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OBSERVATION:
THE THEORY OF NIKLAS LUHMANN

DISSERTATION

Presented in partial Fulfillment for the Requirements for
The Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
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*****
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ABSTRACT

This dissertation applies German sociologist Niklas Luhmann's systems theory to analyze the complex communication phenomena between U.S. and China. It contains two main themes: an exposition of systems theory and a communication-based analysis of U.S.-China relations. The exposition part is my discussion of methodology and the analysis is application of the methodology.

In the past decade, following the 1989 Tiananmen incident and the end of Cold War, the United States has had great difficulty in formulating a coherent China policy. Political realism, the dominant paradigm of international politics and practices, views the problem as caused by a series of changes both in the international system and national politics. Realism has long emphasized the material bases of international politics as it "really" was. It depicts international politics as a realm of anarchy in which nation-states, as self-interested actors, use whatever means to compete for power. However, methodologically, realism is no more than a narrative, as oppose to analysis, constructed on the worldview of the Westphilian state system.

This dissertation argues that this simplified view can no longer provide a proper description of the complex post-Cold War international relations in general and U.S.-China relations in particular. From a systems-theoretical perspective, power politics is just one aspect of modern world society; the state system is but one communication
system, among others, operating at a global level. Instead of the territorial state, following Luhmann's theory of social differentiation, the study argues that the unity of international communication is founded on the functional differentiation of communication-based social systems. These communication systems include the state, economy, law, ideology, religion, science, and value or morality, etc. Based on Luhmann's systems theory, the study develops a theoretical framework that is able to observe different areas of communication within the context of U.S.-China relations.

Using China's entry to the World Trade Organization as an example of the complexity of modern international relations, the study identifies the inconsistent and unintegrated character of China policy in the differential communications produced by different communication systems.

Luhmann's systems theory is extensively discussed as my methodology. I start with the most fundamental concept of systems theory: observation. Observation, as defined by Luhmann, is the use of the distinction system/environment to generate information. As the observed presupposes the observing, observation must be discussed at a second level - the observation of observation. Luhmann's notion of observing system amounts to a fundamental epistemology of social inquiry. After a discussion of Luhmann's central concepts, I present a comparison between Luhmann and Giddens, the two most important contemporary sociologists. The comparison serves to justify my selection of using Luhmann as my conceptual tool in social analysis. Finally, the application of systems theory to analyze China's WTO accession is intended to connect the highly abstract theory to its environment - the real world.
To my family,

my parents and my wife
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If you told me that I would become a Ph.D. twenty years ago, I would say you must be kidding. If you told me that I would become a Ph.D. ten years ago, I would say I wish but I don't think I can. I want to thank those people who have helped me in making this mission impossible possible.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>ii</td>
</tr>
<tr>
<td>Dedication</td>
<td>iv</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>v</td>
</tr>
<tr>
<td>Vita</td>
<td>vi</td>
</tr>
<tr>
<td><strong>Chapters:</strong></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1. Statement of the problem</td>
<td>5</td>
</tr>
<tr>
<td>Introduction</td>
<td>5</td>
</tr>
<tr>
<td>U.S.-China relations after 1989</td>
<td>9</td>
</tr>
<tr>
<td>The China debate</td>
<td>13</td>
</tr>
<tr>
<td>Political realism and foreign policy</td>
<td>15</td>
</tr>
<tr>
<td>How does realism observe and unobserve the world</td>
<td>19</td>
</tr>
<tr>
<td>Organization of the document</td>
<td>24</td>
</tr>
<tr>
<td>2. Epistemology: Luhmann's second-order observation</td>
<td>25</td>
</tr>
<tr>
<td>Introduction</td>
<td>25</td>
</tr>
<tr>
<td>From first-order cybernetics to second-order cybernetics</td>
<td>29</td>
</tr>
<tr>
<td>Autopoiesis</td>
<td>32</td>
</tr>
<tr>
<td>Laws of form</td>
<td>34</td>
</tr>
<tr>
<td>The epistemology of systems theory</td>
<td>38</td>
</tr>
<tr>
<td>Observing systems</td>
<td>42</td>
</tr>
<tr>
<td>A note on paradox</td>
<td>46</td>
</tr>
<tr>
<td>3. A discussion of the theory</td>
<td>49</td>
</tr>
<tr>
<td>A description of systems theory</td>
<td>49</td>
</tr>
<tr>
<td>Key concepts of systems theory</td>
<td>55</td>
</tr>
<tr>
<td>System and function</td>
<td>55</td>
</tr>
<tr>
<td>System/environment differentiation</td>
<td>57</td>
</tr>
<tr>
<td>Complexity</td>
<td>59</td>
</tr>
<tr>
<td>Boundary</td>
<td>60</td>
</tr>
</tbody>
</table>

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Conclusion ................................................................................................................... 162

6. Conclusion ................................................................................................................. 164

Summary ..................................................................................................................... 164
Epistemological contributions ................................................................................. 166
Final thoughts .............................................................................................................. 169

References ................................................................................................................... 170
INTRODUCTION

This book is my dissertation. This is of course just a statement. But even this simple statement already presupposes the use of several distinctions as the conditions of communication. First, a distinction has to be drawn between books and other forms of communication medium, then a distinction between this book and all other books in the world. It also draws a distinction between earning a doctoral degree and other expressive intents, and between academic and non-academic writings. It also indicates a temporal distinction, for the statement is about the state of a future present.

I am the one who uses these distinctions to produce the thing called "dissertation." But if I can step outside of myself and watch how I direct my action according to a self-description, I find that my act of writing a dissertation has its origin in a vision of who I want to be. If we call the basic distinction with which subsequent actions refer to the observer, then it is this projected future state instead of my consciousness as a whole is the observer in this matter. It is based on this present future that my current action acquires its meaning. In a phenomenological sense, it is this present future selects what to actualize within the horizon of possibilities.

Likewise, although my academic advisory committee members are the ones who evaluate this dissertation, they are not the real observers in this process. The real observers are the distinction by which they use to review my arguments. The observer is

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the idea that they have in mind of the criteria of a dissertation. Unless I meet the stringent criteria, my academic institution would not award me my degree. In order for this book to become a dissertation, it must establish a relation with the concept of dissertation.

So there are indeed two observers in the making of this dissertation: an envisioned Ph.D. and an academic standard. Although each observer operates within its own network of meaning constituting process, this study reproduces both observers' existence: it reproduces my consciousness as a prospective Ph.D. and an academic tradition. In other words, the project is a self-referentially produced event with the outcome no other than the observers themselves. Humberto Maturana (1980) calls this process "autopoiesis."

Let me use the same scheme to describe the contents of the study. This study uses German sociologist Niklas Luhmann's systems theory to analyze problems of the United States' making of China foreign policy. Luhmann's sociological systems theory is the distinction that the study uses to observe the U.S.-China relationship, which is the observer in this theoretical inquiry. This notion of observation designates a difference of how knowledge is to be constructed. This epistemology replaces the distinction transcendental/empirical (or subject/object) with the distinction the conditioning/the conditioned. One can easily see, again, self-reference is how this cognitive process operates. One may argue that self-reference presuppose circularity and paradox; the initial distinction predetermines what is knowledge is knowledge and what is not knowledge is not knowledge. Paradox and circularity, as Whitehead and Russell (cited in Krippendorff, 1984) had discovered, is central to all logical inquiry. But unlike their treatment, which tried to avoid them by all means, Luhmann made productive use of them. An autopoietic system cannot but find justification in its own circularity and cannot
but produce regularity that governs its regularity. With this cognitive model, part of my
task is to identify the observers participated in the process of making China policy and to
analyze their observations as self-referential operations. As there involved more than one
observer, policymaking inevitably situates itself within a complex environment.
Complexity demands selection, and selection presupposes contingency. Inconsistency
and confusion in China policymaking emerge not simply because of conflict of interests,
but more fundamentally, because of differentiation of observations.

Using Luhmann's systems theory as my observer of the international world needs
justification. The end of the Cold War and the rapid spread of the information revolution
have drastically changed the global material, spatio-temporal, and cognitive landscapes.
Within this context, the conventional geopolitically based international relations theories,
which generally posit a correlation between political geographies and collective
identities, have been increasingly challenged by empirical and epistemological
transformations. Luhmann's sociological systems theory is one of the few contemporary
grand theories that has provided a comprehensive analysis of the nature and dynamics of
modernity and identified the social forces shaping human life in the contemporary world.
Within this theoretical context, there is another notable sociological theorist, Anthony
Giddens, whose structuration theory seeks to explain human agency and social
institutions in modern societies. The two authors represent two very different intellectual
traditions and have carved out very different forms of social reality. Why Luhmann
instead of Giddens? A comparison between the two would justify my selection of the
observer of U.S.-China relations.
Indeed, with this introduction, we are then already moving within Luhmann's systems theory. This self-description of the dissertation is put together by using concepts like system, environment, distinction, observation, self-reference, complexity, contingency, and above all second-order observation. Second-order observation is the observation of observation. Since every thing said is said by an observer, second-order observer asks how does one observe in order to claim what he/she has observed. So instead of talking what the dissertation observes, I introduce how it is going to observe, and to be observed as well.

This dissertation is a self-referential reproduction of Luhmann's systems theory. But whether it can successfully reproduce itself depends on its external reference, that is, its structural relation with the academic world. And this engagement is to be evaluated by systems theory's connectivity with the real world, with problems in making China foreign policy. Ultimately, systems theory's self-referential reproduction depends on its external referentiality - its connection to the world.
CHAPTER 1

STATEMENT OF THE PROBLEM

Introduction

In October 1999, the Senate Foreign Relations Committee held a hearing on the future of U.S.-China relations. The chairperson, Senator Jesse Helm from North Carolina, addressed the issue in his opening statement:

... I would like to know, one, how is it that our relations with China have reached such a low ebb after seven years of painstaking efforts by the administration to cater to Red China's every whim and wish? Two, how is it that after seven more years of MFN, most favored nation; after an unprecedented transfer of technology... after unquestioned access to our capital markets and opting not to introduce UN human rights resolutions... the Clinton administration still hasn't been able to establish a better relationship with Beijing (Federal News Services, 1999)?

Not too long ago before this hearing, Washington and Beijing were speaking of a "strategic partnership" and seeking ways to enhance already substantial economic and political relations. The bombing of the Chinese embassy in Belgrade, the release of Cox report alleging nuclear espionage by the People's Republic of China (PRC), and China's
renewed threat to use force to regain Taiwan, the "renegade province," have produced a new round of tensions on the relation. Helm's statement revealed waves of frustration over President Clinton's engagement strategy and a growing support for a hard-liner's China policy in Washington.

Few international issues are as critical and complex as the U.S.-China relationship. The People's Republic of China is the world's most populous country, with 1.2 billion people. It is strategically positioned in Asia; its territory borders 15 countries. It is the fastest-growing economy in the world, the third-largest economy in the world in 2000. It is a nuclear power, holding one of the seven permanent seats on the United Nations Security Council. After two decades of economic reform, China is the only communist regime emerging as a major economic, military, and political power that could conceivably challenge American preeminence over the next half-century. America needs China's cooperation in preventing the spread of mass destruction weapons, in combating international crime and drug trafficking, in protecting environment, in tearing down trade barriers, in respecting human rights, and in resolving difficult situations in Asia from the Indian subcontinent to the Korean Peninsula. The role China chooses to play in these issues will have immense implications for global stability and prosperity for the 21st century.

But while knowing it is crucial to maintain a good relation with Beijing, Washington has not been able to implement a consistent China policy in the past decade. Worst, it seems that the same uncertainty will continue into the years to come. Why the uncertainty? The consensual view among international relations theorists treats it as a structural problem (Rodman, 2000; Sutter, 1998): a series of significant changes in the
international system, including the collapse of the Soviet Union, Tiananmen Square incident, Taiwan's democratization, the shift from a bipolar world to the United States as the sole superpower, and China's rise as a potential superpower, caused the relationship difficult to manage.

This view has its explaining power, but limitation too. Underlying this explanation is a political realist's assumption of the structure of states system in which territorial states interact with one another on the basis of bounded sovereignty. For political realism, sovereignty is associated with territory; it is a matter of both control of territory with authority over people therein and mutual recognition among members of the states system (Held and McGrew 2000; Taylor 1996). There is certainly some truth pertaining to the state-centric view of international affairs; state is by and large the only legitimate player in most international bilateral and multilateral relations. But state-centric thinking also produces narrowly selected international relations theories that omit much of what are happening in today’s international scene.

From the view of Luhmann's theory of communication, realism's preoccupation with power politics drastically confines its observation of international communication to power relation. To realist, power constitutes a realm of functional autonomy and is the only medium of communication between states. The history of U.S.-China relations in the post-Cold War era can be seen as a process of increasing differentiation and complexity due to the developments of various autonomous communication systems, such as economy, value or morality, ideology, and international norms. Comparatively, power is just one means of communication among others. Limited by its conceptual simplicity, realism cannot "see" other forms of communication both within and between...
modern states. It not only impedes one's proper understanding of the nature of modern states but also their inter-relationships.

It is not fair to accuse realism the major culprit who has caused all the uncertainties between the two countries. However, as the dominant theory of international relations, its inability to provide a proper description of the relationship certainly adds more confusion to an already complicated situation. In this study, I have chosen a different route, from the viewpoint of communication, to approach U.S.-China relations. This study aims to conceptualize the complex situation of China policy making in which identity, principle, and consensus are replaced by boundaries, differences, and opposition. To this end, one needs a theory that can observe different areas of socio-macro communications, one that has not been parochially affixed to a single social domain such as political and military power. The best theory available is Niklas Luhmann's systems theory, which conceives the social as a domain of self-referential communication. Based on Luhmann's systemic concepts, I develop a theoretical framework to describe the complex communication phenomena between U.S. and China, as well as to explain the inherent uncertainty and contingency caused by the simultaneous communications of several autonomous functional systems.

In this chapter, I first give a brief description of the history of U.S.-China relation in the 1990s. I then introduce the current China debate, as it framed by the containment and engagement paradigm. I argue that the containment/engagement debate not only frames China policy in false categories, but the paradigm is also ill-equipped to delve into the complexity of this relationship. The containment or engagement paradigm has its root in political realism. The theoretical assumption of realism and its view of “rising power”
are discussed in the next section. Lastly, from the viewpoint of communication, I criticize realism’s inability to come to terms with structures of modern international relations and suggest that a better theoretical tool is needed.

U.S.-China relation after 1989

U.S. policy toward China had a clear strategic rationale from 1949 to 1989: a policy of containment from 1949 to 1971 and an anti-Soviet strategic partnership from 1971 to 1989. Since the June 1989 brutal crackdown at Tiananmen Square and the collapse of the Soviet Union, Sino-American relations have become increasingly unsettled, lurching from crisis to crisis. The collapse of the Soviet Union removed the common threat that brought China and America together and the crackdown of Tiananmen Square shattered the broad domestic consensus that had supported the Sino-American partnership since the Nixon administration (Sutter, 1998). After the Tiananmen incident, President Bush tried to preserve the same relationship with China. But his administration was repeatedly criticized by Congress, the media, and anti-Communist interest groups. China’s human rights record was attacked by Clinton’s 1992 campaign against George Bush. When President Clinton took office, his administration demanded China to improve human rights condition as a pre-requisite for the most-favored-nation (MFN) tariff treatment. However, confronted by an adamant China and faced increasing pressure from U.S. business and industrial groups and their allies in Congress, the human rights demand was softened in mid-1994. Although Clinton showed more resolve in pursuing a policy of "engagement," U.S.-China relations under his administration were characterized by a series of ups and downs. Beijing vehemently protested to the Clinton administration’s decision to grant a visa to the former president of Taiwan to deliver a
speech at Cornell University. The relation reached its lowest ebb in early 1996 when PRC conducted a series of missile tests in the Taiwan Strait and United States dispatched two carrier battle groups to international waters near Taiwan.

The Taiwan crisis apparently caused enough damage for administration officials to embark a rapprochement with PRC. U.S.-China relations improved rapidly as Clinton and Secretary of State Madeleine Albright using terms like "cooperative partnership," "strategic cooperation," and "strategic partnership" to characterize the relationship. President Clinton's trip to China in the summer of 1998 and the summit meeting with China's president, Jiang Zemin, marked the high point of U.S.-China relations in the post-Cold War decade. During the course of the meeting, the two leaders issued a joint statement pledging to cooperate to prevent proliferation of nuclear weapons and ballistic missiles and to take responsibility for promoting peace and stability in South Asia. In a move that stunned Japan, Secretary of Treasure, Robert Rubin and his PRC counterpart also issued a joint statement, praising the PRC's role in containing the Asian financial crisis and criticizing Tokyo for its delay of action. After the summit, Clinton traveled to Shanghai and issued a brief but crucial statement outlining the "three noes" policy regarding Taiwan, affirming that "we don't support independence for Taiwan, or two Chinas, or one Taiwan, one China. And we don't believe that Taiwan should be a member in any organization for which statehood is a requirement."

What were implied in the "three noes" policy were the recognition of China as the major player in Asian affairs, Washington's willingness to accord Beijing that status, and most importantly, Japan's stardom might be fading as China was rising. But the partnership was a short-lived one; it began to collapse almost as soon as Clinton returned.
from his trip in July 1998. Criticisms in Congress about Clinton's "three noes" announcement were overwhelming, condemning that the policy was not just one of appeasement but was exceedingly accommodating of Beijing's preferences. The president and his advisers made a hasty withdraw rushing to assure that there was no substantive change in U.S. policy on the Taiwan issue. To calm Taipei's anxiety, Washington dispatched Secretary of Energy, Bill Richardson, to Taipei - the highest-ranking U.S. official to visit Taiwan in years.

These actions irritated leaders in Beijing. They suspected that Washington once again, while saying it was committed to one policy, presented a different one to domestic audience. Beijing also speculated that Washington was indeed pursuing an anti-China containment policy by revising defense guidelines for the U.S.-Japanese alliance and proposing to create a regional shield defense system against ballistic missiles. The release of the Cox committee report alleging systematic PRC espionage to steal America's nuclear technology further crippled the relationship. Beijing denied the allegation and charged that the report was part of a plot by the PRC's political enemies in Washington to build a comprehensive anti-China policy. The U.S. led military intervention in the Balkans further deepened the chill in U.S.-China relations. China and Russia vehemently protested the United States and NATO's military action against Bosnia. The military action intensified their suspension that America intended to achieve global domination by using military power. The relationship declined to its lowest point since 1989 after the U.S. bombing of Chinese embassy in Belgrade on May 7, 1999. Many Chinese believed the United States intentionally targeted the site. The incident deepened nationalistic and
anti-American sentiments, inciting waves of violent, anti-American demonstrations in cities throughout China.

The Clinton administration has gone to great lengths to restore relations with China. The two countries resumed high-level talks in the summer of 1999 and made arrangements for China's entry to the World Trade Organization. As the value of bilateral trade exceeded 80 billion in 1999, both sides have made an effort not to let the animosity get out of hand. But scars left from the Balkan episode never fully recovered. Since the summer of 1998, the overall tone of statement and articles coming out of Beijing has become overwhelmingly negative and hostile (Carpenter, 2000). Although Clinton was determined to pursue an engagement policy toward China, the relationship was frosty, especially on Beijing's part, by the time he left office.

Much like Clinton criticized his father in the 1992 presidential campaign, in the 2000 campaign, George W. Bush condemned Clinton for being soft on China and vowed to take a tougher stand toward China, claiming that his presidency will not hesitate to confront China on international security and human rights issues. Instead of a "strategic partner," he called China a "strategic competitor." "China is a competitor," he stated in his campaign promise.

We must deal with China without ill-will, but without illusions. We must show American power and purpose and strong support for our Asian friends and allies... we will help Taiwan defend itself. If I am president, China will find itself respected as a great power, but in a region of strong democratic alliances. It will be unthreatened, but not unchecked ("Bush Delivers International Policy Address," 1999).
Since Bush took office, several signs have indicated that the President and his foreign policy advisers mean to make good on the tougher stance on the mainland. Secretary of State, Colin Powell criticized religious oppression in China. Bush is calling for development of a much larger national missile-defense system than the one former President Clinton backed. Defense Secretary, Donald Rumsfeld said Beijing's opposition to missile defense was not a consideration and hinted that Taiwan might benefit from such a system (ABC This Week, 2001). Officials say the Bush administration will adhere to the longstanding "one China" policy that recognizes Beijing's claim that Taiwan is part of China. However, the administration has also offered the biggest arms package to Taiwan in a decade to improve its defenses. In addition, Bush told Charles Gibson on ABC's morning show that, "the Chinese must understand" the United States would do "whatever it took to help Taiwan defend itself (Bush, 2001)." Although the Bush administration has yet to define how it will approach China as an emerging world economic force and regional political power, one thing for sure in U.S.-China relations is that, as State Department spokesman, Richard Boucher, has acknowledged, China policy will be "different" under the Bush administration ("China Policy Changes..." 2001)

The China debate

The current debate over China policy splits between those who believe China will eventually threaten U.S. interests - thus needs to be isolated or contained - and those who think that China is moving in the "right" direction - so a non-adversarial relationship can be pursued through greater engagement. Does China pose an expansionist threat to its neighbors and seek domination in Asia? Should Washington adopt a tougher policy toward China on human rights, trade, and national security issues? Does China's
accession to the World Trade Organization offer hope for improvement of future U.S.-China relations? What impacts do economic interactions with China have on security and human rights? Is China a country committed to market economy and democratic reform? These are recurrent questions in the China debate, and responses to these questions are often divided along the "containment vs. engagement" line, which points to either hostility or indulgence.

Richard Bernstein and Ross H. Munro's book The Coming Conflict with China (1997) represents a typical "containment" thinking. The authors, two journalists with extensive experience in China, sketch a devious and dangerous China who seeks hegemony in the East Asian region. To protect America's interests in the area, they argue that U.S. should maintain military superiority in Asia, prevent China from building up its nuclear weapons capability, arm Taiwan, and re-arm Japan to maintain the balance of power in Asia. They believe that the United States should "prevent China from becoming the hostile hegemony that could interfere with the American pursuit of its interests in Asia (p.218)."

The "engagement" school, on the contrary, seeks ways to accommodate Chinese power. For example, Robert Sutter suggests in Shaping China's Future in World Affairs (1996) that American policy toward China should direct to facilitate the transformation of a China with which the United States can cooperate to achieve common objectives. Sutter projects three likely scenarios of future China. The positive scenario "posits an effective administration and greater political reform along with powerful economic modernization (p.3)." The negative scenarios picture either a degenerated, chaotic Chinese government or an aggressive Chinese superpower. Sutter believes that with positive influence from
America, it is possible to bring about a democratizing and cooperative China in the future.

The two perspectives have set the stage for debates of U.S. policy options. (Other alternatives, for example, Gerald Segal (1996) suggests a policy of "constraint" and Zalmay Khalilzad (1999) proposes a policy of "congagement," are simply variations within the same containment/engagement distinction.) Although the two schools propose totally different policy responses, however, taking a look into their underlying assumptions of the way international politics works, one finds that they are indeed identical. First, people on both sides see the current international world as a relatively stable system founded on the great power of America. Secondly, as China's economic growth also elevates its military and political powers, China may challenge the American preeminence in the future. The essence of the debate is indeed how to manage this rising power? The only difference between them is that while one suggests determent and the other appeasement. The assumption that rising powers are dangerous and such a circumstance requires responding strategies on the part of established powers reflects a classical political realist worldview.

Realism has enjoyed widespread acceptance among policymakers and scholars during the Cold War era. Realism claims to explain a great deal of world history and contemporary international politics. To understand how realism has shaped foreign policymaking, it is important to understand realism's basic assumptions.

