno-economic change brings about new social structure and institutions" (Bechmann 2000, 45). Thus it is likely to ignore the role of social factors for technology adoption.

#### **5.5.5. Transformation Society Image II: National Unification**

Korean unification is considered the most desirable future in Korea. "Most South Koreans assume that the true and real Korea is a unified Korea" (Grinker 1998, x). During the late 1980s to the early 1990s, those who did not want unification were even considered traitors (Grinker 1998, x). 'Our wish is reunification' is a strong national pathos which Koreans have pledged in order to follow Korea's ideal path and to

overcome the national division which has caused external hostilities and internal suffering since 1945. This sentiment is expressed in the most famous song sung by most Koreans and well-known by Korean kids. It is sung at most concerts and events (Steinberg 1998, 237). The song was even sung at the presidential summit with Kim Jeong Il and Kim Dae-jung in 2000. The lyrics of ‘our wish is reunification’ are:

Our wish is reunification,  
Even in our dreams. Our wish is reunification  
With whole dedicated, reunification  
Let’s fulfill reunification.  
Reunification that revives this nation  
Reunification that revives this country  
Reunification, come true soon  
Reunification, come true.

The song of unification shows the powerful metaphor of people’s desire for reunification. Reunification makes the country strong and prosperous. Reunification is a powerful image. It is more than the idealized Korean future. It is able to realize a ‘real’ Korea that constructs a socially, culturally, and economically homogeneous country (Nelson 2000, 20). The image of a unified Korea can provide people with a strong motivation for them to endure hard labor and rough circumstances (Nelson 2000, 21). When we explain the future images in more detail, a 1991 second-year National Language text (*Gukeo*) tells ‘A Story of Balloons’ (Ministry of Education 1992, 118-119, cited in Lee, Dong Bae. 2005), depicting the idea that the two Koreas should be unified and there would be a bright future after reunification. In this story, the blue balloon stands for South Korea and the red one for North Korea.

#### A Story of Balloons

1. Two balloons are floating higher and flying farther. Mt. Kumgang [in North Korea] can be seen. It is very beautiful.
2. “I wish people could see Mt. Kumgang as freely as us,” says the blue balloon.
3. “Yes, well, let’s pray it will be done.”
4. The red balloon says to the blue balloon.
5. The red balloon and the blue balloon float higher.

However, since the late 1990s, South Korean attitudes toward reunification and the official reunification discourse have changed due to the Post-Cold War era, generation gaps, and the economic crisis of 1997. Nowadays, South Koreans are hesitant about reunification. A 1999 survey by the RAND Center for Asia-Pacific Policy and the Joong-Ang Ilbo, a South Korean daily newspaper, shows that 59.3 percent of respondents selected either “somewhat cautious” or “very cautious” to describe their feelings about full unification; in 1996, that number was 43.6 percent (Levin 1999, 10). In a survey of university students in 2005, almost 80 percent of respondents subscribed to the view that the unification should be cautious, with no damage to the national economy, or they preferred remaining divided (Park 2007).

Furthermore, the unification discourse has changed in two aspects. First, the discourse has changed from one of sudden reunification to one of gradual reunification. The second is about changing from the “must of Korea” or the “holy grail” to “the NIMT (not in my time) Consensus” (Cha 2000). For the past decades, many Koreans viewed the reunification to be a historical imperative and national mission. But they are becoming hesitant about reunification. South Koreans are afraid of the possibility of post-unification chaos due to the lessons from German unification. The rhetoric of reunification that emerged through journal articles and mass media is “Korean unification: how painful and how costly?” (Ruiz Estrada and Park 2008); “peace is much more valuable than reunification to most South Koreans” (Kim 2005a); and “being developed nation is higher priority than unification” (Donga Ilbo 2006). South Korea prefers reunification in the normative discourse, while everyday rhetoric and public claims of reunification have focused on worries about the economic difficulties and the instability of reunification. Thus, images of the future of reunification are ambiguous.

For instance, in 2005 and 2006, a Samsung cell phone commercial produced hits in South Korea. The ad campaign, entitled “Sound of One,” is about a concert with South Korea’s pop icon Lee Hyo Ri and the North Korean dancer Jo Myung Ae (Jeong 2005). It is called a reunification ad whose key concepts are “encounter,” “harmony,” “consensus,” and “hope” (Hong 2005). This ad sent a message to the nation about reconciliation and

reunification in the Korean peninsula. It was even displayed at the entrance of Incheon International Airport so foreigners would see the image of reunification (Ahn 2006). In one of four episodes, Lee Hyo Ri and Jo Myung Ae sing a song about parted lovers with the lyrics, “Someday we will meet again, although no one knows where we're going, someday we will meet again, in this very image of us separated” (Ahn 2006). The lyrics of the song decode the message of reunification: The vision of reunification is emotional but uncertain. In contrast to the vision of reunification as a popular and unwavering national goal, the song presented vague visions which contain no specific directions or indications of how the reunification will come to be, even though it is a commercial aimed at consumers. The vague rhetoric has come to reflect the ambiguous images of the future of reunification that are held by South Koreans. The paradox of reunification is that while the normative reunification discourse is explicit, South Koreans are stumbling to take actions for it with their hearts.

## CHAPTER 6

### FOUR ALTERNATIVE FUTURE SCENARIOS TO 2030

*Visioning means imagining, at first generally and then with increasing specificity, what you really want. That is, what you really want, not what someone has taught you to want, and not what you have been willing to settle for. Visioning means taking off the constraints of “feasibility”, of disbelief and past disappointments, and letting your mind dwell upon its most noble, uplifting, treasured dreams..... We should say immediately, for the sake of skeptics, that we do not believe vision makes anything happen. Vision without action is useless. But action without vision is directionless and feeble. Vision is absolutely necessary to guide and motivate. More than that, vision, when widely shared and firmly kept in sight, does bring into being new systems.*

Meadows, Meadows and Randers (2004, 272)

#### 6.1. Introduction

This chapter envisions four alternative futures that may unfold in Korea’s future. Scenarios are alternative futures. They do not predict the future; rather, they are multiple alternative images of future situations. These four alternative futures can help develop the directions that Korean society takes and lead to the preferred future scenarios. This chapter adopts the Alternative Futures Scenarios to create four alternative futures. The Alternative Futures Scenarios provide the four archetypes of generic alternative images: “Continued growth,” “Collapse,” “Discipline,” “Transformation”.

Each of scenarios has different assumptions and consequences, based on the four generic archetypes. Each scenario takes on a different future development. The four alternative futures are: 1) Continued growth scenario: The Republic of Samsung, 2) Collapse scenario: The Great Han River Flood in Warmer Korea, 3) Discipline scenario: A Big Human Global Family Phenomenon, 4) Transformation scenario: The Age of Biotechnology.

## **6.2. Continued Growth Scenario: The Republic of Samsung**

### **6.2.1. Background**

In The Republic of Samsung scenario, the dominant paradigms and trends that currently organize society continue without significant change. This scenario is the logical extension of current economic development and tries to visualize what Korea will look like given business as usual for the next 20 years. This scenario is called the continuity economic growth scenario. The Samsung Group is a huge multinational conglomerate in Korea and has become the best-known global brand name. The title The Republic of Samsung reflects a future in which business organizations remain closely involved in important decision-making processes in Korea. In this future, the Korean economy is dominated by export-based conglomerates. The ethos of expansion, neoliberal ideals of competition and market-led social policy have become widespread in Korea. The activity of companies significantly affects Korean society with economic and corporate values influencing lifestyles in Korea. The principle of competition plays an important role for development. Companies have substantial power to influence the state.

It is already apparent in 2030 that Korea, where trade and commerce are well developed, is prospering under globalization and the development of information technology. It is increasingly evident that changes are gradually taking place. The general level of prosperity is rising, the population is decreasing, innovations in high tech industries are taking place, changes in manner and beliefs and in the social order of wealth, as well as political ideas and relationships. All were changing in the predictable ways along developmental trajectories from a developmental state society to a corporate society.

### **6.2.2. Drivers of the Scenario**

This scenario assumes the following driving forces:

- **Economy:** Economic factors are the main driving forces that will shape Korea's future in this scenario. The world economic order is driven by globalization and trade liberalization. It will enhance corporate wealth and create new businesses. Korea's economy also continues to grow at a steady pace along with greater foreign investment and growth in export markets. Multinational companies continue to enhance Korea's economy.
- **Population:** The population is steadily decreasing due to the low birth rate. An aging society and population decline diminish the number of young people, therefore leading to a shrinking labor force. Koreans will live longer. High migration is taking place. Urban population shows continual growth.
- **Energy:** Total energy consumption and demand have increased due to continued overall economic growth. Oil, gas and coal continue to be the most widely used fuels. However, gas and non-fossil fuels has gained market share steadily in the future. In general, Due to improving technology, Korea has an abundant supply of energy and there are sufficient energy resources to meet Korea's energy demand in the next 20 years.
- **Technology:** the ICT, biotechnology, and smart materials continue to evolve. The trend of technology investment remains relatively constant. Infrastructure, education, initiatives and regulations are fully provided for the development of technology. Korea is considered a first-class ICT country.
- **Culture:** Individual freedom and the principle of a free market economy are very important. The desire for wealth in a free market economy is seen as a part of progressive vision and motivates the development of technology and vital economic activity for the preferable futures.
- **Governance:** The growing globalization and market-oriented development policy depends on the firm's competition orientations and cultures. The State's control in overall society is decreasing. The market has more power to

allocate resources. Civil society shows moderate degrees of participation with low legitimacy and poor output.

- Environment: The continued economic growth and urbanization causes major environmental problems such as air pollution, soil degradation and depletion, and pollution of water, etc. Although Koreans focus on sustained economic growth and green growth, environmental problems have grown along with Korea's economy.

### **6.2.3. The Path to 2030**

#### **Devotion to Free Market**

Korea is one of Asian Tigers, along with Hong Kong, Singapore, and Taiwan. The Asian Tigers represent countries with high economic growth and rapid industrialization through export of manufactured goods over the past five decades. The economic financial crisis of 1997 provided new ways of accomplishing economic activities in order to reform of the financial system and deregulate, moving away from state intervention toward a neo-liberal economic approach. Korea has developed a more open and liberal economy and many foreign investors have entered the Korean market. Korea's economy has gone through its ups and downs. Korea bounced back from the global financial crisis in 2008. In 2010, Korea held the G20 Summit in Seoul, even though it was not a member of the G7. This event represented Korea's economic power in the world economy. In 2011, Korea agreed with the EU and the US for the free trade agreement (FTA). Furthermore, Korea also signs the FTA with Australia, Canada, Columbia, Mexico, New Zealand, and Turkey in 2012-2013. In April 2014, Korea's National Assembly ratifies the trilateral FTA between China, Japan and Korea. The trilateral FTA provides a base for an Asian Economic Union, for a common economic market and currency. Since then Korea's trade output to China shows more than a two-fold increase from US\$ 300 billion in 2013-2014 to US\$ 600 billion in 2017-2018, according to the Korean International Trade Association.

During this period of strong confidence, free market economic views are consolidated steadily among many Koreans, economists, think tanks, bloggers, entrepreneurs and decision makers. In particular, a Neo-Schumpeterian perspective that emphasizes entrepreneurship and innovation is rapidly spreading at the expense of democratic equality. The Neo-Schumpeterian discourse of creative destruction induces Korean society to be the platform of an innovation-based growth, global development, and technological competition as its driving forces. The ruling party and its opponents alike support free trade, deregulation, privatization, health care reform, government budget cutting, government decentralization, and personal retirement accounts.

Solid economic growth is maintained. A number of foreign multinational companies enter Korea's manufacturing and service sectors. Small numbers of Korean multinational corporations prevail in the Korean economy. They have built a successful global brand. Thirty Korean companies rank in the Fortune 500 list based on the revenues of 2018, compared to fourteen companies in 2010. Samsung Electronics, Hyundai Motor, SK Holdings, POSCO, LG Electronics, and Hyundai Heavy Industries show an impressive performance in the world market. Samsung Electronics, a global leader of digital TVs, semiconductor chips, and mobile phones, has invested in new businesses in the environmental and healthcare industries. It is the world's leading producer of solar cells, rechargeable cells for hybrid electric vehicles, Light Emitting Diode (LED) technologies, biopharmaceuticals and medical devices in the global market shares of 2019.

### **An Economically Affluent Society**

The 2010s is often seen as a decade of economic affluence. It is an era of prosperity, conformity, and optimism. Many Koreans agree that their life is much better. Manufacturing and export growth has continued. Korea's new convergence of technology with biotechnology and nanotechnology are expected to remain strong. The world market continues to grow. The CIVETS (Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa), and other emerging markets, including Eastern Europe, and Qatar, are still

the world's hottest markets. Most importantly, China and India are major trading and investment partners to Korea. They provide strong support for Korea's export demand.

Many Koreans appreciate the economic affluence. Korea's per capita income rises and inflation remains subdued. Koreans enjoy more elegant cars, exotic foods, personal identity inspired clothes, and internet based entertainment, including a 4D home entertainment system and 4D gaming. Travel agencies offer great deals to many wonderful places around the world for spiritual retreats, eco tour adventures, leisure tours, and family tours, etc. The space tourism industry is going to be a new emerging market.

Furthermore, they use hydrogen fuel cell cars which drive by wire technology. Homes have digital control panels which can help manage security and energy consumption. Electric car charging stations are installed in house garages. Koreans buy smart home appliances. Folding tablet pc smart phones, which combine the tablet pc with smart phones, have become the most popular electronic gadget. They are called AmiPhones. They listen to what people say with voice recognition function. They read people's minds and save their preferences, allowing tasks to be completed without the need to repeat the commands for the task. When traveling, Koreans book their flight via AmiPhones with speech. They then make rental car reservations and review hotel options. The AmiPhone also provides people with directions and time schedules.

However the decade is not without problems. North Korea sometimes has confrontations with South Korea. But their conflicts are not serious but rather routine. The tensions between the North and the South rise and fall. Low birth rates and an aging population are still issues contributing to the shortage of labor. Immigration, and the participation of the elderly and women in the work force are slowing down the problems of an aging and declining population. The working-age population rises from 15-59 years old to 15-75 years old. The rising numbers of migrant workers suffer from discrimination, limited legal protections, and limited access to social welfare services. Migrant workers have protested for years. Korea has the highest rate of suicide among member nations of the OECD due to school stress, workplace stress, relationship stress, and financial stress. The gap between the rich and the poor is widening. The lower class increases to over 30 percent of the total population in 2019 and the middle class declines to 50 percent of the

population in 2019 from 55.5 percent in 2009. CEO's and other top executives make extraordinary fortunes to a mixture of salary, bonuses, stock shares and stock options, and other benefits. We are witnessing a growing polarization between the professional/corporate elite and low income workers.

### **Great Recession by Local Government Debts**

In the end of 2019, Korea is indeed suffering a great recession resulting from an economic downturn in China. The Shanghai stock market, a center of world finance, halts trading after a 20 percent drop in one day. The Shanghai stock market crash spreads to the U.S., EU, and Asia. It precedes all other stock market declines and results in a significant decline in economic activity in Korea. Demand, production, employment, profits, investment spending, and household income all fall, while large-scale enterprise bankruptcy and high unemployment become inevitable. Korea's central government and local government tax revenues are constantly decreasing. Their expenditures are increasing while their debts are soaring. The Seoul Metropolitan Government's debt surges. The city's debt is three times as much as that of other global metropolitan cities. The city has no choice but to borrow more money as well as to issue local bonds. However, the financial markets and world trade have declined. The Korean government tries to intervene to mitigate the crisis. It proves to be a failure, so Seoul declares bankruptcy. Seoul files for bankruptcy protection and defers bond payments. Korea's central government takes charge of Seoul, resulting in cutting services, raising taxes, and negotiating foreign lenders. Seoul's moratorium hurts Korea's economy, throwing Korea's financial markets into turmoil.

The Korean government proposes a comprehensive rescue plan to defend the heavily indebted Seoul and protect its shaky financial system. It includes liberalizing labor markets, decreasing the size of the government, lowering interest rate cuts and a fiscal stimulus package. Korea also calls for Asian countries, such as China and Japan, to help create a bailout fund. In 2020, the East Asia Summit is held to announce financial rescue plans that are write-downs of debts and new injections of capital. The rescue plans

are widely praised as being significant enough measurements to stabilize the financial system and housing market, and to fix the credit markets, and attract foreign investment. Seoul's success of working together via the East Asia Summit triggers the necessity to build the East Asian Community and increase regional cooperation. Consequently, Asian countries agree with the Asian Monetary Fund to reduce deficit pressures on a single country and "stabilize exchange rate of Asian currencies" (Moon, Rhee and Yoon 2006).

After the economic meltdowns, it takes four years to get back to the previous economic conditions. The Korean government takes action and intervenes to end the economic recession, restoring its equilibrium, and encouraging economic expansion. The Korean President signs an economic stimulus plan and recovery package, which include tax cuts, unemployment funds, financial stability plans, and massive government spending. The Korean National Assembly passes a bill known as the *Local Government Restructuring Act* of 2021, which defines new rights, responsibilities, and managements of local government. The act should increase the local government's actions to local demands and decrease the problems of their previous system for consulting with all of stakeholder such as citizens and companies. *The Convergence Technology Promotion Act* of 2021 is passed by the Korean National Assembly to promote the development of NBIC (Nanotechnology, Biotechnology, Information Technology and Cognitive Science) Converging Technology to improve the nation's competitiveness.

### **An East Asian community**

In the early 2020s, regional economic integration is accelerated with "proliferation of bilateral and multilateral free trade agreements", "soaring intraregional trade levels", "the expansion of Asian bond markets", and spread of democratic values (Tanaka 2008, 92). Furthermore, severe acute respiratory syndrome (SARS), an infectious disease, is founded in early 2023 in Southeast Asia. SARS spreads to other Asian countries and countries outside Asia. The rapid and extensive outbreak of SARS has thousands of cases and over one thousand deaths and costs hundreds of billions of dollars. After Korea's great recession and SARS outbreak, the discourse of an East Asian

Community (EAC) is strongly advocated by several Asian countries for dealing with the economic cooperation, regional peace, energy security, the spread of infectious disease, and frequent natural disasters in East Asia. Among many Asian leaders and policy makers, there are fears and uncertainty surrounding East Asia's future.

Korea's President initiates a series of talks through the meetings of both ASEAN+3 and the East Asia Summit, resulting in an agreement on the creation of an EAC in the following ways:

- Primary vision: The establishment of a unified market by December 31<sup>st</sup>, 2030
- Secondary vision: The codification of East Asian political cooperation
- ASEAN +3 as the basis for a regional community without the US, Australia, India, and New Zealand.
- By 2024, the Beijing Treaty for the preparation and negotiation
- By 2025, the Asian Currency Unit for establishing a common currency in Asia
- By 2029, the Tokyo Treaty for the ratification
- By 2030, a single market and production base

### **New Weird Korea: Technology**

Korea spreads more weird stories than other country when the wave of Brain Computer Interface (BCI) technology hits the world. The BCI technology represents a "man-computer symbiosis" for "an expected development in cooperative interaction between men and electronic computers" (Licklider 1960, 4). It is a potential ability of humans to control computers, machines, and devices by thoughts, emotions, and mental concentration (Wang, Wang and Jung 2010). Korea has been fascinated with BCI technology with applications ranging from smart home appliances, a virtual keyboard, playing a game, moving a robot arm, musical composition to prosthetics and medical diagnostics. *The New York Times* reports 'Korea's New Weird Society' on August 28, 2030:

Korea is number one in the world in terms of comprehensive BCI adoption. Korea BCI infrastructure is well established. The capability of the BCI network in the United States is about two-thirds as fast as that in Korea.

Mrs. Jungan, who is an international higher education specialist, wakes up at 5:30. This morning, she lies in bed instead of rising at her regular time because she is thinking of today's presentation on how BCI technology affects higher education. She wants to listen to music, specifically Simon and Garfunkel's 'Bridge over Troubled Water'. A tiny machine that hangs on the wall in the master bedroom tracks her thoughts and activities. It is connected to "inconspicuous wireless sensors" on her body for the monitor. The machine directs the music player to play Simon and Garfunkel's song. If she wants to make her own music, she can create melodies and rhythms by mental concentration. She benefits from this "digital nervous system".

After listening to the song, she gets up. With mere thoughts, she switches lights on and off, turns on her TV set, and uses the AmiPhone. She finds everything satisfactory in her smart home. The machine measures her bodily functions and conditions such as pulse rate, body temperature, blood pressure, stress, and movements. It sends all the data back to her computer or phone. It displays some charts and graphs for her to evaluate. If she needs medical care for a high fever and or the flu, it reminds her how to take care of her illness. For serious health problems, doctors are connected with her through the machine. She opens the bathroom door by saying, 'open the door for Jungan', to wash her hands. There is a tiny gadget to measure her weight in the bathroom. It sends her weight to her computer and phone. Her computer and phone can display her weight and calculate her fat percentage. "Architectural display glass" is attached to the wall. It is interactive and a touch screen. She can send an email and watch the news, and get the latest weather updates from her bathroom mirror.

She is sitting down in a chair in front of a computer wearing a wireless neuroheadset in her study. She does not need a mouse to search the Internet. Her brain waves command the computer. If she wants to read political-related news, the neuroheadset translates them into commands that the Internet website can accept and pulls-up political-related news and video clips. She can immediately go to her favorite websites. Also her emotions control websites. If she is in a blue

mood, the brain-computer interface program suggests alternative websites for bright games, happy music, and good news. She feels hot in the room. The control machine detects her body temperature, then automatically cools down the room temperature and adjusts the humidity and lighting. A chair sensor recognizes her back tension and sends a message to the computers and phones. She starts to feel hungry and thinks of a menu for her breakfast. The machine automatically detects her hunger and orders a robot to make breakfast for her. Her favorite breakfast is banana pancakes.

South Korea has gone enthusiastic over BCI-oriented gadgetry. BCI Tech-obsessed Korea has as many AmiPhones as people. The AmiPhone use is ubiquitous with 47.4 million subscribers in Korea with a population of 52.7 million. That is 90 percent of the total population, which indicates one of the highest AmiPhone saturation rates in the world. The Amiphone features a BCI system. The AmiPhones are more than just smart phones which send email, play music, chatting capabilities, and processes bank transactions. They also can read human's emotions and thoughts. They can measure and record heart rate and blood pressure for analysis. They even contain a copy of a person's genome records. They can control home electric appliances from lights to the TV to the alarm clock. Koreans are able to control everything from in their homes or from outside their home through the AmiPhones.

Korea's Samsung Group, one of the largest top 10 companies in the world by market capitalization, has invented new medicines for diabetes, Alzheimer's, and Parkinson's disease with U.S. drug makers. Samsung produces 'positive' (antidiabetic drug) and 'whole person' (anti-Alzheimer's drug). The popularity of these medicines is constantly growing due to their good quality, safety, and effectiveness. Most people believe that diabetes, Alzheimer's, and Parkinson's are incurable and unpreventable diseases. The success of Samsung to treat them is confidently taking positions on the world market of pharmaceutical industry. It not only opens up the door for a wide range of applications for the pharmaceutical and

biotechnology industry but also provides a driving force for Korea's knowledge economy.

Korea is aggressively pushing the global market with technology innovation under Korean style environments, working together with government, conglomerates, academics, engineers, and financiers. Leading technologies include the following:

**Molecular computing:** It is "based upon the use of biological molecules (biomolecules) to store information together with genetic engineering (biomolecular) techniques to manipulate these molecules so as to perform computation" (De Castro 2007, 14). "It constitutes a powerful combination between computer science and molecular biology" (De Castro 2007, 14). "Nano-sized computers implanted in the human body could autonomously scan for disease symptoms, diagnose diseases, and control the release of the appropriate drugs" (Zyga 2011).

**Personal genomics:** It defines "not only the unbiased collection of genetic information of individuals but also the bioinformatic analyses used to extract meaningful knowledge regarding disease history or risk from this genetic information" (Penrod et al. 2010, 194). It plays "a central role in the realization of personalized medicine" (Penrod et al. 2010, 194). Personal genomics discerns disease-risk variants for certain disease. It has changed the health care paradigm from clinical medicine to preventive treatments.

**Biofuels:** They are primarily derived from non-food biomass such as waste, byproducts, switch grass, etc. Biodiesel from algae is another alternative for energy scarcity. Biofuels have great potential to solve Korea's energy and environmental problems for sustainable development.

**Hydrogen and Fuel cells:** They are effective alternatives for gasoline and other fossil fuels, and they also reduce greenhouse-gas emissions. The commercial application of hydrogen and fuel-cell technology provides power to homes, hotels, educational institutions, and hospitals. Some fuel cell vehicles such as cars, boats, trucks, and motorcycles are popularized. A major success of hydrogen and fuel-

cell products as a portable energy storage appliance which plugs in everywhere we need to charge.

**Augmented reality:** It “overlays virtual (computer-generated) images onto a person's real-world field of vision or into a real-world experience in a way that improves and enhances the ability to accomplish a wide variety of tasks and assignments” (Cowper and Buerger 2003). The augmented reality technologies are applied in many areas: military for enhancing soldier's combat ability; an augmented business card, real time language translation, learning tools, and sports telecasting.

### **Structural Change for a Knowledge Economy**

Over the past two decades, Korea has achieved continued economic growth and has become a center of a new knowledge economy. High-tech sectors and enterprise are main drivers of economic development. Particularly, exports of high-tech goods are increasing. Korea holds a significant share of the world market. Korea is ranked among the top 10 global exporting countries in high-tech products. Korean biotechnology, genomics, and pharmaceutical companies hold a great deal of global-level patents. Global economic power shifts from Western Europe and the US to Asia. The rapid growth of the middle class in emerging markets provides great opportunities for Korea's economy. Korean companies fit into the larger global market for their specialized goods. Korean consumers get the benefit of low cost imports from emerging markets.

The BCI economy has achieved fast growth and is central to economic innovation. More than 50 percent of products and services are purchased by the BCI economy. Korea's economic structure is steadily changing: decreasing manufacturing sectors and increasing service sectors. Korea's economy has matured into knowledge-intensive activities. Traditional manufacturing sectors transfer their activities to medium and high tech industries. Knowledge high-tech services grow in terms of employment. Also financial services and market services are going to dominate all business service firms. Women improve their ability in science, technology, and engineering. This promotes

women's participation in science, technology, and engineering. Many companies respond to the aging of Korea. Health care and senior care businesses are fast-growing enterprises. Robotics and telepresence reality are involved in the senior care industry. Robotic pets and "prototype robotic telepresence nurse" (Jones 2010, 50) are good examples. AmiPhones and BCI technology-related devices change economics. They are the fastest-selling items in consumer products. Because of their increased usage in public places, wireless BCI connecting systems are growing exponentially. Some companies providing systems are gaining profits. Their affiliated businesses replace Wi-Fi systems and bandwidth sectors. The commercial BCI technology has fundamentally transformed business.

### **Internationalization of Education and Corporatization of Higher Education**

The impact of globalization reshapes the contour of education. A knowledge-based world economy needs a highly educated workforce. Education is the key factor to acquire skilled, innovated, and talented human resources. Internationalization is a high priority in Korean education. Large numbers of foreign students are coming to Korea. Korea's colleges and universities state the increasing importance of international or global education in their vision statements. Educational institutions consider it as a means of improving the quality of education, increasing the enrollment of foreign students, and preparing Koreans for the global market. A growing number of foreign faculty members are hired. Several universities build partnerships with foreign universities to bring degree programs. Some US and Chinese universities open up a branch campus in Korea. For instance, the Peking University of China opens master's and Ph.D. degrees in Chinese language, international affairs, and Chinese medicine in Seoul in 2025. Also, the Korean style of higher education has grown into one of Korea's most important exports. Sungkyunkwan University, a private university in Seoul, offers undergraduate degrees and an M.B.A. in Hanoi of Vietnam. The merging of higher education institutions in Korea is taking place due to the financial pressures and enhancing competitive advantage. Korea's conglomerates like Samsung and LG enter into the education market in the

developing countries, including Vietnam. Individuals voluntarily ride on the trends of internationalization for the domestic and international job market.

The knowledge economy is closely associated with advances in knowledge creation. The purpose of academics is to nurture a well-educated and innovative workforce. The collaboration between universities and companies results in a gain of benefits for developing new technologies. Many companies fund academic research and many academics file patent applications. The partnership between universities and companies encourage students to get specialized degrees. For example, Samsung Electronics, LG Electronics, Hyundai Heavy Industries Group, and Hyundai Motor have their own universities for providing a qualified workforce. Furthermore, some universities are struggling with their large debts due to the decrease of enrollments. Private investments are pouring into the academic area to offset the debts. Executives of big corporations join the board of trustees at universities. In general, Korea's higher education system is becoming a training ground for the corporate workforce than a place of higher education. Large corporations hold more power on the higher education.

### **New Masters and New Employees**

Korea's total output of goods and services grows at an annual rate of 5-6 percent from 2012-2030. Consumers buy more goods and services, especially health care and entertainment. Companies invest more in financial, ICT, and biotechnology industries, spurring moderate growth. New technologies, new services, and new ways of working affects the workplace. New technology devices achieve high productivity while fewer employees are needed. Many companies and government agencies are struggling to cut costs after the great recession of 2019. They replace full time employees with new technology programs and devices, and contract employees. They are outsourcing. Outsourcing manufacturing and services show significant levels of growth. High levels of outsourcing and high adoption of technologies results in high levels of job loss.

The dominance of globalization, the technology revolution and financial deregulation lead to new forms of organization. According to the survey of national

consciousness on Friday 18<sup>th</sup> May of 2030, over 96 percent of survey respondents believe that “hypernomads” are the most powerful group for change in Korea as a new ruling class. They comprise “a new innovative class” or “a hyperclass” who strongly influence society: Holders of the capital of business, financial or business strategist, executives of insurance and leisure companies, software designers, creators, jurists, financiers, authors, designers, artists, creators of nomadic objects (Attali 2006, 195). They are the new national and global elite. They are working hard, representing an innovator’s life. They are very well-educated, possess a cosmopolitan mindset, and are supportive of meritocracy. They have a broad range of connections in the global community, joining international conferences and forums, having residences at Beijing, New York, London, and Mumbai, and pursuing the new way of organization forms.

The family-controlled big conglomerates and small and medium-sized businesses are deeply involved in virtual organization as a new way of working. Virtual organization is a temporary entity of collaborative network of people for achieving specific projects through information technology (DeSanctis and Monge 1998). It is based on a virtual team that is formed or disbanded according to the necessity. The employees or member of a virtual organization are geographically and culturally distributed around the world. The companies have developed the virtual working environment. Virtual corporations have become popular. In 2025, Second Contact Group, which is a well-known virtual corporation, is listed on the NASDAQ stock exchange as a Korean corporation. The headquarters are in cyberspace; there are no physical offices; its employees cannot meet Second Contact Group’s CEO in person but they can have videoconferences with the CEO.

Work organization is transforming into post-bureaucratic forms of organization. Post-bureaucratic forms of organization are characterized by hybridity: a combination between virtual workplaces and physical workplaces; mixed forms of peer-based teamwork and managerial hierarchy; blurred demarcation of home and work. The hyper-network with teams and collaborative working is essential. The hyper-network—cloud computing, robotics, AmiPhones, and social media—becomes the workplace. There are no distinct boundaries between academia, business and government. They work together

for a project. This partnership, being called a “golden triangle” and provides a worldwide network to other universities, companies, and government agencies and leads an effective way for technological advances and innovation. Informal recruiting is more prevalent than formal recruiting. Fluidity is another important factor in forming the workplace: flexible working hours, virtual teams, and the use of cloud computing.

