Chapter Three

Conceptual Framework

3.1 Introduction

During the evolution of international cooperation, international security, in particular military security, was the dominant issue after World War II until the 1960s. During this period, the balance in terror under realism was the key concern of the entire world. Since the 1990s, world environmental issues have captured international attention. The concept of “global public goods” has provoked heated discussion (Kaul, et al., 1999; Faust, et al. 2001). National security was no longer discussed in terms of a balance of terror, but instead the focus was on theories of traditional relations. National security now may require integrated cooperation by all of the global actors under global environmental governance.

The efforts to probe global crisis management can be classified into two parts, i.e., “globalized crisis management” and “global crisis management.” In the former, many multinational corporations (MNCs) and a majority of corporations (either domestic or foreign) are enthusiastically promoting global expansion of their businesses. These corporations, the majority of which are American firms, have prepared or are preparing crisis management plans (Gottschalk, 2002: 26). The plans themselves differ in their enforcement, due primarily to the difficulty of solving the final stages of crisis management. When a corporation attempts to have its plans disseminated abroad, especially to developing countries, it has only a low chance of success (Gottschalk, 2002: 26-27). Gottschalk (2002: 28-29) has pointed out that when crisis management is applied to global issues, there are three key points which
one cannot afford to overlook. The first is to determine how the crisis will damage the organization. The second is to recognize that a foreign country can take power in order to dominate public opinion. The third: One can tell how to touch such organs in the best possible means. For example, when Formosa Plastics Corporation had a mercury contamination issue in Cambodia in late December of 1998, how did Formosa Plastics Corporation, Taiwan’s Environmental Protection Administration (EPA) and the Cambodian government manage this cross-national crisis is the topic of globalized crisis management. This means when crisis management is applied to the concept of globalization, it refers to “crisis management dominated by a single or few actors, e.g., organizations or enterprises”.

“Global crisis management” includes not only the examples mentioned earlier, but also the millennium year computer conversion, the SARS crisis, and avian influenza more recently. Frenk and Gomez-Dantes (2002: 161-165) have pointed out that in addition to efforts to overcome domestic issues, we must appropriately solve four key issues which involve international pulses including inter-transmission of international crises, the effect of fluctuations between different systems, and the sharing of experiences and information. O'Sullivan (2004: 69-71) has noted that because of the vast reach of the mass media and their networks, all citizens of the world can share the same feelings at the moment of a crisis. the same feel at the very moment upon occurrence of an issue. He noted that a so-called global crisis has four elements, i.e., globalization itself, mass migration, post-911 religious factors, transnational organizations, international rules and the expansion of power and influence via International Law. As international issues become increasingly complicated, International Law can no longer easily solve disputes. Instead, non-government organizations (NGOs) represent the key links which some scholars view as a new

“...all international crises are just numerous issues combined into a whole. In terms of the external problems, what can we do in the face of a crisis? Upon underlining the crises, what are the objective needs? In terms of internal problems, how will the organization become itself when the country takes a role involving the issue? Namely, how shall we effectively organize ourselves, how shall we mobilize adequate political will to carry out the mission to allocate risks?”

Overall, in comparison to crisis management in a single sovereign country, even if there are multifaceted participants (players), government branches or high level units of the organization that are still “authoritative” (even though such “authoritative” might probably be subject to challenge)[you should omit this phrase], global crisis management will demonstrate the characteristics of network interactions because of the presence of anarchism in international relationships (Axelrod and Keohane, 1986). In other words, in the global networks where resources depend upon each other, a single authoritative and dominant policymaker is rarely seen. Instead, there are “multiples vs. one” (multifaceted policymakers vs. a single crisis event) or “multiples vs. multiples” (multifaceted policymakers vs. multiple crisis events).
3.2 Global Actors and the Global Governance Network

3.2.1 Diverse Global Actors

With the increasing importance of globalization issues, participants in the
globalized world are proliferating. For example, international non-governmental
organizations (INGOs) and global civil society have provoked much scholarly
discussion (Anheier, et al., 2001; Germain and Kenny, 2005; Kennedy, Messner, and
Nuscheler, 2002). Not only the INGOs, but also the global political economy, cultures,
and other areas have been changed by globalization.

Globalization also influences the discussions of international relations, and the
concept of global governance is now being widely employed in the 21st century.
Defining global governance, the Commission on Global Governance (1995: 2)
asserted:

“Governance is the sum of the many ways individuals and
institutions, public and private, manage their common affairs. It is
a continuing process through which conflict or diverse interests
may be accommodated and cooperative action may be taken. It
includes formal institutions and regimes empowered to enforce
compliance, as well as informal arrangements that people and
institutions either have agreed to or perceive to be in their
interest.”

Using this definition of the Commission, the participation of diverse actors and
the structure of global governance networks can be identified as the two most
important factors influencing international cooperation (Brown, et al., 2000; Josselin
and Wallace, 2001; Risse-Kappen; 1995). Various global actors, such as hierarchies,
markets, networks, communities, NGOs, INGOs, and multinational corporations (MNCs) all play important roles in global governance. The nation state is no longer the only actor in the structure of world society (Messner and Nuscheler, 2002). Figure 3.2 also shows the growth in IOs and INGOs since the 1970s.

![Figure 3.1 The Growth of IOs and INGOs](image)

Source: Union of International Associations. 2005, “Yearbook of International Organizations, 2005/2006.” Figure 1.2.1 (b)

There are four main types of global actors: state agencies, regional organizations, NGOs, and multinational corporations (MCs).