Political realism and foreign policy

Political realism or realpolitik claims the world must be seen as it actually "is," consisting of nation-state inherently conflicted over competing interests and limited
resources. The earliest realist's ideas can be found in writings of philosophers Mencius, Lao Tzu, and Thucydides. The father of modern realism is Cardinal de Richelieu, chief minister of Louis XIII. Richelieu promulgated the concept of *raison d'être*, the idea that national interest justifies whatever means employed to further it, and grafted it onto French foreign policy (Kissinger, 1994). Francis Beer and Robert Hariman (1996) describe the realist worldview as follows:

In the discourse of realism, nation-states are the primary actors in world politics. Since these states necessarily inhabit a condition of anarchy, they learn to conduct their foreign policies on the basis of national interest defined in terms of power. Consequently, they calculate and compare benefits and costs of alternative policies and rank each other according to their power, which is measured primarily in terms of material and especially military capabilities. Thus, national foreign policy decision makers use whatever means are most appropriate, including direct violence, to achieve the ends of national interest defined in terms of power (p.3).

This worldview operates simultaneously as an ontology and epistemology. It presents a state of affairs conducted less by morality and law than by power and lays down the ground on which objective knowledge of international relations is to be gained. Realism provides taut explanations for wars and alliances during the Cold War and before. Its emphases of enduring propensity for conflicts were consistent with the central features of Eurocentric world system, the American century, the American-Soviet rivalry, and the New World Order (Beer and Hariman, 1996, p.4). It explains George Kennan's initial proposal of the policy of containment toward Soviet aggression; Nixon's and Kissenger's
rapprochement with China in 1970; and Secretary Colin Powell's commitment to a national missile defense system ("Powell Is Named Secretary." 2000).

For realist, national growth is dangerous. According to Martin Wight, "it is the nature of power to expand. The energies of their members radiate culturally, economically, and politically, and unless there are strong obstacles these tendencies will be summed up in territorial growth (cited in Schweller 2000). As states grow wealthier and more powerful, realists predict, they not only seek greater world-wide political influence but also are more capable of expanding their interests and, if necessarily, overthrowing the established order. For the established powers, it is crucial to judge whether the emergence of a new great power will eventually destabilize the current international system or the system can peacefully incorporate the new power into the current order. The policies of containment and engagement are respectively the strategies an established power undertakes to prevent a rising power's expansion or to appease it through negotiation and compromise (Schweller, 2000). A containment policy designs to maintain balance, to keep established power's status quo, while an engagement policy designs to minimize conflict and maintain the formal institutional arrangements and informal rules by adjusting the international hierarchy of prestige and probably the division of territory (Schweller, 2000).

Realism has strong influence on Washington's China policymaking. Since 1994, after his de-linked of human rights from the MFN tariff treatment, Clinton has defined the policy choice as one of engagement or containment, integration or isolation (Manning, 2000, p. 190). Theoretically, Clinton's strategy of engagement derives from the tenets of Wilsonian liberalism, which values the benefits of democracy, trade and
international organization. But his underlying assumption of international relations reaffirmed realism. He says the following in a major policy speech:

"China stands at a crossroads. The direction takes toward cooperation or conflict will profoundly affect Asia, America, and the world for decades. The emergence of a China as a power that is stable, open, and non-aggressive, that embrace free market, political pluralism, and the rule of law, that works with us to build a secure international order - that kind of China, rather than a China turned inward and confrontational, is deeply in the interests of the American people (Clinton, 1997)."

The Bush administration's position is even more straightforward. Condoleezza Rice, Bush's national-security adviser, a former professor of political science in Stanford, describes herself as a foreign policy "realist" ("Rice Holds a Different Worldview," 2000). She chided Clinton's Russia policy, saying "if we have learned anything in the last several years, it is that a romantic view of Russia -- rather than a realistic one -- did nothing to help the cause of stability in Russia." The White House press secretary, Ari Fleischer, when asked about Bush's attitude toward China and Russia in a press conference, replied:

...on the foreign policy front, the president is doing exactly what he indicated he would do, which is bring a sense of realism to America's foreign policy, a sense of cooperating with other nations where cooperation is possible, and to the degree
that there are differences, dealing directly with those differences. It's an approach based in realism (2001).

**How does realism observe and unobserve the world**

For realist, realism "represents" the way world politics operates, and thus it also prescribes for state actions in international arena. If the world of states is a natural world, then only states can be the agent for political process. If power politics is an autonomous realm, then it is only by means of state administration's rational calculation that pursuits of national interests can be maximized. In short, "the discourse of realism and the practices of modern state are mutually reinforcing (Beer and Hariman, 1996, p.7). Realism certainly describes a good part of the way world politics works. But taking a theoretical framework back to the basic operative distinctions enabling them (realism and state-centric politics) to indicate what they have observed, one finds that they are actually using one another as their operative distinctions. Thus, states observe the world with the operative distinction of realism while realism with state-centric politics.

What does this mean? If one agrees with Luhmann's concept of communication, that communication is a self-referential operation by which social systems reproduce themselves, one realizes that realism and state-centric politics produce each other's social existence. That is, realism functions to facilitate international communication carried out by the state system, and in producing the state-centric international relations, realism also reproduces itself. Realism reduces international affairs to interactions among states. The international world is conceived as a field of power relation constituted by self-referential states on the operative distinction of power. The unit of communication is state and the medium of communication is power. Powerful states use power to communicate with the
purpose of reproducing state power. Phenomena of the Eurocentric world system, the American century, the Pax Americana, and the New World Order can all be understood as communicative events produced by self-referential powers. For realist, international politics must be seen as a system of power relation and realism simply describes the autonomous system of state power.

But the problem is: while the realist description remains the same, the structure of international affairs has become increasingly complex in the past decade. The enormous increase in complexity within U.S.-China relations, set free by the end of Cold War, was not matched at the semantic level. While communications among states have expanded into other social areas, its semantic description still narrowly focused on the state-centric power relation. The new areas of communication between U.S. and China include economics, ideology, value or morality, and international norms, and each of these relations, like power relation, can be seen as an autonomous system. In Luhmann's terms, each area of operations is a reflexive and recursive form of system building, differentiating itself from others by its specific communication. Confining international communication to one area not only impedes our understanding of processes of international politics but also simplifies the nature of the nation-state in modern international environment.

The differentiation of international communications means that different systems use different distinctions to observe their specific communication in international situation. This has two consequences: it increases the complexity of the state on the one hand and it decreases the authority of state sovereignty on the other. As a state necessarily consists of more than one subsystem, different operations performed by
different subsystems within the state increase the complexity of the state. As state power is no longer the only distinction on which communication between states establish, much of today's international affairs is not "nationalistic" in character. Much of modern international communication has nothing to do with state sovereignty. National boundaries neither facilitate nor hinder these new areas of communication.

In international politics, the results of the differentiation of communications are fragmentation within national boundaries and globalization among national boundaries. As Robert Sutter (1998) has observed, the post-Cold War period has seen substantial changes in the making of foreign policy, shifting away from the elitism of the past toward much pluralism. The State Department, the Defense Department, the National Security Council, the Congress, the business communities, non-governmental organizations, and the mass media, all have different agendas and perspectives on foreign policy. By referring to different distinctions that enable communications, these actors often disagree on issues being discussed between U.S. and China and the U.S. response to those issues. They foster an environment in which U.S. foreign policies result from a high degree of fragmentation, confusion, and extensive bargaining among the various interests. The state, as oppose to the realist account, can hardly be a unit of communication but must cope with its own internal complexity. Although the state can choose its priority among competing interests, modern state can no longer have a clearly defined national interest. Policymaking becomes virtually the selection of communication within a complex environment that is made up of several social communication systems. The exercise of political power cannot be thought of as a process of applying principles, but rather as
limited selections among structurally coupled subsystems that reciprocally reduce each other's freedom.

The post-Cold War period has also experienced an acceleration of the process of globalization - political, economic, and social forces that have drawn people together regardless of state boundaries. The rapid developments of global and regional trading organizations (e.g., WTO and NAFTA), the expansion of military and political organizations (e.g., the North Atlantic Treaty Organization and the ASEAN regional Forum), and the explosion of media and communications worldwide (e.g., CNN and the Internet) seem to reflect the "end of geography" or the "death of distance." Seeing these transnational institutions as systems of communication, one finds that their operations became possible only on the condition that each institution uses a same distinction to reproduce its communication - be it economy, geopolitics, or instantaneous communication. These institutions reproduce themselves self-referentially based on communications that have nothing to do with national boundaries. For them, "a-national" can open up more possibilities of communication; that is system reproduction. For example, Robert Reich (1992) predicts there will no longer be national economies, as economic operations are global in nature. Big multinational enterprises have budgets larger then those of all but a few nations. Multinational enterprises may wield immense economic power that sometimes have the capacity to influence political policies in their home bases and elsewhere. Indeed, it is not unusual that U.S. government uses its international political influence and domesticate administrative power to facilitate the economic system’s communication. In such cases, state power has become a means in economic system’s global reproduction. From the viewpoint of Luhmann’s system

22

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differentiation, this means that state has recognized the differentiation of international relations and has accorded a legitimate role of economy to international relations. Furthermore, as distinctions on which communications established became globalized, international relations are no longer a zero-sum game. Today's world is less anarchic and more interconnected than ever before, since one's own interests are so intricately intertwined with those of others.

The fragmentation of policymaking has made it difficult to define what is in the national interest and the globalization of political, economic, and cultural behaviors has made domestic and foreign affairs indistinctive. Both developments challenged the realist account of international relations and render the state-centric approach obsolete. Phenomena of fragmentation and globalization point to a specific combination of difference and identity, of differentiation and reconstructed unity. These phenomena coincide with Luhmann's concept of "system differentiation (Luhmann, 1982)," but also that of Giddens' "system integration," or "time-space distanciation (Giddens, 1984)." Luhmann's idea of system differentiation suggests that boundaries of social systems are to be distinguished by their recursively closed communications instead of by territorial boundaries or other physical attributions. Giddens's idea of system integration suggests that the unity of modern organization is the social relation that binds actors' uses of time and space. Both theorists provide conceptual tools to make sense of structures of modern
international relations. Why Luhmann instead of Giddens? I present a comparison between Luhmann and Giddens in chapter 4 to justify my selection.

Organization of the document

This dissertation uses Luhmann's systems theory to describe the problem of the structured complexity within America's China policymaking. It also seeks to provide a "theory-laden" explanation to the difficulties in sustaining a coherent China policy. I have introduced the problem of the study in Chapter 1. The problem is of two folds: the practical political difficulties in sustaining a coherent China policy and problems of the inability to observe the complexity of U.S.-China relations by the current realist framework. The following three chapters discuss the study's methodology. Chapter 2 introduces the epistemological foundation of Luhmann's second-order observation. The whole chapter is intended to explicate the concept of observation. Chapter 3 introduces key concepts of Luhmann's systems theory. Chapter 4 compares Luhmann's theory with Giddens' to justify my use of systems theory to approach U.S.-China relations. Chapter 5 is a case study of China's accession to the WTO.
CHAPTER 2

EPISTEMOLOGY: LUHMANN'S SECOND ORDER OBSERVATION

Introduction

In present sociological inquiries, no one epistemology prevails as a widely accepted account of knowledge. The positivist seeks to establish science as a form of knowledge subjected to objective validation, which depends neither on metaphysical assumptions nor on valuations of investigators. Implicated in this attitude is an ontological assumption of an unproblematic reality which is accessible through accepted scientific methods and an epistemological assumption of knowledge as the representation of reality. As a philosophical position, positivism has lost most of its support during the 1960s (Adorno et al, 1976). In general, Challenges to positivism have tended toward two directions: the language or, rather, meta-language through which things are known and the knowing subject.

The structuralist emphasizes the centrality of language and suggests scientific discourse can find its root in the more fundamental cultural, cognitive, or social patterns. "Sciences becomes one among many symbol structures, universes of discourses, or language games (Hall, 1990)." Hermeneutics, on the other hand, has taken a subjectivist turn, insisting the realm of meaning as irreducible to causal explanation (Gadamer, 1975).
For the hermeneutic tradition, the purpose of social inquiry is to understand the ways in which actors make the world meaningful in their subjective terms.

If structuralism and hermeneutics affirm an optimistic relativity, then postmodernism posits a pessimistic one. Foucault's genealogy, for example, indicates "an historical ontology of ourselves in relation to truth through which we constitute ourselves as subject of knowledge (cited in Dreyfus & Rabinow 1983; p.237)." In Foucault, scientific inquiry is unmasked as a moment of power exercise. The only contemporary figure who still seeks to establish a universal structure of reason is Habermas (1984). His theory of communicative action aims to show that, as McCarthy comments, "the ability to act communicatively... and to reason argumentatively and reflectively... is a developmental-logically advanced stage of specieswide competence, the unfolding of potentialities that are universal to humankind (1995, p.135)." Refusing to accept either linguistic or historical reason, Habermas locates reason in a telos of communication in which mutual understanding will not be overshadowed by systems imperatives.

Such contending developments are the hallmark of present day social inquiry. Each of these discourses postulates its own knowledge, information, ideology, and value, and competes over who should have the greatest authority. As a consequence, communication between discourses became impossible. One may call it a crisis as the quest for objective knowledge turned into incommensurable language games (Hall 1990). But does the unity of knowledge can only be found in differentiation and controversy? Can self-descriptions of the discipline be cast only in negative terms? Perhaps a second-order cybernetics epistemology can provide a more fruitful way to look at the diverse developments of theoretical discourses. (Yes, I am adding one more epistemology here).
Second-order cybernetics or second-order observation is the observation of observation. A major difference between second-order observation and other forms of epistemology is that the former asks how is knowledge possible instead what is the nature of knowledge. The second order "how" question emphasizes the process of knowing while the first order "what" question emphasizes the correct representation of an object. As the "what" question leads to the answer of what knowledge "is," it also necessarily implies what knowledge "is not." So one's information is the other's misinformation, and my knowing can only repudiate your knowing. Even Habermas' theory of communicative action amounts to an authoritative rationality, which cannot communicate with, and understand, other contending discourses.

Second-order cybernetics instead asks: How does someone observe in order to claim what he/she has observed? With the concept of autopoiesis, one can suggest that knowing is a self-referential reproduction of what is already known. The process of autopoiesis, or self-reference, requires that external reference be interrupted. This explains the diverse developments of contending discourses and the subsequent incommensurable language games. It certainly doesn't mean that second-order cybernetics can yield more objective knowledge, or it can endow itself with an authority to repudiate others' findings. But it certainly can explain about the way we come to know what we know, about the differences between different knowings, and about the relation between the knowing system and the environment. Second-order cybernetics allows one to reflect on the possibility of seeing knowledge construction as a process of self-creation and the diverse developments of theoretical discourses as different self-referential reproductions.

27
Among contemporary social theories, Luhmann's systems theory is the only fully developed theory that describes social reality from the perspective of second-order observation. Luhmann's sociological systems theory is not an analysis of what is modern society per se but a general conceptual framework for observing how social systems work. Luhmann claims his systems theory to have universal applicability (1995a). By universal, he does not mean that his is the only correct one, but claims to be able to describe whatever happens in society. For a theory to be universal, it must, in the first place, be able to include itself in its domain of observation. It cannot observe the world from a blind spot to which it cannot see; a universal conceptual scheme must be sophisticated enough to observe its own observing as well as that of others. Social theories are not detached from the world, but are parts of the society to which they observe. Science is one of the functional subsystems of society and systems theory one of functional subsystems of science.

A positive side effect of this observing observation is that it makes knowledge gained in systems theory of potentially relevance for a theory of knowledge. Systems theory's self-observation as an observing system can be applied to other theoretical perspectives. One can observe how other theories observe the world; although being first order observations, they cannot see their own observing. This makes it possible to explain the current epistemological debates as differential observations carried out by very different observing systems. Just as a society is consisted of various functionally differentiated subsystems, so are cognitive paradigms differentiated into different observing systems.
Luhmann's interest in second-order observation starts with his emphasis on the importance of self-reference or circularity in theoretical reasoning and other areas of social reality. If self-reference is the only way a cognitive system comes to know, then the only way to know the knowing process is to look at one's own self-referential loop, which can be seen only by projecting a second-order observation. The concept of self-reference is discussed most extensively in second-order cybernetics, the theory of autopoiesis, and calculus of form. They provide the epistemological foundation for Luhmann's systems theory.

From first-order cybernetics to second-order cybernetics

The idea of classical (first-order) cybernetics, originated in the 1940s, was initially an engineering endeavor intended to steer mechanical systems. Here are a few examples of early cybernetics research and applications: Norbert Wiener (1956), often considered the father of cybernetics, was engaged in a War project using calculation and statistics to improve the hitting rate of anti-aircraft batteries. Wiener's task was to predict where a German plane would be by considering a range of different contingencies and assigning a suitable probability to each contingency. The idea of separating information from noise was a clean break with the Newtonian deterministic view of information. His ideas latter led to the construction of the world's first computer ILLIAC. The information theory of Shannon and Weaver's (1963), initially intended to solve the problem of noise in telecommunication, however, has shed light on paradoxes unsolved for centuries: order and disorder, error and the control of error, possibilities and the actualizing of possibilities, uncertainty and the limits to uncertainty. MIT's Marvin Minsky (1988) constructed a small robot, M. Speculatrix, which could perform some simple tasks. His

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assumption is that knowledge is a commodity that can be stored inside of a machine, and the application of such stored knowledge to the real world constitutes intelligence. Minsky's experiment initiated the now flourishing field of Artificial Intelligence.

With its stress on control and predictability, first-order cybernetics was primarily interested in homeostasis or equilibrium maintenance. The universe was considered complex yet orderly, and was composed of basic laws. Its goal is to discover these laws to achieve environment mastery. From the 1940s to 1960s, many researchers in the field of the social sciences, most notably Talcott Parsons, Gregory Bateson, and Margaret Mead, worked solidly within the tradition of cybernetics. It is not surprising that these authors were especially interested in explaining the structure and stability of social systems.

Second-order cybernetics originated in the early 1970s, some thirty years later than first-order cybernetics, as a reaction to what were seen as the deficiencies of the classical cybernetics. Heniz von Foerster (1970) coined the term in a paper presented in the American Society for Cybernetics, entitled "Cybernetics of Cybernetics." He defines "first-order cybernetics as the cybernetics of observed systems, and second-order cybernetics as the cybernetics of observing systems." The reason of the revision is simple enough: If everything observed is observed by an observer, then "the science of observed systems" cannot divorce from "the science of observing systems" (von Foerster 1974). He formulates the shift from first to second order cybernetics in Observing Systems (1984):

While in the first quarter of this century physicists and cosmologists were forced to revise the basic notions that govern the natural sciences, in the last quarter of this century biologists will force a revision of the basic notions that govern
science itself. After that "first revolution" it was clear that the classical concept of an "ultimate science," that is an objective description of the world in which there are no subjects (a "subjectless universe"), contains contradictions. To remove these one had to account for an "observer" (that is at least for one subject)...

After this we are now in the possession of the truism that a description (of the universe) implies one who describes (observes it). What we need now is the description of the "describer" or, in other words, we need a theory of the observer. Since it is only living organisms which would qualify as being observers, it appears that this task falls to the biologist. But he himself is a living being, which means that in his theory he has not only to account for himself, but also for his writing this theory. (p.258)

The major difference between first-order and second-order cybernetics is that the latter explicitly includes the observers in the systems to be studied. As "the observed" presupposes "the observing," it sets an unavoidable limit on what one can know: one's own subjectivity. The observer is necessarily a constitutive part of a circular organization of knowing. In this way, concepts such as self-reference, autonomy, and self-reproduction become essential to the understanding of the process of cognition. In contrast to the engineering oriented first-order cybernetics, second-order cybernetics has in principle a biological basis. This explains why the works of biologists Humberto
Maturana and Francisco Varela on autopoiesis as an understanding of the living and
cognition has been so important to the development of second order cybernetics.

**Autopoiesis**

The idea of autopoiesis was introduced by Humberto Maturana and Francisco
Varela (1974) as a definition of the concept of life. However, the scope of the concept is
not limited to biological issues; it also generates implications for epistemology,
communication, and systems theory. The fundamental question for Maturana and Varela
is: What is the distinction between living and non-living? To answer this question, they
focus on the operation of a single cell, asking "what the cell produces?" and "what
produces the cell?" To the first question, they found that a cell produces many complex
substances within the cell which then participate in the very same production processes
(1975). This then also answers the second question: what produces the components of a
cell is the cell itself. A cell produces its own components, which then produces the cell in
a circular process. So the two questions actually answer to one another: what the cell
produces is what produces the cell. Thus, a cell produces and is produced by no other
than itself. Maturana and Varela call this self-producing process "autopoiesis." They
define an autopoietic system as:

A dynamic system that is defined as a composite unity as a network of
productions of components that, a) through their interactions recursively
regenerate the network of productions that produced them, and b) realize this
network as a unity in the space in which they exist by constituting and specifying
its boundaries as surfaces of cleavage from the background through their
preferential interactions within the network, is an autopoietic system (1980, p.29).
The second specification indicates that an autopoietic system must be realized within self-produced boundaries. Note that it does not specify that the realization must be a physical one. This leaves open the possibility of non-biological form of autopoietic systems such as cognition, a set of concepts, a process of communication, or the social world. Whether such systems can be properly called "living" systems is the subject of much debates (Maturana, 1981; Fleischaker, 1988; Varela, 1981). But, if the proposition of our cognitive process as an autopoietic system is accepted, then it embodies important epistemological implications. In particular, it constitutes a theory of the observer, which coincides in principle with the notion of von Forrest's second-order cybernetics.

According to Maturana and Varela, "An observer is a ... living system who can make distinctions and specify that which he or she distinguishes as a unity (1978, p.31)." However, as a bounded system, which means all transactions occur within its boundaries, a cognitive system can engage the world only in according with perturbations of its inbuilt nervous system. The property of the unity is inevitably specified by the observer, which may or may not correspond to the actual domain of the observed unity. But through the recursive distinguishing of unities, "the observer is capable of generating, maintaining and re-engaging its own states as if they were literal re-presentations of external phenomena (Whitaker, 1995). Such observations are 'second-order' in the sense that they are derivative from the organization instead of actual recordings of phenomena.

So, "Everything said is said by an observer to another observer that could be him or herself (Maturana, 1988, p. 27)." There is always a distinction between the actual operation of an organism and the description of the operation by an observer. Descriptions, including self-descriptions, are necessarily dependent on the choices and
purposes of the observer. We have no access to a subject-independent reality - our knowledge of the world is a purely human construct instead of a reflection of reality.

For Maturana and Varela, "Observing is both the ultimate starting point and the most fundamental question in any attempt to understand reality and reason as phenomena of the human domain (Maturana, 1988, p. 27)." This is well demonstrated in their theory construction. Starting from the observation of operations of a single cell, they conclude with a theory of autopoiesis which leads to a theory of observation that can be used to guide observations of living systems. And all these observations are no other than the internal autopoietic operations of Maturana and Varela's abstract concepts.

**Laws of form**

A different theoretical perspective that also points to the similar conclusion as those of the theory of autopoiesis and second-order cybernetics is mathematician George Spencer Brown's *Laws of Form* (1969). Spencer Brown's primary goal was to uncover what lies underneath logic, and in particular, Boolean algebra - the mathematical analysis of logic. Logic is the science of abstract form, where form can be organization, pattern, structure, or relationship. "When the same form (organization of parts) can be abstracted from different concrete situations it is general. When we study it in its generality... then we have logic (Lee, cited in Minger, 1995 p.50)." While Boolean algebra deals with logic, Spencer Brown wants to find out the laws of form. Consequently, he develops a calculus that refounds logic on the basis of mathematics.

Spencer Brown proposes that the act of distinction or indication is the most primitive activity and the foundation of all signs. Before counting, we must have 1, 2, 3, 4... and before distinguishing different things, we must be able to distinguish something.
So "drawing a distinction" is the beginning of everything; only by drawing a distinction is one able to create from nothing one thing.