The diversity of the workforce is a new feature. It is driven by the decline of birth rates, the aging society, the increase in women’s participation, the rise of retirement ages, and a growing number of immigrant workers. Diversity issues embrace age, gender, and ethnicity. Ageism and gender inequality continue to fade. Diversity in the workplace can improve productivity, creativity, and marketing opportunities by creating a culture of inclusion. On the other hand, it leads to some challenges: generational conflicts and ethnic discrimination. The digital divide between generations is widening. The younger generation is the “digital natives” who are good at computers, surfing the Internet, and robotic technology who can access high skilled and value-added jobs with higher wages and job security. The older generation is “digital immigrants” who are poor at technology and get repetitive and less skilled jobs with lower wages. Young bosses and old workers are common. Young bosses are working together with people old enough to be their parents. Korea is an extremely hierarchical society that stresses age and seniority. The new management culture based on performance invokes conflicts between generations.

Employees can be roughly divided into two categories: “virtual nomads” and “infranomads” (Attali 2006, 197-202). Virtual nomads respond to the demands for new technology and produce new social networks. They are middle class including skilled workers, doctors, lawyers, developers, and engineers. They provide information and generate a great deal of profit. They have strong autonomy and flexible working times. They are used to multitasking and have a global mindset with connecting high-tech devices and applications from AmiPhones On the contrary, infranomads consume new technology and its applications. They are the lower class comprising unskilled workers with low income. As more technology and foreign cheap migrant workers are introduced, they become more and more at the disadvantage with unemployment and poverty. They

are characterized by poverty, homelessness, and unemployment. They are vulnerable “to epidemics, to lack of water, to desertification, to climate change” (Attali 2006, 201).

### **Dominance of Corporations and the emerging Plutocracy**

The income of the wealthiest 1 percent of Koreans has nearly quadrupled over the past two decades while the bottom of 80 percent shows only modest growth. The richest 1 percent holds more than half of the nation’s financial wealth. Korea is divided into two blocks, “the plutonomy and the rest”, due to “the capitalist-friendly government, more technology-driven productivity, and globalization” (Kapur, Macleod and Singh 2005,1-2). The plutonomy, originated from the Greek god of wealth, dominates the economy. In particular, the corporations play a pivotal role in economic growth. Thus, Korean society is surrounded by corporate culture such as profit, consumerism, and efficiency.

Milton Friedman, who was an American economist and main proponent of free market capitalism, would be the No 1 dinner party guest invited by most of Korea’s CEOs, if he were alive. Joseph Schumpeter, an Austrian-American economist, would be No 2. For most of the past two decades, many of Korea’s elites in politics and economics have embraced their views. Milton Friedman (1970) says that the main purpose of business is to make profit for shareholders:

In a free-enterprise, private-property system, a corporate executive is an employee of the owners of the business. He has direct responsibility to his employers. That responsibility is to conduct the business in accordance with their desire, which generally will be to make as much money as possible while conforming to their basic rules of the society, both those embodied in law and those embodied in ethical custom.

Joseph Schumpeter emphasizes innovation as “creative destruction,” to destroy old business and generate new business and to perfect competition and to maximize economic activities. He argues business cycles of ups and downs; result in a stronger economic future (Bodvarsson and Van den Berg. 2009. 233-234):

Every time an innovator *creates* a new business opportunity, it *destroys* the market power and profits that its competitors had gained as result of their earlier innovations. This continual creation and destruction prevents monopolies from permanently reaping profits. Most important, argued Schumpeter, the process gives society continual technological progress.

Based on the concepts of Milton Friedman and Joseph Schumpeter, the solutions to all problems are to let personal choice alone prevail. Competition and efficiency are the most important virtues. Making profits and developing technology are the most important priorities for the national agenda. The Korean economy is dominated by large conglomerate companies. They still provide the impetus of economic success. They are economically and politically powerful. They contribute to nearly 75 percent of the country's exports and account for more than half of Korea' GDP. They also dominate domestic markets for biopharmaceutical products, health care industry, new aging industry, renewable energy, financial market, and the robotic industry. Corporate culture disseminates into the society and is perceived as the standard for ethical attitudes and proper conduct.

The importance of corporate governance has become apparent. So it leads to some issues. Most companies reduce the number of regular jobs, resulting in the increase of irregular jobs. Irregular jobs make up more than two thirds of total jobs. The labor market becomes completely flexible. It introduces unprecedented economic polarization. Corporate culture emphasizes competition between citizens and the individualization of the wage relationship. It degrades civic virtues. Korea has the world's highest suicide rate, almost doubling between 2020 and 2030. Corporate dominance always seeks to privatize state-owned or public institutions. For instance, most higher education institutions are given freedom from government intervention. The privatization of the educational system has generated intense competition between institutions of higher learning and provides an elitist educational platform.

The rich people and corporations have the same interests. Their wealth dramatically increases. The richest people have a huge influence on the economy. The plutocracy emerges and their rights and freedom are placed above those of the common

people. Korean plutonomy is building a new economic, political and cultural landscape. The Korean economy is fueled by and is consumed by the very wealthy and the average people. There is dramatic demarcation between “the plutonomy economy” and the “everyone else economy”. The richest people define a whole way of life, including, private banking, hotels, restaurants, and invitation-only clinics and health centers. “Everyone else” are invisible. Concierge doctors and technicians take care of their health. The exclusive investment clubs are managed for them. The wealthy have their own broadcasting system and internet sites. Gated communities have become common in Seoul. Busan and other large cities show the same trend. They hold live concerts, fashion shows, photo and art exhibits, and private events in their gated communities.

Korean politics is dominated by these few. They seek to deregulate everything, pay low taxes, protect the military, and reject strong unions. They exert heavy influence on political parties and elections through lobbies, donations, charitable giving, and media. They want to seek political offices. Korea’s media system is dominated by big companies. Private conglomerates and newspapers own cable networks such as CSTV, JTBC, Channel A, and MBN. The top 10 cable stations, and the top 5 TV and radio broadcasting stations are owned by the same companies that own cable networks. The wealthy donate large amounts of money to universities, foundations, and think tanks for promoting their causes. They create national database to connect their alliances and collect information through high technology.

In 2030, corporate dominance emphasizes capital over citizens, equality, and moral values. The importance of capital introduces corporate values and practices. The emergence of a plutonomic economy is represented in the importance of the corporate values and the way that globalization has accelerated the importance of the corporate dominated situations. The plutocracy has become a hot issue in Korea. The relationship between the plutocracy and democracy is a candidate for headline news.

The plutocracy hurts democracy because of the underdevelopment of pluralism, which is a precondition for the advancement of democracy. The super-chaebol at the top of the pyramid blocks efficient allocation of resources. Furthermore, the growth of the super-chaebol distorts the operation of democracy. The huge power of the wealthy

increases the role of money in politics. The chaebol affect the election process and the power of money pollutes the political fields. Most decision making processes are influenced by the chaebol directly or indirectly. Economic polarization intensifies social conflicts and leads to the collapse of the middle class. Thus, economic polarization causes economic hardship for people. Such hardship undermines their belief in the democracy. They do not care about the democratic government and have lower expectations for democracy. Koreans show a greater preference for conservative parties rather than liberal and progressive parties.

### **The Rise of the Age Gap in Economic Policy Preferences**

New conflicts begin to emerge between the younger generation and the older generation over economic policy preferences. Generational gaps have existed over the past several decades. The younger generation has held relatively liberal perspectives on social and political issues while older generations have conservative perspectives. During the 2000s-2010s, the younger generation was more supportive of the practical engagement with the environment, coexistence and cooperation with North Korea, the independent strategy with the U.S. The older generation supported the globalization with a laissez-faire attitude, strong alliances with the U.S, and anti-North Korean policies.

Now the generation gap is much more about economic policy preferences than ideology or values, due to the huge increase in the economic gap between the two generations. The younger generations are more culturally and ethnically diverse than older generations. They are more educated and less religious. However, they feel that the future of the economy is out of their hands. Many jobs are replaced by machines, programs, robotics, and cheap foreign workers. They cannot find jobs. The joblessness of the younger generation is much higher than that of the older generation. Furthermore, the household income of the young generation is much less than that of the older generation. Housing is a main factor contributing to the generation gap in wealth. The younger generation has early debt problems due to the burden of student loans and a consumption-oriented economy and culture. Their early debt problems and rising housing prices mean

that the younger generation cannot afford to buy their own homes as the older generation did. Talented young people move abroad to seek jobs due to the high unemployment rate and the tough job market. Brain drain is one of the key challenges facing Korea. Younger generations protest to reform the economy for unemployment, jobless growth, and wealth inequality. They have to pay high taxes to support pension benefits and health care costs for seniors. They call for reducing social welfare and pension system for the older generation.

On the other hand, the older generation claims the protection of existing programs. A growing number of the older generation, resulting from prolonged life expectancy, protest against cuts to social welfare programs for seniors. The Korean Association of Retired Persons (KARP), which is one of the most powerful interest groups in Korea, supports the strengthening of the rights of seniors. The Korean Silver Party (KSP), which is a political party formed to express the interest of the elderly in 2020, adopts a platform calling for the promotion of elderly rights, the protection of existing social welfare and pension systems, universal healthcare, reduction of arms worldwide, and environmental and economic sustainability. It has held seats in the National Assembly. While the political and economic chasm between younger and older generations has widened, there has been the possibility of future generational conflicts on every issue, from national safety net programs, taxation, and unemployment benefits to voting trends from elections and cultural issues.

### **Balance or Bandwagon? A Chinese Superpower**

The South Korea-US alliance is one of the most successful relations in the world since the 1953 Mutual Defense Treaty, after the Korean War. Their alliance contributes to peace and stability in East Asia. The main purposes of their alliance is to deter North Korean threats and to contain communist expansion by the former Soviet Union and China. The bilateral alliance is always under stress due to differences between South Korea and the US over how to deal with North Korea's threats and China's rise. South Koreans see North Koreans as brothers, so the South Korean government maintains an

engagement policy toward North Korea. It refuses to take the US's hard line policy against North Korea. On the other hand, Korea views the rise of China as a major economic opportunity, while the US considers China as a serious rival for control over East Asia. Korea does not fear China's rise and is getting closer to China. Furthermore, Korea poses the same stance with China over North Korean and Japanese issues.

China's economy surpasses that of the United States in 2027. Also, Chinese military capabilities surpass those of the US. The United States is going to cede its global leadership to China. China has established a strong military presence in the Asia-Pacific region. China's rapid economic development and active diplomacy have transformed world politics. China becomes more powerful than the US and the US loses its status as the biggest global player. The rapid economic growth of China, India, Russia, and Brazil lead to the multipolar world. Latin America, Asia, and Africa lie under the influence of China, while the United States has relative influence over Europe, the Middle East, Japan, and Australia. China is a new key player in the world. The Chinese consider themselves as the center of the world. They seek East Asian hegemony and play an assertive role to the world politics because of "China's history, culture, traditions, size, economic dynamism, and self-image" (Huntington 1996, 229). In particular, the concept of a hierarchical Sinocentric world order wants the new world order, which directly affect Korea's international relations.

Korea has to make critical strategic choices over China's rapid growth in power and hegemonic ambitions: balance or bandwagon. By balancing, Korea should improve its military capability or build military alliances with other countries against the rising China. Inversely, the bandwagoning strategy makes Korea maintain constructive relations with China or Korea should build a new alliance with China for economic and strategic gains.

In 2028, China and the US fall into conflict over the Taiwan Strait and the South China Sea. The US supports Taiwan in the military confrontation in the Taiwan Strait and Chinese troops are landing on the disputed territory in the South China Sea. The US takes measurements against China's aggressive actions. The US is seeking to surround the Chinese military, economically, and diplomatically. South Korea faces a security

dilemma: whether to bandwagon with China or align with the US. If South Korea chooses to advocate the US's stance under the security treaty, South Korea becomes entrapped in the US's conflicts with China. China is South Korea's best customer and trading partner. Should South Korea endure the loss of economic gains and the danger of armed conflict? On the other hand, if South Korea chooses China, it encounters the risk of abandonment by the US. The South Korean government provides a national referendum to make the decision. The younger generation favors the bandwagoning strategy while the older generation prefers the balancing strategy. This balance or bandwagon choice spurs the generational conflicts. Eventually, the national referendum picks the bandwagoning strategy: 60 percent of voters support the bandwagon based on the result of the referendum. As a result of the national referendum, the US withdraws all of its forces stationed in South Korea. The South Korea-US security alliance breaks down at the end of 2020. South Korea moves towards China. South Korea has undergone the most important transformation on its international relations.

#### **6.2.4. Summary**

This scenario is based on the "Continued Growth" future images. We can see how continued economic growth affects the Korean society through the year 2030. The size of the Korean economy is steadily growing along with export-oriented economic policy. Most Koreans regard the East Asian Community as an important element for economic growth and regional peace in Korea. High-tech sectors and enterprises can be powerful engine for economic development. Korea makes the transition to a mature knowledge economy. Koreans have lived in a high-tech lifestyle. Big companies have exerted a powerful influence on nearly every aspect of Korean life, including higher education institutions. Economic/social polarization and age gaps are deeply embedded in Korea. Progress in the continued economic growth future society is a product of either economic prosperity or technological advancement. Korean society is defined by the concepts of free trade and meritocracy. The Republic of Samsung scenario is an era of great economic growth as well as an era of inequality.

Table 6.1 presents a summary of the main features of the scenario. The vision of this scenario is one of global neoliberal capitalism which is the official view of Korea's future. It is a linear process of global capitalism and represents the continuation of current trends. The market optimism and techno-consumerism appear in Korea as discourses. Market-oriented reforms are seen as a social and economic progress. Koreans are fortunate to have so many ways to access high-tech devices.

Table 6.1 The Republic of Samsung: Key Features

Vision of the future	Discourse/worldview	Opportunities	Challenges
Global neoliberal capitalism	Market optimism, techno-consumerism	Satisfaction of further economic growth and technology advancement, regional peace in East Asia	The increasing social polarization, dominance of single corporate culture, erosion of democracy, corporatization of higher education

The key opportunities for the Republic of Samsung scenario are further economic growth, technology advancement, and regional peace in East Asia. In this scenario, the main goal of Korea is to prepare Koreans for the globalized world and technological advancement. Economic growth and material affluence are a result of strong economic and technological innovation. The vision of global neoliberal capitalism fosters entrepreneurship and technological innovation, which are main driving forces. Technological innovation combined with entrepreneurship helps sustain Korea's continued economic growth. Korea needs to create a successful innovation strategy, such as nurturing innovation culture and enhancing the innovation human resource pool. Another opportunity is that external environments, including financial crisis, energy issues, infectious diseases, etc, stimulate regional integration. Regional integration in Asia comes together and coordinates some decisions to overcome challenges regional states confront. Accordingly regional integration in East Asia has assumed a significant

strategic initiative. Korea needs to enhance greater commitment to regional integration for the future.

On the other hand, key challenges lie in increasing social polarization, dominance of a single corporate culture, erosion of democracy, and the corporatization of higher education. Social polarization will become a dominant phenomenon and a significant issue in the future Korean society. Social polarization in Korea is associated with differentiation, exclusion and segregation within society that may emerge from several factors. The second challenge is the dominance of corporate culture. Corporate dominance will emphasize competition, profit and consumerism over citizens, equality, and moral values. As a result, it weakens social cohesion. Weakened social cohesion impedes social solidarity and economic success. The third challenge is the erosion of democracy. The corporate dominance will hurt the democracy because of the underdevelopment of pluralism and distortion of the function of democracy. The final challenge is the corporatization of higher education. The corporatization of universities will undermine university's ability and their public commitment due to the mounting costs and the narrow focus on economic competitiveness. These four challenges may enhance social conflicts and tensions and lead to the realignment of social groups. Thus they are likely to be important to the negative outcomes of economic and political development.

### **6.3. Collapse Scenario: The Great Han River Flood in Warmer Korea**

#### **6.3.1. Background**

In The Great Han River Flood in Warmer Korea scenario, Korea encounters catastrophic weather events, contributed to by global warming, which causes a consequent warming of surface temperatures and rising sea levels dramatically. Korea is affected by ocean storms and ensuing heavy floods. There are all kinds of emergencies. The death toll after the worst floods has risen to hundreds of thousands. The great flood causes a nationwide blackout. The functions of the government nearly collapse and the fundamentals of Korean society are destroyed. The following crisis is severe. The Korean government cannot provide basic services for the recovery from the disaster. Under this

scenario, Koreans require a revolutionary paradigm shift in the way they live. Accordingly, this scenario can be called the collapse scenario rather than the crisis scenario.

Global warming in recent decades has become a widely discussed topic. It has inspired doomsday visions for the future characterized by droughts, heat waves, floods, tsunamis, hurricanes, earthquakes, and other calamities. The US Pentagon's report, "An Abrupt Climate Change Scenario and its Implications for United States National Security," says the threats and fears of global warming on national security (Schwartz and Randall 2003, 14):

Violence and disruption stemming from the stresses created by abrupt changes in the climate pose a different type of threat to national security than we are accustomed to today. Military confrontation may be triggered by a desperate need for natural resources such as energy, food and water rather than by conflicts over ideology, religion, or national honor. The shifting motivation for confrontation would alter which countries are most vulnerable and the existing warning signs for security threats.

Floods are the most common natural disasters around the world. Most global communities have experienced some kind of flooding. Gideon Sjoberg (1962, 357) defines disaster as "a severe, relatively sudden, and frequently unexpected disruption of normal structural arrangements within a social system, or subsystem, resulting from a force." Disasters can destroy a society and result in sweeping social changes. People lose their livelihood, social position, and family. People fall into "collective stress situations" that "many members of a social system fail to receive expected conditions of life from the system" (Barton 1969, 38). On the other hand, a disaster represents a "window of opportunity" that "brings forth demands for improved safety in the future" (Alexander 2000, 3). It can create "the conditions for new levels of sociocultural integration" (Yoffee 1988, 11). Severe natural disasters can bring out best measurements to overcome the hardships. When a society is demolished, humans may make better societies than previous ones. People might establish updated social and physical infrastructures. They can fight against impending future disasters. The future relies more on our choices.

### 6.3.2. Drivers of the Scenario

This scenario assumes the following driving forces:

- **Environment:** Environmental degradation is a main driving force for this collapse scenario. Natural resource depletion is steadily occurring. Air, water and land pollution constantly challenge Koreans. The levels of carbon dioxide in the atmosphere are continuing to rise. Korea continues to warm. The rate of global warming is accelerating. The climate change is causing extreme weather events and serious economic consequences.
- **Population:** Total population is steadily decreased. The birth rate is one of the lowest in the world. Korea shows one of the most rapidly aging societies. The share of Korean population living in urban areas has increased. Korea has a higher urbanization level in the world. Increasing levels of urbanization are source of environmental degradation. The world population continues to grow. The rapid growth of world population has caused the problems of resource depletion, pollution, and food shortage.
- **Economy:** The global economy faces a number of problems. The pace of globalization and international trade has been slowed due to the impacts of climate change. A more sustainable world economy has emerged. Korea's economy grows at a moderate pace but still shows healthy growth. Korean companies have confronted challenges caused by the global warming. Unfortunately, Korea's economy is on a steep downward trend when the severe weather events start to become worse.
- **Governance:** Disaster risk governance emerges because the frequency of disasters and the increase of economic losses are rising. The state is working toward partnerships with businesses and civil society for dealing with the risk agenda. The state has more power and leverage to reduce the disaster risk. Civil society and businesses are subject to state leadership.

- **Technology:** Even though natural disasters damage physical capital and the infrastructure of an economy, new applied technology has developed for disasters. Overall technologies show a moderate advancement. Green technology (energy efficient and renewable energy), however, is growing strongly with the sustainable growth strategies.
- **Culture:** Natural disasters and technology allow Koreans to identify sources of risk. Social norms are more important than individual autonomy in the era of risk. Desire for safety is the most important social value. Along with the individualistic culture, Koreans favor personal and family protection over group and community protection. There are no high social cohesions and group consciousness. Disruption and conflict are widespread in Korea.
- **Energy:** Global and national energy consumption has increased steadily. Energy demand rises steadily due to population and economic growth. In Korea energy shortages have been occurring more frequently, driven by the extreme weather events and dwindling fossil fuel reserves. Growing energy security becomes a priority on national agenda even though alternative energy sources are developed to meet growing demand.

### **6.3.3. The Path to 2030**

#### **The Era of Global Risk Society: Safety Fever**

Korean men and women of 2013 are the offspring of political democracy, pop culture like the Korean Wave, and economic prosperity in the end of the twentieth century. Korean society has embraced individualism, task-oriented attitudes, material success, and consumerism over the past several decades. In the early twenty-first century, Korea has made great strides in ICT development, e-government, global trade, and the environment. Koreans believed that Korean society has become anchored in the fruits of modernization.

The Korean Wave or “the love of South Korean cultural exports” wash over the world and maintain a strong cultural influence over the young generations in the world. Communications are revolutionizing Korean society. Korean IT products dominate the global market. The smart phone penetration rate in Korea is about 90 percent, far higher than the world average. 3D technologies are widespread. “Extreme Sports Holograms” and “Home HD Holographic TV” are seen at home as high-tech entertainment devices (Winslow 2007). Koreans enjoy vehicle telematics, offering “voice-and touch-activated communication, entertainment features and battery-charging management for electric and hybrid vehicles”(Stenquist 2011). The Korean government launches solar powered military housing projects. Every military housing unit should collect solar power and rain water.

Koreas are looking for new ways of seeing the world, while rejoicing technological progress. Korean’s prospects go faster and louder in the 2010s. The discourse of risk and danger, however, are surrounding all Korean public perceptions and thoughts. On the afternoon of April 5, 2013, a Chinese space laboratory module Tiangong-2 (Heavenly Palace-2) explodes shortly after docking with Shenzhou 12 Chinese spacecraft and kills some astronauts. The explosion is caused by the most powerful meteor storm ever recorded. Chinese crews cannot effectively operate the defense mechanism due to a terrible miscalculation in the computer. The Tiangon-2 disaster has severely damaged Chinese national pride and caused a large delay in China's lunar exploration project. In the August of 2013, a cholera epidemic hits the Texas Gulf Coast after a tropical storm and ensuing floods. It has gradually spread east and north, reaching Louisiana and the Mississippi River. The cholera epidemic kills several hundred people and affects millions of people nationwide. “Cholera outbreak in Texas and Louisiana is one of the worst ever in U.S. history”, according to the director of the Federal Emergency Management Agency. Along with a nuclear-armed Iran, Saudi Arabia’s attempt to acquire nuclear weapons drives a nuclear arms race in the Middle East.

Risks have always existed throughout human history. As mentioned above, global hazards are awakening a sense of crisis about the safety in Korean society which has

readily embraced by the myth of prosperity and technological progress. The author of *Writing Everyday Risks and Prosperous Life in Korea* (2013) warns about the great risks and negative side effects of Korea's transformed prosperity period. She states the everyday risks:

The other part of a prosperous Korea is the high-risk society. The high risk of Korean society reflects uncertainty, change, and discontents. Koreans have faced risk factors such as terrorism, environmental degradation, greater financial complexity, and uncontrollable technology. The deepest concerns in a prosperous time are health risks, personal lives, and family. The large majority believe that current regulations are not enough to protect people from genetically modified foods and other biotechnology. The disconnection from the smart phone leads to the highest levels of depression for a whole day. Some people die of e-viruses caused by human-embedded electronic devices. Koreans are often buying emergency/disaster kit items and bottled water in an emergency situation. More Koreans buy organic foods in an effort to protect the environment. They worry about genetic identity theft and threats to privacy. Travel abroad is canceled as a result of the severe weather conditions. Extreme or risky sports are rapidly growing in popularity.

Technological progress, economic growth, and natural disaster are sources of risk. The need for safety is the central interest to Korean society. Risks are starting to become a large source of business. The private risk industry gains huge profits and benefits. Risk management consulting businesses are continuing to grow. Government uses the concept of risk to control the people and push their policy agenda. The government's ways to gain more leverage on the public leads the debates on the role of the government. Many Koreans believe that what they anticipate from the future is negative change, rather than the continuation of economic growth. The safety fever is motivated by perceptions of high risk. In this sense, the language of the risk society can be replaced with a safety oriented discourse, which is related with self-preservation, well-being, threat avoidance, and self-gratification, and ideal security culture. Safety is more important than competition. It is more than physical safety or avoiding risk. Everyone has equivalent safety access. The implement of true democracy and the emphasis of family values are alternative ways to sustain the powerful narrative of safety fever.

## **Consumerist Optimism**

Much of the debates about the risk society caused by the rapid modernization and climate change are more closely linked to conspicuous consumption. The latest national smartphone survey finds that about two-thirds of Korean adults say conspicuous consumption creates serious environmental degradation that leads to extreme weather conditions. However, Koreans who feel consumption is related to extreme weather do not want to change their existing consumption patterns dramatically. At the same time, nearly three in 10 Koreans say they are willing to change their consumption patterns to gain long term benefits for environmental concerns. While the majority of Koreans recognize the significant relationship between consumption and environmental problems, most do not pay much attention to sustainable consumption. They still emphasize economic success. Some go even further to say that the over-emphasis on environmental threatens hurts competitiveness and profitability.

In the 2015, JC Corporation, a leading food company in Korea, launches a famous bio-energy drink ad campaign, “More Drink, More Physical and Mental Health! Just Follow to Your Sense of Personal Well-Being in a New Period of Global Risks.” The headline invokes one of dominant discourses about the culture of consumption: well-being is dependent on material aspirations; personal satisfaction is derived from personal choice and health status. The campaign reflects the consumerist optimism. The private chef business has been one of the fastest growing services in the 2010s. Wealthy people demand more personal services and are employing more personal chefs for their specific tastes. The Korean Personal Chef Association says that tens of thousands of Koreans hire personal chefs today compared with only thousands of Koreans 6 years ago. The privatizing chefs are more than food tastes. They mean a new display of opulence.

Energy consumption per capita in Korea is 2 times as high as the world average and has been higher than the OECD average, a Korean government report reveals. According to the Korean Clean Energy Agency, total energy consumption has grown steadily between 2013 and 2017. Korea’s primary consumption is dominated by gas, coal,

and nuclear, which accounts for 36 percent, 23 percent, 19 percent, and 17 percent, respectively. Biomass covers 5 percent of primary consumption. Over the next ten years, more energy consumption is expected to increase by 30 percent and growth in Korean energy consumption surpasses its GDP growth. Korea generates 5 times as much carbon dioxide as the global average. High level of energy consumption has remained fundamentally unchanged in the middle of the extreme weather events.

Luxury brands also continue to exceed expectations. They grow 90 percent in Korea between 2013 and 2018, while mass consumer brands only grow 20 percent in the same period. Korea's spending on luxury items continue. South Korea is the substantial market of the international luxury industry. In Seoul, eight out of ten Korean women has a Louis Vuitton handbag. Luxury brands have become an everyday experience for millions of Koreans: Gucci shoes, Prada clothes, Tiffany jewelry, Rolex watches, Burberry bags, etc. Everybody can taste small luxury products under the language, "democratization of luxury goods". Louis Vuitton bags, however, are not luxury brands any more. They are just expensive items. New luxury brands have emerged. The new luxury brands are derived from the time of economic prosperity and high technology in the late twenty century and the early twenty first century, when people are consistently satisfied their material desires. Koreans are looking for post-material waves like "emotional connections," meaningful experiences, and high technology products: robot driven cars, commercial space trips, augmented reality watch, custom tailored spiritual travel, fantasy organizers, household managers, bio-medical smart clothes, wearable universal translation robot, Asian and ancient antiques, and luxury bathrooms.

### **The Most Extreme Weather Year**

The year 2015 is one of the most extreme weather years in Korean history. January 2015 is the second snowiest January in record. The worst yellow dust storm covers the nation, followed by the third hottest month. Korea has seen its worst drought in 50 years. Repeated flooding in the Han River is a significant issue for a couple of months. Roaring wildfires and lightning storms are in October. "Warming temperatures

cause a large number of extreme weather events” and “warmer air that holds more water can produce heavy rain and snow,” says a Korean meteorologist. The cost of extreme weather events is steadily rising and reaches a total of hundreds of billions in damages in 2015. The following is a list of Korea weather records observed.

- January: 80 inches of snow has fallen across much of Korea, making it the second snowiest winter in Korea history.
- February: there has been snow on the ground for two weeks.
- March: Koreans get stuck in the freezing cold weather, showing a dramatic drop in temperature.
- April: the yellow dust that comes from China causes school closures and health concerns with respiratory problems.
- May: the continued drought in Jeju Island, located at the southern tip of Korean peninsula, causes a widespread livestock deaths and severe shortage of water.
- June: frost and hail destroy farmland.
- July: Korea reports its third hottest July over the decades.
- August: heavy rain and flash floods hit Seoul, one of the greatest rain falls ever recorded in three hours in Korea. The underground railway is stopped for 36 hours by floodwater.
- September: the worst wildfire burns more than 10,000 acres and destroys hundreds of homes
- October: the autumn heat wave hits the southern part of Korea.
- November: a large number of heavy snowstorms occur.
- December: ice storms and extreme cold cause major power outages and property damages.

### **The Politics of Extreme Weather**

In 2016, the extreme weather events has become the heart of socio-political issues, dividing the nation into many incompatible and opposing factions over whether or not climate change affects extreme weather, and how to deal with it. Extreme weather events influence Korean society in many ways. Death tolls and damage from extreme weather are increasing significantly. The extreme weather causes a record number of power outages. Three nuclear reactors shutdown due to problems with the cooling systems resulting in reduced GDP growth and affecting trade and financial markets negatively. Food prices soar. Weak economies and budget deficits threaten the legitimacy of government.

In Seoul, the progressive and conservative parties remain at an impasse on funding and climate-related legislations. The conservatives argue that government should bring a scaled-back disaster relief fund for the response to extreme weather. They refuse to support the scientific consensus that human activities cause the global warming. They worry about higher taxes on the rich for dealing with climate change agenda. The conservative party rejects the latest progressive party's proposals. It blocks cap-and trade legislation, including a carbon tax, and new energy efficiency bills. The progressive party tries to introduce the environmental tax reform. The climate change issue is a critical part of its platform. However, it does not have the leverage to make their agenda into the law under the harsh political reality.

Civil society is concerned about extreme weather to a much greater extent than any other fields. It criticizes the political parties for engaging in "gestural politics" (Giddens 2008) because their grand plans seem to be vague and lacking urgency. The extreme weather events generate a number of new organizations to deal with the issue. Korean civil society organizations' consortium put considerable pressure on politicians and officials to take action. In particular, the Korean Civil Society Coalition on Climate Change, which is founded in 2015, pushes environmental protection and climate change mitigation policy. It plays a significant role in climate change policy assessments and sustainable development policy. The state is struggling with aging infrastructure to resist severe weather. It tries to develop a climate-resilient infrastructure, but fails in the task. The government takes "a return to planning" (Giddens 2008) which promotes a long term view to the public and private sectors. It forms national initiatives for low carbon emissions and a green Korea. The initiatives focus on solar and renewable energy home and a green transportation system.

Global warming and extreme weather are sources of risks and opportunities for businesses. They affect the agriculture industry, fishery industry, insurance industry, energy intensive industry, and tourism. Energy intensive industries, such as iron, steel, cement, ceramics, glass, aluminum, paper, and chemicals, are confronted with rising energy costs and international competition. They implement low carbon manufacturing and make innovations in order to survive. On the other hand, some businesses swiftly

move to commercialize low carbon and energy efficiency technologies. Many people are entering the new carbon business for Korean companies. For instance, artificial paper and glass start new businesses. Three of Korea's top conglomerates, such as, Samsung, SK and LG groups, issue Eco-Corporate Citizenship Reports and launch "Eco-Market Movement" dedicated to environmental challenges and innovation solutions.