1. State Agencies:

   Globalization leads to bottlenecks which sovereignty, territories and national powers must be virtually restructured. The legitimacy of rule by conventional national organs has been gradually passed on to local, central, regional or even global level rulers or non-government organizations (NGOs). National organs are no longer the only and sole core of power (Rosenau, 2000). Nations and countries have been subject to the impact of globalization but they have not themselves had the same vital impact; the influence is not bidirectional. The key is that national organs must be transformed

- 59 -
(de Vries, 2001: 405-406): (1) Nations/countries will not disappear due to globalization’s impact, but will transform themselves into the roles of ordinary but indispensable participants (players) during the policymaking process. The very function of nation state is effective negotiation on the negotiating table with other counterparts as other countries. (2) The countries implicated in the interdependence tend to have less influence, but may still be able to lure the right industries and investors by means of tax advantages to boost their competitive edge. (3) The national agencies still have the significant mission of re-education to guide economic development, highly supported resource systems and human resources in the very premise of minimum possible price of social turmoil. They will still have significant influence upon the improvement of upgrade of national lifestyle. In a regime of global governance, although nations and countries are subject to challenges to their sovereignty, both nations and countries will still play a pivotal role in international politics and economics, according to Gilpin (2001).

2. Intergovernmental/ International/ Regional Organizations:

   International organization has long been one of the focuses of international relationship theories, in particular international regimes theory (Katzenstein, Keohane, and Krasner, 1998; Krasner, 1983; Kuo, Cheng-tian, 1996). In the post-cold war era, international and inter-government organizations represent key platforms from which to iron out international affairs. Organizations like the United Nations (UN), World Trade Organization (WTO), World Health Organization (WHO), the World Bank and the International Monetary Fund (IMF) are playing an increasingly significant role in global issues.
3. Non-government Organizations (NGOs):

Pierre and Peters (2000: 83-91) pointed out that under the concept of governance, the national powers are converted in three levels. (1) Moving up governance. This refers to situations when the sovereignty of the nation is penetrated or replaced by international organizations or players; (2) Moving down governance, refers to a nation that adopts a power-division model and passes power on to local regions, local governments or community governance. (3) Moving out governance. This refers to situations where the conventional powers of a nation are transferred from the hands of the political elite to social organizations or entities. In addition, by means of NGOs, the nation provides public service projects or policies, and/or enforcement of government policies.

Figure 3.1 suggests that since the 1970s, the emergence and activities of NGOs have been deemed pivotal issues for the global governance today. Where NGOs are being proliferating in both developing and developed countries, NGOs are termed a sort of “associational revolution” (Salamon, 1994: 109). Because NGOs are being boomed throughout the entire world since the 1990s, the concept of “global civil society” is becoming important. The term “global civil society” as set forth herein denotes the associations or activities being carried out by citizens beyond the range of countries and markets, either for personal or collective purposes; they include NGOs, global civic networks, cross-national social movements, global public realms and the like (Anheier, et al., 2001; Chandler, 2005; Salamon, et al., 1999; Salamon and

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1 The non-government organizations (NGOs) are quite multifaceted in the shapes and terms, notably community organizations, non-profit organizations, NPOs) • civil society organizations (CSOs), voluntary organizations, Vos, philanthropic organizations and the like. The present thesis does not define such terms respectively but, instead, terms it “non-government organizations (NGOs)” in general.
Sokolowski, 2004).

At the moment, the principal influence of the “global civil society” upon global governance is primarily shown through the cooperation and confrontation of governments of various countries in cross-government organizations. The former can be verified in the teamwork we see between the United Nations and NGOs. For instance, when the United Nations Environmental and Development Conference was convened in 1992, more than one thousand NGOs were invited to the event, just as when thousands of NGOs participated in the Commission on Global Governance, 1995). In terms of confrontation, the World Trade Organization (WTO) Conference which was scheduled to convene in Seattle in November, 1999, drew the attention of the entire world because large anti-globalization and trade liberalization crowds gathered to protest against the meeting. As de Senarclen (1998: 99)s said: “International politics is heavily surrounded and influenced by NGOs”.

4. Multinational Corporations (MNCs):

Gilpin (1987: 276) defined multinational corporations in an uncomplicated way: “The term “multinational corporations” as set forth herein denotes the corporations which own and manage certain economic units in two or more countries. In most cases, when a corporation invests externally, it obtains ownership of economic units in several countries. To put it in more understandable terms, such direct investment suggests that the power of management goes beyond the national boundary.”

In line with the trend of economic globalization, many large-scale enterprises have increased the pace of their deployment in the world markets. They try to minimize their production costs and investment risks via the international division of
labor and free capital flow. Meanwhile, they accomplish the ultimate goals of expanding their markets by removing barriers lying on the day of trade. Thus the mechanism/regime of global governance has become a sort of barrier against investment and trade during the globalization process. To a certain extent, multinational corporations believe that the world economy and markets can be integrated into one another, by means of globalization and global governance. Such integration will help boost the combination of worldwide resources and will enhance the economic development of all countries throughout the world. (Liu, Kun-I, 2003: 38-39).

Certainly one cannot afford to overlook the influence which accrues via the demonstration which is incurred by the demonstration of the power of global governance (Levy and Prakash, 2003). For example, on the issue of sustainable environments, entrepreneurial environments, society and strategic governance have significant influence upon the competitive edge and profitability of multinational corporations. The “Global 100 Most Sustainable Corporations in the World” were officially announced at the annual conference of the World Economics Forum in 2005. Since 2005, these rankings have been reset each year based on the Corporate Knights, Toronto, Canada. In the future, we can expect to see the pictures of multinational corporations in the public areas of the global economy. Multinational corporations will inevitably become key players in other issues of global society.

3.2.2 Global Governance Network Structure

The concepts of government and the governed were challenged in the 1990s. At

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2 Cf. website: http://www.global100.org/
the same time, crisis management has found it difficult to refer to governments alone. Bang and Sorensen (1999: 329) put forward the idea of replacing the idea of a government by the idea of governance. They state that the relations between civil society and government will no longer be contradictory; instead, the focus of relations will be turned toward a new-type of political coordination and interactive development. Kazancigil (1998: 69) uses the term “from government to governance” to describe this change in the administrative structure. He thinks that the government must cooperate with the private sector and voluntary organizations to manage public affairs. Stoker (1998: 18-26) provides five additional propositions regarding governance. He views government as capable of using new tools and techniques to steer and guide. Rhodes (2000: 55-63) has summarized the relevant concepts of governance, which include: governance as corporate governance; governance as the New Public Management; governance as good governance; governance as international interdependence; governance as a socio-cybernetic system; governance as the New Political Economy; and governance as a network.