"Distinction is perfect continence (p. 1)," says Spencer Brown. Continence, derived from the Latin *continere*, means to contain. By this, Spencer Brown means a distinction contains everything. It includes "the indication that the distinction makes; the non-indicated rest of the world, which the indicated is distinguished from; and the distinction itself, separating the states indicated from the states non-indicated (p. 2)." A distinction can be drawn only if there is a reason for doing so, so it also contains the motive, the content, the value, and the name of the distinction. Spencer Brown calls everything contained by the distinction "form," although one can never get to the unmarked side of the form.

Once a distinction is drawn, there are only two ways to handle the distinction: to accept or to deny it. Spencer Brown presents the two choices in two axioms. He calls them the law of calling and the law of crossing (p. 1-2).

**Axiom 1:** The value of a call made again is the value of the call.

**Axiom 2:** The value of a crossing made again is not the value of the crossing.

To draw a distinction and then to draw the same distinction again adds nothing new to the original distinction: to call is to confirm. To draw a distinction and then to draw a different distinction makes the first distinction disappear; to cross is to cancel. Minger (1995) provides an example, using a baby crying for milk, for the two axioms: The baby cries (calls) for its mother's breast. This draws a distinction and values the contents. The distinction, the indication, and the values are one in the cry. The baby cries again and again, each cry drawing the same distinction and re-calling the same call. This
is in accordance with axiom 1. Then the mother arrives, the baby goes to the breast, and the cries stop. The baby has entered into the distinction (mother's breast) and drawn another distinction (no longer need to cry for the breast), and peace returns. This is in accordance with axiom 2 (p.52).

However, by drawing distinctions and then teaching something about them, Spencer Brown already exhibits one more way of handling distinctions. This observation of how one, in this case he himself, uses distinction is a third way of handling distinction. If to observe is to draw a distinction, then observation of operations based on the distinction drawn is the "re-entering" of distinction into the realm they distinguish.

Spencer Brown's calculus shows that any observation is necessarily an asymmetrical indication, introduced by a two-sided distinction, and presupposes a three valued form: the marked state of the indication, the unmarked state of the rest of the world, and the observer drawing the distinction and separating two states of the world which may be indistinguishable to another observer (Baecker, 1999).

According to Baecker (1999), social systems theory came to be interested in Spencer Brown's calculus for two reasons. First, "...the explicit inclusion of the observer in the operation he performs, together with the possibility of observing, by using the distinction (i.e., distinction) of the 'form' of his distinctions, how he does what he does and which possibilities he leaves open for choice (p.4)." Secondly, "the concatenation of the operations performed by drawing distinctions and observations of these operations performed by drawing other distinctions constitute a perfect example of communication (p.4)." Baecker goes on, "Any observer drawing a distinction necessarily leaves open the three options for handling the distinction: to call it again, thereby accepting its motive,
value, and content; to cross it, looking for different motives, values, and contents; or to re-enter it, perhaps in order to examine more closely its motive, value, and content (Baecker, p.4)." This corresponds to the phenomenological interpretation of communication postulated by Luhmann (1995a). "Drawing distinctions and thereby creating the space of choice is exactly what communication does, restricting the realm of the possible yet exposing the very act of restriction, together with the realm of the nonrestricted (yet unspecified) and the observer responsible for the restriction (and its exposure) (Baecker, p.4)."

Spencer Brown's calculus also attests to observation's self-referentiality. To observe is to draw a distinction and to separate the world into the indicated or marked side and the unmarked other side. Who is the observer then? The observer is no other than the distinction. But the observer cannot see him/herself. This requires a second observer. The introduction of this second-observer is "re-entry" of the form into the form. Thus, while the first distinction divides the world into a form with two sides, the seen and the unseen, the second distinction divides the seen into the observed and the observer. As the first-order observer sees the world and not himself/herself observing the world, the observer disappears into the world and self-reference remains invisible. Second-order observation, on the contrary, can distinguish between the distinction and the indication, and thus can see how the first observer observers self-referentially. "The first distinction, the mark, and the observer are not only interchangeable, but, in the form, identical (Spencer Brown, cited in Robert, 1999, p.28)." The observed world is simply the
indication designated by the observer. Here, we arrive at the same conclusion as von Forrest's second-order cybernetics and Maturana and Varela's autopoiesis.

The epistemology of systems theory

Drawing on von Foerster's second-order cybernetics, Maturana and Varela's autopoiesis, and Spencer Brown's calculus, Luhmann has developed a post-humanist epistemology which grounds the knowing subject, or the observer, on cognitive systems (Wolfe, 1995). For Luhmann, observation or cognition takes place when systems distinguish and react to their own distinctions. The unity of a distinction employed for observation is constituted within the system. Following the theory of autopoiesis, Luhmann understands cognition and knowing as an internal self-referential operation, instead of the copying or representing of an external world. It is only in the observing system that things distinguished are brought to the unity of being distinct. Moreover, second-order observation reveals the contingency of knowing, which is concealed in first order observation. Knowing is a realization of autopoietic operation of a system that is closed off from its environment. Thus, instead of grounding self-referential knowing systems in a theory of knowledge, Luhmann founds the production of knowledge in a theory of self-reference. Drawing a distinction is at the same time the starting point and conclusion of Luhmann's conceptualization of knowing.

Luhmann's discussion of epistemology begins with the question: "By means of what distinction is the problem of knowledge articulated (1990a)?" Traditionally, questions like this are answered either from a subjectivist or an objectivist view. The subjectivist thinks knowledge is possible through introspection whereas the objectivist thinks knowledge as a condition or process pertaining to a particular object. For

38
Luhmann, both the subjectivist and objectivist made a mistake by assuming that it is possible to describe an object "without making any reference to its relation to its environment (whether this relation be one of indifference, of selective relevance and capacity for stimulation, of disconnection, or of closure) (1990a)." To avoid these problems, Luhmann suggests instead the distinction between system and environment. With this move, systems theory has the distinction central to constructivism: "it replaces the distinction transcendental/empirical by the distinction system/environment (1990a)."

Epistemology concerns itself with the relationship between knowledge and its object, i.e. reality. Conceiving knowledge as a system and reality its environment, it then implies that reality is what knowledge indicates as real. When this fact was first discovered in the eighteenth century, the distinction transcendental/empirical was developed to avoid self-referring circle (Luhmann, 1995c). Consciousness was conceived as transcendental, extending beyond what is empirical, as the subject of the world. The self-reference of the subject was postulated "as both the source of knowledge and as the source of knowledge about the condition of knowledge (1995c)." The empirical can be known only insofar as it conforms to the essential structure of the knowing subject. However, with the system/environment distinction, how can one avoid the circle of self-founding of knowledge? But "Why must one avoid this circle (1990a)?" asks Luhmann. If knowing is an autopoietic process, as Maturana and Varela have argued, then why can't one simply say: "Knowledge is what knowledge takes to be knowledge (1990a)?"

This "autological" formulation is central to Luhmann's systems theory. It explicitly acknowledges that systems theory looks at its objects from the viewpoint of self-reference (Luhmann, 1985). It also means systems theory's relationship with its
objects is an aspect of its own self-reference. No system can operate outside its own boundaries; the boundaries function not to connect but to sever. In systems theory, any reflection on the possibility of knowing must start with a paradoxical assumption: "it is only non-knowing systems that can know; or, one can see because one cannot see (Luhmann, 1990a)." An example is Maturana and Varela's research on the organization of nervous system.

It is interesting to know that the operational closure of the nervous system tells us that it does not operate according to either of the two extremes: it is neither representational nor solipsistic. It is not solipsistic, because as part of the nervous system's organism, it participates in the interactions of the nervous system with its environment. These interactions continuously trigger in it the structural changes that modulate its dynamics of states.... Nor is it representational, for in each interaction it is the nervous system's structural state that specifies what perturbations are possible and what changes trigger them. (1992, p.169)

For Maturana and Varela, environmental perturbations take place on the level of the structure of autopoietic operation, which is specified by the entity's organization and operational closure. What this means is that information does not exist independently in the world; information can be information only because the cognitive system recognizes it as information (before it motivates it to form a representation).

For Luhmann, the effect of this constructivist epistemology is a "de-ontologization of reality (1990a)." But this is not to say that reality does not exist, otherwise there would be nothing to be observed, nothing to be gained by means of distinctions. "It is only the epistemological relevance of an ontological representation of

40
reality that is being called into question (1990a)." The external world does exist and true contact with it is possible as a condition of the operations of the system. It is the differentiation of what is out there that is contributed by the system's imagination, since the distinctions, upon which systems' operations are based, can be drawn differently. "The passage to constructivism follows from the insight that it is not only for negations that there are no correlates in the environment of the system but even for distinctions and designations (1990a)." All distinctions and designations are purely internal and recursive operations. Operationally closed, no system can perform operations outside its boundaries, be it physical or conceptual. When new operations are introduced, it means the system has expanded its boundaries. Knowing is a classic case of autopoietic operation; to know is to reproduce based on a system's internal dynamics.

But is it possible to call what is perceptible knowledge? To answer this question, Luhmann distinguished between operation and observation (1990a). For Luhmann, an "observation" is an "operation" that uses distinctions in order to designate something. So different from other operations, it is the employment of a specific distinction. The distinction by which a system uses in observing an operation, which may be itself, may be different from the (real) distinction on which the observed system carries out its operation. An observation leads to knowledge only to the extent that it produces re-usable results in the system. So the distinction by which one uses to observe must be able to re-enter into what has been distinguished. "Observation is cognition insofar as it uses and produces redundancies - whereby redundancy here means limitations of observation that are internal to the system (1990a)." An example is that of chickens and eggs. There involves three observing systems in our observation of the relation between chickens and
eggs; the chicken, the egg, and the human observer. The chicken is an observer insofar as it acts differently from a dog, a cat, or a fish, etc. The egg is an observer insofar as it develops into an embryo under right circumstance. Our anticipation of a chicken will lay eggs and eggs will turn into chickens is based on the observed operations of chicken and eggs. This observation leads to knowledge to the extent that it takes hold through time. Time here means the duration produced by the unfolding operations of chickens produce eggs and eggs produce chickens. We think we know chickens produce eggs and eggs produce chicken not because we have establish a connection to chickens and eggs but because the distinctions can re-enter into those chickens produced by eggs and those eggs produced by chicken. This notion of cognition also changes the meaning of reality. For Luhmann, "Reality then is no longer the result of a resistance of the environment against knowledge attempts of the system, but the result of the successful solution of inconsistencies, i.e. the result of a resistance of operations of the system against operations of the same system (1997a)."

Observing systems

Luhmann defines system as a particular distinction - that between system and environment. A system comes into being when it draws a distinction between itself and the environment, i.e., when it starts to observe its own operation, based on a self-description, as distinct from that of the environment. From the perspective of second-order observation, one knows that the real observer is indeed this self-description. The concept of observation has been defined extremely formal by Luhmann as a distinguishing description (1990a). However, despite its formality and abstractness, the concept is to be understood as an empirical distinction (instead of an analytical one).
With observing, distinguishing, and designating, Luhmann always means "an empirical operation that changes the system executing them - which means an operation which in its own turn, is observable (1990a)." On the other hand, the abstractness does leave open the question of "who carry out the observation?" Luhmann's notion of observation neither seeks nor finds a ground for knowledge but keeps open the possibility of observation operations being carried out by very different empirical observing systems, for example, living systems, consciousness, and communication systems. A cell, an immune system, a brain, an organization, and a social system can all observe. Observation occurs when a cell recognizes its own components and reproduces itself; observation occurs when an immune system discriminates invaders; observation occurred when Marx used economy as his distinction to observe society; observation occurs when the distinction profit/loss is used to evaluate transactions; and observation occurs when one observes how Marx or economic system observes.

It is clear that Luhmann's epistemology is a post-humanistic theory of knowledge. The traditional attribution of cognition to "man" is renounced. "This is not intended maliciously," says Luhmann,

but only to make clear that the concept of 'man' (in the singular!), as a designation for the bearer and guarantor of the unity of knowledge, must be renounced. The reality of cognition is to be found in the current operations of various autopoietic systems. The unity of a structure of cognition... can only lie in the unity of an autopoietic system which reproduces itself with its boundaries, its structures and its elements (1990a).
For Luhmann, society produces cognition instead of the other way around; "cognition is a product of the system of communication called society, where consciousness plays a permanent but always fractional role (1990a)." Communication is an extremely important concept in Luhmann's theory of social systems. A detailed discussion of the concept of communication will be provided latter. In summary, Luhmann proposes to make the concept of communication the basic unit of social system and thereby switch sociological theory from the concept of action to the concept of system (1990b). This move allows Luhmann to present social system as an operatively closed system, consisting only of communications. Consciousness is not part of social system but its environment. Consciousness and social systems belong to two different operatively closed systems, whereby each provides the condition of the other's evolution, a process Luhmann calls "interpenetration."

Social systems use communication as their particular mode of autopoietic reproduction; social systems observe themselves self-referentially by means of communication. Based on its selected distinction, a communication can "inform itself about its own communication, can doubt information, refuse acceptance, give norms to reliable or non-reliable information, etc. - as long as this occurs in the operative form of communication (1992a)." An example is my advisory committee's evaluation of this dissertation based on an academic tradition. An individual can certainly observe society, but if we look into the motive or value of the distinction on which observation is carried out, we discover the system of communication called society. Cognition, or knowledge, is an artifact of communication (1990a).
Luhmann understands society as the comprehensive social system of all communications. Based on the distinction communication/non-communication to conceive society, we then can have only one society - the world society. Looking at the history of human society, Luhmann argues that the evolution of society can be seen as a process of increased complexity characterized by functional differentiation (1982 differentiation; 1984 the self-description of society). Social differentiation is the result of re-entering the distinction thematized communication/other communications into the society. Very broadly, Luhmann sees modern society as functionally differentiated into subsystems of economy, politics, law, science, education, and religion. These subsystems distinguish themselves from their environment self-referentially and observing themselves based on the specific communications they carry out. The world does not become complex by itself; its increased complexity is the result of the ways in which the differences of systems and environment are realized, i.e., the result of operations of different observing systems. Society consists of a variety of observers; each observes itself as well as others. Luhmann's systems theory is not a theory of specific object called system, but a theory observes reality using system/environment distinction. Systems theory came to be a theory of observing systems, that is, a theory that observes other systems as observers, as system in an environment (Sciulli 1994).

If one accepts the proposition thus far, we must then take seriously the methodological and analytical implications of what Luhmann calls "the facticity of observation." It also means we must accept Luhmann's "de-ontologization of reality," and view the social world as a realm of communications realized by a variety of observing systems. "Observation," in Baecker's words, "are not something done after the fact or
after the deed. Rather, they are the fact and deed themselves. Any event, and action, and any communication is taken to be an observation concerning a certain state of a social system, which changes the state and thereby reproduces the system (1999)."

A note on paradox

With Luhmann's notion of observation, one cannot avoid seeing a paradox: that things appear to be natural and necessarily when seen from inside may appear artificial and contingent from external view. Paradox can be defined as a vicious self-referential circle or as antinomies (Krippendorff, 1984). According to Krippendorff, antinomies allow one to select one interpretation; but as soon as one has made this choice, one is forced to abandon it in favor of its complement, and as soon as one has examined the latter one finds one's self back to the former, ad infinitum - hence the viciousness of the circle (p.49).

In other words, the very distinctions that enable observations and operations also presuppose the contradictions of such observations and operations. How can one cope with the paradox of observation? When Whitehead and Russell discovered that paradox is central to all logical inquiry, they developed a theory of logical types to distinguish between different logical levels and demanded that no proposition can cross levels to avoid contradictions and paradoxes (cited in Krippendorff, 1984). The paradox of self-reference also appears to be an obstacle to the development of an authentic social epistemology. Habermas and Foucault, for example, are well aware that their specific versions of discourse theory lead to paradox (Teubner, 1990). Are not rational discourse justified by rational discourse and discourse formations transformed by discourse formations?
While other authors' solution is to avoid the paradox of observation, Luhmann's treatment is to face it directly and to make productive use of paradox. By projecting a second-order observation, Luhmann is able to observe how observation uses only one of the two sides of a distinction and render invisible the paradox. Observation is to draw a distinction and indicate one side (and not the other side) of the distinction. Using both sides at the same time would violate the operation of the distinction; for one would have to call what is different the same. If one can see this, one cannot help but accept the fact that the form of the distinction is itself a self-contradiction. For Luhmann, operational observation is to dissolve the paradox by re-entering one side of the distinction into that which has been distinguished. Luhmann calls this process meaning constitution. This process enables a system to ignore its a priori paradox by focusing on the next observational operation. The paradox does not prevent the operations of the system. "On the contrary, it is the condition of their possibility because their autopoiesis requires continuing actuality with different operations, actualizing different possibilities (Luhmann 1995c).

In the traditional, ontological worldview, observers are forced to see only one side of the distinction. The other side was regarded as error. It was assumed that repeating the procedure would bring about the same result. This proposition allows only one identical observer in the world. But Luhmann's notion of observation maintains that the self-paradoxification of all observation points to the fact "that the observer can no longer know where he stands, but can very well know how he moves (1998b). "The observer," he continues, "is left with only the facticity of his individuality, the way he obeys the instruction: draw a distinction (1998b)." The world is itself and is indistinct from itself.

47
But in order to see it, it must be distinguished from itself, thus false to itself. Such an inclusion via exclusion precludes any possibility of representation and any holistic theory. For Luhmann, the ontological view of representation is to be replaced by a difference that "when observed, always regenerates the unobservable (1995c). He goes on:

When observers (we, at the moment) continue to look for an ultimate reality, a concluding formula, a final identity, they will find the paradox. Such a paradox is not simply a logical contradiction (A is non-A) but a foundational statement: The world is observable because it is unobservable (1995c).

All observations start and end with drawing distinctions, and all distinctions can be reduced to a paradox. All observations can only enjoy temporary and contingent validity. This is the reason why systems theory is only interested in the question: Who is the observer?
CHAPTER 3

A DISCUSSION OF THE THEORY

A theory with potentially universal applicability is necessarily complex. In his construction of a theory of second-order observation, Luhmann uses concepts like: system, environment, element, relation, complexity, contingency, meaning, time, event, action, communication, experience, world, structure, process, difference, self-reference, other-reference or external-reference, autopoiesis, self-organization, self-observation, self-description, reflection, closure, information, unity, interaction, society, contradiction, and conflict. Luhmann often defines these concepts with reference to one another, yet as the numbers of concept increase, it becomes impossible to discuss and connect them in a single presentation. This chapter practices what systems theory preaches: reduction of complexity. I focus on those I consider essential for observing self-referential social systems and their communication operations. I will give a general introduction to Luhmann’s systems theory followed by a discussion of key elements of systems theory, and then selected criticisms of systems theory.

A description of systems theory

Luhmann, born in 1927, obtained a law degree from the University of Freiburg/Breisgau and spent the early years of his career practicing law and civil service.
Working on war reparation cases in the Cultural Ministry of Lower Saxony, he spent his free time reading Descartes, Kant, Husserl, and the functionalist theories of Malinkowski and Radcliffe-Brown. His engagement with sociology started in 1960 when he studied sociology and public administration at Harvard University under Talcott Parsons. Upon his return, he resigned from his position as a senior government councilor and devoted himself entirely to pursue his sociological interests. Luhmann shared Parsons' ambition of devising a grand theory of social systems and considered Parsons' "structural functionalism" a suitable starting point for theorizing the social. But while Parsons' was a "general" theory, Luhmann's claims to be no less than a universal theory of social systems. A well-known anecdote was that when Luhmann took up his post as a professor of sociology at the University of Bielefeld, he was asked to give a description of his proposed research. Luhmann filled in six words in this document. Research programme: "theory of society." Duration: "30 years." Expenses: "none." He devoted 30 years to his research and promoted his theory of society in thirty some books and more than three hundred fifty articles and essays.

Undoubtedly one of the most important contemporary German social theorist, Luhmann obviously does not enjoy the same recognition as his intellectual rivalry Jurgen Habermas in the English-speaking world. Applying Luhmann's own concept of communication to this state of affairs, one can attribute it as the result of an unsuccessful synthesis of the three components of communication. In terms of utterance, only a small portion of Luhmann's work has been translated into English; in terms of information, Luhmann's unprecedented approach that deviates from the classic sociological tradition creates a rift between him and the mainstream sociology; and in terms of understanding
(or misunderstanding), the many negative connotations associated with systems theory and structural functionalism has cast a evil spell on it's general reception. The slow reception of Luhmann does not reflect the intrinsic merit of his sociological contributions. It is unfortunate that many scholars remain unaware of Luhmann’s system theory, particularly for communication students, for Luhmann and Habermas are the only two theorists who use communication as their basic units in constructing social theories.

Luhmann claims his systems theory to be universal, being able to explain or describe whatever happens in the world or society. A universal theory is necessarily abstract. Writing within the theoretical tradition of autopoiesis and second order cybernetics, Luhmann's point of departure is not ontology but distinction and observation. Using the system/environment distinction as his "guiding difference" of observation, Luhmann constructs a comprehensive social theory that consists of self-referential systems and their 'empirically' observable operations. Luhmann's post-humanist social theory is not simply a critique of humanism by either historicizing the subject, e.g., Foucault, or redefining the notion of objectivity, e.g., Haraway (1997), but a radically new line of social research emerged out of a unique synthesis of phenomenology, cybernetics and information theory. Systems theory amounts to a paradigm shifts beyond the familiar track of the humanities (Rasch and Wolfe, 1995).

Perhaps most people's impression about Luhmann derives from his major debate with Habermas in the early 70s, known as the Habermas-Luhmann Controversy. The debate, which resulted in the collaborative book Theorie der Gesellschaft oder Sozialtechnologie: Was leistet die Systemforschung (1971)? (Theory of Society or Social Technology: What is Achieved by Systems
Research?) is a landmark in recent German intellectual history. In that debate, Habermas accused Luhmann a technocratic who undermined the possibility of critique and emancipatory politics, and Luhmann, in return, criticized Habermas' consensus-oriented discourse as an inadequate response to the complex issues that arise in highly differentiated societies. While this somewhat technocratic Parsonian functionalism did characterize his earlier works, since the early 1980s Luhmann's reflections on society had shifted from an emphasis on the ontological to the epistemological (Rasch and Knodt, 1994). Luhmann refigures systems theory as a radical constructivist theory of observation and sociology as the comparative observation of first-order observing systems at a second level (Fuchs, 1999).

Systems theory had experienced a meteoric rise and a precipitous fall in sociology in the 1960s and 1970s (Ritzer, 1988), but it developed rapidly in different sectors and under different names in the past three decades. These disciplines include autopoiesis, second-order cybernetics, observing systems, cognitive sciences and calculus of forms. It was these developments that incited changes in Luhmann's theoretical perspective, and the most important change was the emphasis on self-reference or circularity in theoretical reasoning (Sciulli, 1994). While concepts of the calculus of forms, second-order cybernetics, and autopoiesis give theory of self-referential system its epistemological foundation, it is Husserl's concept of meaning that links self-reference with sociology (Luhmann, 1990b).

Husserl's phenomenology assumes that the external world is presented to the individual consciousness in the form of a surplus of references to other possibilities of
experience and action. Because of the spatio-temporal contingency of any subjective experience, the totality of the references can never be actualized at any moment. The overwhelming possibilities of experience and action of the world force the subject to select. What is selected can open up further selective possibilities while others recede to the fringe as a latent yet still constitutive part of the world. Phenomenologically, every action is a selection that reduces the complexity of the world and every action presupposes its own contingency.