Many Koreans believe that recent extreme weather events are evidence of global warming. However, some Korean conservative Christians see the extreme weather as a sign from God or the End Times. They are obsessed with the apocalyptic idea. The idea of End Times drives many people to get involved in religion. Religious leaders predict the judgment day. They demonize the efforts to reduce greenhouse gas emissions. Korean Christianity remains one of the most important elements in the dynamism of Korean politics. Christians account for about one-third of the population of Korea. It is one of the dominant religious groups in South Korea. Some groups of Christians aggressively get involved in politics and try to control the government. Korean conservative Christians are a growing political force. Theocracy is introduced into Korean politics. They use the label of God's Will and the Christian right to expand their network of support and affiliate with the conservative political party. On the other hand, the progressive party and a large number of humanist groups criticize Christian theocracy and view the extreme weather as an outcome of modernity.

### **Extreme Weather Divide: "Dark with Envy"**

Koreans are exposed to severe conditions ranging from disasters to everyday risks. The most vulnerable communities are generally high population-density urban areas, low-lying coastal regions, and river flood plains. The poor are more vulnerable to extreme weather events than the rich. The poor tend to have very limited resources with which to protect themselves from severe weather conditions, while the rich spend huge sums of money to protect themselves from deadly conditions.

In 2017, a rare early November heavy snow storm hits Seoul, Korea. Seoul is reportedly covered by about 40 inches (more than one meter), killing dozens of people

and leaving 1 million households without electricity for a week. Ha-Il, a 31-year-old high school teacher, who resides in downtown Seoul, goes to her best friend's house for two nights. She has no power in the house due to the snowstorm. Power is out all over her town. Her friend has the biggest hydrogen fuel cell generator. After the power failure, her wealthy friend invites her family to her house to avoid problems that the power outages caused. Her friend is able to keep lights, home appliances, and the home 3D entertainment room running for several days in a whole-home hydrogen fuel cell generator system. Ha-Il's daughters really enjoy the sleepover. During the era of extreme weather events, generators become a necessary amenity. Koreans use them as a status symbol because lower income families cannot afford to buy the expensive hydrogen fuel cell generator.

There is another scene. Mr. Kim, CEO of One Safe Security Company, flees to a disaster-resistant vacation house at the countryside an hours drive from Seoul. The disaster-resistant vacation house is supported by an impact-resistant roof and window system, and a safe room. It is structured to resist earthquakes, floods, snowstorms, and other natural disasters. Also, it is equipped with high-tech communication devices. The disaster-resistant vacation house allows his family to stay safe during natural disasters. "The disaster-resistant vacation house can provide better protection from a blizzard, than my regular house my kids would be more comfortable resting in this disaster-resistant house than a normal house," says Mr. Kim. Purchasing disaster-resistant vacation houses are a vogue that becomes more common for upper class and elite groups. Much has changed over the past decade. Rich people have generally owned beach condos, mountain cabins, and luxury beachfront villas. Instead, security and welfare in disasters are markers of class identity. Disaster-resistant vacation houses represent class privileges and tastes.

### **The Big Arctic Melt: The Golden Age of Cyropolitics**

The arctic is experiencing an unprecedented transformation. The Arctic sea ice is steadily diminishing, caused by the warmer air over the past decades. Compared to 2000, over half of the Arctic sea ice has vanished in 2020. The melting of sea ice in the Arctic

causes the vicious cycle of rising temperatures and rising sea levels. In 2020, the Oslo World Polar Science Conference claims that the Arctic would be the ice free around 2040. The Arctic is very warm. The projection of an ice-free Arctic is a bellwether of what is coming to the entire globe.

The melting Arctic brings a number of environmental, economic, and political issues. Multiple ecosystems of wildlife and plant life are affected. The melting ice destroys their natural habitat. The polar bear population has seen a sharp drop. One-fourth of Earth's permafrost has disappeared. Emissions from thawing permafrost cause an increase in global warming. The melting ice provides new shipping routes between the North Atlantic and the Pacific oceans for goods, fishing, and tourism. Large-scale natural resources such as oil, gas, and minerals, are rapidly developed in the Arctic and subarctic regions. For instance, the world's largest oil and gas companies, such as ExxonMobil, BP, Royal Dutch Shell, PetroChina, and Gazprom, are entering into oil and gas exploration with the Arctic countries of America, Canada, Russia, Norway, and Denmark.

The melting ice induces new territory disputes due to natural resources and shipping routes. The Arctic geopolitically becomes a center of "cryopolitics" for "the competition between states to control emerging resources and territory created by the melting cryosphere" (Haverluk 2007, 1). Eight Arctic states dispatch Arctic patrol vessels and submarines for ship safety and environmental protection. The US and Russia set up military bases. The Arctic is required to have new international agreements and environmental regulations. In particular, the Arctic island of Greenland becomes a fully independent country from Denmark in 2022. Many Greenlanders believe that their independence secure more jobs and wealth produced by oil and mining exploration while Greenland enters a stage for a fierce battle between global oil companies. Major power countries like the US, China, India, and Russia, make strong efforts to control Greenland.

### **Environmental Refugees: Climate Change Exodus**

The International Organization for Migration (IOM) declares in June, 2023 that there are up to millions of environmental refugees. More people emigrate to escape from

the hard environmental situation. “Environmental refugees are persons who can no longer gain a secure livelihood in their traditional homelands because of environmental factors of unusual scope, notably drought, desertification, deforestation, soil erosion, water shortages and climate change, also natural disasters such as cyclones, storm surges and floods” (Myers and Kent 1995, 18). The number of environmental refugees increases much more rapidly than before.

The Alliance of Small Island States (AOSIS), “a coalition of 43 small island and low-lying coastal developing countries”, are seriously threatened by the rising sea levels. It has called for severe actions in greenhouse gas emissions and coastal protection measures. Some parts of its coastal area are underwater and many people are displaced. In particular, Tuamotu islands in French Polynesia, Tuvalu, a tiny island country in the Pacific, and Maldives, the Indian Ocean islands, are disappearing from sight. These country’s citizens are forced to abandon their businesses, homes, and traditions. Many countries of AOSIS are on the verge of disappearing. The massive exodus happens in the AOSIS. According to IOM, at least 1 million people of AOSIA are looking for homes elsewhere.

The International Environmental Refugee Project establishes the Floating Eco-Habitat Project, supported by Global Climate Fund and environmental charities. The project has two branches: the Floating Artificial City Project and Water Floating House Project. The city project builds huge floating artificial islands to provide homes for environmental refugees. It moves around the world as a self-sufficient shelter for about 50,000 people. It is powered by renewable energies such as solar, thermal, wind energy, hydraulic and a tidal power station. The house project establishes floating building structures. When sea levels rise and floods occur, the houses float up with the water level. The floating houses have flexible pipes for sewage and electricity.

Environmental refugees are not an uncommon sight in Korea. Jinsoo Park leaves his town in the west coast of Korea and moves to a crowded city after a tropical storm raked his home and business. His family is suffering from economic hardship and food insecurity. His many friends also do the same thing. According to National Emergency Management Agency (NEMA), about 200,000 people have fled their home because of

the natural disasters in 2025. The June flooding and September horrific wildfire kill more than 100 people and destroy at least 5,000 homes. The number of environmental refugees has been steadily increasing. The continuous onslaught of natural disasters turns climate migration into a hot domestic issue and has induced political and civil conflict.

### **Great Han River Flood of 2027**

On the early morning of Saturday, May 15, 2027, an emergency notification is sent up to wake up the Director of the Korea Meteorological Administration (KMA). The National Weather Emergency Alert System (NWEAS) is designed to send emergency messages to the members of the National Emergency Management Council (NEMC) when imminent dangers are identified in Korea. The NWEAS, which has an intelligent supercomputer with a climate forecasting system, warns of huge storm and heavy rain. The Director rushes to the window of his bedroom near the Han River. A surge of water is rolling down the Han River from an intense rain. The system convenes an emergency meeting to address heavy rain conditions and how to proceed via video conferencing. The Prime Minister, who heads the NEMC, appears on the 3D screen and starts to preside over the meeting. He declares an emergency state of alert, so the NWEAS quickly sends and broadcasts emergency notification to the whole nation. Most participants of the meeting hear ominous sound of rumbling thunder in the distance.

In the spring of 2027, the most disastrous flood in Korean history occurs along the Han River passing through Seoul. The rain has been falling for about three weeks. The flooding inundates Seoul, Gangwon Province (east part of Korea) and Kyunggi Province (west part of Korea). The Han River floods and washes through Seoul. Mr. President declares flooded areas as a special disaster zone to prevent looting and in order to respond to the crisis. Government authorities and military troops are deployed to assist evacuation and rescue operations, and to protect property. Dead bodies are everywhere. It affects about one-fourth of Korea. It kills thousands of individuals, ruins crops, destroys tens of thousands of buildings, and causes hundreds of thousands of people to be

evacuated from their home. Koreans know that the heavy rain is coming, but they cannot imagine it will be such a big mess.

### **Worldwide Extreme Weather Phenomena: No International Aid to Korea**

Extreme weather events become a worldwide phenomenon. Most countries have been affected by severe weather. There is a high death toll and high economic losses. To make the matter worse, the severe weather situations have a negative impact on the world transportation system such as road, rail, aviation, and navigation. The Korean government has appealed to the international community for humanitarian aid because it has lost the capacity to feed Koreans. There is no response from the international community. The United Nations aid programs fail. Even the Development Assistance Committee (DAC) of the OECD can no longer help Korea.

### **Fallen State: Grasping at Straws**

The disruption caused by the massive Han River flood has serious implications for national security, political and economic stability, and social development in Korea. The flood inundates major cities, including Seoul. Hundreds of thousands of people flee Seoul. Government offices and schools announce closures. Subway and train services are not able to navigate around Seoul. The flood downs power lines. Incheon International Airport, which is Korea's largest airport, shuts down. The flood obliterates thousands of acres of rice fields and other cropland. Almost 10,000 factories have been closed, many of them high-tech producers, auto-part manufactures, and bio-technology makers.

Overall commodity prices have been on the rise since the flood occurred. The flood threatens the energy infrastructure, cutting off oil and gas supplies, and damaging solar panels and other renewable energy facilities. Energy prices soar, and this makes the Korean economy vulnerable. High food prices worsen the situation. The price of rice, fish, meats, dairy, fruit and sugar increases leading to the great threat to food security. The flood destroys global credit and paralyzes international trade. The delays to shipment last

for weeks. The flood causes long-term health issues and environmental damages: contaminated water, toxic chemicals, and other pollutants. Furthermore, it brings collective stress along with a sense of loss or grief, anger, depression, uncertainty, and distrust of institutions.

The Korean government confronts the threat of social unrest. It fails to respond adequately to the country's worst-ever natural disaster. The government fails to rescue citizens quickly and does not provide immediate aid. It also cannot maintain domestic order in the aftermath. The colossal failure of governmental responses erodes the competence and legitimacy for the government, leading widespread public dissent and anger. Thus, the Korean government falls into “the incapacity of a state to perform its obligations toward its citizens and toward the international community” (Giorgetti 2012, 263).

Even as the government initiates restoration measures in much of Korea, it has heightened people’s frustrations on the inadequate relief efforts. They see the consequences of incompetence and neglect by the government. Hundreds of thousand people gather at the Seoul City Hall Public Square to shout for the ousting of the President and new elections. A wave of protests and civil uprising spreads across the country. Most Koreans express their outrage over the government in three aspects: (1) class bias by the governmental responses on the floods; (2) the incidence of large-scale corruption with multinational corporations; (3) post- flood ineptitude. Specifically, the following responses reflected the criticisms of the ordinary:

“If my neighborhood is wealthy people, my family would have rescued from the flood as soon as possible”

“The flood itself does not kill too many people. Rather, bad houses and buildings do make poor people more vulnerable”

“Instead of serving the nations and the public, political leaders and high officials allow for the monetization of their positions and serve themselves.”

“A lobbyist and developer are for soliciting flood relief projects.”

“The political elites do not care about the pain of people. They only care about their gains.”

“The government does not consider quick aid as the highest priority for the emergency. Poor and slow responses after the flood are the virtues of the government.”

The 2027 Failed State Index, prepared by *Foreign Policy* magazine and the Fund for Peace, says that Korea is the world’s second most unstable state, behind Bangladesh, because of malfunctioning states from the massive flood. The index measures the instability and failure of countries around the world. The most dangerous countries are Bangladesh, Korea, Sudan, Netherlands, and Nauru. Bangladesh, Netherlands, and Nauru are devastated by years of struggle with rising sea levels, rank first, fourth, and fifth respectively. Major causes for the failed state are natural hazards and environmental degradation, compared with anomic internal conflict and economic crisis two decades ago. In terms of regions, two decades ago, dominant failed states were in Africa.

### **Inevitable New Movements: “Degrowth Society”**

Most Koreans take a skeptical view of the conventional economic growth model: “the fossil fuel based, automobile-centered, throwaway economy” (Brown 2006, 4). They reject the consumption-oriented policy of promoting economic growth and trade at the expense of the environment. They oppose the fast paced society of accelerating progress of technology and science because they believe that sustainable development is the important source of a real alternative to avoid future nightmares. Environmental degradation, depletion of resources, and the highest level of consumption are ravaging the foundation of survival. They are looking for radical change and a new economy. Korea’s actions towards a low-consumption lifestyle, along with an “economic contraction” slogan, are fundamental. Achieving a degrowth society is a natural outcome of the most destructive river flood. “Degrowth opposes conventional growth economics on the grounds that growth in the highly developed nations has become socially counter-productive, ecologically unsustainable, and uneconomic” (Alexander 2012). Sustainable

degrowth has been defined as “an equitable downscaling of production and consumption that increase human well-being and enhances ecological conditions at the local and global level, in the short and long term” (Schneider, Kallis and Martinez-Alier 2010, 512). In this context, George Herbert’s following poems on “Providence” are widely cited in Korean society (Herbert and Heber 1861, 100):

Bees work for man; and yet they never bruise  
Their Master’s flower, but leave it, having done,  
As fair as ever, and as fit to use.  
So both the flower doth stay, and honey run.

Sheep eat the grass, and dung the ground for more:  
Trees after bearing drop their leaves for soil:  
Spring vent their streams, and by expense get store:  
Clouds cool by heat, and baths by cooling boil.

The practice of a degrowth society project becomes Korea’s first priority. By the end of the 2020s, the degrowth society idea has replaced the sustainable society idea as environmental disasters threaten basic human needs. The path to a degrowth society lies in lower production and consumption rates, deepening democracy, and a more equal distribution of wealth (Schneider, Kallis and Martinez-Alier 2010, 511). Degrowth society is an alternative project for a post-flood politics. It is “an equitable and democratic transition to a smaller economy with less production and consumption” (Martínez-Alier et al. 2010, 1741). It does not make a stand against economic growth, but rather objects to growth-driven developmentalism. It focuses on “a society built on quality rather than on quantity, on cooperation rather than on competition[...] humanity liberated from economism for which social justice is the objective” (Martínez-Alier et al. 2010, 1742). In this context, progress in a degrowth society means harmony with nature and simple life, while the traditional paradigm pursues economic growth as progress.

Political and economic institutions are so important that they deal with balancing power between different interest groups and allow people to practice degrowth values. Political systems are associated with “decentralizing and deepening democratic institutions” (Schneider, Kallis, and Martinez-Alier 2010, 513). But sometimes political systems mediate economic systems for encouraging degrowth attitudes and practices. The

degrowth society is compatible with market economy. It only scales down the scope of the market economy (Latouche 2003):

Drastically reducing environmental damage does mean losing the monetary value in material goods. But it does not necessarily mean ceasing to create value through non-material products. In part, these could keep their market forms. Though the market and profit can still be incentives, the system must no longer revolve around them.

There are two strategies to establishing the degrowth society: the voluntary simplicity movement and the eco-village movement. The voluntary simplicity movement is a social movement of people who not only reject high consumption lifestyles but also seek a high quality alternative life. People who embrace voluntary simplicity try to attain a simple and meaningful life. This life signifies “accepting a lower income and a lower level of consumption, in exchange for more time and freedom to pursue other life goals, such as community or social engagements, more time with family, artistic or intellectual projects, more fulfilling employment, political participation, sustainable living, spiritual exploration, reading, contemplation, relaxation, pleasure seeking, love, and so on – none of which need to rely on money, or much money” (Alexander 2011, 186).

Eco-villages are defined as “urban or rural communities of people who strive to integrate a supportive social environment with a low-impact way of life” (Irrgang 2005, 29). People living in eco-villages share and recycle clothes, shoes, books, all children items, cars, electric appliances, and equipment of all kinds. Also they run ‘No Internet’ weeks. The core principles of eco-villages are identified as the following (Trainer 2002, 69):

- The rejection of reliance on the market and the adoption of community decision-making regarding basic development priorities;
- The application of local resources directly and immediately to the solution of local problems;
- Control by local people;
- Participation and cooperation on common problems;
- Use of low and intermediate technologies, and technologies which do not require large amounts of capital;
- The building of local economies rather than links with and dependence on national and international economies; and

- Striving for satisfactory and sufficient but materially simple living standards as distinct from western consumer lifestyles.

#### 6.3.4. Summary

This scenario is based on the collapse future. We can see how a disastrous flood affects Korean society. During the era of the global risk society, Koreans demonstrate an extreme demand for safety. The safety fever has persisted through this scenario. Koreans fail in their attempt to slow global warming due to the consumerist optimism. Therefore, extreme weather events have increased across the nation. The whole-home hydrogen fuel generator system and disaster-resistant vacation home become a symbol of social and economic status. The melting ice makes the Arctic a center of cryopolitics and environmental refugees are a global-wide phenomenon. In 2027, Korea encounters a massive flood which seriously destabilizes people, economies, societies, and culture. The Korean government falls into state failure. As a result, Koreans seek to build a degrowth society as a momentous paradigm shift.

Table 6.2 The Green Han River Flood in Warmer Korea: Key Features

Vision of the future	Discourse/worldview	Opportunities	Challenges
Eco-socialism	Natural catastrophe, de-growth	Increase in internal solidarity and communal public works.	Environmental degradation, national preparedness

Table 6.2 presents a summary of the main features of the scenario. The vision of this scenario is eco-socialism, which is composed of anti-capitalism ideas and practice. It is an attempt to construct alternatives to neoliberal capitalism. The primary discourses in this scenario are those of natural disaster and de-growth. Natural disasters are destined to be major issues in Korean society. Disaster preparedness and relief are most importance values. They are dominating over cultural practices. Unpredictable massive natural disasters provide sufficient conditions for the emergence of de-growth ideas. De-growth

movement believes that existing political institutions and economic systems are main causes of the climate crisis.

Key opportunities increase in internal solidarity and communal public works. Weather crisis leads to national integration in Korea. The Han River flood destroys decades of development. Koreans are coming together to overcome the crisis situation. The natural disasters change Korean's values and priorities. Koreans help each other in order to create and sustain Korea's stability. Internal conflicts disappear temporarily. Korea can now confront challenges: environmental degradation and national preparedness. Natural disasters degrade the overall environment in Korea. Disaster preparedness is critical for Korea. The experience of natural disaster can enhance Korea's ability to respond and to recover from other natural disaster and other man-made disaster.

#### **6.4. Discipline Scenario: A Big Human Global Family Phenomenon**

##### **6.4.1. Background**

In The Big Human Global Family Phenomenon scenario, Korean society moves toward a global family with cosmopolitan values. Global citizenship beyond the nation-state emerges. Every person is a member of the global society. The belief of a universal human community without borders is embedded into everyday life in Korea. Using a cosmopolitan vision, Koreans try to infuse respect into their attachments to others, including strangers. So the principle of justice and ethical commitment should be implemented beyond nationality and citizenship and ought to apply equally to all human beings as our global neighbors.

Cosmopolitanism is the opposite side of communitarianism, which emphasizes the importance of specific ethical, cultural, and political communities rather than human beings as a whole (Benhabib 2004). Cosmopolitanism is closely linked to universalism which exemplifies the Christian principle of loving our neighbors as oneself, while communitarianism is closely linked to the particularism which includes nationalism and

patriotism. Appiah (2006, 131) states that cosmopolitans focus more on human interests rather than local and national interests. Nussbaum (1996) says that cosmopolitanism is a love of humanity and patriotism is love of country as symbolization of their differences.

This scenario supports the concept of liberal cosmopolitanism rather than hard-core cosmopolitanism or radical cosmopolitanism. Liberal cosmopolitanism emphasizes the role of a nation while radical cosmopolitanism rejects special obligations to fellow nationals or citizens. Liberal cosmopolitan draws from Kant (1991), Appiah (2006), Beck (2006), and Nussbaum (1996). Kant (1991, 108) says that nation-states contribute to the perpetual peace. Appiah (2006, 163) emphasizes the correlations between the role of the state and equality. Beck (2006, 13-14) rejects “the dawn of the world republic” and believes that “the ideas of human rights and democracy need a national base.” He opposes humanistic universalism which pursues sameness and eliminates plurality (Beck 2006, 30). Thus cosmopolitanism can’t replace nationalism and provincialism; rather it functions to reduce the harmful effects of nationalism for human rights. Nussbaum (1996, 9) writes that being cosmopolitan does not necessarily mean abandoning local identities. Cosmopolitans can be defined partly by their particular loves like families, friends, regions, communities, or even countries. Strong local identities encourage cosmopolitan identities and vice versa.

#### **6.4.2. Drivers of the Scenario**

This scenario assumes the following driving forces.

- Culture: Cosmopolitan values which permeate Korean society are the main driving force in this discipline scenario. Koreans bring their attachments to others and strangers with full respect. The principles of justice and ethical commitments are implemented beyond nationality and citizenship. Cosmopolitan values are applied to all human beings as Korea’s global neighbors.

- **Economy:** Korea's economic growth continues through international trade and financial flow. The process of globalization is more actively involved in global interdependence in the economic, social, technological, and cultural areas. Consumerist cosmopolitanism is widely spread in areas like food, tourism, music, literature, clothes, sports, and education. Specifically, tourism is one of the most vital industries.
- **Population:** The Korean population increases due to more births, decreased deaths, and increased net migration. Immigration is the first largest contributor to Korean population growth. Immigrant workers and foreign wives grow at the fastest rate. Racial diversity is spreading across the nation.
- **Governance:** The rise of powerful global governance limits Korea's national sovereignty. But, the state power is not abolished. More Koreans, including decision makers and politicians, are seeking to reflect global politics and policies for solving problems and making decisions, rather than Korean state power. Civil society has significantly expanded its leverage over the state and business.
- **Technology:** Technological innovation created more smart mobile devices and more energy efficient transportation. The increasing use of mobile devices leads to more communication and involvement. Energy efficient transport modes reduce travel costs and promote more tourism.
- **Environment:** The environment is moderately degraded while the government seeks sustainability. Population growth and increased consumption are major causes of pollution and environmental degradation.
- **Energy:** Energy consumption in Korea has increased slowly due to population growth driven by immigration. The share of renewable energy sources in primary energy consumption has increased steadily. Most Koreans have tried to save energy to protect their environment. Also the Korean government

employs most energy-saving methods to deal with limited global energy supplies.

### **6.4.3. The Path to 2030**

#### **Toward a Multicultural Society**

As many people have expected, the annual alumni event of the university meeting came off successfully in Seoul, Korea in 2014. Most alumni see diversity in the party for the alumni meeting celebration. Mr. Changho Kim lives in Beijing and Tokyo. His wife who grew up in Hong Kong has taught at the Peking University in China. Mrs. Sunhee Lee was born and raised in Busan, Korea's second largest city and largest seaport. She graduated from the National University of Singapore and then studied business at Oxford University. She married an Arab and lived in Qatar for twenty years. Her family practices the nomadic lifestyle, staying in Korea during spring and fall seasons and Qatar during summer and winter seasons. Her son was born in Korea, grew up in Qatar, and studied in the U.S. He returns to Korea and works in a global management consulting firm in Seoul.

The movie, "Poisoned Korean Dream", which comes out in 2014, is a story of migrant workers who are exploited and abused by Koreans. Also it is a love story between a Korean girl and a foreign migrant worker. Their love story is just like any typical love story where a Korean girl falls in love with a foreign man migrant worker. Her parents strongly oppose their marriage. Love overcomes parental disapproval based on ethnicity. But the story ends with the death of the foreign migrant worker during a social protest against social discrimination and the government's unfair immigration policies. It shows a fractured Korean dream of immigrants and the need to ensure the protection of labor and human rights for all immigrants. The movie tops the box office. It becomes the most popular movie based on a best-selling novel.

The discourse on becoming a multicultural society could be seen as a major issue for South Korea in the 2010s, with the causes of the aging population, low birth rate, and globalization. The discursive agenda concerning a multicultural society have become

popular not only for media coverage and policy making but also for NGO activities and academia to question its social meaning. It impacts and haunts Korean people's perceptions of a unitary nation based on strong nationalism. The growing number of immigrant and international marriages has prompted the growth of a multicultural society; the number of people who became Korean citizens has risen rapidly; higher education institutions and global companies report an increase in the number of international students and foreign employees. The number of foreign residents in Korea reaches some 2.3 million and accounts for five percent of the total population in 2014, a huge increase from 1.4 million in 2011. A five percent foreign population does not make Korea a multicultural society. However, the general belief is that Koreans consider themselves to be one of the purest blood and most homogeneous peoples on Earth, Korea is undergoing a remarkable transformation toward becoming a multicultural society.

#### **Nonpolarity: “Solidarity Beyond the State”**

The pattern of distribution of power in international relations changes from American unipolar to nonpolarity. Nonpolarity is “a world dominated not by one or two or even several states but rather by dozens of actors possessing and exercising various kinds of power” (Haass 2008). American hegemony is gradually fading and gives way to nonpolarity characterized by numerous meaningful players. The major players are nation-states, global organizations, nongovernmental organizations (NGOs), corporations, global financial groups, megacities, and terrorist groups. Also, the center of the global economy slowly moves from the West to the East. The global economy primarily depends on Asian consumption and technology development. Global wealth is more evenly distributed. Political and economic powers are put in the hand of the majority of countries.

The US cannot keep its hegemony due to its growing national debt and political polarization between Democrats and Republicans. Furthermore, the rapid growth of other countries results in a relatively weak performance by the US. The world sees a moderate increase in Chinese power and influence. Despite extraordinary economic growth, the Chinese Communist Party has seriously confronted social polarization, economic

inequality, corruption and environmental degradation. India is struggling with a population explosion, lack of education and infrastructure. These factors have prevented India from achieving high economic growth and attracting foreign direct investment. Even though it has a rapidly aging population, Japan has slightly moderate economic growth due to the extraordinary progress of capital-intensive and know-how intensive manufacturing. Russia enjoys a decade of high oil prices while the corruption and the conflict between the conservatives and the progressives undermines social cohesion and leads to political instability. The EU is slowly recovering from the public debt crisis of 2011. It does not hesitate to act as a major power player in global politics.

The six world powers (China, Japan, India, Russia, EU, and the US) and other actors strategically coexist in world affairs. The influence of regional powers is adequately demonstrated: Brazil, Argentina, and Mexico in Latin America; Nigeria and South Africa in Africa; Egypt, Israel, Saudi Arabia, and Iran in the Middle East; Australia, Indonesia, Malaysia, Korea in East Asia and Oceania. International financial institutions—the IMF, World Bank, and Asian Development Bank—play a pivotal role in the public financing for the countries. Megacities—Tokyo, New York, Seoul, Mexico-City, São Paulo, Mumbai, Los Angeles, Delhi, Manila, Shanghai—get involved in the process of global political power. They act “as magnets for trade, culture, knowledge and industry” (GlobeScan and MRC McLean Hazel 2007). Regional organizations—the African Union, the Arab League, the Association of Southeast Asian Nations, and Shanghai Cooperation Organization—commit themselves to supporting the international developments and projects. International NGOs—Human Rights Watch, Green Peace, Doctors Without Borders, Transparency International, and Amnesty International—work with global organizations and networks to influence international issues.

World politics is becoming more decentralized, and regional actors increasingly take a part in global issues. The new communication technologies and the advancement of transportation technologies have made a decentralized world politics possible. With the introduction of new technologies, the participation of numerous regional actors in the global decision making process is greatly facilitated. Technologically connected individuals actively participate in global issues, share information with other global

citizens, and create global community for social movements. People cannot see the global ubiquity of Wal-Mart, McDonalds, and Starbucks. Local foods and products enrich culture around the world. Hollywood does not dominate the film industry and Bollywood's domination is apparent. Information and culture are generally categorized as being decentralized.

### **The Emergence of Neo-Nationalism: Anti-Immigrant**

Modern Korean nationalism has been a product of anti-imperialism and Korea's historical legacy (including the Korean War, anti-communism, developmentalism, and globalization) since the late nineteenth century. During the nineteenth century, Korea faced international threats with the increase of foreign traders, missionaries, and military troops. Korean nationalism with the intellectual elites and the masses began to develop anti-imperialism to keep political autonomy and tradition against powerful external forces. Nationalists used ethnic and cultural identity to make the modern nation-state in the Korean nationalism a political force. During the 20th century, nationalism has played a crucial role in various South Korean discourses about modernity and national reunification. Nationalism focuses on the homogeneity of Koreans. South Korean regimes have employed nationalism as the basis for the ideologies and discourses of mobilization in order to achieve their national goals. Nationalism helped to bolster Korean unification. Three types of Korean nationalism, which were anti-empire nationalism, modernity nationalism and unification nationalism, has been confronted by new challenges, such as the erosion of national borders, the growing presence of migrants and internationally married families, at the end of 2010s. In these new challenges, nationalism in Korea has been opened up to new possibilities arising from a new understanding of belonging, new demands of self-determination, and new forms of national identity.

The Korean view of the growing migrant phenomena is often ambiguous and contestable. The Korean government and businesses have tended to support foreign migration for solving labor shortages. The Korean economy has benefited from

immigrant workers with a minimum wage. It depends on immigrant workers for 3D (dirty, dangerous, and degrading) jobs. The Korean government has recognized the importance of immigrant workers while it is not willing to share social welfare and other resources. Also, the public tends to perceive foreign migration with a feeling of deep fear and sympathy. Many Koreans call immigrant workers ‘invader’ or ‘poor barbarians’ who compete for jobs, education, and businesses. They consider foreign immigrants threatening to Korean society’s well being and national identity. On the other hand, some Koreans try to cut the myth of the pure-blooded Korean ethnicity and to improve the quality of life of the migrants and their families.

The number of foreign residents continues to increase due to the growth of immigration and their high birthrates. Many Korean demographers estimate a high rate of growth in foreign residents in the near future. Many immigrant success stories circulate in Korea. For instance, Mr. Safa, 45, who emigrated from Pakistan, becomes a successful retailer. Mrs. Jiang, 38, who arrived in Korea from China in 2005, manages real estate empires in the community of Chinese Diaspora. Mr. Han Nuri, 45, who was born in Korea as a Kosian<sup>27</sup>, is the first Kosian man to serve as a Minister of Education. Filipino migrants are labeled as a “model minority” in Korean society<sup>28</sup>. They have gained economic success and respect by working hard and possessing good English language skills, compared with other immigrant groups.