Regarding the development of network theories, White (1970) could be said to have introduced the idea that the social structure influences “network-oriented” research on organizational behavior. Subsequently, Granovetter (1973; 1985; 1992), Krackhardt (1992; 1994), and Burt (1992) introduced the field to cross-technological dialogues about network analytical frameworks. Network analysis stresses the inter-reliance between the public and private departments. Due to a lack of resources, the players could hardly accomplish the goals alone (Rhodes, 1988).

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3 Those propositions are: first, governance refers to a set of institutions and actors that are drawn from and beyond government. Second, governance identifies the blurring of boundaries and responsibilities for tackling social and economic issues. Third, governance identifies the power dependence involved in the relationships between institutions involved in collective action. Fourth, governance is about autonomous self-governance among networks of actors. Finally, governance recognizes a capacity to accomplish tasks independent from the power of government command or authority.
interacting players underlie various policy issues and resource clusters. These interaction models are very stable and enduring. In addition, there are “rules of the game” that regulate the players’ behaviors and the distribution of resources. And the distribution of resources and the rules of the game are dynamic and interactive.

Networks are defined in an extremely imprecise way, but are universally viewed as “nodes” which come into being between a set of actors through specific social relationships. Such “nodes” cover the interests and relationships of power of the players. Through such relationships, one may proceed with conversion of resources and the exchange of information, to arrive at unique inter-dependence relationships (Laumann et al, 1978: 458). According to the World Bank, there were a total of fifty global policy networks accredited as of 1999, dealing with issues covering international crime, disputes over fishing boats, public health issues, etc. (Reinicke, Deng, and Witte, 2000). The term “global public policy networks” as set forth herein does not denote another international organization. Instead, it combines those organizations with specific backgrounds (or even hostile or competitive ones) into a whole, including of course different actors, e.g., governments of various countries, international organizations, international non-government organizations (INGOs), and the like. A global public policy network does not come into being where the government or international organization transfers power to the public society or non-government sector. Instead, it plays the conventional policymaking organs and a complementary role to help a government or multifaceted organizations use science and technology to make possible transformation to bring up added responses locally (Reinicke, 1999).

Most global public policy networks serve the following functions: 1. enhancing or promoting global consciousness and agenda setting of the issues of global policies;
2. setting the ground rules to negotiate and solve global standards; 3. generating and disseminating knowledge; 4. creating commercial values; 5. providing innovative implementation mechanisms and bolstering institutional effectiveness; 6. widening the opportunities to participate in global issues; and 7. rectifying the malfunctioning of markets (Streck, 2002; Liu, I-Chun, 2002). Accordingly, global public policy networks combine the resources and interests of various actors to fill social, economic, political and cultural gaps. Many global public policy networks perform several of these functions. Working under limited budgets, they facilitate relationships among the public and private sectors and civil societies. They represent niches for global governance and cooperation in international relationships (Liu, I-Chun, 2002).

Keohane and Nye (2001) use the term “complex interdependence” to describe the intense international relations found today. They point out that international interdependence has the following characteristics: multiple channels, absence of a hierarchy among issues, and a minor role for military force. They also consider four strategies that states use to achieve their interests under this complex interdependence. These include: linkage strategies, agenda setting, intergovernmental relations, and the role of international organizations.

To facilitate the operation of a network, interaction principles and relationships under resource interdependence have become stable, and provide the institutional basis for network actors (Kicker and Koppenjan, 1997). The two elements necessary to build resource dependence are resources that flow between the sectors, and the criteria by which resource dependence is measurable (Saidel, 1991: 544). The intense interdependence of these global actors has actually formed a network.

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4 To learn more about ways to negotiate and solve global standards, please refer to “Setting International Standards: Technological Rationality or Primacy of Power?” of Mattli and Büthe (2003)

“...global public policy networks offer a promising model for how to handle new governance because complex political, economic, and social systems cannot be governed by a single sector---the public sector, or from a single level---the national level.”

Therefore, there is not cooperation under anarchy, but cooperation under conditions of interdependence and commitment in the era of globalization. Figure 3.2 presents four models that describe today’s world order in terms of global governance structure(s?). They are: anarchy among the world states, hegemonic world order, horizontal self-coordination, and order based on a single world state. As Messner and Nusscheler (2002: 136) note, anarchy or a hegemonic element still exists in the world order, but, “this world order also seeks to reduce the anarchy of the world of states by involving them in a regime of horizontal self-coordination achieved through internationals and regimes.” In other words, we do not know if there will be an order based on one world state in the future, however, the contemporary world order can be viewed as a self-coordination model.
Figure 3.2 Models of World Order

Source: Messner and Nuscheler, 2002: 136

Streck (2002) pointed out that the global public policies come into being as a result of only a few momenta: 1. high level economic integration among countries by means of trade, capital flow, and knowledge expansion as well as human crowds; 2. with the inter-dependence between multinational economy and social networks created by science and technology transformation and economic integration, control cannot be achieved by means of conventional national laws and regulations; 3. the conventional bureaucracy very often lacks the knowledge and flexibility to reflect today’s complicated challenges in society and governance, which are being rapidly transformed. Global public policy networks will first call for political settlements at the international level. But they lack an innovative framework under a central government. Through cross-department cooperation, the global public policy network
offers a firm commitment to solve the complicated political, economic and social system problems which could not be solved through a single government unit or at a single level. Global public policy networks are characterized by diversity, openness, flexibility and speed, as well as by subsidiary and legitimacy.
3.3 From Disaster Management toward Disaster Reduction