Replacing the world/subject relation with that of environment/system, Luhmann integrated the humanist tradition of “Geisteswissenschaften” and the concept of self-reference by assigning meaning as the unit of self-referential reproduction for both psychic and social systems. For Luhmann, meaning is a selective relationship between a system and its environment. The meaning of meaning resides in the difference between actualities and potentialities. Meaning is not pregiven in the objective world or transcendental in the experiencing subject, but is a constitutive process through which a system reaffirms its initial distinction, past selections, and future hopes, which is its existence in the world. Meaning is the medium by which a system uses to “reduce the complexity of the world.” It is also the medium through which observers could recognize and dissolve forms and observe other observers' attempts to construct the difference between system and environment (Sciulli, 1994).

Conceiving social systems as autopoietic systems is a deviation from all conventional thinking in social sciences. Another theoretical advance made by Luhmann is that he assigns communication as the basic unit of social systems. Changing the basic unit of social system from action to communication allows Luhmann to de-psychologize
the concept of the social and to form a concrete unit for social system's autopoietic self-reproducing operation (Sciulli, 1994).

With phenomenology on the one hand and autopoiesis, calculus of form, and second-order observation on the other, Luhmann reformulated systems theory not as a theory of specific objects (called systems) but a theory of observing systems. In particular, a theory observes reality using the system/environment distinction. As one can only observe what one can distinguish and indicate, observation is a distinction that is repeated in itself, to re-enter the distinction into what is previously distinguished. The effect of such a theory is a "de-ontologization of reality (Luhmann, 1990a)." This is not meant to deny that reality exists, for without which nothing will be observed. It is only the claim of an ontological representation of reality that is being called into question. On this path, there are no facts; perception is an activity and not a passivity. The first-order "what" questions are replaced by second-order "how" questions. Systems theory becomes essentially a theory of observing observers or second-order observation. It enables one to observe how systems, including systems theory itself, observe and reproduce themselves. Von Foerster once refers to second-order cybernetics as "[a] turn from looking at things out there to looking at looking itself (1992a)." This description also characterizes Luhmann's system theory.

Using this framework to observe the modern world, Luhmann suggests that within the social structure of modern society there is no one privileged position from which modern society can be represented as a whole. Society cannot be seen as the sum of its parts, be it conceived as action, role, or consciousness. By re-entering the form (system/environment differentiation) into the form, modern society can be seen as the
totality of a multitude of subsystems, each constructs itself according to its own specific system/environment differentiation. Society is at the same time an “internal environment” for each of its subsystem in its own specific way (Luhmann, 1995a, p. 18). The increased complexity of modern society necessitates the differentiation of sub-systems. These sub-systems are operationally closed - their mode of operation is not influenced by normative factors external to them - and function self-referentially in accordance with their own internal logic, reproducing their constituent elements by referring to themselves. They are, however, cognitively open in the sense that they selectively absorb information from their environment. Very broadly, Luhmann depicts modern society as functionally differentiated into subsystems established by their recursively produced communication – the economy, politics, law, science, education, religion, and basic values.

The highly abstract nature of Luhmann’s theoretical work, coupled with his sociological radicalism, caused Luhmann’s work to be frequently criticized and misunderstood. It is likely that the sociological potential of Luhmann’s work has not yet been fully recognized by many social scientists. Notwithstanding these obstacles, it is beyond any doubt that Luhmann’s systems theory will constitute one of the theoretical pillars of sociology in many decades to come.

**Key concepts of systems theory**

**System and function**

“There are systems.” This is the basic assumption of systems theory. This is, of course, just a statement, and we should not confuse it with reality. But in systems theory, statement as such is intended to refer to reality. Thus it refers to something in the real world and it is against this something in reality that statements of systems are to be
tested. Systems theory is itself a system, by all accounts it should meet this requirement. Comparing systems theory against other methodologies, one can see that systems theory is recognized as a system by its differences from other methodologies, and it acquires its identity in these differences. Systems theory itself exists in the real world as one of its own objects, among others. It is forced to compare itself as a functional equivalence to other systems and to learn from such a comparison. This requirement necessarily establishes systems theory as a theory of self-referential systems. By contrast, classical epistemology has been trying to avoid self-references at all cost as merely tautologies.

So the thesis, “there are systems,” can now be more correctly rephrased as “there are self-referential systems.” In a general sense, this means: “there are systems that have the ability to establish relations with themselves and to differentiate these relations from relations with their environment (p. 13).” This thesis posits the basic assumption of systems and the conditions of their description and analysis by other systems. It is important to note that this generalization doesn’t mean to describe the characteristics of things in themselves. There is no guarantee between generalities and essentialities. A more fruitful way to handle concepts at the most general level of analysis is to use them “not as concepts describing possibilities but as concepts formulating problems (1995a, p. 15).” Systems theory does not seek to find essential features common to all systems. “Instead,” says Luhmann, “it is formulated in the language of problems and their solutions and at the same time makes clear that there can be different, functional equivalent solutions for specific problems (p. 15).”

Different from the conventional understandings as the way parts are related to the whole or a fix relationship between specific causes and specific effects, the concept of
function in systems theory is understood as solutions to specific problems in relation to self-reference in systems. Functional analysis is the comparison of different systems according to this functional abstraction, which is built into the generic forms of all social systems. This framework makes it possible to describe very different functional systems with the same set of concepts. This also makes it possible to organize a comparative context between equivalent performances (Luhmann, cited in Zolo, 1986). It is in this sense that Luhmann justifies the use of the concept of "system," and finds the unity of modern society in the comparability of very different systems.

If every social contact, as communicative event, is understood as a system, up to and including society as the inclusion of all possible contact, then one can claim to universality for systems theory. This is the reason that Luhmann claims that his systems theory encompasses all sociology's potential topics and, in this sense, to be a universal sociological theory. Yet claiming to universality is not the same as claiming to exclusive correctness, and thus the exclusive validity of one's account. Being aware of its own self-reference, systems theory, as a subsystem of sociology, as a subsystem of science, as a subsystem of the societal system, would inevitably experience its own contingency.

**System/environment differentiation**

A general agreement among systems scholars is that the point of departure for all systems oriented analysis is the difference between system and environment. Systems presuppose their environments. The environment provides a system the occasional and adaptive orientation, and in that it puts a restriction on the system's structural form. A system constitutes itself by establishing and maintaining a difference from its environment, and it uses its boundaries to regulate this difference. Without this difference

57

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of inside and outside, there could be no ground for self-reference; for difference is the functional premise of self-referential operations. The system would have no orientation and guiding difference for creating information. Boundaries maintenance is system maintenance (1995a, p.17).

For Luhmann, boundaries are not a break in connection. They simply mean distinctions; “processes which cross boundaries (e.g. the exchange of energy or information) have different conditions for their continuance (e.g. different conditions of utilization or of consensus) after they cross the boundaries (1995a, p.17).” Where to draw the distinction is, in a sense, at the system’s wish. “Attribution of the environment (external attribution) is a strategy of systems (p.17).” So the environment acquires its property only in relation to the system. But this is not to say that the environment depends on the system or that the system can determine the form of environment as it pleases. Their form can best be characterized as co-dependent, neither one can totally determines the other.

An important consequence of this system/environment paradigm is that “one must distinguish between the environment of a system and systems in the environment of this system (p.17).” The relations of dependence between system/environment and those among systems must be distinguished. Since all systems orient themselves toward their own environments, no one system can come to determine another system’s environment completely, although it is very likely that a dominant system can seek to influence another’s environment. Accordingly, there is no such thing as absolute power. This position resonates with Giddens’ notion of “dialectic of power (1984).” As a paradigm, the system/environment difference replaces the whole/parts difference in sociology with a
theory of system differentiation. System differentiation means the repetition of system formation within systems; a system now becomes an internal environment for further system building, and each subsystem is formed in its own specific way. System differentiation is the replication of the system/environment difference within a system. The entire system becomes a multiplicity of system/environment differences. From a subsystem's viewpoint, every difference between subsystem and internal environment is the entire system. System differentiation increases the complexity within a system. In a certain way, differentiation can be seen as a unity; one can determine the unity of the system from the way in which its differentiation is constituted. A system can identify itself in the specific form of its differentiation, for example, an order of rank, the difference between center and periphery, or the differentiation of function systems.

**Complexity**

The problem of complexity incurs when the numbers of elements, which must be connected in a system, increase to an extent where it is not possible to relate every element to every other one. Complexity can be defined as the system's incapacity to relate each element to every other one, be it in the system itself (internal complexity in terms of structural connection) or in the environment (external complexity in terms of relational connection) (Luhmann, 1983). Complexity forces the system to select its operations. Selection entails contingency and contingency presupposes different and perhaps better selections are possible. So complexity also leads to contingent elements. The obligation to select and the conditioning (constrains) of selection allow one to see how very different kinds of systems can be formed out of similar units. This conclusion leads us to a second concept of complexity; i.e., indeterminacy or lack of information.
Complexity necessarily renders the system insufficient in understanding its relation with the environment (environmental complexity) and with itself (system complexity). The two concepts of complexity point to the fact that a system cannot grasp its complexity yet can problematize it. Whatever a system's status of existence, "the system produces and reacts to a unclear picture of itself (1995a, p.28)."

How can a system deal with these difficulties? How can a system cope with its internal improbabilities and external intransparency? It cannot, obviously. But this is not to say that a system doesn't have an orientation vis-à-vis multiple complexities. This leads to Luhmann's theory of self-reference, which can be understood as the mechanism developed by the system to cope with its own failing.

**Boundary**

Systems have boundaries. Boundaries have the double function of separating and connecting system and environment. Boundaries separate events, yet let causal effects pass through; a boundary separate elements, but not necessarily relations. With this double function, systems can open and close at the same time. Boundary determination is by and large, although not necessarily, self-defined, according to systems' operations. For example, an immune system can use its own modes of operation to discriminate between internal and external, and a social system can use communication to determine whether something is communication or not.

As a result of increased complexity and system differentiation, boundaries of modern societies become increasingly overlapping and illusory. For example, a nation-state can no longer control its economic, political, scientific, and educational operations for these systems do not correspond to the national boundaries. As closed systems, their
boundaries are determined according to their own modes of operation and mediate all contact with the environment through other levels of reality.

Self-reference

The notion of self-reference has attracted much attention in recent systems research, where it has also gone under the names of self-organization and autopoiesis. Corresponding concept in interpretive terms can be found in Giddens' notion of reflexive monitoring of action (1979; 1984). The major difference Giddens and Luhmann is that Luhmann shifted the location of self-reference (reflection, reflexivity) from the subject or consciousness to the domain of objects - real systems in the world.

"The concept of self-reference designates the unity that an element, a process, or a system is for itself. 'For itself' means independent of the cut of observation by others. The concept not only defines but also contains a significant statement, for it maintains that unity can come about only through a relational operation [italics added], that it must be produced and that it does not exist in advance as an individual, a substance, or an idea of its own operation (1995a, p.33).

As a paradigm, the concept of self-referential system has replaced the older input/output analysis of the so-called open systems.

Borrowing Maturana’s observation of organism, Luhmann uses the concept “autopoiesis” to describe the recursive operations of self-referential systems.

To use ipsissima verba: autopoietic systems “are systems that are defined as unities as networks of productions of components that recursively, through their interactions, generate and realize the network that produces them and constitute, in the space in which they exist, the boundaries of the network as components that

61
participate in the realization of the network.” Autopoietic systems, then, are not only self-organization systems, they not only produce and eventually change their own structures, their self-reference applies to the production of other components as well... Even elements, that is, last components (in-dividuals) which are, at least for the system itself, undecomposable, are produced by the system itself. Thus everything that is used as a unit by the system is produced as a unit by the system itself. This applies to elements, processes, boundaries, and other structures and, last but not least, to the unity of the system itself (1990b, p.3).

Organizationally, self-referential systems are close systems. But this is not to suggest that they can create a material world of their own. Their existence presuppose other levels of reality, for example, the human world presupposes an ecological system composed of air, water, subsistence, etc. “But whatever they use as identities and differences is of their own making (1991. P.3).” As closed operations, elements produced by autopoietic operations are always reproduction. Action systems must reproduce actions and communication systems must produce communications. Operations as such are necessarily repetitive. Repetition is the guarantee for connectivity and a requirement for the emergence of structures or structured relations.

The concept of autopoietic closed system does not contradict the premise of a system’s openness to its environment. According to Luhmann, organizational closure is indeed the guarantee for structural openness. Moreover, as the attribution of elements is a function of system, structural closure enables the system to discern more usable elements in the environment, reinforcing the system’s relational connection with the environment while keeping away “noises.” The concept of autopoiesis postulates closure as a
condition of openness, it formulates limiting conditions for possibilities of components of
the system (1990b, p.12).

With reference to the difference between system and environment, an autopoietic
operation is a reconstruction of the difference in the reproducing process. A system must
make sure that elements being reproduced in the process are the elements of the system
and not something else. To make this possible, a system must construct and employ a
description of itself; it must be able to use this description for orientation and as a
principle for creating information. Self-observation, i.e., the ability to distinguish
system/environment difference, is the necessarily precondition for any autopoietic
reproduction. Self-referential reproduction is no more than the management of the
difference.

Structure and time

Given the difference in degree of complexity between system and environment, a
complex system cannot rely on point-to-point correspondences with the environment. A
system must create time to maintain its own operations despite changes in its
environment. Time can be experienced only under determinate structural conditions. This
occurs when systems develop structure and process (1995a, p.44). Structure and process
mutually presuppose each other; “structuring is a process, and processes have structure
(p.44).”

For Luhmann, structure and process differ from one another through their relation
to time. “Structures capture the reversibility of time because they hold open a limited
repertoire of possibilities for choice... Processes, by contrast, mark the irreversibility of
time. They are composed of irreversible events... Both arrangements serve, though in
different ways, to amplify selectivity in a material respect; that is, to preselect possibilities for choice (p.44).” The concept of structure defines how elements are to be related across temporal distances. Structures constrain the possible relations among elements, making specific relations valid, customary, predictable, and repeatable. Structures emerge by predetermined selections, and determined selections exhibit structural features. Structures transform unstructured complexity into structured complexity. Processes, on the other hand, are results of structured selections, as concrete selective events build upon one another temporally.

The preselection of what can be chosen is experienced as validity in the case of structure, but as the sequence of concrete events in the case of processes. Both arrangements of reflexive selection therefore direct the selection into domains that are reflexively presupposed, thus relatively improbable, and for this they enlist time (p.45).

A social system adapts to the irreversibility of time by temporalizing its own complexity. The system joins the irreversibility of time by copying it internally and using structure to connect elements that are evanescent, coming into being or passing away. Accordingly, such a system exists via its elements, thus events. Elements pass away; they cannot endure in time, and thus must constantly be produced. This construction points to an “interdependence of the disintegration and reproduction of elements (1995a, p.45).” Systems with temporized complexity depend on constant disintegration and reproduction of elements. “Reproduction thus does not mean simply repeatedly producing the same, but rather reflexive production, production out of product (p.49).” Luhmann calls the reproduction of event-like element operation. Autopoietic system is never in a stable

64

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state but needs constant renewal of system elements. The operations serve to maintain a dynamic stability.

In social systems, structures exist temporally in the form of expectations (1995a, P.303). Structures acquire social relevance only when they can be anticipated. Only in this way can expectation become reflexive. “This is how expectation can order a social field that includes more than one participant. Ego must be able to anticipate what alter anticipates of him to make his own anticipations and behavior agree with alter’s anticipation (1995a, p.303).” Expectations in turn construct the system’s temporal horizons (1995a, p.308). Based on what is anticipated, one can calculate a future and select a past to remember. Luhmann defines time as “the social interpretation of reality with respect to the difference between past and future (1982, p.274).” This definition emphasizes the experience of change and the subjective aspect of timing. From a phenomenological standpoint, both the future and the past can be conceived as “temporal horizons” of the present. Time experienced in this way is system-internal time, although it refers to both system and environment. One can prepare his/her own action for events that have not yet occurred in the environment, and one can prepare the environment for his/her upcoming actions. With reference to expectation, the present loses its actuality and is conceived only as a difference between past and future. The present interrelates time and reality, connecting past and several mutually incompatible future presents. Seen
temporally, the world acquires it meaning in the sense of “not yet,” “no more,” “will never come,” and/or “never came.”

Communication

Since Weber and Parsons, action is commonly assumed as the unit of society; social systems are constructed either on a type of action or an aspect of action. Luhmann, however, shifts the most elementary operation of social systems to communication. “Social systems use communication as their particular mode of autopoietic reproduction. Their elements are communication that are recursively produced and reproduced by a network of communications and that cannot exist outside of such a network (1990b, p.3).”

As the observer is the system's autopoietic operation, communication is to be observed sociologically instead of psychologically. This certainly is not to suggest that there can be no consciousness behind communicative action. But sociologically, “only communication can communicate and only within such a network of communication is what we understand as action created (1992b, p.251).” Based on the distinction communication/non-communication, only communication can observe consciousness and determine which action is communication, thus social, and which action is noise. A consciousness can initiate and end communication, but whatever a consciousness does is its own affair. Psychic and social systems are two closed systems operate at different levels of reality. However, this is not to say that there is no structural connection between the two. Following Parson, Luhmann uses the concept “interpenetration” to describe the structural interdependence between the two realms of reality. Psychic and social systems evolve together; one is the necessarily environment for the other. The one kind of system...
is structurally conditioned by the other as the indispensable form of its complexity. The
two systems emerge together as processes of a complex co-evolution.

To understand Luhmann’s concept of communication, ironically, we have to start
with a phenomenological analysis of consciousness. Husserl calls the possible
experiences which can be actualized at any moment by a consciousness horizon. Horizon
is at the same time the possibilities and limitation of what can be achieved. Once the
consciousness has made a selection, the actualized experience opens up a new horizon
with new possibilities and limitation. Now if communication is what a social system
does, then communication is from the start a selective occurrence. For Luhmann, the
unity of communication requires a synthesis of three selections: information, utterance,
and understanding (or misunderstanding). If one of these components is missing,
something else occurs. For example, if the difference between information and utterance
is missing, there would be no communication but only an observed uttering behavior. If
understanding (or misunderstanding) is missing, communication can not continue by
either accepting or rejecting it. "Thus," says Luhmann, "we can also say that a successful
synthesis of information, utterance and understanding is the condition of the
connectibility of communication in the system, and therefore the condition of the
autopoesis of the system (1996)." A stream of communicative events is called a social
system and this is possible only under structural constrain which sets the limit on possible
relational connections between events. Structures provide systems with enough “internal
guidance” to make self-reference possible. The formation of structure is a precondition
for the observation and description of a system. Further discussion of this line would lead
us to the notion of generalized media of communication, which will be discussed in the next chapter.

Luhmann uses the utterance “You don’t understand me” as an example to illustrate the autopoiesis of communication (1992b). Being a vague statement, it can lead to several developments. On the one hand, it says, “you are not ready to accept what I want to tell you” and attempts to provoke the admission of this fact. On the other, it is the utterance of the information that the communication cannot be continued under this condition of non-understanding. And third, it is the continuation of communication. The consequential questions and clarification of the previous communication demonstrate that only communication can solve communication problems. We can communicate about information, understanding, misunderstanding, and even non-understanding, and all these acts must refer to previous communications. In terms of social systems' autopoietic operation, communication is not the transmission of messages or understanding of expectations; it is a state *sui generis* constructed on a selected distinction.

Sociologically, there are no building blocks of communication that exist before acts of communication. Communication is simply “a matter of different selections whose selectivity and selective domain are constituted by the communication itself (1992b, p.253).” Communication system is a completely closed system that produces its own components that produce the communication itself. It is a typical case of autopoiesis.

**Binary coding and program**

The concept of autopoiesis and communication makes it possible to understand the function of enforced binary choices (1989, pp.36; 1990b, p.13). The system can choose to continue its autopoietic operation or stop it. It can continue to live, to produce,
or to communicate with the only alternative to come to an end. With respect to
autopoiesis, there are no third states. As a closed system, it cannot transcend itself, its
boundaries, be them material or conceptual. The binary structure of autopoiesis
represents for the system a "internal totality." "To be or not to be, to continue the
autopoiesis or not to, serves as an internal representation of the totality of possibilities...
The system emerges by inventing this choice, which does not exist without it (1990b,
p.13)." For Luhmann, modern society can be seen as a complex system of
communication that has differentiated itself into a network of subsystems with each
subsystem steering its communication through binary codes. For example, science uses a
code of true and false, legal system operates with a code of legal and illegal, and the
economy uses property and money to distinguish between possession and non-possession.

A system can use the difference between true and false, legal and illegal, and have
and have not to steer its operation. It can develop "program" to direct its operations, to
satisfy its positive value. Programs, according to Luhmann, "are given conditions for the
suitability of the selection of operations (1989, p.45)." On the level of coding, a system
establishes itself as a closed system, differentiated by means of a binary scheme. On the
level of program, a system can learn and develop more suitable selections to maximize its
operation. It is through "the differentiation of coding and programming a system acquires
the possibility of operating as closed and open simultaneously (1989, p.45)."

Meaning

Luhmann uses Husserl's phenomenological concept of "meaning" (Sinn) to
integrate the humanist tradition of "Geisteswissenschaften" and the concept of self-
referential systems. The main point being that both psychic and social systems are meaning constituting systems.

As mentioned above, Husserl (1982, in forward) sees the external world as presented to the subject in the form of a spatio-temporal field of unactualized possibilities. Actual experience is constituted in the subject's "intentional acts" which seize upon particular objects within the field. Once a specific aspect of the world is actualized, others possibilities recede to the margin, where they reside as a latent yet constitutive part of the world. So the stream of mental process can never consist of what is actualized, "which is to say, it exists as meaningful experience only in the form of the distinction between actuality and potentiality (Knodt, 1995, p.xxvi)." The world is experienced as a surplus of reference; it refers not only to what is real, but also to what is possible (conditionally real) and negative (unreal, impossible). The totality of references offers more to hand than can in fact be actualized at any moment. For Luhmann, this referential structure enforces a condition of selection, and the enforced selectivity is the meaning of meaning (1983). "This inevitability of selection enters into the consciousness of meaning and, for social systems, into communication about what is meaningful (1995a, p.60)."

This formulation of meaning can be reconfigured in the language of second-order cybernetics. As Knodt puts it, "meaning resides in the self-referential structure of a consciousness that consists solely in and through its autopoietic operations and that, in selecting from a self-generated horizon of surplus references, reproduced that horizon without ever exhausting its possibilities or transgressing its boundaries (1995, p.xxvi)." With this recursive constituting process, Luhmann is able to define the concept of
meaning without referring to a meaning constituting subject. A system constitutes meaning for itself by making selections within an environment. For the system, “meaning is the difference between potentiality and actuality. And only because of this difference can make a difference does information processing become possible (1983, p.993).” It is by resorting to meaning as a guiding difference that a system can determine what to think, what to see, and what to do next. Meaning structures and regulates the process of consciousness in psychic system and communication in social systems. Looking from outside, we can characterize a social system by its reduction of complexity between system and environment. But looking from inside, we realize that the world is presented to both psychic and social systems in the form of meaning.

Summary

Systems come into being by establishing system/environment differentiation. A system acquires its property by the particular constellation it have selected to organize its elements. This constellation is contingent for other possible organizations are also available. A system reproduces itself self-referentially by maintaining its difference with the environment and its selected relational combinations of element. Social systems use communication as their particular mode of autopoietic reproduction. They structure their communication through binary codes to continue their autopoietic operations. In this process, social systems constitute meaning for themselves.

Some criticisms of systems theory

The responses to Luhmann’s highly complex, abstract, and unconventional approach have been mixed. Despite some superficial criticisms accusing Luhmann of being difficult, abstract, and arcane, most Luhmann’s critics, including Habermas,
criticize one aspect of systems theory while accolade its originality, imaginativeness, and significance.