Foreign immigrant success stories have emerged because of the rapid growth of immigrant population. Amid the growth of immigrant populations and their influences, the neo-nationalism trend has emerged with an anti-immigrant stance. The neo-nationalist narratives are spreading across the nation. They are easily observed in public debates and in Korean politics. They become an important part of the political agenda. The neo-nationalists are annoyed with the massive flood of immigrants. They seek to send thousands of hundreds of immigrant workers back to their country of origin. They try to

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<sup>27</sup> Kosian refers to children of South Korean fathers and Asian mothers from China and Vietnam

<sup>28</sup> Model minority refers to “a minority ethnic, racial, or religious group whose members achieve a higher degree of success than the population average” (Internet Wikipedia, [http://en.wikipedia.org/wiki/Model\\_minority](http://en.wikipedia.org/wiki/Model_minority), February 2, 2012)

pass anti-immigration laws. They openly use nationalist or anti-immigrant rhetoric: ‘Korea’s immigration disaster’, ‘overrun of foreigners’ and ‘serious challenges of traditional values on a single bloodline.’ There are new phenomena developed by the rising neo-nationalism and the emergence of immigrant groups: an upswing in anti-immigration movements, the rise of terrorism, the shift of political parties to the extreme right wing, migrant worker activism, and the formation of ethnic enclaves or ghettos.

### **Massacre of Borderless Village in Ansan: Anti-Immigrant Terrorist Attack**

On August 2020, a bomb blast kills at least 100 migrant workers on “Borderless Village” in Ansan City, Kyunggi Province, where hundreds of thousands have gathered for the annual migrant worker cultural festival. The terrorist attack is allegedly conducted by the Korean Nationalist Union, which is an extremist organization to stimulate anti-immigration movements. The terrorist attack is linked to a trend of rising right-wing views that immigration has damaged Korea and leads to a serious loss of national identity. Right-wing nationalists are disturbed by the influence of immigrants. They attribute the rise in crimes and high unemployment to immigrants. Anti-immigration groups have been growing larger over the past several years, to hundreds of groups in 2020 from a dozen groups in 2015.

The Borderless Village massacre has shocked the Korean peninsula. It is Korea’s first-ever immigrant massacre. Although it is a relatively homogeneous society with a strong sense of nationalism, Korea has no recent history of such cold-blooded killings by politically motivated assassination. Borderless Village is a “special multicultural district” for foreigners and migrant workers (Kwon 2009). It is close to the industrial complex. It is formed by a wide variety of migrant workers from several countries. It is called “mixed-minority enclaves” (Seol 2011, 144). Most are less skilled migrant workers and poorly educated. They come from Bangladesh, the Philippines, China, Nepal, Vietnam, Sri Lanka, Indonesia, Myanmar, and Nigeria. The Borderless Village, as a symbol of a global village and borderless world, has frequently held international art and music festivals, academic symposium, and organizational meetings for immigrant communities.

The attack on the Borderless Village has brought attention to right-wing nationalism and extremism around the nation. Recently right-wing political parties and groups have gained political leverage by demanding an anti-immigrant agenda. Koreans have experienced immigration-related issues: illegal immigration problems, unemployment, economic disparities, and conflicts between immigrant cultures and the dominant Korean culture. The right-wing camps derive political benefits from these conditions. They exploit the anti-immigrant climate for exercising political influence. They are able to increase their political support from voters. Some critics say that such a climate brings horrible terrorist attacks on immigrant workers. The Massacre of Borderless Village provides warning signs for a new threat to national stability. In Korea, debates on how to deal with this attack are polarized. Much of the main discourses have widely echoed for a couple of years over a new paradigm of anti-nationalism: cosmopolitanism.

### **The Failure of Neo-liberalism:**

The dominance of global neoliberal capitalism has been accelerated by China's rapid transformation from a socialist market economy to a capitalist market economy. China has been successfully implementing neoliberal policies, acting like an evangelist of neoliberal capitalism. The neoliberal-turn of China can be seen as the triumph of neoliberal capitalism. Neoliberalism has promised economic prosperity and freedom through the free market system:

A theory of political economic practices proposes that human wellbeing can best be advanced by liberating individual entrepreneurial freedom and skills within an institutional framework characterized by strong private property rights, free market, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices. (Harvey 2005, 2)

The wave of universal neoliberal order in the world is like a rising sun to give a bright future to the coming generations. However, like the performance of previous neoliberal reforms, the new neoliberal wave deteriorates the economic welfare of the

people and raises the question of democracy for whom, due to the casualization of work, social polarization, and other side-effects. The neoliberal managerial practices lead to the erosion of citizenship and solidarity. The emphasis of competition between citizens degrades civic virtues. Income inequality has increased. Neo-liberal reforms have led to mass layoffs and an increase of casual workers. Thereby income inequality in Korea has increased. Economic polarization intensifies social conflicts. Furthermore, neoliberalism can emphasize more on capital rather than citizen, equality, and moral values. The dominance of capital hurts democracy due to the underdevelopment of pluralism and the corruption of the political field by money.

To make the matters worse, Korea has been undergoing the worst financial crisis since the 1997 Asian financial crisis. The Korean real estate market has triggered the financial crisis. Housing prices fall sharply after a huge increase. Most banks tighten the loan standard for homes, autos and credit cards. People cannot afford them. Also the stock market plummets. Many households, firms, and individual financial institutions heavily borrow to make investments from banks. The entire Korean banking sector is imperiled by the collapse of the housing market. The Korean economy is slipping back into recession. Korea's housing collapse affects Japan, China, Hong Kong, and Taiwan, leading to a global slowdown. Although the housing market bubble generates the financial crisis, the most important cause of the crisis has been known as the flawed structure of deregulated neoliberal financial system:

This evolution has taken the form of cycles in which deregulation accompanied by rapid financial innovation stimulates powerful financial booms that end in crises. Governments respond to crises with bailouts that allow new expansions to begin. As a result, financial markets have become ever larger and financial crises have become more threatening to society, which forces governments to enact ever larger bailouts. This process culminated in the current global financial crisis, which is so deeply rooted that even unprecedented interventions by affected governments have, thus far, failed to contain it. (Crotty 2009, 563)

With the financial crisis, Koreans can see that the neoliberal economic system is shaking up the foundation of the society. The neoliberal ideology, which has prevailed in social and economic thought, loses its legitimacy. Korea needs a new theory to govern its

global economy and politics. The new global economy involves the proper balance between state, civil society, and market. It involves a close link between ethics and economics. The new global politics involves “new ideas that not only is built on the recognition of the common global problems that no individual state and no individual non-state actor can solve alone, but also must take into account the moral necessity of a common global responsibility” (Kemp 2010, 252)..

### **Global Citizens Movement: Toward Cosmopolitanism**

The global citizen movement is vigorously activated by a variety of groups to represent a new way of life when Korean society is going through the rise of neo-nationalism, serious racial tensions, and the failure of neoliberalism. Solidarity for Global Civil Society (SCGS), which is established in 2028, is one of the forerunner groups for the global citizen movement in Korea. The global citizen movement, based on cosmopolitanism, is able to rethink global citizenship and global democracy. It aims to be against anti-neoliberal globalization or anti-corporate globalization and aims to stand for global justice. The SCGS has been organizing for months on social media and community organizations. It calls on coping with narrow territorial-based affiliations and struggling with the exploitation of citizens around the world. It challenges government’s policies and corporate practices. It has developed a vision for global civil movement:

- All people have the same right of the Earth
- “Cultural openness to the world and to cultural differences” (Skrbis, Kendall and Woodward 2004, 117).
- “Communities are the front lines in the battle to bring corporations back under citizen control” (Marx et al. 2007, 2).
- The global citizen movement from below provides the strategy for global democracy and builds democracy institutions for global justice
- Support of the transnational global citizens movement

The global citizens movement has built up diverse organizations, networks, and platforms in the local, national and global levels. Also, it develops partnerships with religious groups, academic institutions, NGOs, and foreign government agencies. There

are some success stories of the global citizens' movement. The global citizens' movement transforms itself into a political party. The Korean educational system accepts the global citizenship education. Korean law permits multiple citizenships. The biggest challenge of the global citizens movement is the gap between the South and North and the lag of the global citizenship consciousness and the establishment of an institutional structure. The number of global citizens movement groups around the world share their experiences, networking, and resources.

### **Cosmo-federalism: A United Nations Parliamentary Assembly (UNPA)**

In 2028, a UN World Court is held in the Hague to try a US president and several senior US officials on the charge of mismanagement of nuclear power which is leaking radiation at a dangerous level. The nuclear disaster results in scores of radiation deaths of foreigners. The failure of the US response to the nuclear accident led to the tragedy. The family of the victims accuses the US president and other US officials. The UN World Court also investigates the economic crime of Chinese president and bankers affecting the world economy. Chinese bankers have faced allegations of collective embezzlement and the Chinese president gets involved in the economic fraud. Thousands of people in Hong Kong demonstrate for several weeks against the corruption in China. The indicted global leaders by the UN World Court show that the cosmopolitan legal order is functioning fairly.

Cosmopolitan federalism dominates world politics as the governance mechanism. In this cosmopolitan political order, all nations would renounce and relinquish part of their power of sovereignty and would collaborate with other international institutions. "This institutional design would give voice to different actors, including significantly all individuals, independently from their national membership, thus effectively realizing the ideal of inclusive democracy" (Marchetti 2011, 401). The power of the cosmopolitan order is widely spread to a variety of levels and sites (Pogge 2002, 178):

Persons should be citizens of, and govern themselves through, a number of political units of various sizes, without any one political unit being

dominant and thus occupying the traditional role of state. And their political allegiance and loyalties should be widely dispersed over these units: neighborhood, town, county, province, state, region, and world at large.

A United Nations Parliamentary Assembly (UNPA) is one of the key institutions for a cosmopolitan world, along with a UN Council, a UN World Court and the Constitution of Cosmopolitan Society. The UN is “a global federal organization in which individuals and states would share power for specific global purposes under a system of strengthened international law” (Marchetti 2011, 401). The UNPA is a main body with regulative powers in the UN. It is dealing with social, economic, and political global agenda and setting up an authority for tackling global problems and issues. It closely works with global civil society and national representatives. It serves to promote global democracy and the transparency of global governance, and allows world citizens to participate more in UN activities (Bummel 2010, 7-8):

A UNPA would not be a duplicate of the UN General Assembly, merely with different voting strengths. First of all, the assembly would not be composed of government diplomats but of autonomous delegates. These delegates could be chosen from within and by political groups that exist in national legislatures....The delegates in a UNPA would organize themselves in multifaceted political, national and regional groupings. International groupings according to similar political camps would probably be most often and the delegates of a given country would not necessary vote in the same way....One of the basic purposes of a UNPA is to reflect the political plurality of the population of the UN member states. In consideration of this, a minimum of two seats is allocated to every country, one to be selected by the majority, the other by the minority in parliament.

### **Economic Cosmopolitanism: People’s Economy**

Economic cosmopolitanism refers to “the enhancement of people’s economic capacities to pursue their own projects—individuals and collective—within the constraints of community and overlapping communities of fate” (Held 2003, 524). This economic cosmopolitanism is founded on three dimensions. First, it is to “establish fair conditions for economic competition and cooperation” across the nation (Held 2003, 524).

Second, it requires “the end of political and economic doctrine based on the exploitation of ‘others’” (Guibernau 2007, 164). Third, it aims to reduce poverty in order to fight social injustice (Erbeznik 2008, 3). Economic cosmopolitanism thus can be the basis for a people’s economy that suggests that “human needs and relationships are more important than competition and profit” (Serrano and Xhafa 2011, iii)

Korean society has eagerly applied the principles of economic cosmopolitanism to all economic activities for entering the people’s economy. It leads to new growth models, new spheres of investment, and new business relations. The people’s economy comes up with new paths out of overproduction, oversupply and overinvestment. Social solidarity is more important than economic profits. Massive financial investments are so constrained that the real economy dominates rather than the financial economy. Stocks, bonds, and other securities are generally considered less valuable investments. Many corporations have tried to serve their members and their communities, instead of gaining financial profits. Business ethics and corporate social responsibility become common norms in the enterprise world. Most CEOs are concerned about how their companies affect the community, their employees, and environment. They have committed to promote human capabilities in the community where they run their businesses. They see their enterprises as not only money-making business but also part of the community.

The integral part of a people’s economy is the empowerment of the community economy to promote local development. Small and medium enterprises are becoming main driving forces for Korea’s development while chaebol is no longer dominant in the economy. Business conditions of small and medium enterprises are dramatically improved. Some employees of small and medium enterprises get higher wages than those of large enterprises. Korean society has more work satisfaction with small and medium enterprise than large enterprises. Furthermore, export-oriented growth strategy has changed into a domestic demand-led growth strategy. The Korean economy has tried to create a balance between production for the domestic market and production for export market. Trade and industrial policies are focusing on protecting and revitalizing community economy.

Another important aspect of the people's economy is global taxation to fund regional and global governance, to redistribute global resources, and to tackle global problems. The followings are details of global taxation (Held 2003, 525):

For instance, a consumption tax on energy use, or a tax on carbon emissions, or a global tax on the extraction of resources within national territories, or a tax on the GNP of countries above a certain level of development, or a transaction tax on the volume of financial turnover in foreign exchange markets.

The key points of people's economy include:

- Economy driven by human needs and relationships
- Empowerment of the community economy
- Industrial policy to stimulate small and medium enterprises
- Domestic demand-led growth strategy
- Global taxation

### **Cosmopolitan Politics: “From National Government to Multilevel Governance”**

Nearly two decades into the cosmopolitan era, the landscape of Korean politics has been transformed from a state-centered approach to a multilevel governance approach. The multilevel governance is a general phenomenon of Korean politics. Korean government does not have many power resources to impose its agenda on individuals and groups. The Korean government cannot easily set any rules for society. Korean politics are influenced by “global public policy networks” (Sørensen 2004, 62) and other non-state actors. It requires political cooperation with other international political areas. The UN, the World Bank, the OECD, and international non-governmental organizations (INGOs) have expanded their roles and are working with Korean government and civil groups. The strength of civil society strongly influences the state and business. “Regulation and control is no longer a sole preserve of states (Sørensen 2004, 64). Thus,

Korean politics is featured by “governance with government; government are still involved, but they negotiate with a host of other actors and act more like a *primus inter pares*” (Sørensen 2004, 62).

The growth of multilevel governance challenges the dominant frame of Korean politics. Civil society and international institutions are more powerful in setting the political agenda while the state is clearly weak. There is a power gap between the state and civil society. The period of multilevel governance features active political participation and control by the civil society. The populace supports cosmopolitan democracy on the national and global scale. Multilevel governance gains considerable electoral popularity and political legitimacy by the economic equality and democratic political engagement. Despite the consolidation of cosmopolitan democracy, the Left and the Right are continuously confronting and contending with each other to get hegemonic positions. The leftists oppose the role of the nation, special obligations to nations, and hierarchical organizations. They are based on radical cosmopolitanism. One of the prominent left-wing groups is the Global Stateless Society Center. Its main ideology is anarchism which advocates a stateless society without borders. Thousands of migrants and students become cosmopolitan anarchists. On the other hand, the Right supports the existing political order of cosmopolitan democracy without any alternative framework. They see the limited state’s authority to deepen democracy and to ensure equality. In this context, the left-wing perspective is highly skeptical about the democracy under the multilevel governance. The right-wing perspective upholds the preservation of liberal cosmopolitan tradition. It tends to be optimistic about the nature of multilevel governance.

### **Cosmopolitan Divide: Transnational Elites and Provincialised Masses**

Migration and cosmopolitan cultural practices are the key factors for survival in cosmopolitan society. Driven by massive global economic activities, Korean society is characterized by the rapid flows of capital, technology, labor, and culture across the nation and globe. The migration of high-skilled labor and low-skilled labor is interconnected with the development of the Korean economy. “Hyper-fluid global

nomads who move effortlessly across frictionless global space” (Yeoh and Huang 2011, 681) establish cosmopolitan knowledge, skills, and network which effectively contribute to their income and status.

Another crucial set of identities and power relations, which must be taken into account, when exploring the figure of the cosmopolite are those of class. In other words, an awareness of transformations in class formations is useful in developing our understandings of cosmopolitanism more generally. . . . In particular, cosmopolitanism—as a set of skills or competences—is an intrinsically classed phenomenon, as it is bound up with notions of knowledge, cultural capital and education: being worldly, being able to navigate between and within different culture, requires confidence, skill and money. (Binnie et al 2006, 8)

There are two levels of power in the cosmopolitan Korean society: transnational elites and provincialised masses. Transnational elites have been associated with “large clusters of high-waged professional and managerial expatriate workers” (Yeoh and Chang 2001, 1029). They are highly educated, highly skilled, highly paid, and highly mobile. They are easily moving from one country to another country and are not a homogenous group. Thus they are interesting in cultural power practice rather than political power practice. They are politically uncommitted elites.

Despite their fluidity and transience, the presence of cosmopolitan elites does generate a multiplicity of ‘contact zones’ within the globalising city; and because of the ephemeral and unconsolidated nature of their ‘presence’ and the strong sense of connectivities with ‘elsewhere’, these contact zones are differently inflected compared to the more permanent, stable, often historically rooted, presences forged by longer-term migrants, or even by more recent, lower-skilled migrants who arrive in much larger numbers and therefore constitute a stronger bodily presence. For one, these contact zones seldom occur in the sphere of urban politics. As Sennett (2001) notes, the ‘new global elite . . . avoids the urban political realm. It wants to operate in the city but not rule it; it composes a regime of power without responsibility’. While this may be so, we suggest that the embodied presence of cosmopolitan elites is both catalyst and medium of cultural politics of the everyday sort. (Yeoh and Willis 2005, 270-271)

On the other hand, provincialised masses encompass local professionals, local workers, low-income migrant workers, and refugees. They provide services to global

elites, travelers, and seniors. They show the lack of cosmopolitan expertise and culture. For instance, high mobility of global elites harms local professionals. Local professionals should contest global elites who enter the local market. Local professionals suffer the decline in earnings and take a relatively minor way. In general, provincialised masses have been relegated to a localized economy. They are excluded from the political and economic processes and wider connections on the global levels. If they want to seek work outside their locals and countries, they need to develop cosmopolitan expertise.

### **Cosmopolitan Cities: Shifting Powers and Urban Dynamics**

Global cities have become primary sites on which people involve cosmopolitan cultures, politics, and business. Most Koreans live in cities which produce most of GDP. Cities draw cosmopolites from all over the world. Global cities emerge as the center of cosmopolitan cultural and political development due to the weakening of the sovereignty of national states and community identities. The cosmopolitan economy demands cooperative and creative professionals and workers with social skills. Korean cities have tried to attract cooperative and creative professionals and workers in this people's economy. Business and cultural activities are dominated by cities rather than as a nation. Korean cities are key locations for cultural events, social networks, tourism, and entertainment facilities. Therewith, some Korean cities, such as Seoul, Busan, Gwangju, Daejeon, and Daegu, are influential.

For instance, Seoul reinvents itself as a global cosmopolitan city. Seoul is becoming a center toward a culture of openness:

A vibrant economy. Good jobs. Cultural liveliness. Artistic creativity. Social innovation. Good school. World class universities. Technological advances. Intellectual discussion. Museums. Night-clubs and theaters. Good food. Fun places. Happy people. This is not a hotchpotch of images concerned to tantalise you. It is a vision within our reach. (Singapore's Prime Minister Goh Chok Tong; <http://www.mta.gov.sg/>, cited in Yeoh 2004, 2434)

A city is a place where people can learn to live with strangers, to enter into the experiences and interests of unfamiliar lives. Sameness stultifies the

mind; diversity stimulates and expands it. The city can allow people to develop a richer, more complex sense of themselves. They are not just bankers or roadsweepers, Afro-Caribbeans or Anglo-Saxons, speakers of English or of Spanish, bourgeois or proletarian: they can be some or all of these things, and more. They are not subject to a fixed scheme of identity. People can develop multiple images of their identities, knowing that who they are shifts, depending upon whom they are with. That is the power of strangeness: freedom from arbitrary definition and identification. (Sennett 2001)

#### 6.4.4. Summary

This scenario is based on the disciplined society future image. We can see how liberal cosmopolitanism affects Korean society. Korea becomes a multicultural society. The global political order is dominated by nonpolarity. The growing migrant phenomenon causes neo-nationalism to encompass both the new radical right and anti-immigrant sentiment. The global citizen’s movement emerges when Korea undergoes a rise of neo-nationalism, inter-racial conflict, and the failure of neoliberalism. Cosmopolitanism dominates Korean political and social life as an official discourse. Thus the Korean government closely collaborates with the UNPA and other international institutions. Korea transforms itself into a people’s economy which is driven by human needs, human relationships and equality. The cosmopolitan Korean society is divided into two levels of power: transnational elites and provincialized masses.

Table 6.3 A Big Human Global Family Phenomenon: Key Features

Vision of the future	Discourse/worldview	Opportunities	Challenges
Cosmopolitan universalism	Global citizenship, multilevel governance	World harmony, respecting diversity between gender, race, ethnicity, and culture, global justice	The future viability of racial discrimination by Korean nationalism, conflict between national sovereignty and global governance

Table 6.3 presents a summary of the main features of the scenario. The vision of this scenario is cosmopolitan universalism. This vision does not deny nationalism but

transforms nationalism into cosmopolitan nationalism. Cosmopolitanism is seen as an equivalent to global justice and social advancement. Two key discourses are global citizenship and multilevel governance. Global citizenship and multilevel governance have permeated as popular beliefs in the cosmopolitan society. There are three opportunities presented by this scenario: world harmony, respecting diversity between gender, race, ethnicity, and culture, and global justice, while key challenges are the gap between the South and North Koreas, conflict between national sovereignty, and global governance

## **6.5. Transformation Scenario: The Age of Biotechnology**

### **6.5.1. Background**

In The Age of Biotechnology scenario, Korea has witnessed a historically unprecedented transformation brought on by the development in biotechnology. Bioscience and biotechnology are “the new life science technologies plus related information technologies, including such fields as: genomics, proteomics, bioinformatics, stem cell therapies, cloning and regenerative medicine” (Schoemaker and Tomczyk 2006, 10). The development of bioscience and biotechnology has fundamentally changed the quality of life, healthcare practices, and business. The advancement of bioscience and biotechnology helps Koreans live longer, cure disease, and promotes healthier living. This scenario addresses how biosciences affect Korean lives and what opportunities and challenges have emerged between 2013 and 2030.

Korea’s accepted wisdom says that the 20<sup>th</sup> century was the age of manufacturing with petroleum; the early 21st century is the age of information technology along with semiconductors; the overall 21st century is the age of biotechnology with genetic engineering. Korean biotechnology ranks among the very best countries in the world with world-class research capabilities and expertise. Korea attracts the most talented researchers and engineers. Multinational companies are confident in their investments in Korea’s biotechnology sector. Koreans enjoy the economic benefits and healthcare

services that come from the strength of their biotechnology industry. Biotechnology accounts for the biggest part of the workforce. Healthcare companies are growing and biotechnologies are well commercialized. Life expectancy continues to increase and people born in Korea live to 100 years. All the transformed images held by Koreans can be seen in the description of Armstrong et al (2010, 341).

This also harkens the notion of a “bio-based economy” in which genes replace petroleum as the basic unit of global commerce. Whereas the past 150 years or so might be termed the “Age of Geology,” we may be moving toward an “Age of Biology” in which bio-based sustainable practices are the norm.

Biotechnology radically changes the way in which Koreans live. But what if we can design our babies using technology? “Should the disabled be eliminated from society?”(Ren 2005, 28). What if some multinational companies can hold patents on human genes for making larger profits (Rifkin 1998, 2)? What if we can have powers like Superman by “simply taking a pill containing new hormones”(Ren 2005, 28)? What if thousands of novel transgenic bacteria, viruses, plants and animals can be released onto the Earth? What if there are new diseases that cannot be possible to cure? What if genetic manipulation can imperil equality, social justice, and human rights? What if bioterrorism is a real threat to society? What if we cannot afford old age as a society? The age of biotechnology raises the following ethical questions:

Altering a baby’s genetic traits and manipulating our own nature, in this view, demeans the uniqueness of each individual and thus undermines our humanity. Ethicists contend that genetic engineering devalues the meaning of parenthood, where children become merely consumer goods and properties of their parents. Moreover, opponents argue that advances in genetics are not fuelled by justifiable societal needs, but by novel biomedical opportunities. Those who can pay for the new technology will make themselves “better than well”, widening the existing social gap between them and those who cannot afford it. No one know for sure what the social consequences are if we play our own “God” (Ren 2005, 28).

### **6.5.2. Drivers of the Scenario**

This scenario assumes the following driving forces:

- **Technology:** Technology factors remain a main driving force of this transformational society scenario. Breakthroughs in biotechnological innovations lead to a revolution in healthcare and medicine. Along with personalized medicine, biotech solutions promise to cure all diseases, to substantially extend lifespan, to improve the quality of our life, to increase production, and to reduce chemical pesticide usage.
- **Economic trends:** The global economy has experienced successful growth. Biotechnology is a key to global economic growth. The biotechnology industry in Korea has been an engine for economic development and job creation, and increases in productivity. The biotechnology industry is a technology supplier to the pharmaceutical industry and healthcare service industry.
- **Population:** The total population remains stable, but Korea becomes a super-aged society. Life expectancy rises dramatically due to high-quality healthcare services and the advance of biotechnology. Record-high life expectancies show that Korea is one of the world's healthiest nations. The increase of middle-aged adults brings major lifestyle changes.
- **Governance:** The government policies play a key role in the development of the biotechnology based industry. The government centered network strongly affects researchers, experts, academic institutions, industry, and the public. The process of the development of biotechnology is largely policy-driven and partly associated with big companies. Public participation is limited to policy choices.
- **Culture:** Most people believe that biotechnology benefits Korean society. Some religious people consider biotechnology immoral. Regarding genetic engineering, personal longevity and individual choice are more important than the collective interest and social norms like respect for human dignity.

- Energy: Clean energy shows double digit growth and continues to expand. The combined national market for solar PV, wind power and biofuels have surged while the fossil fuel energy market share has dramatically declined. In general, there is progress to clean energy development.

### 6.5.3. The Path to 2030

#### Investing in Biotechnology Industry

Information technology has driven knowledge-based growth in Korea over the past decades. With the growing risks of global financial crisis, the rise of emerging markets, and the increase of biotechnology's benefits, Korea's economy has been in conflict with the existing economic strategies for sustainable growth. The biotechnology industry is fast emerging. This growth has pushed considerable exploration in new directions for the Korean economy. In 1993, the Korean government established the First Framework Plan for Biotechnology Promotion (*Biotech 2000*) to achieve R&D budget, human resources, infrastructure and institutions, international cooperation, science and technology competitiveness, and market (Hyeon et al 2008, 594). In 2006, the Korean government put forward *Bio-Vision 2016* as the Second Framework Plan for Biotechnology Promotion (Hyeon et al 2008, 591). Its vision is "to create a life-oriented society and bio-economy in 10 years" and it aims at "achieving the 7<sup>th</sup> place global ranking for Korea in terms of biotechnology" (Hyeon et al 2008, 596).

As shown in Table 6.4, the development of biotechnology by government-led policy started in 1983 with the Genetic Engineering Promotion Law. Since then, Korea has gradually transformed its economic structure into a bio-based economy. It has produced a wide variety of biotech products and has significant shares in the global market.

Table 6.4 Bio-Technology Policies in Korea, 1983-2011

Year	Major Event
1983	The Genetic Engineering Promotion Law established (Genetic Engineering Promotion Law changed to Biotechnology Promotion Law)

1985	Korea Research Institute of Bioscience & Biotechnology (KRIBB) was established
1994	The 1st Framework Plan for Biotechnology Promotion (Biotech 2000 : 1994~2006) was established
1998	Brain Research Promotion Law was implemented and the Basic Plan for Promotion of Brain Research established (Braintech 21 : 1998~2007)
2004	The Novel Biomedicine and Organs industry designated as one of the next-generation growth engines
2006	The 2nd Framework Plan for Promotion of Biotechnology (Bio-Vision 2016 : 2007~2016) was published
2007	The 2nd Framework Plan for Promotion of Brain Research (2008~2017) was announced and The Master Plan for National Life Resources was established
2008	The Science and Technology Basic plan “577 initiative” was established and “BT Committee” under the National Science and Technology Council was formed
2009	Selection of 17 new growth engines in 3 areas of the ‘Visions and developmental strategies for a new growth engine’
2010	NBIC National Fusion Technology Map
2011	Launching of the National Science & Technology Commission (NSTC)

Source: BPRC (2011, 5).

In 2014, the Korean government places a high priority on biotechnology, which has become the most important part of the Korean economy and the government’s support, with the goal of capturing 22 percent of the global market share by 2020 (Koh 2010). It continues to develop the Korean Biotechnology Strategy for promoting successful biotech businesses. These primarily include supporting biotechnology startups, for high quality jobs, for research and development incentives, and for commercial development. Particularly, the President’s Commission on Biotechnology and the 21<sup>st</sup> Century, which is established in 2013, examines the long-term impacts of biotechnology on Korean society and advises the President on a wide range of biotech issues. The commission releases a report, *The Common Benefits: Morning Calm Biotech City*, which recommends building biotechnology research cities within 10 years. The biotech research cities provide a total environment in which to live, work, and communicate. They are intended to compete for Biopolis and Fusionpolis in Singapore, Research Triangle Park in the U.S., Jeddah Biocity in Saudi Arabia, BioValley and BioAlps in Switzerland, BioDelta in The Netherlands, and Tsinghua Science Park in China. The project is

applauded as the ‘bloom of biotech’, and a ‘great leap forward of Korean biotech’. The Morning Calm Biotech City will house hundreds of thousands of scientists.

As a result, Korea is one of the world’s most viable countries in the bio-industries, after the U. S., Japan, Europe, and China. Many international companies, for instance, have seen Seoul as a go-to destination for the life science and pharmaceutical industries such as cloning and genome therapies. Many global companies want to create partnerships with Korean companies and educational institutions for drug discovery and innovation. Tens of thousands of biotechnology companies in Korea generate significant job growth.

### **Bioscience Technology: Words and Terms**

The term biotechnology was coined in 1919 by Karl Ereky, a Hungarian engineer to mean “the science and the methods that permit products to be produced from raw materials with the aid of living organisms” (OECD 1999). Modern biotechnology began in 1973, when Stanly Cohen and Herbert Boyer discovered recombinant DNA technology. Thus, contemporary biotechnology can be viewed as “a wedding of genetics and industrial microbiology” (Hessenbruch ed. 2000, 289). In fact, biotechnologies are scientifically, technologically, financially invested for healthcare, pharmaceutical, agro-food, and environmental applications. Specific terms and words for biotechnology are as followed:

- Cloning: “Cloning is defined as the use of asexual reproduction to obtain organisms that are genetically identical to one another, and to the ‘parent’. This contrasts with sexual reproduction, where the offspring are not usually genetically identical. It is worth stressing that clones will be influenced by other factors such as their environment. This applies to all organisms, from bacteria to humans” (Dale, von Schantz, and Plant 2012, 25)
- Gene Therapy: “Gene therapy is ‘the use of genes as medicine’. It involves the transfer of a therapeutic or working gene copy into specific cells of an

individual in order to repair a faulty gene copy. Thus it may be used to replace a faulty gene, or to introduce a new gene whose function is to cure or to favorably modify the clinical course of a condition. The scope of this new approach to the treatment of a condition is broad, with potential in the treatment of many genetic conditions, some forms of cancer and certain viral infections such as AIDS” (Barlow-Stewart 2007).