3.3.1 Awareness of a Risk Society

A global crisis represents a large-scale issue. The risks to the global ecology or the risks of a worldwide unemployment structure do not result from a single, individual factor, but instead are closely linked to industry-technology capitalism based on economic globalization. Beck defined this as the new liberalism ideology grounded “Globalismus.” During the mobile process of globalization, the old power and capacity of sovereignty virtually disintegrated, and this led to crises in ecology, labor, social security, and the democratic systems of human civilization (Beck, 2000b). Ecological problems have spread from limited regions to the entire world with a momentum fueled by the new capitalism of liberalized capital trade. The aforementioned developments in gene technology represent merely one vivid example. As mentioned in “World Risk Society”, because of unsound systems and superintendence, the disastrous pollution incurred by poverty-stricken countries very often is not noticed until it turns from bad to worse (Beck, 2000b). Outward capital relocation and free flow represent the very essence of trade liberalism. As capitalists invest outward into countries with low labor and land costs and low level control, sovereignty has been subjected to critical challenges. On the one hand, sovereign countries lack support in the form of domestic feedback and tax revenues, which tends to erode the social and national security systems. On the other hand, the structured unemployment raises the costs of social welfare, challenges the security order of the entire social security, and leads to a historic break of capitalism, social security and democratic alliance (Beck, 2000b).

“Shared-risk” tends to become the public risks contained in the risk-prone
community which challenge the community’s people as a whole (Comfort, 1999). “Shared-risk”, therefore, involves specific communities over the alleviation of threat against risks. The public response in “shared-risk” calls for close teamwork by and between the public sector, private sector, third sectors, and nonprofit organizations. The serious policy issues contained in “shared-risk” would totally fail to orient itself to the viewpoints of conventional politic analyses and planning. They are in the attributes of inter-dependence, mobile and unpredictable “collection action for resolution.” Shared-risk shouldered by a society typically has four characteristics. (a) It is nonlinear: the very trivial initial difference would inevitably lead to unpredictable results because of the repetition of actions. (b) It is dynamic: the change in performance in any secondary units must lead to proliferation to entire systems. (c) It is “not amenable to a control strategy”, i.e. powerful control over the incoming power (exclusion), with drastic responses. It actually represents a sort of collective learning process, involving diverse knowledge in multiple groups at different levels, in actions of authoritative and collective solutions. (d) There is a demand for an information-rich environment; the term “information-rich environment” first came from Lawrence Mohr (1982). It refers to the technological capacity to store and proliferate information to satisfy the multifaceted users in their simultaneous demand, and to monitor the performance of different levels. The “information-rich society” and the society would combine into the “sociotechnical system”. That is the necessary tool framework for “Shared-risk” politic issues (Jan, Chung-yuang, 1999).

In turn, the public risks incurred by “shared-risk” will force public managers in the administrative systems to continually and uninterruptedly: (a) locate the public interests of public security and welfare-related public interests among different entities. (b) Integrate different viewpoints through continual effort and (c) clarify
public issues in order to come to a public understanding. Accordingly, “shared-risk” calls for a continuous process of collective learning to back collective action instead of a risk management model or mandatory social control model. The politic issues so presented do not necessarily have definite borderlines. The “shared-risk” goals of the organization are not as definite as the classic law of cause(s) and effect(s).

3.3.2 Capacity Building for Better Preparedness

“Capacity” is a relatively abstract word, referring in general to the technology and know-how, knowledge and resources that an organization requires. It is important that capacity be set up in an organization because it suggests there is some advantage gained by combining good governance and credible commitment to assure that the organization can attain its anticipated goals continually and uninterruptedly. How can we help all the participating organizations develop the capacity to face up to and solve disaster-related issues. This has become one of the key issues that is the focus of all international organizations whose goal is disaster minimization.

The William J. Copeland Fund in its Tropman Report\(^5\) pointed to the following characteristics which could adequately carry out hands-on implementation of capacity oriented constructions:

1. Clear-cut goals which can respond to demands by communities, and which are easily understandable and supported by workers at different levels in organizations. The people concerned would from time to time reassess and review such goals.

\(^5\) Please see http://www.forbesfunds.org/tropman/reports.cfm. 2002 Tropman Reports, Study #1.
2. Capable, positive leadership which takes the initiative. Such leadership has the following characteristics: the Board of Directors will be an orderly organization, employees will be flexible relationship, in firm resolve to manage the standard rules, as the very clear channels for internal and external communications.

3. Effect-oriented content items which would be closely related to the organization’s goals for enforcement. The opinions posed by the organization’s members will receive appropriate responses and there will be follow up.

4. Sophisticated utilization of human resources, information and financial sources, in particular the hiring, soliciting and retaining of employees, utilization of information networks to unroll a reliable and multifaceted financial supply, with firm command.

5. Competence of orientation. Including the competence to orient themselves to different items and enacting rules, work out sound countermeasures, capable of facing up to a change in an innovative manner, undergo risks, and capable of managing various relationship in a sophisticated and flexible manner.

6. Operating and management systems of remarkable efficiency. Capable of utilizing and investing resources in an appropriate manner to reap an optimal effect; capable of making modifications in line with changes inside the organization and the environment.

7. Self-cognition. The organization possesses the competence to continually observe and conduct self-assessments to determine whether the effort is in proportion to the payoff.
3.4 Why and How Do Organizations Cooperate? The Approach of Rational Choice.

As defined by Caporaso and Levine (1992: 128-130) in the economic paths of political science, “rational choice” is a core concept. In the neoclassical framework, how is rationality possible when making a choice? Rational choice involves interpreting the interrelationships among preference, concept, resource and actions. There are two major parts to understanding how preference, concept, restriction upon resources, and behaviors are interconnected. First, Maintaining a consistent criterion in application to the preference and structure of concepts. Second, there are a series of consistent demands. Namely, a behavior that is consistent with respect to preferences, concepts, and resource is definitely rational.

The very gist of rational choice is not system-cored at first, but is built upon “intentional behavior”-based scientific theories (Riker, 1990: 174-7). “Equilibrium”, on the other hand, represents a very fundamental concept penetrating all choice related theories. If “X” state stands in balance, this suggests that there are no other states which will be more attractive than “X” to rational actors. “X” becomes balanced might be a result of a function of “Y”, bringing no better choice to actors. “X” itself might be a sort of system, suggesting a system in replacement because actors could not find a better one. If that is the case, “X” will accomplish the results of system O (Lin, Jih-Wen, 2001: 64-65). In other words, X is institutional equilibrium

This issue “are humans rational and selfish” has long been one of the key issue in hot dispute between pros and cons. For recent discussions of this issue, Quackenbush (2004) is highly recommended. Quackenbush (2004) stressed “assumption”, with defense with the importance of the social science study. He believed that quite a lot of critics have misunderstood that among choices of rationality, rationality is virtually “instrumental rationality”.