Zolo (1986) criticizes Luhmann’s functional epistemology. He points out that Luhmann’s starting point is to rescue the crisis of classical functionalism; a crisis originated by the attack from two major logical neo-empiricists, Carl Hempel and Ernest Nagel, who challenge functionalism’s empirical significance and explanatory and predictive potential. Luhmann rejects the neo-empiricist model of ontological determinism, the use of statistic method, and the assumed objectivity, and proposes replacing the classical logic of causality with the concept of “meaning” to make sociological knowledge “reflexive” in form. However, according to Zolo, Luhmann fails to recognize the difference between nineteenth-century positivism and logical neo-empiricism, so his criticism of the laws of causation doesn’t really challenge the latter’s deductive-nomological model. Furthermore, his decision to reestablish functionalism as a sociology of “reduction of complexity” also seriously weakens the cognitive potential of sociological research. This theoretical weakness is a direct result of using “meaning” as the fundamental category in building his circular structure of sociology of sociological knowledge. “Having renounced the explanatory and the prediction of empirical events,” says Zolo, “it has limited itself to a metatheoretical and metaempirical function of ‘information’ and ‘rational presentation of problems’ of social complexity (1986).”

Wagner (1995) claims that Luhmann’s postfoundationalist paradigm is no more than a newer version of Hegel’s dialectic, so his logic is no different from the identity-logical thought of the “Old Europe,” which he seeks to replace with his difference-based thinking. Wagner argues that Luhmann’s postulation of a foundational difference
between system and environment presupposes a grounding in the sense of an absolute identity. So Luhmann cannot advocate this without placing himself among the ranks of the old-world fundationalist thinkers. For Wagner, Luhmann "sound the death knell for his own systems-theoretic sociology."

Luhmann's bold attempt to define society as an autopoietic system, a step Maturana and Varela has stopped short, is not without controversy. Minger (1995, pp. 149) presents six problems with this conceptualization. 1) Conceiving communication as system component does not properly solve the problem of boundaries. 2) Luhmann does not emphasize the distinction between organization and structure, which is informative for Maturana and Varela to observe systems, which have similar organizations yet, exhibit different structural features. 3) It is questionable whether there can be self-differentiation into autopoietic subsystems within a larger autopoietic system. 4) It is not clear how communication, as an independent phenomenal domain, emerges from human interactions. In Luhmann, the observer of interaction (human) is lost in favor of the observation (system). 5) Luhmann favors the use of functionalism while Maturana and Varela reject it. 6) It is difficult to accept the social purely in terms of communication and the clean-cut separation between different subsystems.

The most consistent and theory-laden criticisms of Luhmann still come from Habermas. Since their debate, both Habermas and Luhmann have altered their positions as they attempted to respond to each other. Habermas (1984), while maintains certain reservations, has accorded a role to systems theory in his theory of communicative action. He develops an evolutionary framework which consists of both social integration and system differentiation; integration via increased rationalization of the lifeworld while
differentiation via imperative systemic media of money and bureaucracy. Society is conceived as simultaneously systems and lifeworld. Luhmann, on the other hand, has taken a harsher stance toward critical theory as he takes up the concept of autopoiesis and radicalizes his constructivist epistemology.

The contradiction between Habermas and Luhmann can be summarized in Habermas’ response to his critics:

These [positions] are philosophical answers to the unavoidable experience of modernity; when they are sharpened into the opposition between relativism and absolutism, an unmediated confrontation emerges between pure historicism and pure transcendentalism. At that point the failures of both positions became clear; the one side carries the burden of self-referential, pragmatic contradictions and paradoxes that violate our need for consistency; the other side is burdened with a foundationalism that conflicts with our consciousness of the fallibility of human knowledge. No one who gives this situation much thought would want to be left in this bind (Habermas, cited in Knodt, 1994).

Habermas certainly doesn’t want to be “left in this bind.” As Knodt comments, Habermas’ ambitious attempt is to “synthesize historicism and transcendentalism in such a way as to preserve what he believes is the truth of each position (1994).” For Habermas, there is some truth pertaining to “contextualism.” But reason as linguistic, historical, or cultural, or whatever distinction on which reason is self-referentially constructed is unacceptable. Grounding reason in “communicative rationality” as “procedural” in the very structure of language itself, Habermas seeks to preserve the inspiration of an enlightened modernity while acknowledge the systemic imperative.

74
For Habermas, Luhmann’s systems theory represents the quintessential contextualism that embraces the notion of universal contingency. Such a theory necessarily precludes a normative center for society to form a critical stance and from which to take control of its own evolution. Once we give up the idea of a normative integration in the communicative practice of the lifeword, we are left with no moral standard whatsoever to judge any particular state of affairs. Systems theory, by emphasizing the functional codes that organize society, amounts to a cynical affirmation of the status quo. Systems theory is inherently flawed because it gives up the possibility of an emancipatory politics that made modernity possible in the first place. For Habermas, it is necessary to combat Luhmann on the level of concept formation to preserve our most cherished utopian hopes.

So Luhmann or Habermas? This is not a problem of theory design but a problem of history and the answer is left to the future present or even to the future future.
CHAPTER 4

A COMPARISON OF LUHMANN AND GIDDENS

Introduction

In discussing modern sociological theories, the two notable scholars are: Anthony Giddens and Niklas Luhmann. Both theorists are prolific writers and have garnered an increasing amount of expositions and critiques. Arguably, Giddens is the leading sociologist in the English speaking world, and Luhmann the most influential in the Continent. Giddens is famous for his "reorientation" of classical and modern social theories; he critically dissects 19th and 20th century interpretative sociology and offers propositions to reenergize these insights. Luhmann's work, on the other hand, is a trans-disciplinary theory that aims to reinvent sociology using concepts of biology, information theory, and cybernetics. While Giddens attempts to advance a tradition by infusing contemporary ideas, Luhmann proposes a radical paradigm shift, drawing ideas from other disciplines to fashion a unified theory of self-referential autopoietic systems.

Although the two authors ride on different theoretical traditions, have different methodological assumptions, and engage in completely different theoretical constructions, they do share the same goal: to provide an analytical framework to understand the nature and dynamics of modern society (Camic and Gross, 1998).
addition, the two authors often use similar conceptual categories, such as action, structure, system, time, the reflexivity and recursiveness of action, and risk. The two theorists seldom discuss each other's theory while they are quick to dismiss the significance of the other's theory. Giddens considers Luhmann part of the newer version of Parsonian functionalism which fails to recognize the practical aspects of social activities (1984, p.xxxvii), while Luhmann believes the contemporary dissecting, criticizing, and recombining classical theories merely add more confusions to an already confused discipline (1995a, p.xlivi). Comparing the two theorists from the perspective of second-order observation, observing how they observe, one can discern the fundamental difference between the two as humanism versus post-humanism. Giddens' subject-oriented structuration theory focuses on the ontological questions, aiming to understand the nature of human agency and social institutions. Luhmann's subject-critical systems theory, on the other hand, focuses on the epistemological questions, observing how social systems observe themselves at a second order. Starting from a “positive critique” of interpretative sociologies, Giddens goes on to argue that action is a rationalized conduct ordered reflexively by human agents. “To be a human being is to be a purposive agent, who both has reasons for his or her activities and is able, if asked, to elaborate discursively upon those reasons (including lying about them) (1984 p.3).” Luhmann regards the idea of the subject as the bearer of meaning part of the “Old European” philosophical tradition that grounds knowing in the autonomous, rational individual with its capacities, potentialities, and interests. Luhmann rejects this subject-centered frame of reference for the social. From a systems theoretical standpoint, there is no longer a privileged knowing subject, nor can phenomena of self-reference be attributed...
exclusively to consciousness. Giddens represents an eminent humanist tradition, which can be traced back to both the Cartesian and Kantian idealism and the Marxian materialism, and Luhmann is part of the subject-critical tradition of post-Enlightenment thought, standing in line with poststructuralism and deconstructivism.

In this chapter, I discuss Giddens' and Luhmann's sociological theory side by side; from their assumptions to the subsequent theoretical constructions of the social, communication, reflexivity, and to their notions of modernity. Then, I present a comparison between them to justify my selection of Luhmann over Giddens.

Knowledgeable agents vs. self-referential systems

Giddens' structuration theory

From the enormous volume of work Giddens has produced since 1960s, one can distinguish that Giddens' early works concentrate on developing the structuration theory while his later works focus on the dynamics of modernity and the third-way between capitalism and socialism. In this chapter, I focus my discussion on Giddens' early works when he is both a critic and a constructor. Giddens conducted a comprehensive review of classical and modern sociology, philosophy, and social theory during the 1970s. Starting from analyses of Marx, Weber, Durkheim, and Simmel, he went on to critique Parsons, Merton, Schutz, Goffmann, Heidegger, Habermas, Levi-Strauss, Saussure, Althusser, Marcuse, and Wittgenstein (1976; 1979; 1982).

In his critical dialogues with these theorists' efforts of theorizing the social, Giddens has identified a dualism that emphasizes either systems/structures or individual actions. On the one hand, those who emphasize individual actions, most notably, Weber's action theory, have not paid much attention to issues of institution, power, and social
change. On the other hand, those who have engaged in institutional analysis, functionalism and orthodox Marxism, for example, cannot provide a proper account for purposeful human behavior. Giddens believes this dualism has hampered our understanding of both individual action and social institutions. He believes that for sociology to generate tenable and adequate analyses of the nature of human action and social institutions, this action-structure or agent-society dichotomy must be transcended. He argues that writers on each side fail to see the interdependency between individual actions and social collectivities. His argument is that instead of a dualism, the individual and society should be recognized as a duality - the duality of structure. That is, individual actions are shaped by social structures, but regularized social collectivities are the outcomes of human actions. Social systems and individuals mutually constituted each other's social existence in a process of structuration. For Giddens, structuration theory is not only a substantive theory, which explicates the nature of modern society but also is a meta-ontology, which can be applied to empirical studies of social phenomena.

According to structuration theory, the basic domain of sociological inquiry "is neither the experience of the individual actor, nor the existence of any form of societal totality, but social practices ordered across space and time (1984, p.2)." Giddens qualifies this proposition: "Human social activities like some self-reproducing items in nature, are recursive. That is to say, they are not brought into being by social actors but continually recreated by them via the very means whereby they express themselves as actors (p.2)." This move not only avoids the actor-society dualism but also redefines the meanings of actors and the social. A human being cannot be an actor unless he or she participates in the making of the society. Nor can society be seen as a given object; society is a process
that needs to be continually produced and reproduced by actors. In this way, action and system can be united by a single framework centered around the idea of social practices. Action, structure, and social system are the three key elements in structuration process and they are defined in terms of each other.

**Agent**

According to Giddens, human action has its origin in three levels of consciousness: unconsciousness, practical consciousness, and discursive consciousness (1984, p.5). Discursive consciousness refers to the capacity of agents to give reasons to their conducts. Practical consciousness refers to agents' "stock of knowledge" from which they "automatically" draw to orient themselves to situations and to understand the acts of others. And the unconsciousness is where agents' motivating force and basic ontological security lie.

Giddens is firmly against the idea of individuals as bearers of structures. He asserts that a central feature of human agency is that actors reflexively monitor their own conducts and those of others. Such monitoring activities can be carried out both within discursive consciousness and practical consciousness. For Giddens, the reflexivity of action on the level of practical consciousness is of central significance to our construction of social life. The vast majority of our day-to-day social activities require a great deal of practical knowledge to accomplish them. It is a tacit knowledge that is skillfully applied to the enactment of courses of conduct and is rarely articulated discursively. While we can give a discursive explanation about why we are doing what we are doing, we probably will not be able to give an immediate account of how things are done. We know how to use a bank without knowing how the banking system works; we know how to
drive a car without knowing the mechanical processes involved. Nevertheless, we can carry out these activities without our conscious reflections about them. It is because of this knowledge that we know how to act, what to expect, and have some basic ideas about how things will turn out tomorrow.

In Giddens' view, much of our routine day-to-day conduct takes place in the practical consciousness, but it is often the most overlooked aspect of social life by sociologists. Consciousness of practical knowledge – knowledge of social conventions of the society we live in – is fundamental for an individual to be a competent actor. It is by referring to these practical skills and knowledge that agents can reflexively monitor their conducts and those of others. In this way, ideas people have about themselves, the social world, their future, and the conditions of their lives are not just abstract ideas about a given world but can constantly enter into the world through their reflexive monitoring of actions.

**Agency**

Giddens defines action as “a stream of actual or contemplated causal interventions of corporeal beings in the ongoing process of event-in-the-world (1979, p.54).” This definition emphasizes action not as a series of discrete acts but as a flow of events. “The concept of agency,” he adds, “... involving ‘intervention’ in a potentially malleable object-world, related directly to the more generalized notion of praxis (p.56).” Here one recognizes the connection between actions and social practices as well as the incorporation of time and space into the concept of action. When participating in a situated social practice, the agent enters into a previously organized time and space as the condition of his or her action. A competent actor possesses practical knowledge about the
use of time and space of the situation, and he or she in turn recreates that specific time-
space organization through reflexively monitored action. In structuration theory, time and
space are constitutive features of social practices instead of the objective environment in
which social practices take place. It is the coordination between the two being the means
of the repetition that gives social activities definite forms.

Giddens' notion of agency posits the individual as reflexive, able to monitor and
give reasons for his or her actions. Giddens believes that people are rational, but rejects
the Weberian notion of a universal instrumental rationality. The rationalization of action
is "the capabilities of human agents to 'explain' why they act as they do by giving reasons
for their conduct - and in the more 'inclusive' context of practical consciousness (1979,
p.57)." Borrowed from the ethnomethodologist, Giddens sees social action as a skilled
accomplishment tied to particular social contexts. The rationalization of action is a
mental process occurs continually and is a chronic feature of daily conduct. This
conception of action is similar to the Parsonian action frame of reference, in which action
is conceived as driven by internalized normative imperatives. But in addition to the citing
of or the appeal to norms, for Giddens, more importantly is the practical knowledge
which actors share and employ in the production of social encounters.

The reflexive monitoring of action gives the concept of agency a reproductive
character. Repeated as routines of daily activities, actions contribute to the creation and
recreation of social practices, which is society. But it is important to note that this does
not mean that actors are conscious of and have control over the consequences of their
actions. An unintended consequence of recursive actions is that they reproduce the
structures which made actions possible in the first place. Actions always bring about
possible unintended consequences that, in turn, become the preconditions for new actions. Agents' knowledgeability is always bound by the unintended consequences of action and their actions by the unacknowledged conditions. History, as Giddens acknowledges, "is created by intentional activities but is not an intended project; it persistently eludes efforts to bring it under conscious direction (1984, p.27)."

Structure and system

Giddens distinguishes between structure and system. Whereas systems are the visible routine features of interactions produced by actions, structures are the invisible structural properties that give actions their recursive forms. Social systems consist of reproduced relations between actors or collectivities, organized across time and space as regular social practices (1984, p.25). Structures, on the contrary, are characterized by the absence of acting subjects. They are rules and resources which structure social practices. Structures, therefore, only have virtual existence, and are instantiated only as agents draw from them in constituting social practices. "Structures exist paradigmatically as an absent set of difference, temporally 'present' only in their instantiation, in the constituting moments of social systems (1979, p.64)."

Conceiving structures as sets of virtual differences is to recognize their existence as the stock of knowledge of "how things are to be done" in actors' memories. They are the "methods" by which agents reflexively use in specific contexts of interactions. Being part of the actor's consciousness, structure and the acting subject presuppose one another. Agents and structures are mutually constitutive; they are two complementary elements in forming recursive social systems across time and space. So instead of a dualism, Giddens suggests a duality - the duality of structure. Through a proper understanding of the
concept of structures, Giddens wants to show that action and structure constitute the other's social existence. The duality of structure is the core of Giddens' social ontology. Society is conceived as a structuration process that constantly produces and reproduces itself.

Communication

Although Giddens does not have a clearly defined concept of communication, ideas of communication are implicated throughout structuration theory; for example, the structuration process as reflexively produced events of communication; social integration and system integration as different forms of system building made possible by different communication technologies; dialectic of control as communication of power; the notion of "time-space distanciation" as construction of time and space through communication; and the idea of "double hermeneutic" as two different yet penetrable levels of reflexive communication. For my proposition, I concentrate on the relation between the knowledegable agents and the production and reproduction of social life as a socio-macro phenomenon of communication.

The idea of social communication in structuration theory can be derived from the concept of the duality of structure. By drawing upon structures in interactions, agents also reproduce the very structures in use. This idea of interaction has its origin in the Marxian ontology of praxis (1976, pp102). Whereas Marx's understanding of interaction was limited to the material aspect of social reality, Giddens expands it to the whole spectrum of social life. The production of social practices is a skilled accomplishment of social actors, and, in turn, actors identify themselves in the social forms their actions help to recreate.
According to Giddens, the production of social interaction involves three fundamental elements: its constitution as meaningful, its constitution as moral order, and its constitution as the operation of relations of power (1976, p.104). In any situation of interaction, the structuration process occurs along these three dimensions. Power, communication of meaning, and sanctions are integral elements to all human interactions.

The structure that enables communication of meaning is a body of intersubjectively agreed upon knowledge. Giddens' uses the term "mutual knowledge" to describe the take-for-granted knowledge shared by actors. In interactions, actors draw upon their mutual knowledge to communicate with one another. "Mutual knowledge is applied in the form of interpretative schemes whereby contexts of communication are created and sustained in interaction (1976, p.107)." Through the mediation of this cognitive scheme, participants of interactions make sense of what each other says and does. Mutual knowledge is "background knowledge" because it is taken for granted and unarticulated. But on the other hand, it is more than the "background" for "it is constantly actualized, displayed, and modified by members of society in the course of their interaction (1976, p.107)."

As there are right and wrong ways of using language, so are there right and wrong conducts in interactions. The normative features of society have been discussed extensively by writers like Durkheim and Parsons. By and large, they stressed the significance of norms as forces of constrain. On the contrary, writers like Schutz and Winch have emphasized norms' "enabling" and "conferring" qualities in interactions. Giddens incorporates the two thoughts into a single framework, arguing that norms possess both qualities: they enable and they constraint. The moral element of interaction,
that is, the right ways of doing things, is an integral part to the rules that define properties of interactions. They are sustained and reproduced each time agents did what are appropriate in communications.

Actions necessarily involve the applications of "means" to achieve intended outcomes. Therefore, the notion of action is logically tied to that of power. Those who have power can mobilize resources to constitute the "means" to get things done. In this general sense, power can be defined as "the transformative capacity of human action (1976, p.110)." Power is the enabler that bridges an intention and its realization. But in structuration theory, Giddens emphasizes a different and narrower kind of power; one that is manifested relationally as a property of interaction. He defines this form of power as "the capacity to secure outcomes where the realization of these outcomes depends upon the agency of others (1976, p.111). It is in terms of this second form of power that we can speak of power as domination and that certain people have power over others. In most cases, the exercise of power in interactions involves the application of resources whereby participants are able to secure the intended outcomes by mobilizing the agency of others. Resources can be skills of communication, authority, or the capacity of using force. The order of domination must be seen as a property of social systems, and the same order of domination is reproduced in the application of power.

The communication of a diagnosis between doctors and patients can be used to exemplify the structuration moment. The asymmetrical power relation, that is, the order of domination, between doctors and patients has been well documented, most notably by Foucault. A doctor must present his or her diagnosis to the patient in a language that is understandable to the patient. During their communication, the doctor has a moral
responsibility to show his/her concern toward the patient. A "competent" patient must express his or her respect to the doctor's professionalism. The order of power relation, the normatively sanctioned behaviors, and a shared meaning between them altogether constitute a typical doctor - patient encounter. During the encounter, structures were transformed into the forms of power, sanctions, and meaning mobilized by agents to achieve intended outcome. Such an encounter may happen tens of thousand of times everyday; they not simply reproduce the doctor/patient relation but also the relation between the medical institution and its subjects. Social relations are produced and reproduced through the application of structures. From the view of structuration theory, there can be no unmediated communication. Social communication is recursively produced, as situated practices in time and space, through a commonly shared practical knowledge and its reflexive application by human agents.

The reflexivity of communication

In structuration theory, the reflexivity of action and the recursivness of social practices are at the same time the cause and result of one another.

It is the specifically reflexive form of the knowledgeability of human agents that is most deeply involved in the recursive ordering of social practices. Continuity of practices presumes reflexivity, but reflexivity in turn is possible only because of the continuity of practices that makes them distinctively 'the same' across space and time. Reflexivity hence should be understood not merely as 'self-consciousness' but as the monitored character of the ongoing flow of social life (1984, p.3)
For Giddens, this mutual construction of action and system not only interprets substantive features of human actions but also explains concrete processes of social life. Moreover, as he points out in his discussion of modernity (1990), the appropriation of expert and abstract knowledge system into the reflexivity of human action has created a modern culture that is fundamentally different from the pre- or non-modern culture.

Based on this mutual construction of agent and system as relation between agent's acts of communication and its social consequence, one can derive the following implications.

1. Reflexivity is a psychological function with sociological consequence; that is, the psychological presupposes the sociological. Actors demonstrate their knowledgeability in their ability of monitoring their actions, receiving information about the consequences of their actions, adjusting their knowledge accordingly, and giving reasons to their actions. In doing so, the knowledge agents have about themselves, others, and the social world re-enter into the making of the social world. The agent's knowledge informs his or her practical action which, in turn, constitutes the social reality. Sociality exists in the "self" of each individual; but the "self" is to be broadly understood as the knowledgeability of human agency, that is, agent's practical knowledge about how to engage the social world.

2. Accordingly, the unit of communication is the practical and discursive knowledge commonly shared by agents. By unit, I mean the basic element which makes communication possible or impossible. It cannot be the agent for the identification of act is not registered on persons but on mutual knowledge (1976, pp.78). Unrecognized acts are simply "noises" even if they are intended for communication. This proposition
suggests communication as selecting from a common repertoire and conveying entities contained therein to someone. Giddens is quick to endow agent with a learning capacity; humans are "concept-bearing" creatures. Agents can imagine different course of action for "all social rules (codes and norms) are transformational (1979, p.104)." But with structures as necessary mediations of communication and reflexivity as recursive application of shared knowledge, Giddens' notion of action is by and large constituted on the principle of "repetition." This confines the spaces within which communicants are allowed to be knowledgeable (Krippendorff, 1994). In structuration theory, social communication acquires its definite form through repetition and identity.

One can "re-enter" this notion of communication into a system and has two or more subsystems of communication in a larger system. Giddens calls the situation in which two, or more, systems' structuration processes intervene with one another contradiction (1979, pp. 131). Conflicts arise when actors in interaction operate according to different interpretative and normative frameworks; each party mobilizes their respective resources to prosecute their particular purposes (1984, pp. 289). Communication, or not, is a matter of repetition.

3. Mutual knowledge not only provides the ground for the reflexivity of action but also that of reason and meaning. Different from the structuralist linguistic reason and predetermined meaning and the Habermasian intersubjectively oriented rationality and communicatively constructed meaning, Giddens' rationality is constructed on the "accountability" of action in social context, and meaning on the "intelligibility" of shared interpretative schemes. For Giddens, there is no universal rationality which operates independently of people's activities. Reason and meaning are always practically and
contextually bonded. The ability to rationalize for one’s action and construct
intersubjective meaning in communication also functions to keep action and meaning the
same across time and space.

4. A consequence of reflexive monitoring of action is that they constitute
repetitive time and space. Time and space do not exist objectively, independent from
human actions. Giddens identifies three interlacing forms of temporality that are
constituted by different modes of action: the duree of day-to-day life, the duree of life
span of an individual, and the long duree, which is the life span of an institution (1987).
All three forms of temporality cannot be separated from the “locales” where actions take
place. Giddens uses the term “locale” to designate the use of place in interactions. This
concept rejects the common sense understanding of space as simply a geographic locality
for actions. “A setting is not just a spatial parameter, and physical environment, in which
interaction occurs; it is these elements, mobilized as part of its interaction (1979, p.207).”