- **Bioinformatics:** Bioinformatics is the science of storing, extracting, organizing, analyzing, interpreting, and utilizing information from biological sequences and molecules. The focus of bioinformatics is the application of computer technology to the management of biological information. Specifically, it is the science of developing computer databases and algorithms to facilitate and expedite biological research, particularly in genomics” (Galitsky 2006, 29)
- **Regenerative medicine:** “Regenerative medicine replaces or regenerates human cells, tissue or organs, to restore or establish normal function” (Mason and Dunhill 2008, 4). “This includes surgery, surgical implants, such as artificial hips, and increasingly sophisticated biomaterial scaffolds. It also draws on hospital procedures such as bone marrow and organ transplants and it relates to tissue engineering” (Mason and Dunhill 2008, 1). The central focus of regenerative medicine is human cells. These may be somatic, adult stem or embryo-derived cells” (Mason and Dunhill 2008, 1).
- **Reprogenetics (reproductive genetics):** “Reprogenetics refers to the use of genetic information and technology to ensure or prevent the inheritance of particular genes in a child” (Silver 2000, 375). “Reprogenetics includes procedures such as in vitro fertilization (IVF), the genetic alteration of egg and sperm, and techniques such as research involving the derivation of human embryonic stem cells, including therapeutic or research cloning” (Knowles and Kaebnick 2007, ix)

### **Cultivating Biotechnology: Life Science Entrepreneur**

Korea has become a pivotal player in the biotech industry. Increased investment in biotechnology affects other industries and leads to technological adaptation for the people. Biotechnology has changed the way we live in terms of health, nutrition, and energy consumption. For instance, personalized medicine has been carried out in the health care area, using DNA chips and genomic medicine, with large aging populations. Koreans purchase more biotechnology drugs than traditional drugs. The volume of Korea's biotech-related exports has sharply increased with the implementation of Korea-Japan-China Free Trade Agreement (FTA). More Korean scientists and entrepreneurs see business opportunities by the new biotech breakthrough. Independent biotech and pharmaceutical companies are a rising trend. Time magazine names Ms. Sukhee Shin, founder and chief executive of Immortal Biotech, as one of the 100 most influential people in the world:

#### **The 2016 Time 100: Scientists and Innovators:**

Sukhee Shin is a successful life science entrepreneur with 15 years of experience developing medical devices for high blood pressure. She and her company create new medical devices to measure blood pressure accurately. Nearly one in five people globally suffer from high blood pressure and one in three lack access to essential drugs for high blood pressure disease. She is currently taking advantage of a fusion of biotechnology and nanotechnology to develop a new medicine for monitoring high blood pressure. Traditional blood pressure cuffs are fragile and yield false blood pressure values. Developing countries show a lack of trained doctors and nurses. Therefore, people living in developing countries cannot measure their blood pressure at the proper time. The new device, however, holds promise of making high blood pressure testing easier and cheaper. It is a significant milestone in the history of global health. With the new device, she changes the world. Additionally, she has led numerous poverty reduction initiatives throughout the world.

Ms. Sukhee Shin has enjoyed the sustained development of life science in recent years. She witnesses the advancement of medical science through online newspaper ads for private clinics:

You will not have to spend hours in a doctor's office to complete a comprehensive health check-up. Instead, with just a single pin-prick, a nanotechnology device will quickly measure and analyse 1,000 proteins in a droplet of your blood. Based on this “molecular fingerprint”, your doctor will prescribe drug regimens tailored to your personal state of health that will not only be able to reverse many diseases, but will also prevent their manifestation in the first place (The Economist, September 15, 2005).

Korea has invested large sums of money in the biotechnology industry. There are, as a result, strong presences of life science, biopharmaceutical, and healthcare companies. There are some cases that start-up companies commercialize new ideas and technologies. One company has developed a vaccine against asthma. The asthma vaccine has not only prevented the outbreak of asthma but can also help fight asthma symptoms. It cures infection in up to 70 percent of people. Another company has isolated a “thermometer gene” from plants to adapt to temperature changes. Those genetically modified crops can now grow in any climate condition.

### **The Gene Age: “Looking for Mr. Good Genes”**

The impressive progress of genetic technology opens up the possibility of decoding the entire human genome sequence at a low cost that is affordable for everyone. By and large, geneticists unravel the genetic roots of diseases like cancer, diabetes, heart diseases, and Alzheimer's. Koreans have easily taken genetic testing to analyze their own DNA sequence for finding gene-related diseases. “The gene has also become a key term in public discourse, and hardly a day goes by without some mention of genes in the media” (Carver, Waldahl and Breivik 2008, 943). Genetic explanations appear everywhere: “poetry genes”, “it's all in the Genes”, “the blood will tell”, and “the mastery key to history” (Nelkin 2001, 556; Nelkin and Lindee 1995, 17). These languages reflect a growing faith in genetic determinism in Korean society. In a Korean culture obsessed with success, wealth, and appearance, the eugenics movement is gaining strength nationally to improve human heredity:

The gene has become a supergene, an almost supernatural and deterministic entity that has the power to define identity, determine human affairs, dictate human relationships and explain social problems” (Carver, Waldahl and Breivik 2008, 943).

Nowadays Korea’s younger generations, who are influenced by fascination with the gene for success, are in a fever of taking genetic testing and genetic screening programs for marriage so that they are predisposed to accept the result of the genetic testing and to seek the advice of a geneticist for a marriage or not. Many marriages are still arranged by parents or professional matchmakers. From a Confucian tradition, many Korean young adults are strongly influenced by the legacy of their parents. Parents now require an exchange of DNA tests between potential spouses. Young adults also prefer to use genetic testing to avoid having newborns with genetic diseases. They consider genetic traits as an ‘offspring future diary’ for their children. On the other hand, some couples cancel their marriage plans due to their potentially dangerous genetic defects. Gene fever sparks separation and divorce when fake DNA reports are revealed. Premarital genetic testing has become widespread and genetic counseling remains a high priority.

In 2018, the Korean government enacted the Anti-Discrimination Laws for Genetics to protect people against genetic discrimination in employment. However, large companies, including chaebol, are collecting employee’s health information through employment-related physical examinations and serve as their own insurance carrier to have access to all medical information about employees. In severe cases, they quit their jobs. With the genetic testing becoming much more popular and cheaper, genetic information privacy and genetic discrimination have been hot topics. Especially in the competitive knowledge-based global economy, a group of talented employees can determine a company’s success. Many companies call on genetic testing and counseling to select a few good men and women with exceptional genes.

Recently ‘designer babies’ have entered the national discourse. Most Korean women are engaged in reproductive genetics as a routine part of pregnancy. They can choose eye color, hair color, skin color and sex, and eradicate genetic disorders such as

Down's syndrome for their future children. Many Koreans expect that gene therapy will offer the possibility of dealing with genetically inherited diseases, longevity, and intelligence in the near future. In 2020, a Korean couple has a baby with blue eyes and white skin through the genetic manipulation of embryos. They are really proud of themselves as the best parents to give their children the advantage of life. Furthermore, the 'Sperm and Egg Bank for Smart People', receives the reward for most prosperous business. The 'Designer baby' phenomenon leads to debates about what is human nature and Koreaness. Supporters of designer babies argue that genetics can treat more diseases and make a baby healthier and smarter. It helps parents to "avoid the emotional hardships and economic burdens that accompany the birth of a child with an incurable disease" (Ren 2005, 28). It can enhance parent's lives and improve well-being of children. Most parents want better children and genetically enhanced babies are closely related with the practice of freedom of choice by parents. According to opponents, genetic manipulation "demeans the uniqueness of each individual and thus undermines our humanity" (Ren 2005, 28). Moreover, critics say that genetic engineering encroaches children's basic human right. Children should have the right to choose the path for themselves.

### **New Bioeconomy**

The Korean Biotechnology Industry Organization holds the World Bio-industry Convention 2022 (Bioworld) which is the largest world class conference. More financial capital has been invested in medical devices and equipment companies than in any other companies. Some military strategists explore the possibility of the bioterrorism against Koreans. The news media has reported a significant boost in medical tourism: "Korea is the second largest medical tourist market in Asia". E-health is playing a significant role in the growth of the health care industry. The five fastest growing jobs in Korea are biomedical engineer, personal care aids, home health aides, physician assistant, biochemist, and biophysicist. Korea is considered to be an epicenter of the bioeconomy.

In 2025, the Korean population slightly increased to 49.0 million from 48.8 million in 2010. The number of people over 65 rises substantially from 5.3 million in

2010 to 10.2 million in 2026. About one in five Koreans are age 65 or above by 2016. The population that is over 65 years-old nearly doubles between 2010 and 2026. Koreans have enjoyed a higher level of personal income. A more affluent life shows the unprecedented rise in demand for quality of life, longevity, and health care. Internationally, the rapid growth of world population requires more food and energy. Biotechnology helps meet the growing demand for food and energy. Those internal and external factors drive the emerging bioeconomy.

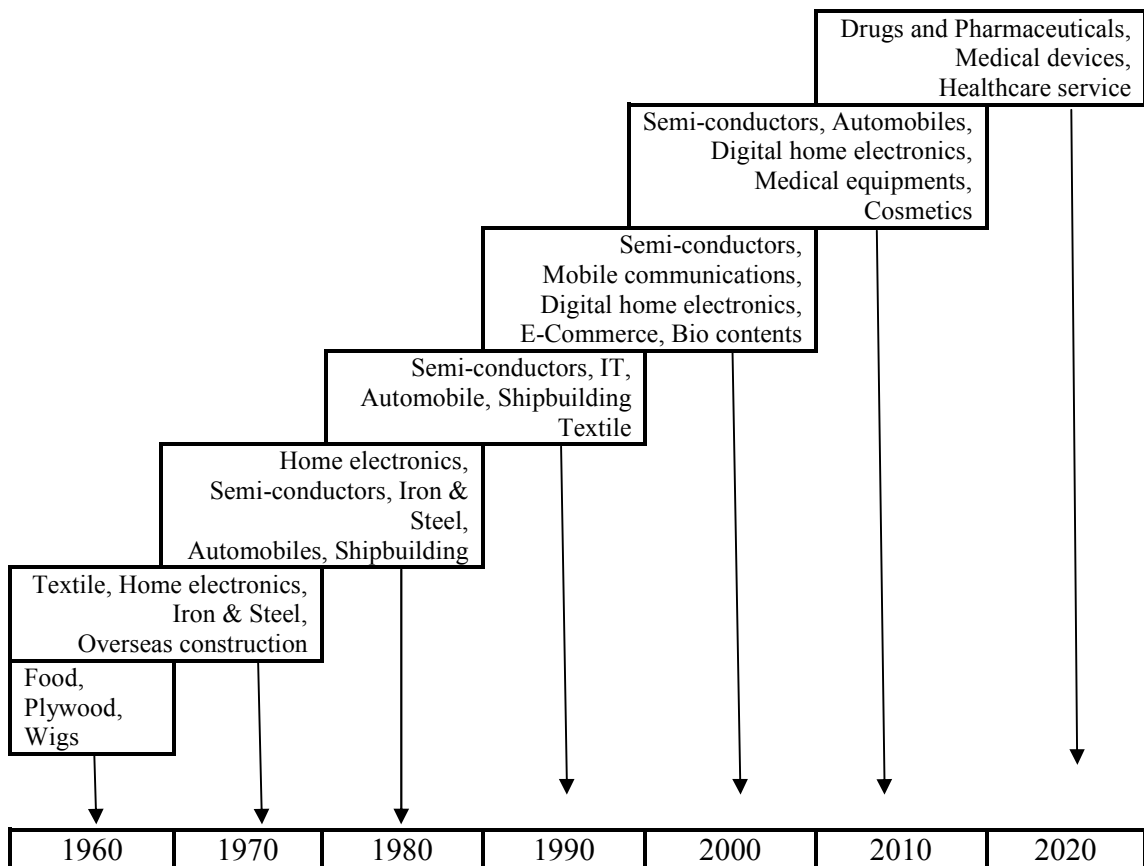
The bioeconomy can be defined as “the aggregate set of economic operations in a society that use the latent value incumbent in biological products and processes to capture new growth and welfare benefits for citizen and nations” (OECD 2006, 3). Biotechnology comprises “the use of genetically modified animals in medicine; in the production of special foods, human drugs, and medical devices; in the development of animal and industrial products; and insect-based pest and disease control” (Crawford 2004, 22). In this era of bioeconomy, many Korean companies have tried to “reinvent themselves as borders between pharmaceutical, biotech, agricultural, food, chemical, cosmetics, environmental, energy, and computer industries blur and erode” (Enriquez 1998, 925). The medical technology breakthroughs, including artificial organs, medical implants, regenerative medicines, and emotional/physical control devices, lead to cures for persistent diseases and to healthier lifestyles.

The Korean economy is undergoing fundamental structural changes from IT and conventional manufacturing sectors to Biotechnology sectors. It has significantly changed the business landscape. More pharmaceutical and bioproduct companies are seen in Korea’s top five companies list. Automobile, steel, shipbuilding, chemical and semiconductor companies are falling far behind pharmaceuticals, medical devices, food and beverages, and life science companies. The big pharmaceutical companies merge to create one of the world’s largest pharmaceutical conglomerates. Many traditional chemical companies are restructuring themselves as life science companies. New agro-biotechnology companies dominate agrochemicals and seed industries. Higher value pharmaceutical and biotech products stay within Korea while lower value products are moved to the developing countries. Biomedical alliances among pharmaceutical

companies, biotech-related universities, and governmental agencies are emerging as leading power groups for decision making process.

Major exports have seen changes over the past decades (see Figure 6.1). Korea started its export industry with plywood and wigs in the 1960s. Then the heavy and chemical industry dominated Korea's exports in the 1970s and 1980s. Since the 1990s, exports of IT-related products had become the nation's principal export items. During the 2020s, the major exports of Korea are drugs and pharmaceuticals, medical devices, etc. This change reflects the rise in biotech related products and the decline in IT and conventional manufactured products.

Figure 6.1 Trends in Major Export in Korea



Source: Adopted from Hong (2010, 12).

### The Nobel Prize: Triumph in Turbulent Times

During the 2020s, high public expectations, strong governmental intervention, and huge private investments are made in health care, pharmaceutical, biotechnology, and the medical device industry. The convergence of nanotechnology, biotechnology, information technology, and cognitive science has promised the advent of new devices, healthcare delivery, and products to cure diseases and disabilities. But there is a dark shadow over the legacy of the biotechnology promise. Genetically modified insects and crops cause unintended effects on public health and the environment. Genetically modified viruses spread new types of chronic and incurable diseases, and strict quarantine programs are frequently enacted for the prevention of incurable diseases. Some biotech companies are shutting down their human and non-human biobanking businesses entirely due to DNA contamination.

Pharmaceutical and biotech losses are unusually high due to drug failure, patent expiration, absence of new blockbuster drugs, and competition from China and India. They are spending more money in emerging markets like Vietnam, Malaysia, Thailand, Philippines, and India. There is also the rise of intergenerational conflicts between the old and young to deal with. The aged demand more health care and economic help while the young work longer and pay higher taxes. Insurance and healthcare providers are growing as power groups, which has an affect on insurance coverage. Many Koreans cannot access personalized medicine due to the high cost and limited insurance coverage. Only the rich can get the benefits of personalized medicine. A total health care bubble has emerged. Furthermore, the aging population places substantial economic burden on the young. The Korean government delivers “a bad-news budget” to cut health care and social services. Economic growth has showed a continued downward trend. Funding from government for the biotechnology industry is decreasing. The biotech industry share of total corporate and venture capital has declined.

As Korea shows economic slowdown, rising inflation, and poor biotech productivity, public pressures mount for new policies and foreign investment. Korean leaders have begun publicly discussing its bioeconomic problems. Most Koreans see global salesmanship as one of the most important leadership qualities to overcome economic predicaments. Korea’s government launches ‘Korea is bio-dynamic’ campaign

aiming to help boost the Korean bioeconomy and investment. Korean political leaders fly to New Delhi, Sanghai and Sydney to address top business executives for foreign direct investment. Korea hosts a global investment conference that helps Korea's recovery from the bioeconomic recession. It is unclear how effective the 'Korea is bio-dynamic' campaign is. Yet those efforts never catch the world's attention.

Over time, an unexpected opportunity is just around the corner. A Korean scientist Dr. Dong-Ha wins the Nobel Prize in medicine for discovering a vaccine to treat type I and type II diabetes. Diabetes has become "a worldwide pandemic" and is "one of the most costly medical conditions to treat" (Los Angeles County Department of Public Health 2010). This fundamental discovery gives new hope to hundreds of millions of people around the world. As a profit center and driving force, it also gives Korean society a booming bioeconomy again. The vaccine has become one of the best-selling drugs in history and leads to a huge innovation in pharmaceutical companies. A biotech renaissance is apparent. For a window of recovery in Korea, private companies, venture capitals, educational institutions, and government agencies are working together to develop new drugs and vaccines. Big multinational companies such as Pfizer, Merck, and Sanofi-Aventis are betting big on Korea. Many biotech-related researches are getting unlimited financial support and more innovations happen everywhere.

### **"Living Well Beyond 100": "Selling the Fountain of Youth"**

In 2030, the life expectancy in Korea reaches a high of nearly 100.0 years, up from 80.0 in 2011. Korea's life expectancy has increased by 20 years in nearly two decades. It opens up the age of centenarians (age 100+ years old). Koreans celebrate the milestone over the lifespan. Also, the number of supercentenarians (age 110+ years old) has risen exponentially over the past decade. Advances in medical treatment and biotechnology have increased life expectancy. This remarkable shift is fueled by not only diet, drugs, and gene therapy, but also "tissue rejuvenation with stem cells, molecular repair, and organ replacement". Common age-related diseases, such as heart disease, arthritis, diabetes, and cancer, have steadily declined. Nano-biochips are widely used to

detect diseases early and deliver medicine. Stem cells repair and replace damaged tissues such as the brain, heart, eye, etc. New drugs are used to treat Alzheimer's, Parkinson's and other degenerative diseases.

The anti-aging industry is a booming business because health and pharmaceutical companies have developed many drugs with the hope of reversing aging. On the other hand, Koreans see anti-aging practices as human enhancement. The discourse of 'aging is our fault' and 'aging is a disease' is wide-spread. Many people are seeking the bio-version of the fountain of youth which is a legendary spring to "restore youth to anyone who sipped its waters" (Weintraub 2010, 5). The practice of lengthening one's life span is one of the most important indicators of well being:

To get back my youth I would do anything in the world, except take exercise, get up early, or be respectable (Oscar Wilde, *The Picture of Dorian Gray*, cited in Kim and Uhl 2011, 3)

Anti-aging products and services have become a cultural icon. The majority of anti-aging products include "facial care, skin care, hair care, drugs and supplements, nutraceuticals, cosmetic equipment, and fitness equipment" (Kim and Uhl 2011, 6). The services are "cosmetic services (invasive and noninvasive), complementary and alternative medicine therapies, bioregenerative services, spa treatments and massages, and gym services" (Kim and Uhl 2011, 6). Antioxidants and hormone replacement are popularized for anti-aging powers. The most fashionable anti-aging intervention is "replacements for aging cells" and "turning off aging genes". Stem cell technologies replace damaged and old cells to reverse the aging process and molecular medicine turns off the genes that promote the aging process. In this context, many pharmaceutical companies are in the pursuit of drugs and therapies to extend life and make people look younger.

### **Midlife Change: "Life Begins at 60"**

Middle age or middle adulthood is a sandwich generation between young adulthood and old age. They are no longer young or old. They are the most powerful age group. In the age of centenarians, the middle aged are undergoing a transition that results in the changes of several aspects of life such as work, social roles, family, other relationships, and people's perception. In the 1990s, the Korean middle aged, who fell somewhere between 40-65 years old, were widely considered to be experiencing a midlife crisis. The notion of a midlife crisis was associated with declining years, forced unemployment, loss of purpose and direction, and retirement:

A time when children are leaving, parents are dying, job horizons are narrowing, and friends are having their first heart attacks; a time when the past floats by in a fog of hopes not realized, opportunities not grasped, and potential not fulfilled; a time when the future is a more consciously-anticipated confrontation with death. On cat's feet sneak little telltale signs of advancing age. Hearing, eyesight, memory, hair color, stamina, teeth, reflexes, skin tone—all, in varying stages of decline, signal life's slow but certain slide downhill (EBONY 1979 (April), 82)

Today, middle age, which is considered as occurring between the ages of 60 and 80, and is seen as the prime time of life. The idea of midlife marks the turning point for a more mature stage of life. Koreans do not consider 80 as old. It is not unusual for those in their 60s to make new career choices. The 60s are expected to remain in the workforce for a couple more decades and enter the new level of life course to participate the world. They are not suffering from age-related health problems like heart disease or cancer. The middle age is supposed to lead a vital and energetic life in artistic insight, enjoying skiing and surfing, having healthy brains, and exploring remote places. The expanded lifetime and good healthcare practices reverse the conventional concept of a midlife crisis. Age is not a main element of our identity and path. Middle-aged people show different lifestyles between the 1990s and the 2020s (see Table 6.5).

Table 6.5 Difference between the 1990s and the 2020s from the Middle Age

	The 1990s	The 2020s
Discourse	Midlife crisis	Midlife transition
Concepts	Declining years	Mature years
Identity	Menopause causes a significant loss of identity.	Menopause is an option due to the development of a

		menopause drug.
Family setting	Empty nest with boredom and loneliness	Happy nest with rich social life and job satisfaction
Physical condition	Physical decline	Physical strength
Financial security	Financial burdens with children education costs.	Financial burdens with healthcare costs
Character	Middle-aged man with feminine characteristics and middle-aged women with assertive characteristics	Middle-aged man and middle-aged women with neutral characteristics
Behaviors	Piecemeal change and an obsession with mortality	Radical change and impulsive behavior about money and career

Source: Based on Harwoo and Giles (1993, 16-17) and Kiebler-Brogan<sup>29</sup>

### **Genetic Divide: “Naturals” and “GenRich”**

Reuters Korea provides two breaking news stories in the summer of 2030. Recently, seven students in Korea committed group suicide due to genetic discrimination and prejudice. Wealthy parents demand a designer baby who will be strong, smart, and pretty as well as having a “no biological need to sleep” trait for success. With the advancement of genetic manipulation technology, Korean society is divided into “the GenRich” and “Naturals.” The GenRich class is “genetically enhanced” and “a modern day hereditary class of genetic aristocrats” (Silver 2002, 5). The Natural class “cannot even breed successfully with their gene-enhanced betters” (Silver 1998). They are regarded with second-class citizenship and “a genetically unemployable class (Rifkin 1998, 165). The GeneRich class includes “GenRich Businessman”, “GenRich musicians”, “GenRich artists”, “GenRich intellectual generalists”, and “GenRich athletes” (Silver 2002, 5-6). The gap between the two classes is widening across the nation. They become separate species (Silver 2002, 6-7):

All aspects of the economy, the media, the entertainment industry, and the knowledge industry are controlled by members of the GenRich class. GenRich parents can afford to send their children to private schools rich in the resources required for them to take advantage of their enhanced generic potential. In contrast, Naturals work as low-paid service providers

<sup>29</sup> Kiebler-Brogan, Heidi. “Are You Having a Midlife?”. [http://www.iecounseling.com/uploads/Tools\\_Article\\_F08.pdf](http://www.iecounseling.com/uploads/Tools_Article_F08.pdf) (February 25, 2012).

or as laborers, and their children go to public schools. But twenty fourth-century public schools have little in common with their predecessors from the twentieth century. Funds for public education have declined steadily since the beginning of the twenty first century, and now Natural children are only taught the basic skills they need to perform the kinds of tasks they'll encounter in the jobs available to members of their class.

There is still some intermarriage as well as sexual intermingling between a few GenRich individuals and Naturals. But, as one might imagine, GenRich parents put intense pressure on their children not to dilute their expensive genetic endowment in this way. And as time passes, the mixing of the classes will become less and less frequent for reasons of both environment and genetics.

The environmental reason is clear enough: GenRich and Natural children grow up and live in segregated social worlds where there is little chance for contact between them. The genetic reason, however, was unanticipated.

Gattaca, Andrew Niccol's 1997 film depicting the future of genetic engineering, becomes a reality in Korean society:

Vincent (Ethan Hawke), the hero and narrator of the film, is born into a world in which one's entire life is determined by the inexorable predictions of genetic screening tests. He is one of the few babies conceived by the old fashioned method, without benefit of genetic engineering. Because of his "inferior" blood, he is known as a "degenerate" (with a long "e"), another reference to the horrors of the National Socialist program. "Genoism," or prejudice based on a person's genetic makeup, is technically illegal but universally practiced. As the narrator explains: "I belonged to a new underclass, no longer determined by social status or the color of your skin. No. We now have discrimination down to a science." A genetic sample can be obtained from something as small as a fingernail clipping or single hair, the residue of a handshake or a kiss. Once a sample is obtained, the genome can be sequenced in a matter of seconds. Thanks to the actuarial tables of a probability-mad society, a person's future appears to be encoded in every cell of the body, a destiny read off from a roll of computer printout. This is a society living fully in genome time, a society that denies the openness of individual futures because of its belief in a destiny already written in the present. (Clayton 2003, 185)

### **Biotech Politics: The Advent of Genetocracy**

In 2030, the Korean Conservative Union (KCU), one of the nation’s most powerful political groups on the Right, launches the ‘Conservative Gene Project’ which supports fertility experiment for the human germline genetic modification resulting in more a conservative inheritance. A growing body of work supports the belief that people’s political ideology is influenced by their genes. Voting and other political participation are inheritable. The project can be an important step in enabling conservatives to increase backers who will support conservative causes. On the other hand, progressives have carried out a ‘Liberal Gene Campaign,’ which makes efforts to discover new genes leading people to have more liberal political attitudes. There are biotechnological conflicts among conservatives, progressives, and other stakeholders.

Table 6.6 Ethical and Social Debates on Biotechnology

Issues	Biotech-conservatives	Biotech-progressives
Will biotechnology only benefit the rich and powerful?	Economic and technological progress is a positive sum game. All benefit from the technological advance.	Technological progress can increase inequality. “Progressive taxation” and “genetic enhancement covered by social security” should be considered.
Transhumanism	“The voluntary use of technology to enhance human capacities and extend our health-span”	An expansion of eugenics
Patents on life	Strong favor of patenting life forms involving stem cells taken from human embryos.	No patent on human life
Development of biotechnology	“A tool to manipulate or control nature”	Significant risk
Who decides the impact of biotechnology?	Individual autonomy	Equality, and human life and dignity
Biomonitoring of the human genome	Preventive action for health risks	Biosurveillance of human populations

Source: Based on Nick Bostrom, “Transhumanist Ethics.”  
<http://www.nickbostrom.com/ethics/transhumanist.pdf> (February 17, 2012)

The political terrain of Korea is occupied, roughly, by biotech-conservatives and biotech-progressives. Biotech-conservatives pertain to the scientific and technological

advances in the matters of social and economic development. They strongly support human cloning, stem cell research, and human genetic modification. Despite ethical and criminal concerns raised, they see biotechnology as their chance, source of national well-being, and the wave of the future. On the other hand, biotech-progressives focus on equality and the protection of human dignity. They support less agricultural and food biotechnology, while there is moderate support for biomedical research and pharmaceutical applications. They criticize biotech-conservatives as having growth-oriented and utilitarian perspectives. Several issues have given rise to ethical debates between the two camps (see Table 6.6).

New breakthroughs in biotechnology have carried the exercise of power in terms of social, political, and symbolic aspects. They bring genetocracy, “organizing itself in informal biological cast systems” to Korean politics (Somsen 2004, 8). For the social order, all Koreans are categorized by “the qualities of their personal genome”. “The mechanisms of surveillance lie not in external coercion, however, but within the very genetic composition of every individual.” (Graham 2002, 109). A new social polarization between the genetically superior and the genetically inferior creates new social and political dynamics. The GenRich class support more bio-conservative values and policies which promote biological advantage. The Natural class is committed to liberal causes. They take to the streets to protest against genetic stereotyping and genetic discrimination. They collectively organize the “genetic rights movement” to seek to change their identity and status as a genetic underclass in the era of genetic destiny.

Issues of genetocracy arise in another area. The advent of genetocracy leads to the decline of the power of the church. Religious leaders criticize that biotechnology allows scientists to play God. They argue that people should be “not changing what God has already created” (Evans 2002, 125). Religious orders have been weakening due to reproductive technologies like designer babies. Those technologies redefine “the boundaries between born and made, organic and biotechnological, the human and non-human” (Graham 2002, 111). Religions cannot offer comfort to Koreans who are finding their security and identity from genetic engineering:

In the ultimate promise of genetic engineering—to reshape the work of Creating—we come face to face with ourselves, i.e., with the meaning of human existence on earth, or with what was meant traditionally by the human “soul.” (Leiss 2001, 260).

In this climate, there has been a significant decrease in religious followers. Many Koreans are seeking other spiritual activities. Some take spiritual biomedicine to promote spiritual practice and to make a critical contribution to faith and worship. Others simply have neural biochips embedded into their brains and then, plug into a computer’s spiritual banks. Their mind is full of information associated with spiritual meaning and religious practice. They make themselves a spiritual leader in anything from the Bible, the Koran, the Buddhist scriptures, and other sacred books. Well-funded religious groups have lobbied and campaigned against the activities of “playing God.” Some fundamentalist religious groups seriously oppose activities that create new life forms. They attack biotech-research parks, cloning clinics, and other bio-related academic institutions.

### **Medical Tourism and Telemedicine**

The healthcare industry is involved in global competition and medical consumerism and becomes one of the main driving forces for the global economy due to aging populations and a desire for a high quality of life. Medical tourism, in which patients travel to another countries for “specialized or economic medical care, well being and recuperation” (Deloitte Center for Health Solutions 2008, 6), is one of the fastest growing sectors across the world. Wealthy patients from developing countries used to travel to developed countries for high-technology treatment. On the other hand, middle-class patients from developed countries come to developing countries for better and cheaper medical service. Many countries like India, Thailand, Malaysia, Singapore, Costa Rica, Hungary, and Mexico are popular destinations for medical travel.

Medical tourism is also becoming vital to the Korean economy. The public and private sectors continue to invest in the healthcare infrastructure. The Korean government has built a ‘Bio-medi City’ in Jeju, Korea’s premier resort island. The City includes

medical clinic complexes, a medical college, apartments, golf courses, shopping malls, concert halls, art museums, and scenic beaches. It specializes in medical checkups, cancer treatment, plastic surgery, dentistry, transplant, and urology. To promote medical tourism, the Korean government opens marketing offices around the world to lure medical tourists. The private clinics and hospitals are affiliated with international medical insurance companies. 'Medi-motels' and 'medi-hotels' are located near the hospitals and healthcare facilities.

Telemedicine is a popular health care delivery system and has been a mainstream business due to the development of ICT, growing chronic diseases, shortage of healthcare professionals, rising healthcare costs, and increasing demands for high-quality healthcare services. It uses "ICT to provide a wide array of health services to individuals without requiring the individual to interact face-to-face with the health care provider delivering the care" (Children's Partnership 2008, 2). It includes "videoconferencing between a patient and health care providers for a consultation or among groups of patients or providers for education, support, and care coordination; transmission of data, such as x-rays, photographs, video, and audio files; remote monitoring of vital signs and other health indicators; and Internet applications for patient education and disease management" (Children's Partnership 2008, 2).

Koreans witness the benefits of expanding telemedicine through several cases. A Korean scientist gets an extremely sharp pain around his heart. But he cannot get a contact with a doctor because he is working at the Jang Bo-go base which is one of Korea's research stations in the Antarctic. He can get an e-consultation with a doctor thousands of miles away through the telemedicine system. He uses a special electronic stethoscope and other portable healthcare diagnostic devices to measure his body conditions. Korea's hospitals and clinics offer telemedicine services to America's Korean immigrant community and other international Korean immigrant communities that speak Korean. Also they provide telesurgery with robots. Korean doctors in Seoul have operated on Korean American patients in New York. Telesurgery is making "a kind of global operating room".