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of Y, and is, as well, the “equilibrium institution” of O. The goals of rational choice are to locate the systems that satisfy the set conditions or is the consequence of systems. There are four conditions to establish rational choices (Lin, Jih-Wen, 2005: 76-77):

Condition I: Aiming at individual preferences of rationality, all models of rational choice must adopt hypotheses of “completeness”7 and “transmittance”. In other words, it is a public hypothesis.

Condition II: There must be a logical interrelationship between individual preference and individual behaviors. All models of rational choices should be defined this way. This is the most important characteristic of the theories of rational choice. Preferences might be hard to observe. As long as a logical interrelationship between preferences and behaviors exists, we must modify the hypotheses of preferences.

Condition III: Individual behaviors can be transformed into collective choice by means of certain mechanism/regimes. The term “mechanism/regime” as set forth herein might be systems, or might be a certain racing rules???. They must be expressly stated before the interpretation can possibly be complete and integral.

Condition IV: Theories of rational choices call for hypotheses of the preferences of individual actors before we can proceed to prediction. In rational choices, they never hypothesize that actors share similar preferences (e.g., selfish but not altruistic). Accordingly, preferences vary from people to people. Descriptions

7 The term “Completeness” refers to the order of preference of any two choices available to actors (Cf. Ordeshook, 1986: 12).
of preferences are individual in nature as well.

It must be emphasized that disregarding the methodology of inspection and verification, rational choices must offer a sort of cause and effect mechanism/regime. In the absence or nonexistence of such mechanism/regime, even if we adopt complicated statistical tools, we are not in a position to satisfy the scientific terms. In fact, statistical correlation is absolutely not a sort of interpretation of cause and effect. Through this perspective, rational choice can even be taken to aim at single cases for analyses, or to adopt a qualitative research approach. If the theory can make an integral presentation of the cause and effect mechanism/regime between individual choices and collective consequences, it may be acceptable (Lin, Jih-Wen, 2005: 77).

Why has cooperation been an important research question in social science throughout these decades? If cooperation is reciprocity, mutual assistance, or adjusting self preferences to match others’ preferences, then why is an individual actor willing to take such action?

In 1965, Olson published his *Logic of Collective Actions*, offering a different analysis of the belief that “as long as an organization shows goals or interests in common, the entire organization would definitely try to satisfy the collective interests through collective actions”. They believed that in collective action, the behavior modes of each and every member of the collective action could be interpreted through economics. In large groups, each and every team member is tantamount to being in a market of complete competition. If there is no mandatory mechanism/regime or other similar system, then any single “rationality” and “self-benefit” team member will not strive for either the common interest or the group interest in his actions. The reasons are clear. In markets with complete competition, the prices of products are decided (the price flexibility of demand is virtually zero). To strive for the maximum possible
profit (in consideration of self-interest), there will be nobody who would possibly sacrifice his/her time and money to back lobbying bodies in an attempt to affect the methods of the government policymaking process as a means to maintain price stability in industries (common interests). In other words, even if such lobbying efforts could actually attain the anticipated effect, there won’t be nobody who would be willing to give up his/her own productivity as a means to provide public property to the group, because in a market, the prices won’t rise because a manufacturer cuts outputs himself. Instead, the manufacturer who increases outputs or the new entrants will seize the established markets.

But there must be an entirely different picture in the case of a small sized group. In an oligopsonistic or monopolistic market structure, prices and quantities change in line with different demand flexibility. That is, in a group where certain team members could obtain collective interests which would be higher than the costs of public property they are to shoulder, they might possibly consider sacrificing their time and money to offer public property. In considering self-interest, as long as the marginal interests are either greater than or equal to the marginal costs, then these team members get the incentives to continually offer public property into production. These issues call for no external mandatory mechanism/regime or systems to regulate performance. In the pursuit of the “rationality” principle, “self-interest” thinking logic and “maximum possible effect”, while satisfactory to the aforementioned conditions, the birth of public property would be highly natural and rational.

The biologist Hardin published his celebrated “Tragedy of Public Property” in “Science” in 1968. In that article, Hardin asked the international community, why do countries tend to gradually augment their military strength in the pursuit of national security where international security becomes increasingly insecure? He
pointed out that personal rationality tends to lead to irrationality in groups. Where a shepherd uses public grazing land, for instance, the shepherd would notice after a rational calculation of the utility that if he raises one more sheep in the grazing land, the benefit is close to positive one. But if the negative benefit is minus one, such negative benefit is borne by all the shepherds in common. To the shepherd individually, where the shepherd increases the number of sheep, the marginal benefits to him will be greater than the marginal costs. Accordingly, the shepherd would choose to increase the number of sheep. The problem is obvious. Other shepherds will think in the same way and the grazing land will be quickly exhausted. The rational choice of the maximum possible benefit would lead to the second best or even the worst result instead.

The aforementioned analysis of the logic of collective actions would of course provoke abundant criticism and rejoinders. In the book “Governing the Commons: The Evolution of Institutions for Collective Action”, E. Ostrom (1990) conducted analyses of cases of common pool resources. Ostrom believed that according to the Olson logic, people would be very likely to abuse resources on such public land. Further studies on various conventional societies the world over, nevertheless yielded the findings that abuse of public resources has not been prevalent. In those societies in which people burned firewood, they all knew what was the right season to fell firewood, and what would be the wrong season. They felled firewood only in sufficient volume to meet their needs. They tended to follow the rules. Why?