Locales of our daily activities, living environment, and social organizations are
inherently associated with the use of time. For Giddens, time and space also contain
structural features. That is, they both enable and delimit actions; they permit particular
types of communication while exclude others. The use of time and space are also
reflexively monitored by agents to sustain their structural features. The expansion of a
same form of organization of time and space among people, by which Giddens calls
“time-space distanciation,” is achieved by breaking the reciprocal ties between time and
space and re-establishing them on agreements. This change in system reproduction has
global consequence by means of the reflexive monitoring of action. The connection
between time and space is now contingent; it is less and less determined by local
environment than by recursive networking of actions. For Giddens, the boundary of a society can best be conceived by the extent of time-space distanciation.

5. Human action occurs as duree, a continuous flow of conduct. The flow of conduct, depending upon the process of rationalization, provides a stable ground for the continuous flow of social life. The flow of social life, in turn provides the ground for agent's reflexive monitoring of action. This mutual constitution makes possible the recursivity of both actions and social practices. If the reproduction of society is a process of reflexive communication, it is this mutual constitution between action and practices, one being the structural ground for the other that made such recursively possible. One's repetitive constitution also enables the other's repetition.

The process of structuration is a flow of communication that does not have a starting or endpoint; only by sustaining the flow can both the agent's and the system's existence be reassured. Agents communicate to produce and reproduce the conditions of their communication and therefore reproduce themselves. The purpose of communication is to reproduce the condition for future communication.

Summary

Agents reflexively constitute social reality on the ground of their knowledgeability. Agents are not dupes of social systems, but constantly reflect on their activities. Agents' practical and discursive knowledge opens up as well as shuts down possible communication; it allows for repetition while prevents difference. This mutual knowledge is also the referentiality of reason and meaning in a bounded society. The boundary of society is to be defined in terms of organized time and space instead of geographical limit. The consequence of reflexive monitoring of action is the reflexively
constituted flow of social life. It is through the reflexivity of agency that society is constituted as a process of recursive communication; and vise versa, it is through the reflexivity of social communication that social agent is constituted in the self-reflexive monitoring of action.

The consequence of modernity

In Luhmann’s terms, Giddens’ analysis of modernity is an observation made by the observer of structuration theory. In other words, his analysis of modernity is a self-referential reproduction of structuration theory. Giddens characterizes the late modernity by the extensionality (spatial extension) and intentionality (trust between agents and system) of the structuration process. In terms of extensionality, the structuration processes of modern organizations can only be observed at a global level. In terms of intentionality, despite a high possibility of risk, the successful expansion of modern organizations depends on actors’ trust in the systems. Modernity spread like a tidal wave, sweeping people away from their past and infusing them with new identities.

What is modernity? According to Giddens, “modernity refers to modes of social life or organization which emerged in Europe from about the seventeenth century onwards and which subsequently became more or less worldwide in their influence (1990, p.1).” This definition emphasizes a distinction of social life between pre-modern and modern institutions. For Marx, the distinction was capitalism; for Durkheim, industrialism; and for Weber, the rational organization of human activities. Each of these distinctions, according to Giddens, specifies just one dimension of the institutional nexus around which modernity evolved. Modernity, for Giddens, is multidimensional. He identifies four “institutional dimensions” that have constituted the modern order:
capitalism; industrialism; surveillance and control of information by the state; and the
development of military power, including the monopoly of the means of violence and the
industrialization of war.

For Giddens, modernity is created by processes of structuration taking place along
these four institutional dimensions. Each of the four institutions is a system with
structural features constituted by human actions. Modern institutions, such as the nation­
state, modern political systems, highly mechanized and highly technological industrial
production, wage labor, and commodification, are produced and reproduced in our
interactions with government agencies, work, and purchasing behaviors. The
structuration moments in political, economic, and industrial systems might not be new,
but what distinguish these institutions from their earlier forms are their modern dynamic
characters. Giddens identifies three sources of the dynamic nature of modernity. They are
the separation of time and space, the “disembedding” mechanism, and modernity’s
reflexive character (1990, pp. 16). Each of these dynamic sources is a distinction (from
agency in earlier forms of social life) of modern human agency that informs practical
actions in their production of social reality. It is by means of these inherent characters of
modern human agency that modernity became a global phenomenon.

The stretching of social relations across time and space or time-space
distanciation can best be understood by the distinction Giddens made between “social
integration” and “system integration (1979, pp. 76).” Social integration refers to
interactions between persons who are co-present in situations; system integration refers to
interactions with those who are physically absent in time or space. In tribal society where
communication was limited by co-present circumstances, systemness can only be
achieved at the level of social integration. The possibility of the “stretching” of systemness in time-space was limited. In such circumstances, the “when” cannot be separated from the “where.” The invention of writing allowed the “stretching” of time-space organization, transcending the limitation of presence and human memories. Now the use of space is no longer determined by local activities; it can be related to “absent” others, who are physically located in remote areas. The “when” was not necessarily tied up with the “where” anymore.

The separation of time and space is crucial to the dynamism of modernity. First, it provides the condition for the processes of disembedding. The separation of time and space helps to open up various possibilities of change by breaking free practices from their local contexts. Secondly, it provides the gearing mechanism connecting the local with the global. And thirdly, an universal timing and spacing system enables a unified world history that can be reflexively used as a world-historical framework of action and experience.

The disembedding of social systems means “the ‘lifting out’ of social relations from local contexts of interaction and their restructuring across indefinite spans of time-space (1990, p.21).” Giddens distinguishes two types of disembedding mechanisms: symbolic tokens and expert systems. By symbolic token, he means “media of interchange which can be ‘pass around’ without regard to the specific characteristics of individuals or groups that handle them at any particular juncture (p.21).” Money, for example, is a symbolic token operating on the assumption that it would have a standard value for everyone. By expert system, Giddens means “systems of technical accomplishment of professional expertise that organize large areas of material and social environments in
which we live today (p.27).” Much of the modern daily life is an integral part of expert systems; from the food we eat, to the house we live in, and to the means of transportation. Symbolic tokens and expert systems are disembedding mechanisms in their power to remove social relations form the immediacies of local contexts and to reestablish them with remote ones.

Reflexivity in the context of institutional analysis of modernity means that “social practices are constantly examined and reformed in the light of incoming information about those very practices, thus constitutively altering their character (p.38).” Although most cultures do alter their practices in the light of new discoveries which feed into them, what is characteristic of modernity is the presumption of wholesale reflexivity that is built into the basis of system reproduction. However, as expert systems are constantly being revised, modern culture can never be stable. Following Ulrich Beck, Giddens calls modern culture “risk culture,” for the abstract systems that are so intrinsically involved in our daily life are fallible and being constantly revised (1991, p.28).

These three mechanisms help to explain modern institutions’ expansive nature. The reflexive appropriation of knowledge, in conjunction with the competitive nature of capitalism, military, industrialism, and the nation-state's apparatuses of control, extends to incorporate massive spans of time-space organization. The disembedding mechanisms provide the means of this extension by lifting out local contexts of interaction and restructuring them according to abstract systems. And time-space separation is both the cause and result of system integration based on agreement of abstract ideas.

The four institutional dimensions of modernity are four structuration processes. Their expansion is achieved on the basis of a universal personal dispositions to a same
conception of the world, trust in symbolic tokens and expert systems, and an expectation of improvement and even reversal of our knowledge system with which we organize our daily life. In terms of their time-space extensions, we can only speak of global societies today. If the world had been colonized, then so was history. The standardized dating system not only provides for an appropriation of a unitary past but also a shared prospect, projected by the reflexivity of expert systems. "Time and space are recombined to form a genuinely world-historical framework of action and experience (1990, p.21).

Giddens' notion of globalization emphasizes the structural relation between modern daily life and the global society. This notion of globalization highlights the ties between local, personal experience and global institutions. Many of our day-to-day activities contribute to the reproduction the global systems, be it capitalism, industrialism, or the nation-state system. From the view of structuration theory, modern human agency has become an integral part of the global economic, political, military, and industrial relations. For Giddens, both modernity and its globalizing effect can be boiled down to the knowledgeability of human action.

Self-referential systems

Making the cut

As John Bednarz points out in his introduction to Ecological Communication (1989), Luhmann's theoretical position is a unique and extraordinary synthesis of several quite diverse intellectual traditions: the Parsonian systems theoretical approach to social action, cybernetics, phenomenology, and the biological concept of autopoiesis. Drawing on these diverse disciplines, Luhmann has put together a social theory that is quite distinct from both classical and contemporary sociological theories. Luhmann thinks it no
longer fruitful to follow classical thinkers, namely, Weber, Durkheim, and Marx, in approaching modern society. In the vast interdisciplinary marketplace, sociologists can, and must, learn from other disciplines. Among contemporary social theories, Luhmann's systems theory is the only fully developed social theory that doesn't have any affinity with classical sociology. What he has inherited from the classic authors are only the problems (of modernity) to which they sought to solve and their ambitions of building a grand theory.

According to Luhmann, there are three "epistemological obstacles" that hamper classical and contemporary sociologists to come to terms with a scientific theory of society (1992a). The first obstacle is "the assumption that society consists of human beings or relations between human being (1992a)." Luhmann calls this the humanist prejudice. The second prejudice is the presumption of a territorial multiplicity of societies. Social differentiation is not to be determined by state organization, language, culture, or tradition. These distinctions cannot provide a sound basis for a convincing theoretical elaboration. The third prejudice is the epistemological distinction between subject and object. This distinction postulates that societies can be observed and understood from outside. "The epistemology which was dominant into our century thought of subject and object (like thought and being, cognition and object) as separate and considered observation and description of the world ab extra as possible; indeed, cognition was only recognized as such when every circular interlocking with its object was avoided. Only subject has the privilege of self-reference. Things are how they are (1992a)."
Luhmann regards these three prejudices part of the "Old European" humanism, which values the concept of the subject and corresponds between being and meaning. Influenced by this humanistic tradition, the mainstream sociology conceives society in the forms of generalized cultural values (Parsons), shared knowledge systems (Giddens), or normative and communicative consensus (Habermas). Luhmann rejects this anthropocentric view of society and its byproducts of rationality and morality. To bring about a sociological enlightenment, Luhmann argues that we must remove human being from the center of the social system. Society exists only because people communicate. It is the interactions between individuals not the individual per se that makes up society. Luhmann characterizes this perspective as "radically antihumanist," "radically antiregional," and "radically constructivistic (Luhmann, cited in Lee, 2000)."

For Luhmann, the problem that no genuine progress has been made to understand our "hypercomplex" society is rather a problem of theory design. It is apparent that sociology can describe society only within society. "Theories of society are theories in society about society (1992a)." Sociology is an internal observer of the system of which it is a part and, therefore, its operation necessarily enters into the object of its observation. This happens when sociology proposes planning, when it criticizes, and when it alarms (Luhmann 1995b). In any case, sociology can no longer comprehend itself within the distinction of subject and object and see itself as an independent observer. Whenever sociology communicates or observes, it sets off effects that complicate the observed. This position points out that the concept of society must be formed "autologically," it must contain itself in itself (Luhmann 1992a). But how do we conceive society in autological terms? How do we come up with a definition of society which contains the observers in
it? And how can we conceptualize a post-humanist society? Luhmann’s suggestion is that we start from the concept of system.

Luhmann’s system departs significantly from the General Systems Theory proposed by Ludwig von Bertalanffy (1960) or the more recent Complex Adaptive Systems approach (1995). For them, the existence of systems is treated as a rather unproblematic given. For Luhmann, on the contrary, a system never “really” exists - systems become possible only on the basis of a system/environment difference.

Luhmann's system does not mean specific complexities called systems but a meaningfully structured transformation of complexities - an engagement of the system with its environment.

Luhmann owes this starting point to Spencer Brown. The main idea in the Law of Form (1969) is the first distinction - the idea that you cannot observe anything without drawing a distinction. The first distinction is a prerequisite of any imaginable operation; only by starting with an initial distinction that we can proceed to the next move. Theories which realize this and discuss the use of distinction immediately becomes self-referential and are applicable on themselves. Theories of this kind, such as systems theory, autopoiesis and second-order observation, do not assume the existence of objects as reality but construct them and always be aware of their own construction.

A first precision, which immediately leads us to unfamiliar territory, consists of understanding system not as a particular type of object but as a particular distinction - namely that between system and environment... A system is the form of distinction, possesses therefore two sides: the system (as the inside of the form) and the environment (as the outside of the form). Only the two sides together
constitute the distinction, constitute the form, constitute the concept. The environment is thus for this form just as important, just as indispensable as the system itself. As distinction the form is closed: 'Distinction is perfect continence' in Spencer Brown's words. That is to say: everything which can be observed and described with this distinction belongs either to the system or to the environment (1992a).

Social systems constituted themselves through a difference between system and environment, and this difference is only produced within the systems. "They use distinctions as forms and take forms as boundaries, separating an inner side and an outer side (1992a)." The inner side is the marked side, the indicated side. It is only from the marked side that one can start the next operation. Systems, thus, have to use their operations to be able to continue to use their operations, and et cetera. This circular production corresponds to Maturnan and Varela's description of autopoiesis (1980). In autopoietic operations, the systems continuously produce their own components, which in turn participate in these same production processes. The result of autopoietic reproduction is the system itself, the form of the system, or the difference between system and environment. This leads to Luhmann's conclusion that society must be conceived as an operatively closed autopoietic system.

With this concept of system, we have already placed ourselves on the other side of those epistemological obstacles. Autopoiesis renounces the subject/object distinction and operative closure excludes human beings and geography from the system of society. What are now included in the system are self-observation and self-description. This is not to say that people and territories do not exist. It is just that they are not to be found where
they were previously thought of. They now belong to the environment of society instead of within the social systems.

In the context of “Old European” tradition, certain distinctions, such as Deism, historicism, Marxism, and positivism, gained a status of “super-codes,” giving meaning to all reality. “The European tradition of (rational) knowledge and action sought after final foundations, after principles, after unquestionable maxims. If one wanted to continue the tradition, one would have to deliver a self-description of society and assert: this is the right one (Luhmann, Cited in Lee 2000).” The era of superperspective is over, argues Luhmann. Instead of offering a sociological super-code, Luhmann's sociology is a second-order observation of society, that is, it observe how society observes itself. His theory of social differentiation is a description of the multiple ways in which social systems using different distinctions to observe themselves.

**Communication**

The genesis moment of a system is when an observer makes a cut, draws a distinction (Hayles, 1995). Before the cut, the world is an undifferentiated complexity. The introduction of a distinction tames the unrecognizable noise, separating an inside and an outside. What is outside remains unknown, but the inside can be further divided, using other distinctions to increase its complexity. Then what is the next cut in Luhmann's sociology following the first distinction of system/environment? What is the cut separating social systems from other systems? What is the unit of society? If social systems are autopoietic systems, what are their recursive operations? What are the elements that social systems produce in order to reproduce themselves? For Luhmann, it is not consciousness, nor action or praxis, nor language, but communication.
My proposal is that we make the concept of communication the basis and thereby switch sociological theory from the concept of action to the concept of system. This enable us to present the social system as an operatively closed system consisting only of its own operations, reproduced by communications from communications. With the concept of action external references can hardly be avoided. An action requires, since it must be attributed, reference to socially constituted complexes: a subject, an individual, for all practical purposes even a living body, that is, a place in space. Only with the help of the concept of communication can we think of a social system as an autopoietic system, which consists only of elements, namely communications, which produce and reproduce it through it the network of precisely these elements, that is, through communication (1992a).

It is important to understand what Luhmann means by communication since he uses the term in a very specific sense. For Luhmann, communication exists at a different level from people and their actions; it is an emergent reality, a state of affairs sui generis. As the basic element self-referentially produced by social systems, communication is an event reproduced over time. As an event, its unity requires a synthesis of three different selections; a selection of information, a selection of utterance, and a selective understanding (or misunderstanding) of this utterance and its information (1990b, 1992b, 1995a). Communication happens only when the three selections come together.

From a phenomenological viewpoint, that action is necessarily situated in a horizon of possibilities, communication is from the start a selective occurrence. Information is what the message is about. Utterance is the form in which the message is
produced. And understanding or misunderstanding is the outcome generated by the message. It is important to distinguish between information and expression because understand can concern itself either with information or with utterance. For example, one can judge a dispute based on its merits (information) or on his or her personal relation with the person involved (utterance). Understanding is the condition on which next communication can be continued; it is the connection for further communication.

Communicative events arise when the three selections come together as a unit. Thus, a message's information value is validated, its mode of expression is accepted, and a response is given to show the message has indeed made a difference. It is important to note that the three selections are distinctions made by the system. A system, for example, an academic community, defines what is to be distinguished as information, how information is to be presented, and if accepted, the act of communication can lead to further communication.

This conceptualization emphasizes that it is not human beings who communicate; rather, it is communication which communicates. This conception is not to suggest a tautological concept of communication but to relate the recursive communication to a self-referential social system. In Luhmann's words: "communication is an autopoietic operation of an autopoietic system. It only occurs if systems exist, which with the aid of an elementary operation, namely, communication, produce and reproduce a network reproducing this elementary operation. I call these systems social systems (1996)."

This post-humanist concept of communication is not intended maliciously but only to clarify that the idea of relating communication to a conscious subject must be renounced. Indeed, as Luhmann suggests, it is communication that produces
consciousness instead of the other way around. “What we know as cognition is the product of the system of communication called society, where consciousness plays a permanent but always fractional role (1990).” Take the following description as an example: a CEO of a biotechnology company who has a Ph.D. in science, goes to church every Sunday, has marital problems, and his business is in financial trouble and is in a legal battle with a counter party. Each of these systems in which he is a part of, namely, economy, religion, science, marriage, and law, is an autonomous system. His actions within these systems may best be understood as communicative events produced self-referentially by these systems instead of by the state of his consciousness. To communicate is to reproduce the specific system/environment difference, i.e., surplus, salvation, truth, love, and legal, by which the system is differentiated.

Relating communication’s referentiality to system (and not the consciousness) enables Luhmann to present social system as an operatively closed system consisting of only its communications. This theory of communication does not refer to “the foundational level” of communication. Nor does it emphasize ethics and reason, as proclaimed by Habermas (1984). Communication is not the transmission of information between communicating parties; nor is it oriented toward agreement, either as an effect of communication or as a normative implication in a Habermasian sense. These conceptions presuppose carriers of communicative events and relate communications to its environment and thus have incorporated all the environmental complexity into its operations. Autopoietically, it is communication that communicates, but this is possible only within an environment which enables and tolerates it.
This conceptualization not only alters conventional understandings of communication but also that of society. The concept of communication assigns human beings not as components of society but that of its environment. The concept of territorial boundaries also becomes dispensable for space acquires its meaning only through its communicative use. The technology of communication has diminished the significance of spatial conditions to an extent that it is communication determines the remaining meaning of space instead of the opposite. Finally, and most importantly, Luhmann's concept of communication postulates that society is a self-observing and self-describing communication system.

Even simple communication is only possible in a recursive network of earlier and later communications. Such a network can become its own theme, can inform itself about its own communication, can doubt information, refuse acceptance, give norms to reliable or non-reliable information etc. - as long as this occurs in the operative form of communication. This makes a double state of affairs evident: that society is a self-observing and describing system and that it can use its own manner of operation and must use it in order to carry out such self-referential operations... All communications about society are conditioned by society. There is no external observer with any partially adequate competence (1992a).

Using communication as the distinction of self-reference and external-reference, Luhmann's definition of society is no other than a self-description of society.

Society is the comprehensive system of all communication, which produce themselves autopoietically through the recursive network of communications which
produce new (and always other) communications. The emergence of such a system includes communications, since they are only internally capable of continuation. And it excludes everything else. The reproduction of such a system thus requires the capacity to discriminate between system and environment. Communications can recognize communications and distinguish them from other states of affairs, which belong to the environment in the sense that one can certainly communicate about but not with them (1992a).

We can re-enter this distinction into society and distinguish one particular form of communication from others. Such an exposition is Luhmann's theory of social differentiation. Social differentiation allows society to build up its internal complexity to cope with environmental complexity and thus sustain its effective communication given the fact of communication's improbability (1990, p. 89). The theory of social differentiation will be discussed below, but first let me turn to the self-reference of communication.

Self-reference of communication

Communication is a three-part unity. It appears as an emergent occurrence when the selections of utterance, information, and understanding are synthesized. Communication can come about only when a difference of utterance and information is recognized and a selective choice is made to connect it to the next communication. This connection is called understanding (or misunderstanding). Conceiving understanding as an essential part of communication has far-reaching significance. One consequence is that communication is possible only as a self-referential process.
Similar to Giddens' notion of action, Luhmann understands communication as a process, composed of discrete communicative actions. “When one communicative action follows another, it tests whether the preceding communication was understood. However surprising the connecting communication may turn out to be, it is also used to indicate and to observe how it rests on an understanding of preceding communication (1995a, p.143).” The minimal condition for each individual communicative event to come about is that it is recursively secured in possibilities of understanding and the control of understanding as the nexus for further communication. Luhmann calls such an operation the case of basal self-reference. Basal self-reference means “the fact that the process must be composed on elements (events) that refer to themselves by including their connection with other elements of the same process (1995a, p.144).” Luhmann distinguishes three different modes of self-reference: basal self-reference, reflexivity, and reflection (1995, pp.442). Reflexivity is “processual self-reference;” the basic distinction is between before and after. In this context, the self that observes itself is the process emerges with the before/after distinction. By reflection, Luhmann means system reference; the distinction is between system and environment. The self is the system to which the self-referential operation attributes itself in contrast to its environment. In systems theory, self-reference can be an aspect of the operative behavior of elements, processes, and/or systems. In this section, my discussion of self-reference of communication only pertains to basal self-reference.

The assumption, that communication is a basal self-referential process coordinates three different selections in each of its elements, points to that there can be no environmental correlation for communication. “The unity of communication corresponds
to nothing in the environment (1995a, p. 144).” Communication necessarily operates by differentiating itself from environmental influences and anticipating controlling its connectivity. “The differentiation relates strictly to the unity and thus the closure of the connection among selections, to the selections contained within, and to the reduction of complexity thereby achieved (p. 144).” This self-referentiality indicates that a system can communicate only to the extent its internal dynamics allow itself to be, but, as mentioned, this does not deny a system’s learning capability. Communication system is always open to new meaning structures; “with every thematic choice the system expands and contracts, takes up meaning and lets others go (p. 145).”

Conceiving understanding as an inherent part of communication has another consequence; it presupposes resistance of communication. By its selective nature, communication creates a focus yet open situation. The possibility of rejection is necessarily built into any communication process. As communication presupposes independent self-referential systems, with their own environments and information processing apparatuses, coordinated selectivity is exceedingly improbable. Indeed, in the context of “double contingency,” communication is more likely to fail. By double contingency, Luhmann means that “Alter and Ego may select communications from an infinite horizon of alternative possibilities (Fuchs, 1988).” Alter and Ego can freely reject each other’s proposals, to select alternative expectations, to ignore communication, or to misinterpret each other’s intentions. Despite the fact that we experience and practice communications everyday, one might want to ask how communication is possible at all.

Given the improbability of communication, one must expect that successful communication does not come along, and even when it does occur, it will be eliminated.
during the course of evolution. How do social systems secure themselves through their autopoietic operations? For Luhmann, the improbability of communication is the point of departure for the development of symbolically generalized media of communication. The development of different functional domains in modern society is the result of communications differentiated and intensified by these generalized media of communication. Luhmann's notion of symbolically generalized media of communication is discussed in the next section.

The functional differentiation of modern society

Whereas Giddens constructs his concept of modernity on the distinctions of extentionality and intentionality of structuration process, Luhmann's is based on the qualitative change in ways divisions of social communication are formed. To understand Luhmann's idea of modernity, we must start with his idea of system differentiation. The central paradigm of systems theory is the difference of system and environment. The difference is not ontological but is correlative to the operation of observation, which introduces this distinction into reality. Observation is nothing more than the management of this distinction. Such practice presupposes the existence of an environment as the reality, although a reality not necessarily corresponds to the system's attribution of it. The relation between system and environment is necessarily asymmetrical. The environment always provides more possibility than the system can realize. To cope with this pressure, that is, to stabilize its own contingency, a system can increase its own complexity by developing subsystems. Luhmann calls this process system differentiation, which means creating an internal environment for further system building. System differentiation repeats system formation within systems; "by applying the process of formation to itself,
the system intensifies its functional tendencies (1995a, p. 190).” More improbable system formation can be built on the promise of an already-domesticated, already-pacified environment with lessened complexity. System differentiation increases and normalizes the improbability of systems.