## **Transhuman Epoch: The Promise of Superhuman**

The development of biotechnology, along with nanotechnology, artificial intelligence, cyber-technology, had led to the burgeoning ideology of transhumanism. Transhumanism is defined as “the intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by using technology to eliminate aging and greatly enhance human intellectual, physical, and psychological capacities” (Bostrum, 2003, 4). The main discourse of transhumanism is that human enhancement by technology is good. Koreans expand their dependence on machines to their bodies.

Many Koreans are obsessed with the promise of a superhuman. Most Koreans have dreamed of having bodies and minds that transcend their biological limitations. The promise of a superhuman has led Koreans to seek Singularity. Singularity fever is a main driving force of biotechnology and cultural expansion in Korea. Koreans use advanced medical, prosthetic and genetic skills and to enhance their intellectual powers. For instance, Koreans has put electronic equipment into their body and use it to control robotic arms and communicate with other people through the Internet. Also the electronic equipment is developed for human brain in order link with an artificial brain in a super computer. The artificial brains develop self-consciousness. Korean’s consciousness can be uploaded on the internet. Some Koreans alter their voice. They can experience the rapid and dramatic changes in the nature of life and mind. As a result, they can increase their intelligence, memory, physical health, and strength. They can expect the achievement of an indefinite life-span in the near future. The transhumant epoch and dreaming of being superhuman, change human nature and spread the idea of controlling human destiny (Dvorsky 2004, 7):

With roots in humanist and Enlightenment thinking, transhumanism is an emerging and broadly based philosophy, bioethic, cultural phenomenon whose proponents believe that technology can and should be applied to improve the human condition. Transhumanists believe that humanity ought to enter into a post-Darwinian phase of existence where intelligences, rather than the blind forces of natural selection, are in control of their own evolution.

#### 6.5.4. Summary

This scenario is based on the transformational society future image. We can see how biotechnology affects Korean society. Korea has significantly invested and cultivated in biotechnology to become a world leader. Their impressive progress in genetic technology opens up the gene age. Genetic traits influence marriage, employment, and career promotion. The gene age gives way to genetocracy. Anti-aging products and services have become a cultural icon. The life expectancy of an average Korean stands at nearly 100 years. The expanded life expectancy and good healthcare practices reverse the conventional concept of a midlife crisis. Korean society is divided into the GenRich class and the Natural class. Medical tourism is becoming vital to the Korean economy and telemedicine is a popular health care delivery system.

Table 6.7 The Age of Biotechnology: Key Features

Vision of the future	Discourse/worldview	Opportunities	Challenges
Transhumanism	The gene age, genetic determinism	Freedom from chronic diseases, no more age biases, reproductive freedom	Genetic divide, lack of privacy. Potential eradication of difference

Table 6.7 presents a summary of the main features of the scenario. The vision of this scenario is transhumanism. The transhumanist vision is not distinctively different from the global neoliberal capitalism vision. It is based largely on the assumption of exponential growth in human power. Koreans has promoted the use of technology to enhance human capacities. They believe that humans should accomplish something special to make progress by the technological intervention. They seek to make their happiness achievable in continued technological, economic, and human development. Thus Korea is entering a gene age. Korea is a society of human genetics. Genetics technologies have changed Korean life, culture, and thoughts. In addition, genetic determinism has emerged as an important social discourse. Genetic information plays a pivotal role in constructing society. Some Koreans use the genetic discourse advantageously by taking genetic testing and genetic screening program for marriage and

employment. Koreans are living in an age where an individual's destiny is determined by their genetic makeup. They are sympathetic to genetic determinism.

In this scenario, the development of biotechnology offers opportunities for a healthy lifestyle. Biotechnology contributes to solve problems such chronic disease and age biases, and provide the reproductive freedom of the parents. Most chronic diseases will be eliminated by 2030. Many patients who are suffering from chronic diseases are able to normal lives. Biotechnology allows Koreans to live longer with a high of nearly 100.00 years. Regarding reproductive freedom, Koreans can now decide when and how they want to have children.

On the other hand, Koreans now confront key challenges: genetic divisions and the lack of privacy. Korean society is divided into a genetically enriched elite and a genetically deprived mass. Extreme social polarization surges in the biotechnology age. There are strong possibilities of inappropriate disclosure of individually identifiable data such as clinical data and genetic data. The development of medicine, genomics, and information and communication technologies makes huge amount of health-related information available. The disclosure of personal information directly impacts personal well-being and society. Genetic engineering and transhumanism can make “the conditions for the possibility for the potential eradication of difference” (Harees 2012, 320). Biotechnology can demean the value of human life. We are intended to treat human as dispensable so that the biotechnology becomes a dangerous interference to undermine human dignity. We need to consider how to tackle key challenges when we promote biotechnology, establish biotechnology-related enactment, and produce biotechnology products.

## CHAPTER 7

### PREFERRED FUTURE SCENARIO TO 2030:

#### NATIONAL UNIFICATION VISION

*The notion of a best society, however, is an abstraction and not the description of an achievable society. For if we imagine any supposedly best society it will be possible to think of ways to make it better, if only by increasing the amount of happiness it contains. The ultimate perfect society in which everyone is perfectly happy, in which there is perfect harmony among all the inhabitants, in which there is no pain or sadness, in which death, if it occurs, is gentle, timely, accepted, and appreciated, in which no parting causes sorrow and no presence impatience, in which there is no want or desire that is not satisfied at the optimal time and in the optimal way, in which there are no accidents, and so on, is a description possibly of heaven, but of no earthly society.*

Burke, Crocker, and Legters (1981, 8)

#### 7.1. Introduction

While the previous chapter deals with the four alternative future scenarios, this chapter addresses a preferred future scenario which leads to a dramatic paradigm shift and motivates people to create a desirable future. The chapter consists of four main sections. The first section involves envisioning a preferred future. The reference of envisioning futures draws on identifying opportunities, challenges, novelty, and tradition that each scenario has brought. The visioning process enables people to understand the elements that shape a preferred future and to imagine desirable circumstances. The second section describes three characteristics of the preferred future: economic democracy, inclusive society, and sustainable development. These three characteristics interact with each other. They are well accepted in Korean society as fundamental principles. The third section describes a preferred future scenario called the Peaceful Unification as a Dream Come True. This scenario is based on the assumption that the

peaceful unification between South and North Korea have realized. The development of preferred future scenario is accompanied by the struggle for economic democracy, creating an inclusive society, and national unification. Section four is about the strategies of the transformation. We suggest strategies and actions to achieve the preferred future.

## **7.2. Envisioning Preferred Futures**

Chapter 6 envisions four alternative futures which explore the possible directions of Korean society. The alternative futures have the potential to transform Korean society and build a new nation. They may be the most likely future condition; they may provide highly challenging future conditions; they may be the most worrying future condition. Not all of them are equally possible. Some alternative scenarios are more likely to occur than others. Some may be unbelievable. Others may be the plausible extension of the current trends. Also, we cannot easily conceive that alternative future scenarios will transform into the actual future due to the alterability or changeability of the future states.

Therefore, “human choice and chance play a major role in determining which of the many possible futures will become the actual future. Some factors like technology and demographics, which will influence the short-term future, can be known in advance. However, others cannot, especially for the long-term future that involves human choice.” (McFaul 2006, 184). In this context, all our human choices are critical to the realization of the future. The images of preferred futures function as a connection between human choice and the realization of the future as medium. Envisioning a preferred future enables us to increase “the probability of occurrence of any possible future” (McFaul 2006, 185).

This section engages Jim Dator’s envisioning process to make a preferred future. The four alternative scenarios are to play a significant role in visioning preferred futures. In order to make preferred futures, we must examine and understand something about four generic alternative futures for creating viable preferred future. Jim Dator (1993, 111) describes the importance of the four generic alternative futures and why people fail to achieve their preferred future.

However it is that the alternative futures generated, I do feel it is important that each person's initial ideas about her preferred future be challenged, broadened, deepened, and strengthened somehow. If this is not done, then the initial ideas about the future are almost certainly going to be only the projected fears or hopes of the past or present. They may not have much relevance for the future. Without some considerations of the major forces creating the environment of tomorrow, and of truly alternative, holistic responses to them, any plan or call for action, no matter how clearly stated and broadly supported, is likely to lead to failure and disappointment. A person's preferred future is more likely to be viable after her sense of what is likely and possible has been challenged and expanded.

Table 7.1 compares opportunities, challenges, the old, and the new in the four alternative scenarios so as to conduct visioning exercise. Opportunities, challenges, the old, and the new provide lists of envisioning futures to help Koreans articulate what they want for themselves and their nation for the long-term futures.

Table 7.1 Four Scenarios Comparison: Opportunities, Challenges, the Old, and the New

Scenarios	Opportunities	Challenges	The Old	The New
<i>The Republic of Samsung</i>	Satisfaction of further economic growth and technology advancement, regional peace in East Asia	The increase in inequality, dominance of single corporate culture, erosion of democracy, corporatization of higher education	Solid economic growth, Knowledge economy, internationalization of education	Regional cooperation(the EAC), the wave of Brain Computer Interface technology,
<i>The Great Han River in Warmer Korea</i>	Increase in internal solidarity, common sharing and communal public works.	Environmental degradation, citizen and community preparedness	Consumerist optimism, extreme weather, environmental refugees	Safety fever, Korean Civil Society Coalition on Climate Change, Eco-Market Movement, international environmental refugee project, de-growth economy
<i>A Big Global Family Phenomenon</i>	World harmony, respecting diversity between gender, race, ethnicity, and culture, global justice	Gap between the South and North, conflict between national sovereignty and global governance	Multicultural society, global citizen movement,	Nonpolarity, neo-nationalism, terrorist attack, the UNPA, anarchism, global taxation, crucial role of cities, people's economy,
<i>The Age of Biotechnology</i>	Freedom from chronic diseases, no more age	Genetic divide, lack of privacy. Potential eradication of	Investing biotechnology, eugenics, anti-aging products	The anti-discrimination laws for genetics, the Nobel Prize, golden age of midlife, genetocracy,

	biases, reproductive freedom	difference	and services, medical tourism	
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Table 7.2 presents the lists of envisioned futures identified by opportunities, challenges, the old, and the new in the visioning process.

Table 7.2 Four Scenarios: Envisioned Futures

Scenarios	Envisioned Futures
<i>The Republic of Samsung</i>	Reducing social inequality, possibility of economic transformation, fiscal sustainability, regional cooperation and peace, improvement of access to global education
<i>The Great Han River in Warmer Korea</i>	Common sharing and communal public works, increased possibilities for government and citizen preparedness, increased critical view of consumerism or materialism, balance between environmental and economic values
<i>A Big Global Family Phenomenon</i>	Global justice, removing of race bias, openness to cultural diversity, integration of global governance and national governance
<i>The Age of Biotechnology</i>	Living a healthy lifestyle, removing of eugenics and biosurveillance, potential for environmental preservation, increased efficiency, a big improvement in the life of the older

### 7.3. Characteristics of Preferred Future Scenarios

The lists of envisioned futures above are analyzed, based on scenarios findings and my personal inspirations. We have developed the three most essential normative elements from envisioned futures to define this scenario's preferred characteristics. They aim at transforming Korea into a preferred future by 2030, capable of a peaceful, equitable, and sustainable future for all of Koreans for generations to come. The three fundamental principles are economic democracy, an inclusive society, and sustainable development.

**Economic Democracy:** Economic democracy is defined as “a system of checks and balance on economic power and support for the right of citizens to actively participate in the economy regardless of social status, race, gender, etc” (Johanisova and

Wolf 2012, 564). Economic democracy is a normative claim that proposes the greater democratization of economic decision-making from the few economic elites to the public. In other words, people should be treated as equals in the process of economic decision-making. However, existing economic institutions and structures are dominated by owners and large corporations determine workplace conditions, income and the general welfare of their employees. It systematically induces problems like increasing inequality and a repeated economic crisis.

**Inclusive Society:** An inclusive society refers to “a society that over-rides difference of race, gender, class, generation, and geography, and ensures inclusion, equality of opportunity as well as capability of all members of the society to determine an agreed set of social institutions that govern social interaction.” (Expert Group Meeting on Promoting Social Integration, Helsinki, July 2008, cited in DESA 2009, 8). It is based on equal opportunities and social justice. Unequal opportunities and social injustice leads to social exclusion while equal opportunities and social justice leads to an inclusive society. Also, “it is promoted by social policies that seek to reduce inequality and create flexible and tolerant societies that embrace all people” (DESA 2009, 7). The most marginalized in Korea have experienced social exclusion in culture, education, economy, and community life. Social exclusion is a common social phenomenon that prevents Koreans from social justice.

**Sustainable Development:** Sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED 1987, cited in Kuhlman and Farrington 2010, 3438). In this context, sustainable development refers to the well being of future generations, concern about limited resources, and concern about the long-term survival of our planet. Economic activities should be driven by public concerns that deliver sustainable wellbeing, reduce pollution, and enhance resource efficiency. Sustainable development can be seen as an alternative vision for growth-oriented development.

## **7.4. Preferred Future Scenario: Peaceful Unification as a Dream Come True**

### **7.4.1. Background**

In The Peaceful Unification as a Dream Come True, a preferred scenario which refers to a set of desirable futures is delivered. The peaceful unification is the most wanted dream in Korea since Korea was divided in 1945 after the end of World War II. The peaceful unification scenario covers a situation in which South and North Koreans support of peaceful unification with gradual economic integration. The two Koreas make efforts to institutionalize peaceful coexistence. After the unification, a unified Korea employs three fundamental normative principles -- economic democracy, an inclusive society, and sustainable development, as important means, to achieve a preferred future.

South Korea and North Korea operate under extremely different ideas about culture, identity, and lifestyles. These differences are the main challenge for unification. Cultural differences are a bigger obstacle than political differences for the success of unification. Unification itself will be particularly important for the foreign policies of major countries, such as China, Japan, Russia, and the United States, in the 21 century. The game of the great-power rivalry over the Korean peninsula is a significant factor in the process of unification. Also, a united Korea is widely believed to be a much more significant political player – either a middle or super power country.

Peaceful unification is not taken for granted. It has been difficult because of the lack of proactive domestic and international efforts (Kim 2007, v). There are strong tensions between the two Koreas both of which have huge conventional military forces. North Korea has developed nuclear weapons to threaten continued economic and social hardships. North Korea is hesitant about reforms. South Korea considers North Korea as object of modernization. Even, South Koreans increasingly hesitate to embrace unification. Neighboring countries surrounding the Korean Peninsula have different national interests when it comes to Korean unification. For instance, China does not favor unification because North Korea helps keep the United States preoccupied in Northeast Asia. The U.S. does not seem to have a specific policy about Korean unification. The

status quo of the divided Korean peninsula may support U.S. national interests. These circumstances make it very difficult to achieve the preferred peaceful unification. One way or another, most Koreans desire Korean unification based on three principles: independence, peaceful unification and greater national unity.

In this scenario, the rise of a new desirable society will be told as an imagined narrative composed of 1) national unification, 2) economic democracy, 3) inclusive society, and 4) sustainable development. In the near future, the transformative process moving toward the preferred future are promoted for resolving existing problems and searching for desirable alternatives. In the long-term future, the new preferred society change the foundations of existing society like everyday life, values, interests, institutions, and structures.

#### **7.4.2. Drivers of the Scenario**

This scenario assumes the following driving forces:

- **Governance:** Governance is the main driving force for the peaceful unification scenario. North and South share common objectives in the avoidance of war and the peaceful resolution of hostility. South Korea maintains an engagement policy toward North Korea. North Korea gradually makes political reforms and individual mobilization is increased. International governance plays an important role. World politics is based on the multipolar world order.
- **Economy:** Two Koreas rely on the globalized economy. The economics of the unification dominate Korean economic policies. The North Korean economy slumps after unification. North Korea implements Chinese-style economic reform. After Unification, Korea has implemented a variety of policies of economic democracy.
- **Population:** South Korean population growth is slow. South Korea's birth rate continues its downward trend, resulting in an aging population and labor

force shortages. The North Korean population has steadily increased. North Korean population density is relatively low. The unified Korea's population is steadily increasing.

- **Technology:** Technological progress is slower due to the cutback in industrial R&D capacity. The technology-intensive industry negatively affected the unification process.
- **Environment:** Environmental quality is moderately improved due to the economic democracy and sustainable development trends.
- **Energy:** The population growth in the unified Korea contributes to growth in energy consumption. The new unified government makes clean energy a national priority.
- **Culture:** A diverse inclusive culture has strongly been built on the solid moral grounds. There is a growing dominance of a culture of inclusion and the principle of recognition. Koreans are open to different background, mindsets and ways of thinking. They are going to recognize difference.

### **7.4.3. The Path to 2030**

#### **Revival of the Sunshine Policy: Working Peace system**

In 2013, South Korea's new government seeks to revive the sunshine policy for developing unification and decreasing political and military tensions between South and North Korea. The sunshine policy is South Korea's foreign policy aimed at achieving economic engagement and reconciliation under the Kim Dae-jung (1998-2003) and Roh Moo-hyun (2003–2008) governments. However, the Lee Myung-bak (2008-2013) government reversed the sunshine policy. As a result, inter-Korean relations froze and future negotiations are considerably aggravated. The feelings of distrust between the two countries were accelerated.

The newly elected South Korean president pledges a revival of the sunshine policy to improve two Korea's relations. In his inauguration speech of 2013, Mr. President emphasizes his willingness to engage North Korea and to try to deal with the diplomatic problems. He also rejects a fast absorption of North Korea and supports a gradual process for unification. "The transformation of two separate and hostile Koreas into peaceful unification needs "a long-term cultural process" and takes a series of practical and specific dimensions toward "a working peace system"," Mr. President says, adding that the unification is more than economic and legal integration and the two Koreas should understand fully each other's culture, history, and basic values.

The revival of the sunshine policy is closely related with a concept of a "working peace system." David Mitrany, a historian and political theorist, proposed functionalism as a working peace system to diagnose the disorder in international society (Taylor and Groom 1975, 1). This approach assumes that economic development promotes mutual understanding; the individual welfare should be considered; and international cooperation is emphasized (Taylor and Groom 1975, 3-4). This policy gets involved in areas such as the economy, education, environment, welfare, technology, and scientific research. Furthermore, it comprises peace by pieces: "pieces that can be seen as constituting organic elements of gradual social and economic integration of the two Koreas lead gradually to a working peace system" (Kim, Samuel S 2006, 358). The promises of this approach include (Kim, Samuel S 2006, 358):

- (1) National unification per se does not automatically bring about peace, power, prosperity, and democracy;
- (2) Korean reunification without prior inter-Korean reconciliation—indeed without a prior working peace system—may be a sure recipe for catastrophe for all;
- (3) The two Koreas must first initiate the politics of regional reconciliation with changes at home and then start the functional peace process by discussing areas of mutual interest on which they can most readily reach agreement.

### **North Korea's Chinese Style Economic Reform**

North Korean leadership adopts the Chinese-style economic reform to confront North Korea's changed circumstances. There is a tsunami wave of change in North Korea. Kim Jong-il has a second stroke after his first stroke in 2008. On December 17, 2011, Kim Jong-il died from a heart attack at age 69. Kim Jeong-un, Kim Jong-il's youngest and third son, officially becomes North Korea's next leader. North Korea has been preparing for Kim Jong-il's death to orderly maintain the regime. The power transition, however, brings the challenges of internal cohesion.

Furthermore, Kim Jong-un prioritizes the successful succession and regime survival. The late Kim Jong-il had declared that North Korea will become a "strong and prosperous" state by 2012. In 2012, North Koreans witness the failure of prosperity promises. Economic situations are getting worse. Chronic food shortages lead North Koreans to drugs, suicide, and defection. Tens of thousands of people have starved to death. North Koreans are looking for alternative ways for survival such as "migrating, foraging for food, selling assets, and engaging in barter and market exchanges" (Haggard and Noland 2007, 165).

The introduction of Internet mobile phones and other technologies are dramatically reshaping North Korean's world view. North Koreans are going to fully understand what they've been through. Their political disaffection to the North government is prevailing. North Koreans try to rise up against the government policies. Chinese companies aggressively enter into the North Korean market. Border trade between North Korea and China is considerably increased. It triggers the marketization of the North Korean economy.

The Chinese government strongly encourages North Korean leaders to follow its footsteps with economic reforms. North Korean leaders have seen China as the world's second-largest economy, overtaking Japan after China's economic reform and opening to the world. The success of China inspires North Korean leaders to take the Chinese path. North Korea is eagerly seeking to cooperate with China on economic development. Furthermore, North Korea's next leader, Kim Jong-un, needs to show a new economic

vision to North Koreans to successfully complete his power succession. North Korean elites are having huge economic gains through border trade with China and other economic activities. Those reasons place pressures on North Korean leaders for Chinese style economic reform and an open door policy.

Political elites try to move from “system-defending reforms” to “system-adjusting reforms” (Ahrens 2003, 68). North Korea’s economic reform is based on the open door policy and border development strategy. The initial focus of North Korea’s economic reform is on outward-oriented growth and a “developmental dictatorship model” (Lee, Kim and Lee 2009). North Korea encourages foreign direct investment for the development of import-substituting industries and the mining industry. North Korea agrees to several projects with China, Russia, Japan and South Korea. Many Chinese companies participate in infrastructure projects and joint ventures in the mining industries and telecom industries in North Korea. China, Russia, Japan and Korea have invested in special economic zones and economic projects such as building bridges, developing ports, establishing electricity infrastructures, etc. Russia provides gas to South Korea through North Korea. North Korea earns at least \$150 million dollars a year on fees for the gas pipeline across North Korea (The New York Times, October 25, 2011). China has been the largest and most dominant partner in economic cooperation with North Korea. South Korea and the international community worry about the economic colonization of North Korea by China. China is a main provider of food and energy supplies for North Korea and the biggest partner for trading. The Chinese government and businesses lease a sixth of an entire geographic region of South Korea such as islands and trade zones for 50 years. They build a variety of factories for low-cost manufacturing to North Korea. North Korea’s economic dependence on China steadily grows. Moreover, Chinese people buy a massive amount of land in North Korea. The state owns most property in North Korea. The state allows the land trading for foreign currency. In this manner, North Korea becomes a “rentier state” which is “largely dependent both on economic rents as well as on politically motivated external financial flows” (Ibrahim and Ibrahim 2003, 110). North Korea’s abundant mineral reserves, and the trade and investment of China strengthen its economy. China is a main client for North Korea’s development.

North Korea is rapidly moving away from a traditional command economy toward market socialism after the economic reforms. It engenders dual economic, social, and political structure. Most North Koreans have a free-market oriented economic mind. Nearly two-thirds of North Koreans earn all of their income from the private sector, up from 40 percent a decade ago. Black markets continue to grow. Prices for food and other goods are soaring. Urban areas are more active in economic activities than the rural areas. North Koreans in rural areas live in poverty. Urbanization is accelerated. There is a big fragmentation between the urban and rural areas. There is no food problem but a distribution problem. North Korean society is divided into “Stalinist country’s elites and its capitalist-minded citizens” (Forsythe et al. 2010). Along with the expansion of market socialism, political elites and new business people make their fortunes from political connections and foreign trade. North Korea faces the process of income inequality. New emerging class shows conspicuous consumption. Furthermore, the intensification of internal migration is occurred looking for economic gains and jobs. In this context, North Korea absolutely needs international cooperation and economic driving policies for energy supplies, trade and capital flows, technology transfers, and establishment of infrastructures.

### **Confronting Cyber Threats and Nuclear Games**

On November 30, 2013 the South Korean National Intelligence Service (KNIS), which is the chief intelligence agency of South Korea, reports that North Korean hackers invaded the South Korean government computer network, stealing and erasing confidential data and critical information. It says that the attack is the most serious one to occur in South Korea over the past years. “North Korea has a force of 3,000 hackers. North Korean cyber warfare capabilities are significantly increased and North Korea uses them to deter South Korea’s military capabilities,” says KNIS’s anonymous. “Cyber operations have become more popular for the inter-Korea conflict, rather than conventional physical threats” and “South Korea expands its cyber and information warfare efforts against North Korea”, anonymous adds. A list of recent cyber attacks include:

- North Korea infiltrated the Korean electrical grid and installed software programs to disrupt the system in August 2013
- North Korea broke into corporate computer networks to get patent and technology information for its economic development in July 2013.
- South Korea attacked North Korea's nuclear program with a malicious virus to damage a sixth of its nuclear centrifuges in March 2013.
- North Korea hacked water control system of Korea Water Resources Corporation and damaged a water system in January 2013.

After seven decades, South Korea and North Korea are still technically at war. A formal peace treaty was never signed between two countries after the 1950-53 Korean War. Inter-Korean relations are a history of ups and downs. Through the revival of a sunshine policy, South Korean policy has focused on rebuilding its ties and cooperation in North Korea. On the other hand, North Korea has dealt with South Korea with sophistication for economically and diplomatically useful opportunities. Sometimes, North Korea shows hostile actions against South Korea. The relations between the South and the North have featured cycles of calm and tension. North Korea continues to use devious negotiating tactics and create "a recurring unstable situation with a certain level of tension" (Lee 2010). In this context, cyber attacks occur often.

North Korea's clandestine nuclear weapon program has been on the international agenda since the 1990s and has brought tension to Northeast Asia. The six-party talks, including China, Japan, North and South Korea, Russia, and the US, has served as a multinational negotiation model about resolving North Korea's nuclear program, but the negotiation has become bogged down by Pyongyang's brinkmanship and different priorities of participating nations. The six-party talks fail to unravel the North Korean nuclear problem. North Korea joins the world nuclear club and eventually becomes a nuclear armed nation.

As a result, it sparks a Northeast Asian arms race, including Japan, South Korea, and Taiwan. Japan declares that it will consider acquisition of nuclear weapons. It drives Korea to consider pursuing nuclear options. This domino effect of nuclear proliferation surprises Beijing and Washington. Newspapers headlines (the New York Times and China Daily) and television networks (ABC and China Central Television) trumpet “shocks”, “new cold war”, and “the Third World War”. Americans are worried that a nuclear-armed Japan could undermine international and regional stability and lose the confidence of the US as security partner to Japan. Chinese leaders want to avoid the international issue of the nuclear-armed Japan. China’s domestic issues are more important than international issues for sustainable prosperity.

China and the US together are calling for a new era of a non-nuclear Korean Peninsula. China, South Korea, and the US persuade North Korea to abandon its nuclear weapons. The US negotiates with North Korea without precondition for the full normalization of diplomatic relations and a comprehensive peace agreement to replace the armistice. South Korea has promised Pyongyang humanitarian aid and technology assistance. Japan announces large scale economic aid and Russia offers North Korea gas and electricity. Particularly, China has considerable leverage over North Korea to influence the military decisions and dismantle its nuclear weapons:

China is North Korea’s most important ally; biggest trading partner, and main source of food, arms, and fuel. China has helped sustain Kim Jong-il’s regime and opposed harsh international economic sanctions in the hope of avoiding regime collapse and an uncontrolled influx of refugees across its eight-hundred-mile border with North Korea (Bajoria 2010).

### **North Korea after Kim Jeong-il: Contested Succession**

After settling the nuclear weapons issues with international society, North Korea is rejoicing. Economic reforms keep things rolling. It has become a member of the international community. The young and inexperienced North Korean leader Kim Jong-un’s hold on power seems secure. North Korea’s power transition goes smoothly and

systematically since Kim Jong-un succeeded Kim Jong-il, the hermetic North Korean leader, after his death in 2011. Kim Jong-un has tried to establish his credibility with the military, party, and cabinet as a ruler of North Korea.

After Kim Jong-il's death, Kim Jong-un and the North Korean ruling class observe "the Confucian three-year period of national mourning" (French 2005, 60). Kim Jong-un has adopted the leadership characteristics of necrocracy. Following the end of the mourning periods, Kim Jong-un's true leadership is fraught with uncertainty. There are highly visible power struggles between the various factions in the North Korean ruling class. While it is unclear what Kim Jong-un's intentions are, some hard-line military factions complain about his settlement of nuclear issues and other political reforms. They are trying to summon Kim Jong-nam, Kim Jong-il's oldest son and Kim Jong-un's biggest rival. Jang Song-taek, a brother-in-law of Kim Jong-il, takes a second position in power after Kim Jeon Un. He has long put his role as a regent for Kim Jong Un. He is labeled as someone with reformist credentials against the hardliners of the army and the party.

A prolonged power struggle leads to the ascension of the reformists. The reformists reduce the extent of military strength and remove military personnel considered as threats. They gradually develop more progressive and pro-capitalist policies, under the pretence of Neo-Juche ideas of North Korean characteristics. Juche is North Korea's official ideology for the past several decades. Liberal values appear in North Korea. The reformists become the most powerful people. They effectively leverage the power of their faction networks. The North Korean regime has change from totalitarian to authoritarian. These phenomena erode the regime's popularity. Growing skepticism toward the legitimacy of Kim Jong-un's regime appears. The key leaders of the reformist group are real power brokers and incline to have ambition to challenge Kim Jong-un's leadership. Kim Jong-un sees them as a potential threat. He discards the reformist leaders with honorary position. He can barely take the control over the country. The following major events occur:

- Kim Jong Un succeeds Kim Jong-il in 2014 and becomes the General Secretary of the Workers' Party of Korea, chairman of the party's Central

Military Commission, presidium member of the Politburo, the Chairman of the National Defense Commission and supreme commander of the People's Army. The main figure of the reformist group becomes the First Vice Chairman of the National Defense Commission and the head of the National Security Agency.

- The new leaders of the party and cabinet pursue the domestic reforms and good international relations, more focusing on economy rather than military. The reformist group is put in charge of these new directions. However these go against the interests of the military. The military has long benefited from the military first policy.
- The reformist group introduces the Third Chollima Movement<sup>30</sup> which is aimed to change the economic structure and catch up with the West and South Korea. One of measures carried by him to raise the economy is to allow direct foreign investment inflows, private business, and trade liberalization. The campaign fails, due to the lack of human resources and innovation-oriented mindset.
- The political stature of the reformist group in the party is damaged because of the failure of the Third Chollima Movement. North Korean People's Army and hardline members of the party congress try to remove them from the leadership of the party and the cabinet. They have increasingly complained about a series of reforms. There are some signs of military-led coup.
- Kim Jong Un questions the leadership of reformists, and turns more and more to hardliners in the army and the party. He is against the reform policies and does not want to see the radical system change. Some reformists are removed from their positions and arrested. Others choose political exile.

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<sup>30</sup> The Chollima Movement took place in 1958 for modernizing North Korea's economy by Kim Il Sung (Frank 2009, 47). Kim Jong-il initiated the Second Chollima Movement in 2008 for completing its modernization (Frank 2009, 47).

- Many protesters converge on the Kim Il Sung Square in Pyongyang to call on the government to implement immediate political and economic reforms. The situation quickly gets out of control. Kim Jong-Un wants to remove reformist's positions. It is not an easy task. The reformist groups and the hardliner groups have a power struggle. Eventually main figures of the reformists and their family flee to South Korea.
- In 2015, Kim Jong Un names leaders of hardliners as Premier and Chairman of the Supreme People's Assembly. The army forces and hardline party leaders strongly back Kim Jong Un's regime. He, as "Dear Supreme Leader", barely manages to maintain the North Korea.

### **Massive Volcano Eruption of Mt. Baekdu**

The intense power struggle fatally undermines the internal cohesion and stability of the North Korea. To make the matter worse, climate change incurs extreme cold weather, heat waves, heavy rains and flooding, and increased droughts. North Korea is facing persistent climatic abnormalities and rampant environmental degradation.