Ostrom noticed that in a conventional society, there will be many ways to punish outlaws. In spring, for instance, if anybody tried to fell firewood before the season becomes ripe, all villagers would regard him as weird and would even expel him from community as a wizard. Ostrom further rectified the logic of collective actions of
Olson, pointing out that in the individual bodies, there must still be collective actions in close collaboration to accomplish the collective interests (Ostrom, 1990). To interpret the factors of collective willingness in cooperation to strive for the collective interests, she re-analyzed the variables of the cooperative attitude and posed the “Institutional Choice Framework”. Among them, a “Shared Norm” co-shared by all humans would be a key variable to affect the choice of systems and would be converted into an “Internal Norm” which contains a personality value which affects whether individuals would adopt a cooperative attitude (Ostrom, 1990).

Marwell and Oliver (1993) offered a supplement to the concept of public property to further classify it into two types of public property with different attributes. The first sort of public property, e.g., public libraries, parks, and highways, will have declining benefits when the number of the team members increases. If a highway is full, you must go slower when you drive a car on that highway than walking on food. They termed such public property as “zero-sum public property.” The other is “non-zero-sum public property.” That means when more people enjoy such public property, the benefit which every single user obtains from the use does not come down. Peace, democracy and law are just such public property, with such attributes. In peace, for instance, when more and more people enjoy peace, the benefits of peace would not decrease. Marwell and Oliver (1993) believed that for non-zero-sum public property, there will be increasing likelihood that people will unite themselves to strive for fulfillment.

The famous Prisoner’s Dilemma game (PD game) provides a structure problem about actors’ cooperative behavior. Figure 3.3 shows a basic matrix of a PD game. Figure 8 demonstrates that defection is the equilibrium for both actor A and B. In other words, “If the game is played a known finite number of times, the players will
have no incentive to cooperate” (Axelrod, 1981: 306-307).

<table>
<thead>
<tr>
<th>Actor</th>
<th>Cooperation</th>
<th>Defect</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>R=3, R=3</td>
<td>S=0, T=5</td>
</tr>
<tr>
<td>A</td>
<td>T=5, S=0</td>
<td>P=1, P=1</td>
</tr>
</tbody>
</table>

Note: T>R>P>S and R>(S+T)/2
T= temptation; R= reward; P= punishment; S= sucker’s payoff

**Figure 3.3 Prisoners Dilemma**

If the world operates like such a game, why is cooperation still found in daily life? At least three factors are suggested by the above argument. First, sanctions will increase the cost of being a free-rider, and the provision of incentives will increase the benefit to the actors. Both sanctions and incentives could be designed for cooperative behavior. Institutions are also considered an instrument for conducting collective cooperation. Usually institutions can be viewed as rules, either formal (such as laws) or informal (such as norms), which will impose constraints on rational actors’ behavior. Finally, as Axelrod (1984) has pointed out, the evolution of cooperation is possible because the actors adopt a tit-for-tat strategy in iterated games. From these perspectives, one may say that a rational actor would still cooperate with others through a kind of self-interest driving force, especially when the external environment, such as an institutional design, makes it beneficial for actors to act cooperatively.

The above discussion shows that international cooperation has been a subject of study for a long time, however, there is little agreement on its topics and approaches.
From World War II to the 1960s, military cooperation and security were the primary concern of realists, and state power was the key point in international relations. The increased interdependence since the 1970s made realism’s idea of a lack of international cooperation unsatisfactory. Instead, neo-liberal institutionalism stresses the importance of international institutions and regimes of international cooperation. From the 1990s on, not only issues of political economy, but also the global environment, resources, fishing, and the so-called global public goods have drawn more concern.

To explore how a global public policy network for disaster reduction forms, the frameworks of rational choice and policy network will be adopted. Riker (1990: 174-177) points out that the purpose of rational choice in the beginning was not to explore the origins of institutions, but to develop a scientific theory of intentional behavior. The approach of rational choice always relies on a conception of actors as purposive and intentional. These actors are conceived to have given preferences, values, or utilities. Individual action is not the sole production; it is also subject to constraints that derive from other independent resources (Friedman and Hechter, 1988: 202).

3.4.1 Preferences

Because of the scarcity of resources, making choices became the human’s primary economic problem. On the other hand, while a human attempts to satisfy infinite desires under conditions of limited resources, he/she can make an optimal decision through a prioritization of preferences. In fact, a common definition of preference is still lacking. However, Druckman and Lupia (2000) discuss the formation of preference by looking at insights from cognitive science regarding the objects of
preference and comparative evaluation. The former refers to those aspects of the environment that are evaluated relative to one another. They can include observable, physically continuous phenomena, such as bowling balls, and unobservable, physically discontinuous phenomena, such as a shared idea. The latter is about “attitude”, which means a person’s orientation toward different objects. In general, rational choice theory is mute about what these preferences might be and where they come from; however, the actors’ ends (that the preferences implied) must be specified in advance in any specific rational choice theory (Friedman and Hechter, 1988: 202).

3.4.2 Institutional Constraints

Under the wave of new institutionalism, institutional study has again become one of the major themes of social sciences. Unlike state theory in the early 20th century, this new institutionalism focuses on issues of “agent-structure” conditions. Friedman and Hechter, (1988: 202) think that the modal individual will find his or her actions are full of institutions, which can include formal institutions, like laws and rules, and informal ones, such as norms. “These constraints serve to provide sanctions of both a positive and a negative kind that raise or lower the net benefit of any contemplated course of action.”

3.4.3 Information

In classical economics, the assumption of perfect information or sufficient information is used to analyze how individuals choose successfully among alternatives. However, as Von Hayek (1945: 519-520) observes, “…the economic problem of society is thus not merely a problem of how to allocate ‘given’ resources…it is a problem of utilization of knowledge not given to any one in its
totality.” The information asymmetry has become one factor which will influence an actor’s decision-making. North (1990) considers that the information cost is one of the critical elements of transaction cost. Especially in principal-agent relations, both of the adverse selections that resulted from hidden action and moral hazard come from hidden information because of an information asymmetry (Arrow, 1985). Dixit and Skeath (1999) suggest that the player who has more information in a game framework will take certain actions. These include hiding information or delivering wrong information. On the other hand, the player with less information will collect information, sift the correct information out, and keep it to himself or herself if he is ignorant, to avoid commitment or threat.