Note that system differentiation is not the decomposition into smaller units but rather a process of growth by internal diversification. As each subsystem constitutes its own environment differently, the whole system becomes a special form of a difference between the subsystem and its environment. “Differentiation thus reproduces the system in itself, multiplying specialized versions of original system’s identity by splitting it into a number of internal systems and affiliated environments (1982, p. 231).” It is through the construction of diverse internal versions of the entire system that modern society no longer has a center in observation, no authority or legitimacy and no principle that guides its direction; facts, events, and problems obtain a multiplicity of meaning from different perspectives.

In the course of human history, Luhmann points out that society has undergone three different forms of system differentiation: segmentation, stratification, and functional differentiation (1982, pp. 233). Archaic societies are organized according to the principle of segmentary differentiation. Societies are differentiated into segmented yet equal subsystems. In more advanced societies, stratification differentiated society into unequal subsystems. Equality is the norm regulating internal communication, whereas inequality the norm of external communication. Stratification indicates an unequal distribution of wealth and power and an unequal distribution of communication chances.
The upper class not only controls the political and economic power but represents the society as a whole.

With the emergence of modern society, the principle of differentiation is no longer based on groups of people but on the specific function a type of communication performs. Luhmann calls this type of society "functionally differentiation." The unity of society resides in the comparability of different systems' operations and the form of its differentiation. This move solves the traditional problem that views the whole as both unity and the sum total of parts. With reference to this problem, the individual is required to realize sociality in the self, which has consequentially been defined as socialization, rationality, knowledge, and duty, etc. In systems theory, society is no longer required to be homogeneous parts with respect to the whole; instead, it is "composed of a relatively large number of operationally employable system/environment differences, which each, along different cutting lines, reconstruct the whole system as the unity of subsystem and environment (1995a, p.7)."

For Luhmann, modern society can be seen as functional differentiated into subsystems of the economy, politics, law, science, education, religion, and family. The formation of these subsystems is a socio-cultural evolution along with the development of symbolic generalized media of communication in which the improbabilities of communication were surmounted and transformed. Given the improbabilities of communication, most societies have devised agencies to guarantee the transference of selections. In simple societies, such functions are mainly fulfilled by the taken-for-granted "reality construction" founded on shared lived experience. In advanced societies, as the inventions of writing and printing have released communications from the bonds of
social situations, special codes have to be created in order to motivate the acceptance of communications. Generalized media of communication is defined as the codes developed by modern society to secure success of communication. The main characteristic of these media of communication is their motivating function; "they urge the acceptance of other people's selection and as a rule make that acceptance the object of expectation (1979, p.111)." This motivating function certainly can not be invented, it is the result of evolution in which complex communication situations were simplified by generalized codes for shared orientation. These media are able to secure acceptance of communication because of common "agreement" to endow money with value, politics power, science truth, law right/punishment, education socialization, religion salvation, and values indisputable consensus. For example, we often forgo our own interests to comply with law or deny our own experiences if they are not scientifically accurate.

Within the context of media-guided communication, the selectivity of communication is reduced to a single binary opposition, for example, true/false, right/wrong, have/have not, etc (1995a, pp.157). In this context, communication becomes the reproduction of the binary selections and information the internal construction of a predetermined coding system. Subsystems of communication are regulated by the binary coding system in such a way that a scientific statement cannot be refuted on aesthetic ground and a legal decision cannot be denied on moral ground. An important consequence of functional differentiation is the resulting autonomy of each functional domain. A coding system is valid only in so far as communication chooses its domain of application; and vice versa, within a function system, a communication is meaningful only when it can be registered on its specific binary code. Through the application of its
specific code, a functional system is open to only one specific aspect of reality. Their specific modes of operation are closed to other systems and operate only on themselves. This closure does not preclude the capacity of one system to observe other functional systems, but whatever the system does, it acts or reacts based on its own specific mode of operation.

For Luhmann, the primary form of social differentiation in modern condition is functional differentiation. "The most successful and most relevant communication in contemporary society is played out through these media of communication, and accordingly, the chances of forming social systems are directed toward the corresponding functions (1995a, p.161).” The autonomy of the function systems makes very specific distinctions with respect to their environments, with very specific self-defined sensitivity and irritability that vary from system to system. Modern society is a complex system consisted of different functional subsystems; each establishes itself by the particular tasks they carry out and each produces what enables it itself. In this way, society reproduces itself as unity and difference at the same time. Modern society is a society without top and without center. It constantly evolves, expands, and cannot be controlled.

Luhmann vs. Giddens

The above exposition of Giddens and Luhmann is intended to show the “how” aspect of their theoretical constructions. Starting from the basic distinctions of their theoretical assumptions, I go on to present their conceptualizations of the social, communication, and modernity. My purposes are to present the two utterly different sociological theories side by side; and to demonstrate the logical connection between their first distinctions and the subsequently increased conceptual complexity by drawing
further distinctions (within the marked side). Here I contrast their major differences. The comparison also serves to justify my selection of using systems theory to approach U.S.-China relations.

1. The foremost difference between Luhmann and Giddens is their assigned unit of self-reference. In Giddens' reconstruction of 19th and 20th century sociology, he has also preserved an eminent humanist tradition which values the autonomous, rational, and self-referential individual. In this tradition, self-reference occurs exclusively in the domain of consciousness. This position reaffirms the conventional distinction between subject and object. Observation is a self-referential operation of the subject, and scientific observations are the applications of scientific knowledge to the observed. Luhmann, on the contrary, regards this humanist tradition and its subsequent subject/object distinction major obstacles to which sociology needs to transcend. Using concepts of autopoiesis, second-order observation, and calculus of forms, systems theory shifts the domain of self-reference to objects, which are the real systems in the world. In systems theory, a system operates by means of the continual reproduction of the difference between self-reference and external-reference. On this first level of observation, the world is seen "as it is;" a system operates by what it identifies as itself and as environment. But by re-entering the difference onto itself, one realizes that it is through the difference that the system assures its own unity. The world turns out to be a construction on the difference. Luhmann's systems theory provides us the conceptual tools to observe, on a second level, how social systems observe themselves and the world.

2. The different self-referential units lead to different constructions of the social. Giddens uses the concept of duality of structure to combine actor and system in a single
framework. Action is the application of structure within situated time-space organization.

The social, the marked side, consists of situated practices as recursive communications.

Within the marked side, a sociologist can engage in "institutional analysis" to identify the rules and resources as chronically reproduced features of social system or to analyze "strategic conduct," studying the mode in which actors draw upon structural elements in their social relations (Giddens, 1979, p.80).

Based on the distinction of system/environment, Luhmann conceives social systems as closed self-referential systems and communication as the particular element of social system's self-referential reproduction. This enables Luhmann to present the social system as an operatively closed system consisting only of communications. The marked side is the closed communications carried out by a multiplicity of different system/environment distinctions.

3. Their different conceptions of the social point to their different conceptions of communication. Communication in structuration theory is a skilled accomplishment of the agents. Communications is reflexively constructed to maintain a shared meaning, power relation, and normative order. Successful communications are necessarily mediated and structured. Luhmann's idea of communication, on the other hand, is an emergent reality, a state of affairs sui generis that has no direct contact with consciousness. A successful communication requires the synthesis of three selections, i.e., utterance, information, and understanding, made possible on the basis of specific system reference. The more subsystems a society has, the more differentiation communications are.
4. Luhmann’s and Giddens’ explanations of modernity are the results of their conceptions of communication and can be characterized as differentiation vs. integration. From a historical perspective, Giddens characterizes modernity as the increasing system integration of capitalism, industrialism, military power, and the control of nation state, and Luhmann, on the contrary, characterizes it as the increasing differentiation of communication due to social differentiation. For Giddens, the modern world is now a situated time-space path produced and reproduced along four structuration processes, and for Luhmann, a complex system of communication composed of various subsystems, each reproduces itself according to its own system-specific operations.

Conclusion

The exposition and comparison explain my selection of Luhmann over Giddens in observing U.S.-China relations. U.S.-China relations in the post Cold War era are characterized by its increasing complexity both between and within national boundaries. The differentiation in defining national interests and diversification of decision-making apparatuses are counterfactual to observation based on structuration theory. Such discrepancies correspond to criticisms of structuration theory made by Craig (1992) and Krippendorff (1994). Craig criticizes structuration theory as "a theoretical meld in which all differences disappear (1992, p.10)." He argues that structuration theory fails to relate itself to a world which is increasingly fragmented, threatening, unstable, and confused. Likewise, Krippendorff criticizes Giddens' view of communication as too simplistic: "this overly simplistic notion of communication as selecting from a common repertoire and conveying entities contained therein to someone else does have a place in institutionally stable or conventionally regulated circumstance where innovation or multiple realities are
discouraged (1994)." But, he continues, "it does not explain the communication processes that take place prior to compliance with such rules, and thus obscures the understanding of alternative and more embracing forms of human communication (1994).

In addition, one objective of this dissertation is to refute political realism's state-centric view of international relations. With structuration theory, one can easily identify the nation-state as the only actors in the Westphalian state system. It reaffirms the state-centric view that the study seeks to deny. Finally, that structuration theory locates self-reference exclusively in the domain of consciousness hampers the possibility to construct a theoretical framework to make sense of the inconsistencies and confusions in China policymaking. With its insistence of the knowledgeable agent and capability of rationalization, structuration theory would probably attribute the confusions to individual decisions. Structuration cannot be a proper tool in developing a theoretical framework to approach the super complex U.S.-China relations.
CHAPTER 5

CASE STUDY: CHINA'S ACCESSION TO THE WTO

Introduction

The objective of this case study is to develop a theoretical framework to observe the structured complexity in making America's China policy. This subject puts the study in two contexts of observation. Conceptually, it pits against realism - the dominant observer of international relations. Practically, it observes a confused and frustrated state which cannot control its own communication, based on its self-description, both within and among national borders. The state-centric view of international relations has its basis in modern state system, which conceives the nation-state as the unit of international relations. It presumes the state must provide integrated political, economic, social, and legal foundations for international communication. This case study argues that this simplistic view can no longer adequately describe the complexity of modern international relations in general and the U.S.-China relationship in particular. Instead of the territorial state, I suggest the unity of international relations the functional differentiation of communication. This case study uses Luhmann's systems theory to describe a much more complicated view of international relations. Using China's WTO entry as an example, I argue that, in addition to the state, other observers in the relations include economy
(including both capital and labor systems), ideology, geopolitics, environmental concerns, and religion, etc. These systems do not belong to the complexity of the state, as the state-centric observer would suggest, but that of the world. Each of these systems observes and operates with its own specific system/environment distinction that does not correspond to state power. From the view of functional differentiation, modern society consists of multiple global communication systems, and the state system is but one among others. The state-centric description of the international world is one-dimensional and has omitted much of what is happening in the world scene today. Since politics has the power to make collective binding decisions which either facilitate or constrain operations of other systems within its territory, we still expect politics to provide social integration and solutions of otherwise insoluble problems. Frustrations over China policy are manifested in two directions. For the political system, frustration is the inability to control communications generated by other function systems but must cope with them as its environmental complexity; for other function systems, frustration is the inability to influence themes of political communication.

In this chapter, I will discuss methodological issues and then introduce the background of China’s WTO entry, the debate of national discourse, and conceptual efforts that seek to come to terms with the contentious nature of China policymaking. I use Luhmann's systemic concepts to formulate a set of propositions as my framework of
analyzing U.S.-China relations. In this analysis, I define the meaning of China policy in terms of communication and suggest its implications for U.S.-China relations.

Method and methodology

Method and methodology are confusing terms. On the one hand, the positivist approach to social scientific studies often uses the two terms synonymously (Wallace 1983; Wimmer & Dominick 1987; Nachmias & Nachmias 1996). Method or methodology is understood as rules for logical reasoning - the established process of validating scientific knowledge. On the other hand, the humanistic approach to human condition has typically used method as the exercise to clarify logical issues. This is the way Giddens discusses his concept of action in *New Rules of Sociological Method* (1976) and Habermas discusses his theory of reason in *Knowledge and Human Interests* (1968). Giddens' concept of action is the basic assumption of his structuration theory while Habermas' theory of reason provides the foundation of his critical theory. In this tradition, methodology is the clarification of basic assumptions for theory building.

In her article titled *Sense-Making's Journey From Metatheory to Methodology* (1999), Dervin has a different view of method and methodology. According to Dervin, every research project necessarily involves two dimensions: a product dimension formed by meta-theory and substantive theory, and a process dimension formed by methodology and method. Meta-theory is a set of basic assumptions presupposed in the researcher's observation. They “provide general perspectives or ways of looking based on assumptions about the nature of reality and human being (ontology), the nature of knowing (epistemology), the purpose of theory and research (teleology), values and ethics (axiology), and the nature of power (ideology).” Meta-theory describes a particular
perspective of observation, but it does not prescribe any specific move for substantial theorizing. The latter is the function of method. Method is “the specific ‘hows,’ techniques guided implicitly or explicitly by methodological considerations.” An informed researcher must be aware of the theoretical opening and limitation registered on the selected meta-theoretical assumption. Such a reflection is the meaning of methodology. Methodology is the “reflexive analysis of the ‘hows’ of theorizing, observing, analyzing, and interpreting.” A method is a researcher’s own design; it is the specific step taking through which a substantive theory is constructed and “theory-laden” analysis conducted.

Dervin’s emphasis on the “how” of theorizing corresponds to Luhmann’s second-order observation. To rephrase Dervin’s proposition using Luhmann’s term, methodology is essentially a second-order observation of the act of observation, i.e., the theorization enabled by a selected meta-theory. A meta-theory is the initial distinction drawn by a researcher on which meaningful communication generated. Meta-theories have the same function as that of media codes; they provide conditions for communication. Methods are programs designed to carry out meaningful communication. The problem of the positivist approach is that, as an operation of first-order observation, it cannot see its observation, which is contingent on the distinction of the empiricist worldview. It develops program for communication without knowing the condition of communication. The humanist tradition, on the other hand, mostly focuses its discussion on the code, on the distinction, and its openings for observation.

A significant consequence of Dervin’s notion of methodology is that it makes the selectivity of meta-theoretical assumptions visible. It forces one to see the complexity of
theoretical discourses: sciences or humanities, structuralism or hermeneutics, positivism or phenomenology, classical Marxism or cultural studies, realism or postmodernism, and systems theory or critical theory. These meta-theoretical assumptions can never be tested in terms of their ultimate truthfulness; they are constructed distinctions that guide observation. One's selection of meta-theory serves to reduce the otherwise impossibility of observation in a phenomenological sense. A selection establishes a condition for self-referential communication. In this view, the meaning-bestowing processes that were once associated with ultimate knowledge of the world are now delegated as achievements of various meta-theoretical subsystems. There is no longer a universal knowledge about the world; knowledge acquires its information value only within its specific meaning boundaries. Again, this is not to deny that reality exists but to acknowledge that one must realize the contingency, limitation, and self-referentiality of one's observation.

How does this dissertation assert its empirical applicability – its valid observation of the real world? According to the constructivist epistemology, a cognitive system can no longer distinguish between the conditions of real object and the conditions of its own knowledge. The system has no access to real objects other than through its own knowledge. With this limitation, statements of correctness of representation become meaningless. A second-order observer is one who is able to see how the observed system's frame shapes its knowledge and actions (although this merely leads to a recurrence of the problem of existence and observation at a second level). "The theory of operational constructivism does not lead to a 'loss of world,' it does not deny that reality exists," notes Luhmann. Phenomenologically, the world is not an object but a horizon. "And this is why there is no possibility other than to construct reality and perhaps to
observe observers as they construct reality (2000, p.6),” indicates Luhmann. But a theoretically inspired analysis does not exclude the possibility that serviceable results can be attained. Above all, a second order observation can observe how social communication is produced. In the context of international relations, seeing what political realism can and cannot see, a second-order analysis can reduce the probability of creating unnecessary excitement and frustration.

**Background: from MFN to WTO**

After 15 years of long, arduous and difficult negotiations, People's Republic of China became an official member of the World Trade Organization (WTO) on December 11, 2001. China’s entry actually marked a return for one of the original contracting parties of the General Agreement on Tariffs and Trade (GATT), the predecessor of the WTO. China was a founding member of GATT in 1948, but withdrew in 1950 after the constitution of the People’s Republic. In 1986, China notified GATT of its wish to resume membership. In 1987, a formal working party was established to determine the exact terms and conditions under which China could rejoin GATT. One of the terms was that China must reach bilateral agreements with WTO members on reciprocal tariff reductions and other market-access issues. There were 134 members in the World Trade Organization at that time, all of whom must conclude their own separate and successful negotiations with China. Upon accession, the results of these bilateral agreements would be extended to all WTO members. At the final stage, a vote would take place among WTO members, and China needed two-thirds of the vote in favor of its accession.

This long process of negotiation began in 1987 and ended in 2000 with the ratification of permanent normal trading relations (PNTR) with China by the U.S.
Congress. The most difficult negotiation was that between the US and China. Note that China needs only two-thirds of the vote to support its entry, but politically, the passage of PNTR means avoiding a major breakdown in the already tensed U.S.-China relationship.

The hurdle was that Congress must cast a vote to reconcile U.S. Trade Act with the rules of WTO. In particular, Congress must revoke or amend Title IV, known as the Jackson-Vanik Amendment, of the Trade Act of 1974. The legislation requires that the president notifies Congress each year of his intention to extend most-favored-nation (MFN), now normal trade relations (NTR), status to a "non-market economy." Jackson-Vanik barred MFN trade status for nonmarket economies unless the president certified annually that the country allowed free emigration of its citizens. Emigration has never been a concern regarding China policy. But the annual MFN renewal for China after Tiananmen Square incident has became a ritual for expressing American grievances over the Chinese Communist Party. Grievances included human rights violations, political repression, nuclear and ballistic missile proliferation, belligerent military actions violating international norms, Taiwan and Tibet's autonomy, etc. Members of Congress could raise any question pertaining to China policy and the president was forced to respond. During the Clinton administration, MFN renewal was an annual tug-of-war among competing interests and advocacy groups. Whether to grant China PNTR and thus pave the way for its WTO accession has stirred heated discussion in the 106th Congress (2000) and much opposition among business groups and labor, human rights, and environmental organizations, China policy analysts and academics. In general, those who supported PNTR were the Clinton administration, representatives of American business community,
and free-trade advocates, and opponents of PNTR included ideological conservatives, human rights activists, organized labors, environmental, and religious groups.

The debate

WTO is a multinational organization for monitoring national trading policies, handling trade disputes, and enforcing its multilateral agreements. However, this economic organization has acquired many different meanings within the U.S.-China relationship. Supporters of the PNTR bill argued that economic engagement is the best policy to enhance America's ability to address a broad range of interests whereas opponents argued that it would have negative effects within China, the U.S., and the WTO. President Clinton characterized the bill as a national security issue of historic proportions. He said, "It represents the most significant opportunity that we have had to create positive change in China since the 1970s, when President Nixon first went there (2000). In an effort to boost congressional support, Clinton allied himself with a coalition of American business interests with strong trade ties to China, including the Business Roundtable organization, the United States Chamber of Commerce, and the United States-China Business Council. Thomas Donohue, President and CEO of the United States Chamber of Commerce, said, "All-in-all the agreement would boost annual U.S. exports by roughly $13 billion in five years and increase agricultural exports by $2.2 billion per year... increased trade raises living standards, opens up closed societies, and generates the wealth needed to pay for social programs... Using trade as a weapon will not only reduce our influence, but actually hurt the working people, farmers and businesses of our own country (2000, March 3)." Microsoft, America Online, and Motorola, putting their competing business interests aside to bolster Clinton's case,
arguing that one of the best ways to help human rights in China is through increased computer and software sales inside the Great Wall. They argued the sales would lead to greater use of the Internet and increased exposure to Western ideas and democracy. Many free trade advocates, who supported Clinton during the debate over the North American Free Trade Agreement (NAFTA), also sided with Clinton again on PNTR. They predicted that open trade can instill the political change necessary for China to participate in the world marketplace. Engagement "will help get wealth and resources out of the hands of the state and into the hands of the people," Mark Groombridge, a trade analyst at the Cato Institute, told the Online News Hour. "This will help break the state monopoly of wealth and power which enables Beijing to control its citizenry (2000)."

Opposition groups claimed that much of that argument has yet to be proven in China. House Democratic Leader Richard Gephardt announced his opposition to the bill, "I understand the argument on the other side -- that trade alone solves the problem. Twenty years of more trade with China has not solved the problem. In fact, I would argue to you that their performance on human rights is worse today than it's been in the past (2000)." Gephardt's opposition is echoed by many of his Democratic colleagues. David Bonior, the Democratic whip, led a protest against the legislation in which House members were joined by Chinese dissidents on Capitol Hill. They paraded a 200-foot chain to symbolize the plight of China's political prisoners. Lori Wallach, Director of Public Citizen's Global Trade Watch said, "The only thing worse than the WTO as it is, is the WTO with China as a member, especially under the terms the Clinton administration signed. The few citizens groups who hoped WTO might be reformable are now saying that if China is admitted, there is no hope WTO would become more
sensitive to labor, environment, or human rights policies (cited in Nolt, 1999).” Labor leaders were also dismayed. They saw normalized trade relations with China would cause lost jobs and widening trade deficit gap. In a decade of annually normalized relations, the deficit with China burgeoned from approximately $6 billion in 1989 to $56.9 billion in 1999. They noted that some Chinese workers are paid as little as 13 cents per hour. That cheap labor pool could convince U.S. manufacturers to move to China. AFL-CIO President John Sweeney (2000) vowed that unions will mount an effective mobilization effort and “the biggest get-out-the-vote campaign ever” to elect working-family-friendly candidates around the country in the 2000 fall election. Brent Blackwelder, President of the environmental group, Friends of the Earth, also opposed China’s admission, claiming, "The Clinton-Gore Administration’s deal to admit China into the WTO will block sorely-needed environmental and democratic reform of this global trade body, and show that the Administration’s real trade priority is boosting corporate profits—not promoting democracy, environmental protection and human rights..." (cited in Nolt, 1999)

The difficulty in balancing counter positions in the WTO debate is typical of the inconsistent and unintegrated character of China policy. How can one conceptualize the conflicting nature of China policy? What do these conflicting positions indicate? Sutter (1998) suggests the inconsistent Clinton approach was a result of both the diffusion of policymaking agencies within government and the increased influence from non-governmental organizations and interest groups. Wittkopf and McCormick (1999) argue that American foreign policy necessarily reflects the dynamic of domestic politics. In particular, the post-Cold War foreign affairs are not handled as national security threats have allowed domestic interests to strongly influence foreign policymaking. Medeiros of
the (2000) analyzes the complex, multi-tiered, competitive, and fragmented policy-making process in the United States. He suggests that American foreign policy is neither a result of national consensus nor as part of a well-defined U.S. global strategy, but rather as a result of significant bargaining among different branches of the government.

These discussions provide narratives but not analysis. They facilitate communication by providing distinctions for observations, yet they do not serve as concepts. Although both narrative and analysis are observations based on distinguishing indications, they differ in the ways explanations are presented; whereas narrative uses the taken-for-granted, natural form of discourse, analysis uses conceptual abstractions or theoretical models in explaining social phenomena (Sayer, 1982). As a system of communication, science is differentiated from other forms of communication by the application of concepts as observing devices. According to Luhmann's theory of functional differentiation, the problem of China policymaking touches on the very concept of society. It has to do with a discrepancy between a specific way of observation of society and operations of society as a whole, or more precisely, a discrepancy between self-observation of the state and operations of a functionally differentiated society.