On December 1, 2015, Baekdu Mountain, a dormant volcano for more than a century on the border between North Korea and China, has a massive volcanic eruption, stunning even many volcanologists who expected it. The volcano eruption is accompanied by a magnitude 9.0 earthquake. The mountain's top splits open and a huge cloud of volcanic ash rises high in the sky over the mountain. The volcanic ash reaches the inland of Japan in 12 hours and causes the disruption of air traffic all across East Asia and part of the Pacific. The mountain contains a billion tons of water. The flows of mud, rock, and water cause the massive flood. The river of mud travels more than 60 miles. The second eruption removes the top of the mountain and ejects 1000 million tons of ash, covering parts of the Korean peninsula. Huge lava flows continue to spill out in all directions from the vent, destroying towns in the northern part of North Korea.

The volcanic eruption has devastating consequences for South and North Korea, as well as for China and Japan:

- North Korea: The volcano spews a deadly CO<sub>2</sub> cloud, boiling water, and massive lahars (mud and debris flows), and huge amounts of hot ash, killing thousands of people and animals. It buries several towns on the south side of the mountain. Volcanic ash and sulfur dioxide cause a volcanic winter, resulting in drastic temperature reductions and massive food shortages. Most vegetation are covered with ashes. Many hundreds of thousands die from famine, disease and the toxic air. Complete blackout occurs. Hundreds of thousands of North Koreans flee North Korea. The eruption has affected more than 5 million people, equal to over 20 percent of the total population. Moreover, the crisis causes a North Korean uproar with chaos, crime, and governmental distrust. Anti-government protests are intensifying across North Korea. Overall, the eruption becomes the most destructive natural disaster.

- South Korea: volcanic ash negatively affects electronics and computer technology. The computer-based infrastructure is vulnerable to volcanic ash. South Korea's high tech industry is stops production. The eruption sharply cuts the supply of semiconductors to the world market. Without semiconductors, manufacturers make fewer computers and digital devices. A local electric blackout has occurred. The ash paralyzed air travel. Korea closes all air spaces, leading to huge costs due to loss of exports and production delays. The poisonous gas leads to the pollution of the atmosphere and the risk of diseases to South Koreans.

- China: four Chinese nuclear power plants, which are located near Baekdu Mountain, are damaged by the eruption. The accident contaminates much of China and the Korean peninsula.

- Japan: Japanese air traffic is paralyzed for two weeks. Overall, the eruption significantly damages the Japanese economy in the short term, but is not catastrophic.

### **Getting Out of the Box: New Way of Breakthrough**

In 2016, the Chairman of the National Defense Commission Kim Jong Un, after the eruption, for the first time publicly makes details on his solutions for the natural disaster that could speed up disaster recovery, offer new leadership, and raise the standard of living for North Koreans. “We should practice a people-centered recovery developed by the state leadership and bring unconditional international cooperation for a new era on totally different grounds. The world should respect North Korea in our own terms,” he said. His speech seems both an attempt to placate despairing North Koreans and a skeptical military, and a signal to the international community to provide full support. Mr Kim’s public speech shows the change of his political style from elitism to populism. He prefers listening to civil society rather than depending on a few elites. He is willing to support economic, political and institutional reforms and to create channels of interaction between normal people and himself. Outsiders glimpse an image of the new vision of North Korean socialism. North Korea is trying to transfer to “productive member of the global community” from “a reclusive and isolated country” (Choe 2008).

The global community, including the UN, China, South Korea, the US, etc., welcomes his speech and starts recovery talks with the North Korean government. The UN food agency provides emergency aid. A large number of aid agencies and donations from all over the world support the effort to provide food, water, and medicine and to rebuild the country. China sends its army to North Korea due to its alliance with North Korea, a strategic value of North Korea as a security bumper zone against South Korea and the US. China argues that Chinese troops should protect its-invested properties and citizens in special economic zones and mines. China blocks South Korea and U.S military intervention. North Korea only allows the UN-led military intervention. The engagement of South Korea and the US are very limited, focusing on humanitarian aid. Particularly, South Korea conducts the nationwide North Korea recovery and rebuilding campaign. South Korea is the largest source of relief aid to North Korea. Ethnic Koreans in foreign countries also join the recovery efforts. Their comprehensive efforts to help

North Korea include: public health and health care aid, educational assistance, agricultural development, and food aid.

During the post-Baekdu Mountain eruption recovery process, the efforts are orchestrated by Kim Jong Un. He launches “the North Korea Recovery Authority” (NKRA) to assist people and community affected by the eruption, and oversees the recovery program. The NKRA has tried to rebuild homes and towns, regenerate the economy and environment, and help turn despair into hope. Big changes are made in the North Korea’s leaders to address key national problems, convene international emergency conference calls, reduce military expenditures and arms, develop and implement programs for recovery, and collaborate with international society. They closely work with South Korea. Most military men are mobilized to participate in the recovery programs. Those changes could probably not have been imagined before the disaster.

Even Kim Jong Un and his associates intensify their efforts at recovery, differences over strategies produce serious fragmentation between political and armed sections that are internally split into several factions and are hindering recovery activities. The Free North Korean People’s Army, which is formed by deserters from the North Korean armed forces, rebel against the North Korean government. North Korean defectors and dissident groups emerge as a new force. Hard-line military groups prefer more aggressive military actions. Reformists have formed a closer tie to the West. The ruling elites, including Kim Jong Un and his associates, have close strategic relations with China. A pipeline carrying oil and gas from Russia to South Korea is blown up by unknown groups. Hundreds of thousands of North Koreans enter China and Russia. Thousands of North Korean refugees in China and North Korea riot to demand improved conditions. Violence against women and children is pervasive. The international community is worrying about the massive violations of human rights.

Despite its efforts, North Korea is confronted with an unstable political climate, a malfunctioning government system, international pressures, lack of resources, and anti-regime activities. The intensified factional splits afflict serious damage on the North Korean government. The government needs a breakthrough to overcome the current

chaotic turmoil that will require thinking outside the box. There is a solution for rooting out the turmoil: reunification. In no time, North Korea and South Korea openly express the certainty about the need for reunification. In May, 2017, following a series of high-level bilateral meetings in Beijing and Washington, North and South Korea jointly declare that they have decided to resume the exercise of reunification under consultation with China and the US.

### **Moving Toward Unification**

South Korea and North Korea establish the Korean Unity Joint Commission in June 2017, working for the preparation of all aspects of the unification. The commission is composed of 50 leaders representing states, political parties, business, civil society, and international agencies. It outlines the Guideline for National Unification, providing principles and strategies of cultural, economic, political and social integration between the two countries:

- Korean unification is for the welfare of all Koreans and will practice a democratic process based on the bottom-up approach.
- Unification should be gradually achieved under the principles of “independence, peace and great national unity.”
- Unification should develop a new political system, a new constitution, a new economy, and a new culture.
- Great efforts should be made to require three conditions: North Korean modernization, political transformation of South Korea, and mutual trust through economic and cultural exchange.
- The specific timing and manner of Korean unification should be subject to mutual negotiation and agreement.
- Three phases for unification process
  - Unification 1.0: Exchange, cooperation and rapprochement
  - Unification 2.0: One country, three systems
  - Unification 3.0: New united Korea

Three months later, the two Koreas sign the Treaty for the Economic Union. It embraces gradual unification of the two Koreas involving a longer period of confederation before monetary union and political integration. It allows time for

adjustments to the totally different social systems can take place. With this treaty, South and North Korea practice free trade and investment with each other and establish common economic policies with other countries. South Korea can benefit from cheap labor and potential markets. On the other hand, North Korea can promote innovation in agriculture, manufacture, technology and science. The National Assembly of South Korea approves the treaty, officially beginning the unification of Korea. South Korea enacts the Unification Law and related legislation, providing political and legal system of transition period, dealing with financial and defense issues, and containing rights of individuals and property.

### **Unification 1.0: Exchange, Cooperation, and Rapprochement**

South Korea and North Korea have remained enemies through hostile incidents, ideology, policies, and propaganda, causing great trauma in inter-Korean relations. The economic and social gaps between North and South remain huge. The Korean Unity Joint Commission (KUJC) puts its best foot forward on promoting reconciliation and building new visions. It shows the fruit of its ongoing efforts in several publications: *Beyond the 38th Parallel: Korean Roadmap for Unification* (2017), *Greater Unified Korea Vision 2050* (2017), *A Blueprint for South and North Korea Foreign Policy toward a Unified Korea* (2018), *A Korean Perspective on Disarmament and New Strategy* (2018), *The Structural Transformation of the Unified Korea* (2018), *Global Finance and Brave New Korea Economy* (2019), and *Social or Sustainable Capitalism: One Country, Three Systems* (2019).

They embrace a great deal of new ideas and moral grandeur, as well as a spiritual audacity, in describing the concrete strategies about the actions to be taken, on the part of both South and North Korea, toward mutual reciprocity and international cooperation. Korean unification is illustrated as sustainable development on the long road to a new era in East Asia moving beyond its boundaries, which does not mean either capitalism or communism but a transformation of the two Korea's system. The process of achieving at such transformation is carried out in Korea's national unification projects:

**Nationwide Unification Scenario Project:** the KUJC organizes the Korean Unification Scenario Project to develop the future of Korean unification in 2017. It is a significant scenario practice for thousands of stakeholders to work together on ways to proceed with two Korea's transition to unification. The products of scenarios are widely disseminated to the Korea peninsula and the world: social media, DVDs, internet video files, reposts in newspapers, special features in TV broadcasting, and the publication of a booklet. Scenario presentations are made to opinion leaders, decision makers, and the public. The details of scenarios have become well-known and lead the public debates on the path of unification. New directions and strategies are added to scenarios as a result of feedback from the public and the international community. The scenarios stimulate the forums of specific topics, including property, intellectual rights, housing, education, defense, nuclear, economic and social policies, constitutions, jurisdictions, etc. This project considerably influences the overall unification strategy and policy.

**East Asian Power Cooperation Project:** East Asian countries, such as China, Japan, North and South Korea, Mongolia, and Russia, establish electric power interconnections to meet the fast-growing electricity demand in 2021. They trade in electric energy. The project is a kind of the Northeast Asian energy cooperation and an effective tool for sustainable development. Northeast Asian countries have achieved high economic growth and are becoming the center of the world economic system. Particularly, China, Japan, and South Korea are consuming energy heavily. Mongolia has abundant sunshine and wind, and is a best place for solar energy and wind power. Far Eastern Russia and East Siberia has the abundant reserves of natural gas and hydro resources. Russia and Mongolia connect their electric power system to China, Japan, South and North Korea. North Korea in severe electricity shortage is strongly benefited from the power project.

**The North Korean Reconstruction Program:** This plan is the large-scale global program to aid North Korea in rebuilding the North Korean economy. Its aims are to rebuild an economically and socially devastated country, reduce trade barriers, reorganize economic system, develop innovative science and technology, provide humanitarian aid, and dismantle weapons of mass destruction. The program has global community support from China, the US, Japan, Russia, and other countries. By the program's end in 2030, USD 200 billion is given in economic aid and technological assistance. It is the best and the largest form of economic aid in the 21st century. "It is one of the most amazing experiences I've ever had", the United Nations secretary general has

said. The President of China, in turn, calls the program a “critical turning point in the history on the Korean peninsula, as well as in East Asian peace.”

**Reconstruction of National Identity:** Different cultures and identities are the biggest obstacles to social integration. Most North Koreans have faced huge difficulties in adjusting themselves to different values and new environments during the economic union with South Korea. They go through psychological torment such as emotional insecurities, anxieties, despair, stress, and depression. They have confused about who they are and how to survive. They feel like second-rate citizens, excluded from Korean society. Some actions are implemented to overcome identity problems: rewriting history for promoting open views, using social media as a communication tool, a standardized version of the language for reducing language differences between the two Koreas, forging vision of a united Korea and dream of a post-unification process for a new cultural identity, and utilizing augmented reality unification tour as a new learning culture.

### **Unification 2.0: One Country and Three Systems**

The great debates on the unified political system have reverberated across the Korean peninsula for months. North Korea’s unification formula is “a loose form of federation” (*yonbang*). On the other hand, South Korea’s unification formula is “confederation” (union of states, *yonhap*). South Korea’s version assumes “reasonable political confidence-building, a free market system, and a plural political system as preconditions for confederation” (Moon 2002, 38). How can the confederation and federation pull together? How can the market society and the planned economy join? The Korean peninsula is trying to find a way to fit in, including scenario workshops, public hearings, surveys and focus groups, etc.

Hopes and visions that all Koreans would see a dramatic transformation to a brave new unification order are in full bloom. In the post-unification society of the future, many futurists argue, there will be very different social structures and values beyond the market society and a planned economy, embracing a new paradigm of emancipatory alternatives. The new vision of the unification future is based on social, economic and political justice, social inclusion, sustainable development, employment creation, superseding the nature

of capitalism (including private profit maximization, excessive individualism and consumerism, competitive supremacy, and the domination of nature). True democracy is deeply embedded into the civilization of Korean unification in concepts of “democratizing democracy” (Santos 2005). The true democracy indicates the realization of political, economic, and social democracy in all aspects of social life and relations. Political democracy is not “elitist representative democracy” but participatory democracy. Economic democracy requires the decentralization of the economic power. Social democracy is democratizing of all forms of social intercourse in religion, education, art, and science. Civil society has an equal power over the state and market.

The “one country, three systems” policy is suggested as an interim stage before complete national unification for overcoming the distinctively different political and ideological gaps. It means that South Korea will maintain the capitalist system it had before unification, while North Korea retains the system it had under socialism. The third system will be built in the Demilitarized Zone (DMZ),<sup>31</sup> which is an uninhabited narrow zone across the Korean peninsula separating South and North Korea. In 2023, the two Koreas designate the DMZ Peace Administrative Region (PAR) for the experiment of coexistence between South and North to the new vision society. They expand the DMZ PAR by adding part of the land belonging to the South and North respectively. They exercise great power over the imagined unified Korea. The DMZ PAR is an attempt to realize true democracy as a principle and vision of unification in the Korean peninsula. Under the “one country, three systems” policy, the residents of the DMZ PAR compose about one-tenth of the total population of both the South and North. The DMZ PAR is supported by the Korean Unification Trust Fund to build a new society. Once the DMZ PAR is established, the two Koreas become easier to transfer to a new society and ultimately reach a unified Korea.

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<sup>31</sup> The DMZ is “a symbol of ideological dispute between North and South Korea, winds 155 miles across the Korean Peninsula. Stretching from from the Han River to the East Coast, it ranges 2 km north and south of the Military Demarcation Line, covering a vast region of 64 million sq. ft. Devoid of people, rare plants and animals exist in an unnatural nature preserve. Peace and tension coexist on a daily basis.” <http://www.lifeinkorea.com/culture/dmz/dmz.cfm> (November 29, 2011).

### **Unification 3.0: New United Korea**

The future of unified Korea, it finally gets out, begins in 2030. While the groundbreaking unification experiment in the DMZ PAR is proceeding well, the Republic of Korea and the Democratic People's Republic of Korea have to face a powerful desire for unification. The united Korean parliamentary election is held in the South and North on May 2030. “The result determines the unified national government, and elects lawmakers and the Presidency of the Unified Korea,” said a North Korean civil rights activist. Two Koreas enter the final stage of the unified Korea as a unitary state.

The unified Korea has a population of about 70 million. South Koreans account for two-thirds of the total population in the unified Korea and North Koreans a third. The unification brings pains and hopes simultaneously. It arouses a great deal of initial cost. The two Koreas share the financial burden of unification. The unification provides former North Koreans with more freedom and better living standards, while the slow economic growth after unification inflicts some stress on former South Koreans. However, the unified Korea is transforming to a new economic structure with economic democracy and sustainable development. It has economic synergy effects by former South Korea’s capital and technology and former North Korea’s talented human capital and rich natural resources. Military forces are reduced to 0.8 million from 1.6 million, resulting from the disarmament process. The US, China, Russia, and Japan endorse the unified Korea at the expense of the denuclearization of the unified Korea. The process of unifying Korea comprises some key elements and problems:

**Neutralization:** The unified Korea’s foreign policy follows a path of neutrality between China and the US. It breaks down the alliance with the US to operate as an independent global power. A neutralized Korea serves to avoid power conflicts and enhance good economic relations in East Asia.

**Economic policy:** The Unified Korea has transformed from fossil fuel energy economy to a sustainable energy economy and from neoliberal-oriented economy to economic democracy. In order to tackle the flaws of the existing economic institutions

and structures, and to achieve the preferred future vision, the economic democracy rests on six principles (Johanisova and Wolf 2012):

- 1) Regulation of market mechanisms and corporate activities
- 2) Moral, political and practical support of social enterprise
- 3) Democratic money creation processes
- 4) A right to reclaim or re-create the commons
- 5) Redistribution of income and capital assets
- 6) A diversity of production scales and modes, including small-scale, subsistence and self employment.

**Inclusive society:** The difference between the North and the South is acceptable. There are some elements necessary for creating an inclusive society (DESA 2009 8-10):

- 1) To respect for all human rights, freedom, and the rule of law, both at national and international levels.
- 2) To participate in civic, social, economic and political activities, both at the local and national levels.
- 3) The existence of a strong civil society
- 4) Universal access to public infrastructure and facilities (such as community centers, recreational facilities, public libraries, resource centers with internet facilities, well maintained public schools, clinics, water supplies and sanitations)
- 5) Equal access to public information
- 6) Equity in the distribution of wealth and resources
- 7) Cultural diversity

8) Effective leadership

9) Positive narratives of an inclusive society of the future

**Sustainable development:** the United Korea strongly urges their people to prioritize sustainable consumption, production, and planning. As shown in Table 7.3, all Koreans are committed to the following principles and processes for the sustainable future (Goldie, Douglas and Furnass 2005, 4-5):

Table 7.3 Principles of Sustainability

Foundation principles
<i>Long-term economic health</i> Sustainability recognizes the needs of current and future generations for long-term economic health, innovation, diversity and productivity of the earth
<i>Equity and human rights</i> Sustainability recognizes that an environment needs to be created where all people can express their full potential and lead productive lives and that significant gaps in sufficiency, safety, and opportunity endanger the earth.
<i>Biodiversity and ecological integrity</i> Sustainability recognizes that all life has intrinsic value, is interconnected and that biodiversity and ecological integrity are part of the irreplaceable life support systems upon which the Earth depends.
<i>Settlement efficiency and quality of life</i> Sustainability recognizes that settlements need to reduce their ecological footprint(that is less material and energy demands and a reduction in waste), while they simultaneously improve their quality of life(health, housing, employment, community, and so on).
<i>Community, regions, 'sense of place' and heritage</i> Sustainability recognizes the significance and diversity of community and regions for the management of the earth, and the critical importance of 'sense of place' and heritage (buildings, townscapes, landscapes and culture) in any plans for the future.
<i>Net benefit from development</i> Sustainability means that all development, and particularly development involving extraction of non-renewable resources, should strive to provide net environmental, social and economic benefit for future generations.
<i>Common good from planning</i> Sustainability recognizes that planning for the common good requires equitable distribution of public resources (like air, water and open space) so that ecosystem functions are maintained and to that a shared resource is available to all.
Process principles
<i>Integration of the triple bottom line</i> Sustainability requires that economic, social and environmental factors be integrated by simultaneous application of these principles, seeking mutually supportive benefits with minimal trade-offs.

<p><i>Accountability, transparency and engagement</i> Sustainability recognizes that people should have access to information on sustainability issues, that institutions should have triple bottom line accountability, that regular sustainability audits of programs and policies should be conducted, and that public engagement lies at the heart of all sustainability principles.</p>
<p><i>Precaution</i> Sustainability requires caution, avoiding poorly understood risks of serious or irreversible damage to environmental, economic or social capital, designing for surprise and managing for adaptation.</p>
<p><i>Hope, vision, symbolic and iterative change</i> Sustainability recognizes that applying these principles as part of a broad strategic vision for the Earth can generate hope in the future, and thus it will involve symbolic change that is part of many successive steps over generations.</p>

**Family:** Unified Korean families are small nuclear families. Confucian ethics, including filial piety and family royalty, are ways to overcome obstacles caused by unification. Family is a huge support system and becomes the most important network for seeking and receiving assistance. The family network is a transition bridge in the unified Korea.

**Unemployment:** In the unified Korea unemployment shows the highest level due to slow economic growth and transition economics.

**Massive migration:** A sizable part of North Koreans migrate into South Korea and other foreign countries, particularly China.

**Partial disarmament and denuclearization:** the unified Korea reduces the number of military personnel, weapons production, and stockpiles of weapons. Nuclear weapons are in decomposition.

**Group polarization:** two distinctive northerners and southerners have a tendency to make more extreme decisions and policies than those made by individual citizens. Long standing hostile relationships lead to fragmented public opinions or black and white thinking

**New nationalism:** A new thread of unified Korean nationalism emerges. New nationalism contributes to political mobilization and builds a new national culture. The

discourse of new nationalism is associated with the vision of a strong middle power to maintain a balance of power in Northeast Asia.

**First class and second class citizens:** Northerners feel like second-class citizens who are marginalized from the mainstream of the unified Korea. Their payrolls are lower and their unemployment rates are high compared with South Koreans. These factors lead to isolation and a less confident life. On the other hand, some southerners discriminate against northerners and support right-wing activities like neo-anticommunism. South Koreans are taller than North Koreans. The South Korean language is considered as official language, while the North Korean language is called a dialect. The popular discourse of the unification is that “Two Koreas are unified but not united.”

### **Neighboring Countries: New Alignments**

With the achievement of the unified Korea, the Korean peninsula remains a less dangerous place in the world than before. But the unified Korea is still unstable. The divided Korea, despite its hostile atmosphere, provides foreign policies with a great simplicity of a bipolarized worldview: capitalism and communism. There was clarity in making decisions in the international politics of the Korean peninsula. Following the dissolution of ideological conflicts and the neutralization of the unified Korea, the Korean peninsula becomes more complicated. The U.S and Chinese troops withdraw. The Unified Korea severs security treaties with the U.S. and China. Power politics between China, Japan, Russia, and the US is intensified. The US, Japan, Russia, and China are trying to build a new order for Northeast Asia. China surpasses the United States economically. China strongly challenges the U.S-led regional security order in Northeast Asia. China and the U.S. are struggling for a regional leadership position. The new landscape of the security structure is emerged.

According to Richard Armitage, former U.S. Deputy Secretary of State, a unified Korea creates new security issues and should respond to a new world order. In a March 2006 interview for the *Oriental Economist* he stated,

“At some point, a unified Korean Peninsula could cause some complications for the U.S.-Japan relationship. Korea has a robust population, relatively young. A unified Korea would have a huge military. And Korea would be a country that, very fairly, has often been described as a “shrimp among whales.” I wouldn’t blame Koreans if they were to decide that they do not want to be a “shrimp among whales.” The desire to end that role that history seemed to impose on them would be understandable.”<sup>32</sup>

The changing dynamics that drive new security structures between Northeast Asian countries start outside the Northeast. The United States, like Japan, is being warned by Chinese ascension in Southeast Asian Nations. China’s sea power continues to expand to the Pacific-Asia. U.S naval supremacy is questionable in the Northeast Asia and Southeast Asia. U.S and Japan are increasingly concerned about their regional influence and energy security. Especially, Japan has seriously confronted border disputes with China over the Senkaku or Diaoyu Islands in the East China Sea. China’s strong economic growth is the greatest strength. Southeast Asia generally relies on China’s economic power. This affects the regional balance of power. The U.S. and Japan promise to defend their interests in the East Asia.

After the unification of Korea, tensions between South Korea and the U.S. begin to grow as both countries pursue their interests for shaping the post unification international order. The U.S troops are withdrawn from the Korean peninsula since the threat of North Korea disappeared and the Korea-US Mutual Defense treaty is nullified. The U.S can benefit from the continued presence of the U.S forces in the Korean peninsula for preventing China and Russia from expanding to be the regional hegemons and for maintaining market access and economic growth in this region. The withdrawal of the US forces and the relative decline of its hegemony in this region undermine the political and economic relations between the unified Korea and the U.S. The two countries are undergoing a significant reconfiguration of their relations. They set aside security issues and focus attention on economic cooperation.

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<sup>32</sup> Richard Armitage, Interview with the Oriented Economist. PacNet, No. 12. Pacific Forum CSIS. <http://csis.org/files/media/csis/pubs/pac0612.pdf> (December 2, 2011).

China mostly welcomes the neutralized Korea that unification brings because it marginalizes U.S influence. In addition, the unified Korea is a major trading partner with China. China's growing economic power is accompanying its political influence in the unified Korea. However, Chinese economic imperialism becomes a hot issue. The rising Chinese economic imperialism is often criticized by the unified Korean public, leading online debates. China has enough national self-confidence to assert its interests and to intervene in Korea's policies. It leads to a serious diplomatic spat between two countries. The unified Korea respond strong steps against China.

Korean unification occasionally continues to ruffle relations with Japan due to Japanese wartime occupation and territorial disputes. Nevertheless, the two country's relations continue intact for some years. Japan is able to achieve impressive economic gains from unification. The unified Korean does not want to break off diplomatic relations with Japan for postunification assistance. The unified Korea is recovering from the burden of expense of the unification cost. It confronts some problems from Japan such as an arms race, territorial disputes, and economic rivalry. These divisive issues cast a shadow over the bilateral relations.

Russia seeks to improve bilateral ties with the unified Korea. In past years, Russia was interested in the stability of the Korean peninsula because of the security of the Russian Far East for its domestic political agenda. Russia opposes a unified Korea forging an alliance with other rival powers. Russia expands its geopolitical influence into the unified Korea in competition with China and the U.S. The Russian government launches its project toward the Korean peninsula, seeking strong economic cooperation through gas, oil, and electricity. The neutralized unified Korea is easily exposed to external threats including those from China, the US, and Japan. Technically the unified Korea continues to consolidate stable strategic relations with Russia.

#### **7.4.4. Summary**

This scenario is based on the preferred future image. We can see how unification is achieved. The South Korean government seeks to revive the sunshine policy for

developing unification and decreasing political tensions with the North. North Korea implements a Chinese style economic reform for a successful power shift. However, North Korea suddenly makes an attempt to achieve unification to overcome political turmoil which is caused by a massive volcanic eruption and intense power struggles. Korea's unification follows three phases: Unification 1.0: Exchange, cooperation and rapprochement; unification 2.0: One country, three systems; unification 3.0: New united Korea. Moreover, three normative principles, economic democracy, inclusive society, and sustainable development, provide a foundation for the united Korea.

Table 7.4 presents a summary of the main features of the scenario. The vision of this scenario is peaceful unification and an equitable and sustainable society. North and South Korea need a radical transformation of their existing conditions. The unification scenario vision challenges the vision of global neoliberal capitalism. This vision derives from two basic discourses: peace on the Korean Peninsula and unification for a superpower country. South Koreans favor unification despite the cost. Most Koreans believe that the unification will create a superpower Korea.

Table 7.4 Peaceful Unification as a Dream Come True: Key Features

Vision of the future	Discourse/worldview	Opportunities	Challenges
Peaceful unification and an equitable and sustainable society	Peace on the Korean Peninsula, Unification for a superpower country	End of internal conflicts, rise of regional power, regional peace	Cost of unification, inflation, unemployment, and the northerner's fear of what is in store in the future

The peaceful unification Korea will be the most important moment in Korean history. The unification may provide some significant opportunities such as an end to internal conflict, the rise of regional power, and potential regional peace, in the Korean peninsula. The unification can terminate the mutual mistrust and enmity between South and North Korea so that Korea is able to seek practical and productive ways to increase national well being by reducing the military burden. It would make Korea strong.

Furthermore, it can stimulate business, ease tension and establish political stability in East Asia, resulting in a viable world peace.

On the other hand, Korean unification may be a dangerous event due to the cost of unification, inflation, unemployment, and the northerner's fear of what is in store in the future. Tremendous economic burdens, internal conflict and violence, and widening disparity might prevent the unified Korea from managing a failing economy and integrating a nation. In general, many unification discourses focus on the unification itself rather than how to resolve economic burdens and internal conflicts. In addition to the internal problems a unified Korea faces, the process of unification will be influenced by the international community. If the united Korea is unable to establish firm international relations with other countries, it will lead to further political and economic turmoil. The South Korean government should make efforts to put multinational corporations in the unification process.

### **7.5. Strategies of Transformation**

The previous section explores the preferred future scenario. The development of the preferred future scenario is not a final end in the visioning process. It is a critical stage toward reaching the vision of a preferred future. Now we are moving toward answering the question, "how can we achieve this preferred future?" The strategy is in the plan for achieving a preferred future vision. It needs to call for programs and projects that secure the preferred vision for current and future generations. Thus preferred future images and strategies are main drivers in transforming the existing society to a desirable future society.

The vision of this preferred future is peaceful unification and an equitable and sustainable society. This preferred scenario is based on three fundamental normative principles: economic democracy, inclusive society, and sustainable development. In order to achieve this vision, practical strategies are divided into five parts: creating visions, national unification, rethinking distribution, creating an inclusive society, and sustainable development. The strategy identifies action plans and outcomes to advance

the preferred future society. Each action plan also provides a short description, rationale, and examples to convince the logic of the strategy.

### **7.5.1. Creating Visions**

#### **National Vision Project**

Brief description: The purpose of the national vision project is to promote a national vision of “neutralized unification and an equitable and sustainable society.” It is to involve national actors at all levels of society, such as government, business, academia, media, political parties, and civil society. It also provides a foundation for a national development strategy to achieve shared national visions and for serious research of alternatives to the existing Korean society, led by the National Vision Committee.

Rationale: In 1989, the Korean government established “the 21 Century Committee” as a Presidential Committee for forecasting and dealing with international relationships, building national models and the unification of both Koreas (Bae 1995: 90). The committee issued the report, “the Problems for the Government to Solve toward the 21<sup>st</sup> Century” to develop long-term planning driven by the government and to study the social effects of technology. In 2006, the Roh Moo-Hyun Government (2002-2007) launched the Vision 2030 – Hopeful Nation in Harmony project which is “a comprehensive long-term strategy to develop into a fully advanced country by 2030” (OECD 2007, 27). Its main goals are to help Korea's transition from a “resource-centered development” to a “human-centered development”<sup>33</sup> and to balance the objective of economic growth and improving social welfare (OECD 2007, 27). Although two Korean visions above made positive contributions, they actually could not reflect the national foresight of the long-term perspectives but focus on national policy science of the short term perspectives. Furthermore, they are concentrated on the concept of modernity, particularly focusing on future economic development. Thus Korea needs to develop more participatory and alternative future visions.

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<sup>33</sup> The Korean Culture and Information Service website, [http://www.korea.net/news/news/newsView.asp?serial\\_no=20060901013&part=111&SearchDay](http://www.korea.net/news/news/newsView.asp?serial_no=20060901013&part=111&SearchDay) (November 9, 2007).

Example: The Republic of Sierra Leone, which is a country in West Africa, launched the Vision 2025 as a strategic effort made towards sustainable development (Republic of Sierra Leone 2003). The Vision 2025 offers strategies for a national transformation based on possibilities of a better future. A National Core Team of experts conducted Vision 2025. It envisions four scenarios: Sweet-Salome, Betteh-Nor-Dae, Tight-Gentry, and Dombolo. Based on four scenarios, it suggests six strategic issues, necessary actions and institutional arrangements. The following are the six strategic issues (Republic of Sierra Leone 2003, 63):

- 1) How to attain a competitive private sector-led economy with effective indigenous participation;
- 2) How to create a high quality of life for all Sierra Leoneans;
- 3) How to build a well educated and enlightened society;
- 4) How to create a tolerant, stable, secure and well managed society based on democratic values;
- 5) How to ensure sustainable exploitation and effective utilization of our natural resources, while maintaining a healthy environment;
- 6) How to become a science and technology driven nation;

### **Korea National Foresight Agency (KNFA)**

Brief description: National foresight is a form of a large-scale national exercise in foresight activities. It is the implementation of foresight focusing on national interests and dealing with national issues. It is to support national economic, technological, and social development. Successful national foresight requires political leverage and levels of governance that enable initiatives and proposals. The KNFA is responsible for overall national foresight in Korea. It focuses on economic and technological foresight as well as comprehensive foresight of quality of life. It also conducts foresight project with other

countries and deals with worldwide topics covering socio-economic, scientific, and technological perspectives.