To figure out the “relations” among actors, the approach of the policy network provides a complementary and mutual explanation of this framework. In the case of global crisis or disaster management, it involves intense communication and coordination both within and among organizations to solve problems in real time. Therefore, the relations among organizations have become important variables when analyzing international cooperation.

Recently, the approach of policy networks has been given weight, and has been employed from different perspectives. Facing the emergence of global governance, the concept of a “global public policy network (GPPN)” is advocated by several scholars (Reinicke, 1999; Stone, 2004; Streck, 2002). In Stone’s (2004) discussion of international policy transfer agents and global networks, she enumerates at least three international actors (international organizations, states, and non-state actors) that have transferred domestic policy into transnationalization and formed a global public policy network for the delivery of global public goods. As Stone (2004: 559) emphasized, “GPPNs can act as advocates but are more institutionalized, performing with a greater degree of what might be called ‘delegated authority’ given their political patronage, and are directly involved in resource allocation and policy delivery.”

How shall social capital be taken to interpret the phenomena of international teamwork? Among the theories of international cooperation quoted above, we can tell that new liberalism, dependency theories and world system theories take respective advantage in interpreting social phenomena, but in all cases they overlook the
importance of the societies themselves, cultures, rationality, and the relationship between societies and nations, as well as in-depth studies of the relationship between societies and nations. Very often they retrieve and rest such key issues, ignoring the attitude of streamlining which are deemed to be variables deriving from the research frameworks or regarded as beyond the analytical frameworks. As a matter of fact, those which formerly were deemed to be established, inherent factors very often become the media that well perform in the social variation and the power of reform (Li, Huibin and Yang, Xuedong, 2000: 29-30).

Network analysis is based on the actors. In contrast to the rational choice approach which emphasizes methodological individualism and the issues of “agent-structure”, the core of network analysis is the relationship among actors (Nan Lin, 2001). Throughout the discussion of the development of international cooperation, resource interdependence and credible commitments, there exist two major relations in GPPNs. Scholars have also drawn on the work of Bourdieu, Coleman, and Putnam to provide a theoretical framework for examining the impact of networks (Field, 2003: 44).

On the other hand, where uncertainty rises amidst the interrelationship between humans and environments, the efforts to lower risks become one of the key issues for the “development of sustainability”. As a matter of fact, the concept of development in sustainability is not necessarily confined to how humans should learn how to exist in harmony with the natural environment. Humans are supposed to learn how to lead a lifestyle of justness and harmony, which are the very foundation of the values for the development of sustainability. The former functions as the infrastructure, while the latter plays the role of infrastructure for the society within the entire community of life. This also represents a core value of theories of social capital. (Chiang, Min-Hsiu, Chen and Chin-Chun, 2004).
Before we go any further into social capital, we must spend some time making sure what “capital” is. In the concept expounded by Marx, there are clear illustrations of capital. Nan Lin (2007: 3-5) further pointed out that capital comes into being within a social relationship which includes the interactions by and between the capitalists and laborers. Such unequal interactions lead to gaps in prices, creating “residual values.” The capitalists, after obtaining these residual values, put the values into utilization by various means, e.g., consumption or reinvestment. The capital theory posed by Marx was believed insufficient in the 20th century. The presentation of the manpower capital cultural capital or even the social capital has all been deemed as either a challenge or a supplementation to such concepts of capital.

As a matter of fact, social capital is deemed to be public property or collective property, suggesting a sort of collectively-oriented purpose, in particular the accomplishment of the purposes of all the team members. While guided by the target of social capital and the individual—collective imbued designs, the “bottleneck of collective actions” in the economics which is to be overcome in the prolonged efforts, create a win-win environment for individuals, clusters, societies and countries, and offer a sort of feasible operating framework for the collective teamwork of human societies. In addition, the number of the social capitals within an organization can be deemed to be an invested resource. The more the social capital, it suggests, the less the transactional cost required for organizational operations, making the objectives and duties of the organization capable of being implemented successfully without a hitch (Chiang, Min-Hsiu and Chen, Chin-Chun, 2004).

In terms of sociological approaches, especially those placing emphasis on structure and relations, social capital is a critical element for collective cooperation. Most authors agree that there are three traditions of social capital, which are internally
heterogeneous, for defining social capital. (Adam and Roncevic, 2003; Field, 2003).

The first is based on Bourdieu (1986: 248), who defined social capital as follows:

“...the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition---or in the other words, to membership in a group---which provides each of its members with backing of the collectivity-owned capital, a ‘credential’ which entitles them to credit, in the various senses of the word.”

Two components, resources and relationships, are included in social capital as defined by Bourdieu. The former is connected with group membership and social networks; the latter focuses on the relationships among actors, both inside and outside of the group (Bourdieu, 1980).

The second tradition was founded by J. Coleman. He asserted that (1988: S98):

“...[social] capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors---whether persons or corporate actors---within the structure.”

More generally, Coleman was seeking to develop an inter-disciplinary social science of economics and sociology. He proposed that system-level behavior must be disaggregated into individuals’ preferences and their actions. Coleman (1990: 302) defined “social capital” as “The resources of individual capital property social structure which can be taken to fulfill the goals of actions. It focuses on the aspect of “relationship”. The more the relationship to fulfill the goals of actions in the social
capitals, the more easily to help accomplish such goals. Coleman (1988, 1990) believed that in the realistic societies, individuals would come into being in certain relationship of interaction with others, known as “social networks”. Through such social networks, such relationships would be mobilized to realize such goals. The social capitals are virtually existent among such network structures to mobilize and cause fulfillment of the goals. In short, Coleman views social capital as a useful resource which is available to an actor through his or her social relations (Field, 2003: 21-23).