Rationale: National Foresight makes contributions to the governmental process in four ways. 1) It is “getting a sense of the big picture or major directions” (Grant, 1988: 86) to explore the possible, probable, and preferable futures for national development. 2) It is to develop “early warnings” to provide national problems and identify emerging issues (Bezold, and Renfro, 1978: 124). 3) It is “identifying unanticipated consequences” (Grant, 1988: 86). 4) It is setting national priorities.

Example: The UK national foresight program was launched to publish the White Paper *Realising Our Potential: A Strategy for Science, Engineering and Technology* in 1993.<sup>34</sup> It was conducted by the Office of Science and Technology (OST) and informed “decisions about how to allocate finite public resources to research and related activities” (Miles 2003). Now this program has been managed by the Department for Business, Innovation and Skills.<sup>35</sup> The purpose of this program is to: 1) develop visions of the future, 2) build bridges between business and government, 3) contribute to the increase of national wealth and quality of life.<sup>36</sup> It has currently conducted the following projects: Future Disaster Anticipate and Resilience, The Future of Identity, the Future of Manufacturing, and the Future of Computer Trading in Financial Markets.<sup>37</sup>

## **7.5.2. National Unification**

### **The Korean Unification Trust Fund**

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<sup>34</sup> This sentence quotes the Homepage of the Department for Business, Innovation and Skills, <http://www.bis.gov.uk/foresight/about-us/history> (October 20, 2012).

<sup>35</sup> Confer to the Homepage of the Department for Business, Innovation and Skills, <http://www.bis.gov.uk/foresight/about-us/history> (October 20, 2012).

<sup>36</sup> EUrofound (the European Foundation for the Improvement of Living and Working Conditions) Homepage, <http://www.eurofound.europa.eu/emcc/content/organisation/o0052.htm?p1=country&p2=IRELAND> (October 20, 2012).

<sup>37</sup> Confer to the Homepage of the Department for Business, Innovation and Skills, <http://www.bis.gov.uk/foresight/about-us/history> (October 20, 2012).

Brief description: the Korean Unification Trust Fund is established, as an independent institution, as a Korean unification financial resource. It also aids North Korea in its reconstruction. It is the primary funding source for unification-related expenditures. It has several resources: government issued bonds, peace taxes, donations, direct foreign investment, and loans from international financial market, including the World Bank and the Asian Development Bank.

Rationale: The cost of unification is one of the main issues. Dramatic social transformation is a lengthy and costly process. Many experts estimate that the unification cost to be between US \$2 trillion to \$5 trillion (Beck 2010). The unified Korea cannot afford the cost. Besides, South Korea cannot enter an economic and social union with North Korea without a certain degree of funds.

Example: the Government of the Islamic Republic of Afghanistan (GIROA) receives for reconstruction efforts from the donations of the international countries since 2002. Many international countries use trust funds to provide assistance to Afghanistan. There are three trust funds to finance the GIROA (Fields 2010, 52-53):

- the Afghanistan Reconstruction Trust Fund (ARTF)
- the Law and Order Trust Fund for Afghanistan (LOTFA)
- the Counter-Narcotics Trust Fund (CNTF)

### **North Korea Education Initiative Project**

Brief description: the North Korea Education Initiative project provides the funding and procedures to encourage education infrastructure and reforms in North Korea. The project has several educational programs, scholarships and other opportunities to develop the education system. New educational curriculums are introduced; teachers are reeducated; the North Korean government sends tens of thousands of students per year to global universities, including South Korea; South Korea's universities institutions have a partner university in North Korea; Free vocational-training program is established.

Moreover, public elementary, middle, high schools, and colleges provide courses and degrees online.

Rationale: Education is an essential issue in reconstructing the North for economic and social development, as well as in sharing an identity. The education exerts a considerable influence on conflict and peace building (Smith 2010, 1):

However, in conflict-affected situation and identity is also about more than service delivery because it is a means of socialization and identity development through the transmission of knowledge, skill, values and attitudes across generations. Education may therefore be a driver of conflict (fueling grievances, stereotypes, xenophobia and other antagonisms), but can also be a way of contributing to ‘conflict transformation’ and ‘peacebuilding’.

Example: A European Education Initiative for Central Asia has been developed since 2007. The EU-Central Asia Education Initiative can be summarized as (Jones 2010, 4):

The 2007 EU-Central Asia Strategy identified the field of education and training as a key area for cooperation, where the European Union (EU) was willing to share its experience and expertise. The strategy called for the establishment of a European Education Initiative and the development of an E-silk highway. Policy engagement for education and training was, in consonance with the rest of the strategy, to be based on a balanced bilateral and regional approach that could respond to the differing needs of Central Asian countries and contribute to regional cooperation.

### **7.5.3. Rethinking Distribution**

#### **Universal Unconditional Basic Income Grant**

Brief description: “A basic income is an income paid by a political community to all its members on an individual basis, without means test or work requirement” (Van Parijs 2004, 8). The grant is “unconditional on the performance of any labor or other form of contribution, and it is universal—everyone receives the grant as a matter of citizenship right” (Wright 2000, 149). “With universal basic income in place, most other redistributive transfers are eliminated—general welfare, family allowances,

unemployment insurance, tax-based old-age pensions—since the basic income grant is sufficient to provide everyone a decent substance” (Wright 2000, 149).

Rationale: According to Wright (2000, 150-151), there are four reasons to support the universal basic income thesis:

- 1) it significantly reduces one of the central coercive aspects of capitalism;
- 2) it is likely to generate greater egalitarianism within labor markets;
- 3) it directly and massively eliminates poverty without creating the pathologies of means-tested antipoverty transfers;
- 4) it is one way of valorizing a range of decommodified care-giving activities that are badly provided by markets, particularly care-giving labor within families, but also within broader communities.

Example: Alaska is the first state to introduce a basic income project the in the world. The partial basic income project can be summarized as<sup>38</sup>:

A partial basic income guarantee is any income guarantee set at a level that is less than enough to meet a person's basic needs. The Alaska Permanent Fund is the only example of an existing basic income guarantee in the world today, but it is only a partial income guarantee. Each Alaska resident (who has lived in Alaska for at least one year) is considered to be a part owner of the state's oil resources and receives an annual dividend that was nearly \$2000 last year. This is a hugely successful and popular program, but it is clearly not large enough for a person to live off of it. However, \$2,000 makes an important difference to a lot of people, and the amount of the dividend grows every year so that maybe some day it will become a full basic income.

### **Participatory Budgeting (PB)**

Brief description: “Participatory Budgeting is a process of direct, voluntary and universal democracy, where the people can debate and decide on public budgets and

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<sup>38</sup>The U.S. Basic Income Guarantee Network website, <http://www.usbig.net/whatisbig.php> (October 20, 2012)

policy. The citizen's participation is not limited to the act of voting to elect the executive or the legislators, but also decides on spending priorities and controls the management of the government...The PB combines direct democracy with representative democracy, an achievement that should be preserved and valued" (UN-HABITAT 2004, 20).

Rationale: According to the World Bank report, participatory budgeting has two fundamental rationales (Shah 2007, 1):

- 1) it can help reduce government inefficiency and curb clientelism, patronage, and corruption;
- 2) it can enhance the quality of democratic participation

Example:"In Brazil, the city of Porto Alegre launched a participatory budgeting initiative in 1990 that has since been copied in at least 400 municipalities throughout the country. The process begins with neighborhood assemblies in which citizens deliberate and set budgeting priorities, and ends with a citywide budget formulated by delegates directly elected by the neighborhood assemblies. The success in Porto Alegre has seen its steady diffusion, with at least 100 municipalities, including Sao Paulo, implementing variations of participatory budgeting in 1996-2000, and some estimated 250 municipalities in 2000-04." (World Bank 2005, 70)

#### **7.5.4. Creating an Inclusive Society**

##### **Community Strategy Partnership (CSP)**

Brief description: the CSP's aim is to promote social integration and to reduce obstacles to social inclusion. The main focus of this project is collaboration in the partnership working. The public, voluntary, communities, local authorities and private sectors are working together to provide a framework and stimulate development of public service provisions. The CSP project will help reach socially excluded groups as (Moray Council 2008):

- Elderly people

- Children and young people
- People in low income
- Lone parents
- Homeless
- People with a disability
- People experiencing mental health problems
- Migrant workers
- Other ethnic groups
- Travelling people

Rationale: social inclusion can help the socially excluded groups meet their basic human needs and build social capital. It can also help members of society to cooperate and work together to achieve national or community goals. An inclusive society is a society in which different groups, such as in ethnicity, social statuses, and religion, get along together effectively. Thus social inclusion can contribute to economic growth and social welfare.

Example: The Dreams Academy a leading project in helping the disabled through culture and art. The project can be summarized as<sup>39</sup>:

Dreams Academy (DA) is a project realized with the financial support of UNDP and Turkey Vodafone Foundation since 2008. DA has educated over 500 socially disadvantaged individuals & people with disabilities in its art education workshops for free, as well as carried out two sub-projects with its innovative and creative pattern. Social Inclusion Band which consists of young and talented people educated by the workshops of DA and DA Theatrical Company which is a drama and dance group performed on the scene with professional artists.

### **Anti-discrimination Law**

Brief description: “An Act to promote equality of opportunity for everyone by protecting them from unfair discrimination in certain areas of activity and from sexual harassment and certain associated objectionable conduct” (Office of the Queensland Parliamentary Counsel 2012, 13). This law seeks to prevent discrimination based on

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<sup>39</sup> Confer to Long Term Volunteering website: <http://www.longterm.lteg.info/index.php/project/publicView/00279> (October 21, 2012).

“sexual orientation, military status, nationality, language, appearance, family type, ideology, criminal or detention record, and educational status.”<sup>40</sup>

Rationale: Many migrant workers and wives have experienced racism and discrimination on a daily basis. Also the discrimination on the grounds of gender identity and sexual orientation is rampant in Korea. Homosexuality is still largely a taboo subject due to the strong Confucian tradition and Christianity. This anti discrimination law may help Koreans understand people who are different and assist them in order to promote an inclusive society vision.

Example: In Australia, “the Commonwealth Government and the state and territory governments have introduced anti-discrimination laws to help protect people from discrimination and harassment”.<sup>41</sup> The laws which apply to are:<sup>42</sup>

- Age Discrimination Act (2004)
- Australian Human Rights Commission Act (1986)
- Disability Discrimination Act (1992)
- Racial Discrimination Act (1975)
- Sex Discrimination Act (1984)

### **7.5.5. Sustainable Development**

#### **Green Transportation Project**

Brief description: the green transportation project aims to improve the sustainability of transportation system and to provide clean vehicles. For instance, employers allow employees to ride public transportation free of charge. The government provides tax benefits to companies who take green transportation initiatives. Several action plans are carried out to meet these goals (Barbie 2010, 79):

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<sup>40</sup> Human Right Watch website: “South Korea: Anti-Discrimination Bill Excludes Many”, November 7, 2007. <http://www.hrw.org/news/2007/11/05/south-korea-anti-discrimination-bill-excludes-many> (October 21, 2012).

<sup>41</sup> Australian Human Rights Commission website [http://humanrights.gov.au/info\\_for\\_employers/law/index.html](http://humanrights.gov.au/info_for_employers/law/index.html) (October 21, 2012).

<sup>42</sup> Australian Human Rights Commission website [http://humanrights.gov.au/info\\_for\\_employers/law/index.html](http://humanrights.gov.au/info_for_employers/law/index.html) (October 21, 2012).

- Developing the next generation of fuel-efficient cars, low-carbon biofuels and the delivery system infrastructure for the new fuels and cars;
- Encouraging modal shifts in transportation systems from road transport to rail and public transit;
- Reducing the miles traveled in motorized vehicles—through smart transport, urban and land planning;
- Improving the accessibility of affordable transport for the poor; and
- Removing transport market distortions and implementing, where appropriate, market-based interments and regulations to improve the sustainability of transport system.

Rationale: In Korea, the transportation sector accounts for 19% of total energy use (ABB 2011). The share of transportation has showed relatively stable conditions for the past couple of decades. The current Korean society encourages private motorized vehicle use. Thus, the green transportation project can help reduce green house gas emissions and have a potential to create jobs.

Example: the Walt Disney Company implanted green transportation as the following:<sup>43</sup>

In California, the Walt Disney Company designated “green teams” for all segments of company operations, including transportation. In addition to promoting transportation strategies through its Corporate Responsibility division, the company supports pre-tax incentives for employees who routinely use public transit or vanpool to get to work. This effort was so successful that in 2007 alone, employee ridesharing eliminated nine million miles of single-occupancy vehicle trips. The company believes that this effort supports employee retention and attributes its success to strong support from the highest levels of management.

### **Korea’s Greenhouse Response Strategy**

Brief description: Human-caused global warming trends occur over and over again in history. Korea’s greenhouse strategies are implemented to respond to this challenge, in particular, reducing greenhouse gas emissions without sacrificing economic

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<sup>43</sup> Community Transportation Association website, [http://web1.ctaa.org/webmodules/webarticles/articlefiles/14\\_GreenTransportation.pdf](http://web1.ctaa.org/webmodules/webarticles/articlefiles/14_GreenTransportation.pdf) (October 21, 2012).

performance and quality of life. The greenhouse response strategies should focus on (Wilkenfeld, Hamilton and Saddler 1995, 33-34):

- No new coal-fired power stations.
- Carbon tax to promote energy efficiency and renewable.
- Establishment of a Sustainable Energy Authority.
- Energy standards for buildings and equipment.
- Increase the fuel-efficiency of vehicles.

Rationale: “Korea’s greenhouse gas emissions almost doubled between 1990 and 2005, the highest growth rate in the OECD area” (Jones and Yoo 2011, 2). “Korea has implemented policies to combat climate change since the establishment of its Committee on Climate Change Response in 1999” (Jones and Yoo 2011, 9). However, these policies cannot effectively solve the problem of CO<sub>2</sub> emissions. Korea needs more work to be done in the area of climate change.

Example: The UNEP (United Nations Environment Programme) (UNEP 2010) set up the climate change strategy in 2010. It has worked on climate change for more than 20 years. It helped establish the Intergovernmental Panel on Climate Change (IPCC) with the World Meteorological Organization and supported the negotiation of the UN Framework Convention on Climate Change (UNFCCC). The UNEP’s strategy for the climate change aims to “strengthen the ability of countries to integrate climate change responses into national development processes” (UNEP 2010, 19). Its strategy consists of four themes (UNEP 2010, 22-30):

- 1) Theme 1: Adapting by building resilience;
- 2) Theme 2: Facilitating a transition towards low carbon societies;
- 3) Theme 3: Improving understanding of climate change science;
- 4) Theme 4: Communicating and raising public awareness.

## CHAPTER 8

### CONCLUSION

*As the future unfurls, the probability of occurrence of any anticipated future may change depending on shifts in trends and how they interact, human choice, chance, or unforeseen events. The probabilities associated with all possible futures may rise or fall depending on what is happening in the present. It is the futurist's task to keep scanning the environment for the appearance of new forces that may steer the future in new or unanticipated directions.*

McFaul (2006, 185)

Every historical time and event are significant as elements for making the present while at the same time new ideas and current circumstances open the possibility of future directions. The past, present, and future are gathered together for the development of future time. The fundamental understanding of the future is needed in order to flow freely from the past to the present, to future imagination which are the future's constitution. There are, however, defining moments that make what the futures hold. Novelty, major trends, shifting power dynamics, eventualities, planned projects, and goal settings can mark defining moments of fulfilling the futures. Everyone can contribute to the occurrence of defining moments that determine future sources and construct future narratives. In particular, when we are willing to look ahead, we are about to discover alternative futures.

Since the 1960s, Korean society has experienced an unprecedented transformation from an agricultural society to an industrial society, from one of the world's poorest countries to one of the richest countries, and from "the Land of Morning Calm" to a "Dynamic Korea". Economic and technological development has been recognized as the driving force in this transformation. However, Korea has been suffering from the tragedy of national division. Korean unification is an age-long national desire even though North Korea has been a challenge. It has brought a high degree of uncertainty to Korea. In this context, Korea has maintained two different images of the future: modernity and national

reunification. These two images of the future have played a significant role in making Korea what it is today. One-dimensional optimistic visions, however, cannot deal with some social problems such as over-development, dehumanization, social cleavage, resource depletion, and environmental degradation. Furthermore, Korea's strong economic growth requires an "inventing model" for its future. The discourse of a risk society needs more future-oriented practices in order to avoid unexpected outcomes. Accordingly, Koreans are looking for, not a single future, but alternative futures which seem unavoidable.

#### **Four Alternative Futures Scenarios Comparison**

By adopting Jim Dator's Alternative Futures methods, this dissertation has presented five alternative future scenarios of Korea in the year 2030 to increase our understanding of the long-term future of Korea. The five alternative future scenarios include four alternative scenario archetypes (growth, discipline, collapse, and transformation) and one preferred future scenario. This dissertation has sought to achieve three tasks. The first task was to measure the multifaceted aspects of four alternative future societies, second, to produce a vision of the preferred future and third, to address implications of five alternative scenarios for Korea's long term future.

These five future scenarios provided a set of responses to a key question: "What will Korea look like in year 2030?" They played a vital role in experiencing "one future substantially different from the present" (Dator 2009, 7), and "creating more balanced societies of tomorrow (Milojević 2005, 245). They provided bright features as well as dark features of the future. There were no utopian and dystopian possibilities. There was no such thing as a "most likely scenario" or a "worse-case scenario" (Dator 2009, 7). All four alternative futures had "equal probabilities of happening, and thus all needed to be considered in equal measure and sincerity" (Dator 2009, 7).

Table 8.1 Four Scenarios Comparison: Visions, Worldviews, and Others

Scenarios	Vision of futures	Driving forces	Proponents	Discourse/worldview	Issues
Republic of Samsung (Continued Growth)	Global neoliberal capitalism	Economy	Milton Friedman, Joseph Schumpeter	Market optimism, techno-consumerism	local government debt, increasing inequality between social classes, the rise of an age gap
The Great Han River in Warmer Korea (Collapse)	Eco-socialism	Ecology	George Herbert, Martínez-Alier et al.	Natural catastrophe, green radicalism	Environmental refugees, failure of state
A Big Global Family Phenomenon (Disciplined Society)	Cosmopolitan universalism	Social-cultural aspects	Kwame Anthony Appiah, Martha C. Nussbaum	Global citizenship, global governance	Anti-migrant sentiment, loss of national sovereignty
Age of Biotechnology (Transformational Society)	Trans-humanism	Technology	Freeman Dyson, Daniel D. Watch	The Gene age, genetic determinism	Genetic divide, lack of privacy, potential eradication of difference

As Table 8.1 and 8.2 present a summary of the differences between the four alternative scenario archetypes in terms of visions, worldviews, main features, etc. The Republic of Samsung scenario is an official view of the Korean future and is a linear modernization approach. It represents the continuation of the existing economic development. The vision of the Republic of Samsung scenario is one of global neoliberal capitalism which creates and reproduces its hegemonic order nationally and globally. This scenario supports the discourse of market optimism and techno-consumerism. The devotion to the free market has generated ever greater material affluence and comfort, and wider access to technology. Along with the achievement of material prosperity, techno-consumerism has replaced the traditional consumerism. Koreans have experienced how far the technology is in advancement; a happy life depends on how satisfied the people are with the technology; Koreans organize their lives largely around the pursuit of more technological devices. However, the free market system and techno-

consumerism become fragile. Income inequality has soared. Social polarization between the rich and the poor are becoming a main social issue. The dominance of corporations has moved even further toward plutocracy. This scenario suggests that widening the wealth gap and increasing the dominance of corporate governance curtails the economic growth and ruins democratic governance. Korean society should tackle inequality and corporate dominance along with local government debt and the generation gap rather than focusing on one and not the other, because these issues are closely linked to one another. Without solving the local government debt and generation gap, economic inequality and corporate dominance would not be effectively managed.

Table 8.2 Four Scenarios Comparison: Main Features

Scenarios	Society	Economy	Politics	Class
The Republic of Samsung	Corporate society	Free market	Plutocracy	Hypernomads, virtual nomads, infranomads
The Great Han River in Warmer Korea	Risk society	De-growth economy	The battle over global warming	A whole home hydrogen fuel generator system, disaster-resistant vacation homes
A Big Global Family Phenomenon	Cosmopolitan society	People's economy	Multilevel governance, cosmopolitan democracy	Transnational elites, provincialised masses
The Age of Biotechnology	Bio or genetic society	Bioeconomy	Genetocracy	The GenRich class and the Natural class

The Age of Biotechnology scenario is also another dominant vision. It is an attempt to realize a post-modern desire for progress through biotechnology. It is not distinctively different from the Republic of Samsung scenario vision. It does not fundamentally challenge linear modernization and global neoliberal capitalism. It still focuses on development and expansion. In this scenario Korea is becoming a bio-society or genetic society due to the successful commercialization of biotechnological products and processes. The development of biotechnology is significantly reorganizing medicine, healthcare, pharmaceutical industry and food production. The discourse of genetic determinism and the notion of the gene age have generated the spread of the transhumansm vision around biotechnology. The GenRich class and the Natural class

show the development of genetic determinism. Also the genetic determinism induces genetocracy. This scenario suggests that the promise of biotechnology and the pervasive power of genetics are threatening the dignity of the human being. People, in this scenario, tend to not accept genetic diversity but force genetic uniformity based on gene excellence. They try to eliminate genetic mistakes and eradicate gene diversity, resulting in the fear of dehumanization. Also, genetic determinism justifies the differences in performance, social class, and inequality. With genetic inferiority resulting in low paying jobs, low social status, and an inequality with the genetic superior. The emphasis on the gene may diminish social responsibility on social and economic inequalities. People are going to pay less attention to social and cultural aspects of social polarization. Moral concerns and ethical discourse are extremely important in determining the policies and strategies in the development of biotechnology, compared to previous economic development planning such as textile, shipbuilding, automobiles, semiconductor, and information technology. So the development of biotechnology should go beyond technical performance and assessment.

On the other hand, the Great Han River in the Warmer Korea scenario and A Big Global Family Phenomenon scenario fundamentally challenge the official dominant vision of the future. The Great Han River in Warmer Korea scenario is a collapse scenario. It is based on the eco-socialism vision which rejects the basic structure of neoliberal capitalism and the ways the environment is degraded. Korean society is totally destroyed after the massive flood. In this scenario, the vision of eco-socialism is based on de-growth. The idea of de-growth comes from the failure of the traditional economic and political system. Koreans live in a world of consumerist optimism, including material excess and overuse of fossil fuels. Koreans need to change their modern life style fundamentally. The collapse scenario indicates that Korea should move into a different direction from pro-growth ideas. Korea would suffer from natural disasters such as heavy flooding, severe drought, etc, if Korea's current policies are not modified taking environmental degradation into consideration. Thus, Korea needs to put in place appropriate measures to tackle environmental problems.

The cosmopolitan universalism vision of the A Big Global Family Phenomenon scenario challenges the consumption oriented attitude and materialistic nature of the Republic of Samsung scenario. It originates from human oriented attitude and social justice. This scenario has charted out the emergence of cosmopolitan values in the context of trends moved toward rapid globalization, dominance of multilevel governance, and growth of global citizenship. It suggests that Koreans should move beyond an inclusive multicultural society and international cooperation toward a cosmopolitan world that puts more emphasis on human rights and fundamental freedoms of individual or groups. Also political activity can facilitate more generic universal interests transcending limited national interests for protecting human rights. In this context, Koreans need to practice global responsibility. Moreover, non-state actors continue to play pivotal roles in constructing the cosmopolitan world and reforming national politics for multilevel governance. We need to consider how non-state actors legitimize their involvement in the formal system.

### **Preferred Future Society**

We have explored the preferred future scenario as a desirable future state. By analyzing opportunities, challenges, the old and the new in the four alternative scenarios, we can envision the preferred future for building a new vision. We have also mapped out the three most essential normative elements for defining the characteristics of a preferred future scenario: economic democracy, an inclusive society, and sustainable development. In the process, The Peaceful Unification as a Dream Come True scenario is developed.

Table 8.3 Preferred Future Scenario: Visions, Worldviews, and Others

Scenarios	Vision of futures	Driving forces	Proponents	Discourse/worldview	Issues
Peaceful Unification as a Dream Come True	Peaceful unification and an equitable and sustainable society	Governance	David Mitrany, Hwang K.	Peace on Korean Peninsula, unification for a superpower country	Tensions between northerners and southerners, a new type of order in East Asia

Table 8.4 Preferred Future Scenario: Main Features

Scenarios	Society	Economy	Politics	Class
Peaceful Unification as a Dream Come True	Unified society	Sustainable economy	One country, three system policy	First class and second class citizen

Table 8.3 and 8.4 present a summary of the preferred future scenario in terms of visions, worldviews, main features, etc. The vision of a Peaceful Unification as a Dream Come True scenario is the peaceful unification of the North and South and an equitable and sustainable society. This vision challenges the one sided nature of the official vision focusing on only South Korea’s future and embraces a desirable national goal as an idealized future. This scenario is based on a sustainable economy to secure continued economic growth without economic crisis and to focus on the quality of life beyond mere consumption. The unified Korea has successfully transitioned into a united nation from two antagonistic states. It bolsters a variety of projects and programs as a part of unification initiatives. The unification is dramatically reshaping the social, economic, and political system as well as personal identity and culture. The unification has spread peace throughout the Korean Peninsula and unification for a superpower country. The discourse of the peace on Korean Peninsula and unification for a superpower has an important role in resulting in a peaceful unification and an equitable and sustainable society vision. However there are also many problems that occur during the unification process such as high unemployment, massive migration, group polarization, new nationalism, tension between northerners and southerners, and a new order of power in East Asia.

The preferred future scenario suggests some policy instruments in order to attain peaceful unification and an equitable and sustainable society:

- The Korean Unity Joint Commission: working for the preparation of all aspects of the unification.
- Strategy-oriented books: *Beyond the 38th Parallel: Korean Roadmap for Unification*, *Greater Unified Korea Vision 2050*, *A Blueprint for South and North Korea Foreign Policy toward a Unified Korea*, *A Korean Perspective on Disarmament and New Strategy*, *The Structural Transformation of the*

*Unified Korea, Global Finance and Brave New Korea Economy, and Social or Sustainable Capitalism: One Country, Three Systems.*

- National unification projects: Nationwide Unification Scenario Project, East Asian Power Cooperation Project, The North Korea Reconstruction Program, and Reconstruction of the National Identity.
- “One country, three system policy”: an interim state before complete national unification
- The DMZ Peace Administrative Region (PAR): the experimental place of coexistence between South and North for the unified Korea.

In this scenario, a massive volcanic eruption has played a significant role in the unification process as a catalyst for social change. This scenario examines how the massive eruption helps facilitate unification. Although political and economic conditions are important determinants that trigger Korean unification, natural phenomena and environmental factors should also be considered as critical variables in the unexpected or abrupt unification. We also need to expect the rapid or abrupt unification. The political events such as the “Arab Spring” in the Middle East and Africa remind us that unexpected change is always possible (Cronin 2011). “Rapid unification would almost certainly rule out the soft-landing scenario so devoutly wished for by most South Koreans” (Cronin 2011). Also abrupt unification can produce unexpected consequences and “new geostrategic fault lines” (Cronin 2011). For the prospect of future unification, Korean society needs to prepare detailed discussions and measurements for an abrupt unification. This scenario invokes the importance of non-social and non-political factors to see the future of the united Korea.

### **From Vision to Strategies**

The vision of Korea is the peaceful unification and an equitable and sustainable society. We need strategies to achieve that vision. Jim Dator calls it “creating the futures” (Dator 2009, 3). The preferred future scenario can provide some insight for strategic policymaking. Table 8.5 summarizes strategic action plans for developing tools to answer the question of what we intend to do to in order to move toward a preferred future.

Table 8.5 Summary of Strategic Action Plans

1. How to create a shared vision
<ul style="list-style-type: none"> <li>• Develop a national vision project</li> <li>• Establish Korea National Foresight Agency</li> </ul>
2. How to attain a national unification
<ul style="list-style-type: none"> <li>• Create the Korean Unification Trust Fund</li> <li>• Provide the Korea Education Initiative Project</li> </ul>
3. How to reduce economic inequality
<ul style="list-style-type: none"> <li>• Implement a universal unconditional basic income grant</li> <li>• Enhance participatory budgeting processes</li> </ul>
4. How to build an inclusive society
<ul style="list-style-type: none"> <li>• Develop a community strategy partnership</li> <li>• Enact an anti-discrimination law</li> </ul>
5. How to create an sustainable society
<ul style="list-style-type: none"> <li>• Promote green transportation project</li> <li>• Develop Korea's greenhouse response strategy</li> </ul>

For today's Korea, the most challenging task is building the shared vision of a peaceful, equitable, and sustainable society for all Koreans and future generations. The vision of the future has varied according to individuals, age, gender, and class. The vision has evolved through space and time. People are looking for the long-term vision, but their behaviors reflect short-term interests instead of long term interests. Sometimes, personal visions conflict with national visions. The most important element in moving Korea toward a specific direction is by having a vision shared by all Koreans. We can build a variety of possible and favorable future visions. The five alternative future visions we present may provide the basic patterns within numerous possible futures visions. Each of the scenarios, which are based on some assumptions, unfolds the way Korea will work in the future. The scenarios allow us to identify visions of scenarios, discourses, issues, main features (including society, economy, politics, and class), opportunities, and challenges. They give us new interpretations for Korea's current situation. Also, we can assess how critical the five scenarios are to a preferred future through the envisioning process. The five alternative scenarios are developed to reduce surprise and expand Korea's future development policy options.

## **Contributions**

My research calls for the incorporation of the event-driven scenarios and social relation-driven scenarios. Many alternative future scenarios have focused on events, incidents, and trends rather than social relations, power distributions, and class. I have questioned why many future-oriented scholars have not paid much attention to this in their creation of alternative scenarios even though the future of a society is intertwined with all factors, including events, trends, structure, etc. Human beings and their social relations play a critical role in forming the future. I contend that the incorporation of an analysis of the event-driven scenario and social relation-driven scenario would facilitate a better understanding of the future society and in getting more plausible scenarios. My research on Korea's alternative futures will serve as a good example of how human beings and external environments interact to create futures.

My second contribution is to envision a preferred future for Korea. There are many excellent preferred scenarios on Korea's future. As Jim Dator (2009, 3) points out the problems of the visioning process, they ignore the discussion of alternative futures as a precondition for creating preferred futures. According to Jim Dator (2009, 3), "visioning should take place only after participants have become aware of what is new and what is old, and what challenges and opportunities lie ahead." My study of Korea's preferred future follows Jim Dator's claims of how to produce preferred futures properly.

The third contribution is to enhance the characteristics of narratives in scenarios. Costanza (2000, 20) places the importance of vivid narratives for scenarios as following: "The visions are described as narratives with specific names and events, rather than as vague general conditions, in order to make them more real and vivid. They are, of course, only caricatures, but we hope they capture the essence of the visions they represent." The dissertation illustrates and involves specific events, names, dates, books, laws, peoples, poems, figures, etc. It provides us with dramatic insight in emotional and symbolic meanings. And they produce the transmission of in-depth understanding for the future imagination.

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