Putnam initiates the third research tradition of social capital. He uses the concept of social capital to shed further light on the differences in civic engagement. He (Putnam, 1993a: 167) argues that, “Social Capital here refers to features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated action.” He (Putnam, 1993a: 173) continues,

“More precisely, social capital contributes to collective action by increasing the potential costs to defectors; fostering robust of reciprocity; facilitating flows of information, including information on actors’ reputations; embodying the successes of past attempts of collaboration; and acting as a template for future cooperation."

Throughout his articles in the 1990s, Putnam (1993b, 1995, 1996) attempts to point out that America’s social capital was in a state of long-term decline. Facing this problem, Putnam uses “productivity” and “effectively” to view social capital as functional, but the context makes clear that he is not depicting the calculating individual actor of rational choice theory (Field, 2003: 33).

From the point of view of social capital, collective action requires networks and
flows of information between individuals and groups to oil the wheels of decision making. At this core, social capital theory will provides an explanation for how individuals use their relations to other actors in societies for their own and for the collective good (Adger, 2003: 389). In other words, social capital has become a resource of collective cooperation.

### 3.5.1 Credible Commitment

As Robertson and Tang (1995) point out, commitment has become a critical and even necessary mechanism for directing actors’ behavior toward collective goal accomplishment. North and Weingast (1989: 803) also note that, “…for economic growth to occur, the sovereign or government must not merely establish the relevant set of rights, but must make a credible commitment to them.” They emphasize the importance of credible commitment in collective action.

Buchanan (1974) defines commitment as reflecting a sense of identification with the organizational mission, involvement in one’s organizational duties, and loyalty and affection for the organization. The development of a high level of commitment is considerably easier when members share similar goals and values when they first join the organization (Robertson and Tang, 1995: 71). In other words, clarifying the vision, mission and goal will become a significant issue for the realization of credible commitment.

### 3.5.2 Trust

The literature on social capital, especially in political science, pays much attention to and gives great importance to social or generalized trust (Herreros, 2004: 44). Herreros (2004: 51) suggests five arguments should be considered when
discussing trust in social capital. First, individuals’ perception of the “type” of the rest of the population. Second, learning to identify the tell-tale signs of properties inherent to trustworthy people. Third, the effects of deliberation within associations on the participants’ beliefs about unknown people. Fourth, the effects of deliberation tend to vary in accordance with the aim of the association, and fifth, the shape and number of an individual’s social networks affects the development of trust in unknown people.

Simmel pointed out: “Trust is one of the most important coherent powers in a society.” (Simmel, 1950: 326; Newton, 2001: 202). In terms of social capital, trust is one of the prime constituents as well (Coleman, 1988: 306; Putnam, 1993, 1995, 2000; Fukuyama, 1995). Accordingly, trust is indeed the important connotation and substantial existence in the social capitals. Fukuyama believed that social capital was “The level of trust availability among members in a society or the specific entities thereunder” (Fukuyama, 1995). The final presentation is “trust”. In societies, “trust” represents the expectation of normal performance, honesty and cooperation. The foundation of trust comes from the criteria owned by the societies and the roles of individual entities that belong to the societies (Fukuyama, 1995). Accordingly, social capital represents the competence of teamwork in an organization toward the common objectives which originates in the interpersonal trust. To put it in more understandable terms, social capital represents a sort of power which is fermented out of prevailing trust among societies. The process where trust is established is a kind of gradual

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8 Aiming at the models of trust, Fukuyama classifies societies into high-trust and low-trust. The former refers to a society where trust transcends blood relationships. The latter refers to a society where trust exists only within the blood relationship. Besides, “spontaneous sociability” is taken to interpret the strength of capital in a society. In a society where the members extend natural trust beyond blood relationships and are voluntarily willing to organize entities beyond the blood relationship, we can tell that the members in that society are in higher trust. On the contrary, where a society lacks trust, with local- and blood relationship-oriented organizations dominating, even then there are organizations that go beyond blood relationships, e.g., bureaucratic organizations, government supported enterprises, for they largely depend upon official rules and regulations as well as systems. In some cases, it calls for mandatory measures in place of trust to bring up the “transaction cost”. Inglehart (1997) elucidates social capital through universal trust and a tolerance culture, as well as the hypotheses formed by voluntary bodies..

1. The calculus-based trust phase: During this phase, trust has a vulnerable foundation. Using a more appropriate metaphor, it is like the game of casting dice, where positive trust is gradually established. Trust tends to become likely to decline due to an organization or specific situations.

2. The knowledge-based trust phase: In this phase, trust is built upon touch for a period of time, generating a growing understanding and greater predictability of the information from other parties. It is appropriately dubbed “cultivation”, accumulating the credit.

3. The identification-based trust phase: This represents the final and optical phase. At this time trust is already a sort of subjective trust. The two sides in the interaction have been in a certain period of cultural integration. With the mutual understanding, sharing of values, co-sharing of information and resources, with a firm prop of mutual demands and trust. It is more appropriate to term this phase a “symphony”. All sides in the interaction play their respectively roles as appropriate, to produce the fruits of harmonious interactions.

On the grounds of the aforementioned explanation of social capital, one can find out that the very core concept of social capital is “mutual interaction”, or “mutuality” (Kooiman, 2003: 211). To put it in more understandable terms, we can tell that social capital is a sort of “relational” theory, with equal concern about the interrelationship of different resources of action.
3.6 Summary

This chapter explores the influence of global governance on contemporary government, and includes two perspectives. The first one refers to the appearance of diverse global actors, which means that states are not the only powerful and authorized actors in international relations. Furthermore, global governance structure is viewed as a network. Resource interdependence, relations, and flexible structures are the main characters in this global governance structure. Facing the changing of global governance, this study adopts two approaches to analyze why and how the global actors cooperate. They are the approaches of rational choice and social capital. The former is methodological individualism, which means that the state agency, NGOs, IOs, and MNCs are viewed as different independent individuals. Three factors are brought up to explore how the individuals make decisions. To have successful cooperation, however, social capital supplements the lack of rational choice. Social capital emphasizes the relations of actors. If the factors of trust and credible commitment can be observed and improved, the outcome of their interaction can be expected to be positive.