Problems in making foreign policy ensue because the state (mis)recognizes itself as the center of an integrated national society and is unable to adjust itself to the reality of functional differentiation. Today, the organizing principle of territoriality has become irrelevant to various communications taking place at the global level that a normative model of international relations based on the distinction of state system can no longer describe international relations in general and the U.S.-China relationship in particular. Observing what enable international communications at a second level, one can see that
international relations are constituted by a number of distinct institutional orders that reducing them to one political logic has profoundly simplified the complexity of the forces that have constituted modern societies and world order.

The distinction of the state system

The idea of a normative state system of international relations is not accidental but a result of social-cultural evolution. The state system first appeared in the writing of the 17th century German political writer Pufendorf. Pufendorf defined a state system as “several states that are so connected as to constitute one body but whose members retain sovereignty (Wight, cited in Little, 1995).” Pufendorf used the idea of a state system to describe the German states after the Peace of Westphalia, which ended the Thirty Years War in 1784. The Peace Treaties of Westphalia, which grants a state exclusive authority within its own geographic boundaries, marked the beginning of a new structure of international relations. The principles of state autonomy and territorial integrity were adopted by European states by the beginning of the 19th century and have eventually extended throughout the world after World War II. The Westphalian model of state system, including territorial sovereignty, the formal equality of states, non-intervention in the internal affairs of other states, and state consent as the foundation of international legal agreement, became the core principles of modern international order (Held and Mcgrew, 2000). This model, as Stephen Krasner (2000) has noted, offers a simple and arresting image of the nation-state. More particular, the principles of autonomy and territory order the minds of policymakers. “It is an analytical assumption for neo-realism and neo-liberal institutionalism, both of which posit that states can be treated as if they were autonomous, unified, rational actors.”

129

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The combination of territory and sovereignty has created a form of inter-state system based on multiple sovereignties (Taylor, 1996). Sovereignty is a matter of both control over a circumscribed space and mutual recognition among members of the state system. The Westphalia state system laid down the principle of the "society of states" which all sovereign and autonomous states would have to adopt if they are to become equal members of the international order of states. The transplantation of this European concept throughout the world entailed the triumph of the doctrine of sovereignty on an international scale. The acceptance of the concept of sovereignty also marks that sovereignty became the cornerstone of people's identity (Albert and Brock, 2001). That an ensemble of people sharing a common living space and having a conviction of forming a unit with a specific identity is likely to resemble a society. This concept of society, defined in terms of political context, is presupposed in the background of most international relations theories. As Mathias Albert (1999) points out:

The theoretical focus of international theory is on the state, not on the society. Yet it is always there. In most cases, 'society' is meant to comprise all social relations within a territorial state, its boundaries are those of territorial state, and the modern, territorial nation-states is the normative 'container' that hold society together. It is the orderly realm on this side of international boundaries, beyond the anarchic or only loosely regulated 'society' of international system.

This notion of society corresponds to the traditional community-based classical model of the social, which can be traced back to the thoughts of Durkheim, Simmel, and Weber. It presumes a cultural identity corresponding to civic conscience (Douglas, 1993). With reference to this model, one can proclaim a specific combination of difference and
identity, or in traditional language, of the parts and the whole. In most International Relations theories, in particular, realism, the ideas of "international society" or "world society" clearly suggest a differentiation of territorial states and a reconstructed unity of international state system. For realism, the unity of international order, that is, the norm of integration, is power. It believes that all international orders were primarily constituted by and through the actions of economically or militarily powerful states throughout human history. The institutionalization of international political, military, economic, and social relations are contingent upon the policies of the great powers of the day since only they have the resources to maintain conditions for the current orders. On the other hand, for various strands of liberalism, the norm of integration is cooperation. Liberalism believes that economic interdependence, democratic political institutions, and international institutions could create more enduring international relations (Walt, 1998). But whatever the unity of integration, both observations rely on the logic of nation-states as the constitutive parts and international system the constituted whole.

The establishment of the WTO is a good example of observations and operations performed by nation-states with the concept of state system. Despite being an economic agency, the prerequisite for WTO membership is nation-state and its regulations are to be enforced by the states. Observing the world with the state system, nation-states assume themselves as the only players in international arena; any interaction at the international
level must be performed through the agency of nation-states. This state-centric view is also clearly reflected in most observations of U.S.-China relations.

Globalization or nation-states

The current debate on globalization has provided us a starting point to rethink the adequacy of state-centric thinking (Kofman and Young 1996; Held and McGrew 2000). Over the last decade the orthodox approaches to international relations, based on the distinction of internal/external, domestic/international, or local/global have been challenged by a growing amount of globalization literature. Following the collapse of state socialism and the consolidation of capitalism worldwide, coinciding with the rapid spread of information revolution, advocates of globalization believe that the world is becoming a shared social, economic, and cultural space. One of the main themes of globalization discourse is that states and societies have become increasingly enmeshed in worldwide systems and networks of interactions that formation of a global society also marks the decline of nation-states. Castells (2000) suggests that the establishments of international law and organization, the integration of global economy, the expansion of transnational social and religious movement, and the diversification ethnicity within national boundaries have undermined the autonomy and decision-making power of the nation-state. Strange (2000) argues that “the impersonal forces of world markets, integrated over the postwar period more by private enterprises in finance, industry and trade than by the cooperative decisions of governments, are now more powerful than the states to whom ultimate political authority over society and economy is supposed to belong.” Albrow (1996) predicts that the Modern Age of nation-state will be displaced by
a Global Age of personal exploration in which the nation-state and its bureaucratic rationality will be reduced to secondary.

On the other hand, skeptics of globalization question the validity of the globalist accounts. Fulcher (2000) contends that the development of global political organization has indeed reinforced the nation-state through the growth of international organizations founded on the principle of national sovereignty. So globalization is in fact associated with the expansion of the nation-state. Hirst and Thompson (2000) dismiss the claim of a new form of global capitalism by making a conceptual distinction between the idea of an international economy, links between separate national economies, and a universal global economy, an economic organization without borders. Mann (2000) points out that while human interaction networks are now penetrating the globe, they are doing so in multiple, variable and uneven ways. Globalization is indeed a two-way street. The diverse impacts and variable outcomes on different nation-states and regions might weaken some while strengthen other states.

The debate of globalization is interesting to the current study for - not whether globalization really takes place - it deals with observations of communication. Conceiving communication as events self-referentially produced on selected distinctions, one then detects that the debate is really about which is the predominant distinction that enables today's international communication. But while both sides focus on structural changes or non-changes of global order, what is lacking is a comparative framework of communication that enables one to see how global communications are produced. Without a comparative model, both sides cannot see that communication must and can choose distinctions, and it can be observed with regard to the distinctions that it chooses.
or unchooses. In international relations theories, the debate is falsely framed in an either-or dichotomy of "globalization versus nation-states." If one thing is certain in this context, it is that conceptualization of international order cannot be constructed on a linear evolutionary model since distinctions of observation and operation in greater numbers are available, and since the same thing can be distinguished in many different ways. The exponential growth in diversity within the boundaries of the global system leads to a response at the semantic level of societal self-descriptions. But no one subsystem, be it political, economic, moral, or religious, can claim the unity of society from within as each subsystem is part of society. The best way to approach international communications is via a second-order observation to see how communications are played out at a global level.

Method of observation: the theoretical framework

A main point of the case study is to exemplify that state centric approach to international relations cannot adequately describe the complexity of modern world society. The state system uses sovereignty as medium of communication to observe its operations, both inside and between national borders. Using this distinction (sovereignty) to observe (re-enter) themselves in world affairs, states necessarily see the international world as composed of two levels of system differentiation; one international political system formed by nation-states and one national political system formed by various political institutions, interests, opinions, and values, etc. However, state differentiation is just one of many possible forms of system differentiation of world society. Other functional contexts would find it difficulty to observe themselves through the medium of sovereignty and thereby reproduce their system operations. To properly capture the
complexity of modern international relations, I suggest shifting the unit of observation from state differentiation to functional differentiation. I propose the following set of propositions as a comparative model that is able to observe different systems of communication.

1. The concept of society is to be defined, not by an ideal type or human beings or relations between them or territorial states, rather by a boundary-drawing operation. Such an operation produces the difference between the system and its environment and thereby provides the basis for observing the system.

2. A system produces itself self-referentially according to the system/environment distinction. A self-referential autopoietic system is a system that produces its own components, which then participate in the same production process. Autopoiesis allows a system to maintain its autonomy and unity through its very own operations; that is, an autopoietic system is organizationally closed. This leads to the notion that a society is an operatively closed autopoietic system.

3. Social systems use communication as their particular mode of autopoietic operation. "Their elements are communications which are recursively produced and reproduced by a network of communications and which cannot exist outside of such a network (1990b)." In this context, communication is to be conceived as an event produced self-referentially by a social system.

4. System differentiation is achieved through the repetition within systems of the difference between system and environment. Accordingly, "a differentiated system is no longer simply composed of a certain number of parts and the relations among them; rather, it is composed of a relatively large number of operationally employable
system/environment difference, which each, along different cutting lines, reconstruct the whole system as the unity of subsystem and environment (Luhmann, 1995a, p. 7).

5. Modern society is a complex system of communication that has differentiated into a network of social subsystems. Each of these systems reproduced itself recursively on the basis of its meaningful communication. Each of these subsystems observes itself and the environment from its unique perspective, by the selected distinctions they use for their operations. Meaning is the medium in which "observers could fix and dissolve forms, and also could see how other observers give form to what they see or distinguish what they see (Sciulli 1994)." It is because social systems are meaning constituting systems so one can describe very different systems like religion and economy, or politics and family, with the same set of concepts, and thus have a comparative capacity.

6. Each subsystem is characterized by the specific function it carries out. These subsystems become highly autonomous, distinguishing themselves from their environments self-referentially. Modern society no longer has a center but becomes the indeterminable outcome of the interactions among these independent but interdependent communication systems. Modern society is differentiated into various functional subsystems that constitute themselves self-referentially through the development of their own separately symbolically generalized media of communication, such as power/politics, money/economy, legal/law, truth/science, and love/family, etc. Economic system finds the meaning of its operations in profitable communications. Legal system finds the meaning of its operations in legal communications. Scientific system finds the
meaning of its operations in truthful communications. And familial system finds its meaning in affectionate communications.

**Functional differentiation of world society**

With these propositions, observations of modern international relations must start with the assumption of a functional differentiated world society. For if society is constituted by communication and communication alone, there can be only one society today, the world society. And if society is differentiated into subsystems and their environment, the world society is differentiated into the political system and its environment, the economic system and its environment, the scientific system and its environment, and the religious system and its environment, etc. This notion of world society clearly indicates that it does not contain any assumption of social integration. Rather, its only unity lies in its diversity. On the other hand, society can be reconstructed as the internal difference between a subsystem and its environment, and this reconstruction is different for each subsystem. Each of these subsystems observes its own communication, yet presupposes the existence of other systems in its environment. With its internal differentiation, modern society has multiplied its own reality as each different subsystem faces different horizons and is guided by different meaning constituting process. But differentiation always contains two sides: it increases complexity on the one hand and it enables new forms of reduction on the other. "Every subsystem takes on, so to speak, a part of the overall complexity in that it simultaneously orients itself only to its own system/environment difference, yet with this reconstructs the overall system for itself (Luhmann, 1995a, p. 192)." Every function system can, therefore, use its own system/environment difference to reflect the entire system, in its own specific way. For a
political system, for example, society can be understood as the relation of consensus and
the exercise of force. It can then attempt to optimize its own relation to these conditions.
The economic system can interpret society as the relation of need and supply, and it can
optimize its relation to that condition through the establishment of proper price-setting.

Autopoietically closed, a function system performs one function of the society. No
function system can assume the function for one another. Politics cannot observe for the
economy, nor the economy for science, and science for law. But non-substitutability does
not exclude interdependencies - function systems can support or burden one another. A
prosperous economy is a political blessing, and vice versa. The more developed the
subsystems in a society, the less freedom each individual subsystem enjoys. "The
integration of system can no longer be thought of as a process of applying principles, but
rather as a reciprocal reduction of the degree of freedom of its subsystems (Luhmann,
1995c)." Autopoietic closure also leads to the notion that all communication is internal
communication. The construction of social realities always means that modes of
representation are modes of how specific social systems observe themselves and their
environment. Everything happened happens in a system (or many systems) and at the
same time in an (or more) environment. Every observation, description, and
conceptualization presupposes the work of a system (or more systems) and it acquired its
meaning vis-à-vis this (these) meaning constituting system(s).

The above description of world society has several implications:

Complexity: Within the structure of modern society, there can be no one
privileged position of observation. Using political or economic referents to define world
order would drastically reduce the complexity of modern society. This, however, is not to
downplay the importance of the nation-state or the capitalist economy. But it
underestimates the problem of structured complexity. Above all, a one-dimensional
reductionism presupposes a channeling of communication flow that does not exist nor
can even be produced. The complexity of modern society can be defined as a surplus of
possible observations that give meanings to an object, event, or act according to the
observers' own modes of operations and direct and justify their communications
accordingly.

*Resonance and information:* The relation between system and environment is
produced through the closing-off the system's self-reproduction from the environment by
means of internal circular structures. Under the circumstance of autopoiesis, only in
exceptional cases can environmental factors irritate system operation. Luhmann called
the reactions or disturbances that an environment produces within the system *resonance*
(1989, pp.15). The constraints on system's capacity for resonance are attuned to the
system's selection between actualization and potentiality - the process by which the
system constitutes meaning for itself. A system uses its boundaries to secure selective
contact with the environment for the purpose of constructing *information*. "The system
introduces *its own distinctions* and, with their help, grasps the states and events that
appear to it as *information* (1989, p.18)." Information is purely a system internal quality;
it presupposes structure that delimits possibilities. It is through this *difference technique*
that system reacts to whatever is environment for it (p.18). It follows that because
distinctions, possible projections, negations, and information are internal, facts, events,
and problems obtain different meaning with different system reference. In observing
communication, "we have to ask in which difference patterns are facts grasped, which
desired states bring states into relief and how do expectations become accustomed to
whatever appears as reality to them (p.19)," thus the observation of observation.

*The Structural limitations of observation:* The environment is the total horizon of
possibility; "it is the system-internal correlate of all references that extend beyond the
system (1989, p.22)." The environment is a construction on a system’s part when the
system uses the difference of self-reference and other-reference or internal and external
reference to order its operations. It is the horizon of a system, and can be pushed back by
selections, brought about different possibilities. The environment always changes, but
only in accordance with the system’s own position. Thus a system can only see what it
can see. It cannot see what it cannot see, and it cannot see that it cannot see this. This is
the inevitable blind spot of self-observation. Nevertheless, a system that observes other
systems would have other possibility. Second-order observation can “observe the
restrictions forced on the observed system by its own mode of operation. The observing
system can discover that the environment of the observed system is not constituted by
boundaries at all, but, perhaps by constraints. It can observe the horizons of the observed
system so that what they exclude becomes evident (1989, p.23).” A second-order
observation denotes that every operation and every observation has structural limitations.
An observing system can only react to the environment it is in, and this applies to second-
order observers too.

*The Observation of Functional differentiation:* The unity of modern society lies in
its functional differentiation of communication. “This means that, today, each of the most
important subsystems of society is directed to a specific and primary function that
pertains to it alone (1989, p.34).” Using the distinction of self-reference and external-
reference, function systems structure their communications through a positive and negative code value. In this way, the unity of self-reference and external-reference are replaced by a difference, a positive and negative evaluation of observation and operation. Only with this achievement can a system conceal its self-reference that would reveal the tautology and paradox of its operational bases.

By coding communication about reality, a function system can channel all further information processing into its domain. It is through operations of the universal yet functional specific media codes that some of the most important domains of modern society are formed, such as money/economy, power/politics, legal/law, and truth/science, etc. Luhmann's theory of functional differentiation explains modern society's extraordinary performance and complexity, but it also reveals the problem of the negligible resonance capacity among the subsystems and of the relation of society to its environment. The problem of modern society's relation with its environment has been well analyzed in his *Ecological Communication* (1989). Luhmann acknowledged that "the theory of functional system-differentiation is a far-reaching, elegant and economical instrument for explaining the positive and negative aspects of modern society." But, he continued, "whether it is correct is an entirely different question (p.35)." This is a paradox of systems theory, and indeed of all general theory.

**Observations of China's entry to the WTO**

The objective of WTO, designed in the final round of GATT negotiations, known as the Uruguay Round, is to reduce tariffs and other barriers to international trade and to eliminate discriminatory treatment in international commerce. The creation of WTO is a self-referential operation of a division of the economic system that aims to establish the
world a zone of free trade through agreements of the states. But with the complexity of
world society, an operation within the economic system not only affect those in the same
system; it is also observable by others. It was treated as information on the basis of a
pattern of difference, through expectations that are fulfilled or not. To be sure, self-
observation constantly accompanies whatever operations taking place within society. It
often creates additional effects of its own that turn out to be in opposition to the initial
operations themselves intended. The public protest against WTO policies and operations
during the 1999 WTO meeting in Seattle was an example of such a scenario. Labor
groups including the AFL-CIO and Teamsters protested the WTO operations as an
exploitation of developing countries' cheap labor. Farmers in many countries worried that
reducing tariffs on imported food would threaten their livelihoods and endanger the
security of heavy food-importing nations. Environmentalists also joined the
demonstration, arguing that the WTO failed to include environmental protection in its
operations. Human rights activists staged a demonstration against the Clinton
administration's support of China's bid to join the WTO. For the WTO, these were
unwanted complications. But for other observing systems, their actions were no more
than operations of their self-observations.

Likewise, the PNTR bill is by no means a simple political or economic measure.
The bill immediately acquired a surplus of meaning in the context of U.S.-China
relations. The end of Cold War and China's economic reform have increased possible
observations in the relations. The Tiananmen Square incident has made human rights an
unavoidable observer in any U.S.-China encounter. The fact of China being a communist
regime presupposes ideology and national security necessary concerns in most cases.
Traditional policy analyses treat these concerns as national interests issues that need to be addressed by the political system. But from systems theoretical view, they are more of independent observers as they confront different horizons, face different possible realizations, and produce their communications with reference to different modes of reality. Within this structured complexity, an event, whatever the initial distinction on which it is produced, cannot have a fixed meaning but is evaluated as information vis-à-vis different closed self-referential operations.

In the following section, I discuss some of the most important observing systems in the PNTR legislation and their observations as presented in the 106th Congress. Note that this exposition does not exhaust all observers involved, nor do these observing systems themselves closely united organizations with harmonious voices. One can always find different programs devised on a same media code. For example, some human rights activists were optimistic about the positive influence by incorporating China into the international community while others believed human rights abuses would continue. The purpose of the exposition is to exemplify the structured complexity within the environment of China policymaking.

**The economic system**

Economic system includes all the observation using the distinction having/having not in guiding operations. Today, the economic system increasingly observes and describes itself through the form of the "global market." The WTO represents a reification of such an observation. In a spatial sense, the system is identical with the globe. One can certainly re-enter the having/having not distinction into the system and identify further differentiation of hierarchy or inequality. Or one can introduce other
forms of distinction to differentiate between capital and labor, or between market, 
production, and service enterprises, or between financial center and periphery. But 
whatever the forms of differentiation, the system can always find its unity in the 
communicability of money, which expresses the distinction having/having not 
monetarily.

However, in the context of U.S.-China bilateral negotiation of trade agreement, 
the economic system inevitably acquires a "national" quality. The system now means 
American economy. But this distinction is indeed a political one. The unity of American 
economy lies not in the economic system's operations but in the political system's binding 
power over economic policies. As the political cannot observe for the economic but can 
still impose limit on its operations, different economic subsystems seek to influence the 
political to the extent that optimizes their autopoietic operations. This is the point of 
resonance between them and the PNTR legislation.

For those who have invested interests in the Chinese market, the PNTR vote 
would determine what can and cannot be actualized in their horizon. James Whittaker of 
The High-Tech Coalition on China, which comprised of thirteen high-technology trade 
associations, spoke before the House Commerce Committee. He emphasizes the 
importance of the high-tech sector to the American economy. "The high-tech sector is a 
strong and important contributor to the U.S. economy. The high-tech industry is the 
largest manufacturing sector in the United States, employing 5 million Americans in 
1999... Granting China PNTR, coupled with the significant market reforms in China 
embodied in its WTO commitments, will ensure our industry is able to participate fully in 
this critical market (2000)." For those who intended to distinguish themselves from the
world labor pool, the vote would determine whether they can maintain that difference (in
the view of investors). George Becker, President of United Steelworkers of America,
testifies:

...PNTR, this is not a trade agreement, this is an agreement for financial
institutions and for multinationals to allow them to build factories in China and
export the goods back to the United States. They're looking for cheap labor,
they're looking for the absence of environmental controls. They're looking for the
maximum profits, and they would go from any country to country that's going to
offer them the max return in that regard (2000).

In any case, the vote would not change the systems but the environment in which
they operated. The meaning of the vote was understood not with reference to the Chinese
market or cheap foreign labor but to the systems' autopoietic reproductions.

**Values: ideology and human rights groups**

Ideology, like other observing systems, is a form of observation based on a
specific system/environment distinction. According to Luhmann, a fundamental
distinction that had been developed as a structural framework for ideological content is
that between individual and collectivity (1988). Collectivity in this context may be
referred to a variety of ideas: "to the population of human beings, to nations, to social
orders, or to historically varying social formations such as 'capitalism (1988)." Once this
distinction is drawn, information can be generated, and various self-descriptions of
society can express the implications of this distinction. Since society and individual are
identified in opposition to each other, it posits an external point that serves as a standard
for evaluating social conditions. Society then can be attributed as the source of individual
alienation, unrealized promises of freedom, inequality, or whatever "ideals" not yet realized. But if one observes this construction of ideology from a second level, one sees the tautology of self-reference of such a self-description of society. Meaningful societal self-description cannot be built on pure self-reference, otherwise, the tautology would become intolerable. To "de-tautologize" societal control by means of ideas, ideologies interrupt pure self-reference by developing "inviolate level" of values that conceal the contingency of the basic distinctions and recommend particular strategies for action (Fuch, 1988). "The value-ladenness of a value defines the position from which to observe, demand, formulate interests, and prepare to act (Luhmann, 1988)." This is a textbook example of communication. With this conceptualization of value, I place conservative politicians, human rights, environmental, and religious groups within the same category, for they use a same distinction right/wrong to construct communications. Using this distinction in observation, these groups also share the same environment - the human world.

The prominent conservative republican Senator Jesse Helms (North Carolina) called the pending bill "the most ill-advised piece of legislation to come to the Senate floor in my twenty-eight years as a senator." In remarks on the Senate floor, September 5, 2000, Helms said: "America's principal national interest, vis-a-vis mainland China, is to seek to democratize China, hoping that China will conduct its foreign relations in a civilized fashion, and stop behaving in a rogue fashion, as the Chinese Communists have done for the past fifty years." "The fact is," Helms continued, "the United States has had normal trade relations with Communist China for the past 20 years. Yet Communist China's behavior has not improved one iota -- it has worsened dramatically ... during
those two decades of normal trade." Human rights activists also fear that giving leaders in Beijing more economic power would increase totalitarian rule. Michael Jendrzejczyk, Washington Director of Human Rights Watch, acknowledged that China's economic reforms did lead to more personal freedom for many of China's citizens. "But when it comes to political freedom or fundamental political reform, there is no evidence thus far of trade in itself improving human rights." "However, we believe that the WTO process should be used to push for human rights improvements. Broader trade with China can be consistent with advancing human rights, but only if it is combined with effective, sustained pressure on China to respect basic civil and political rights," states in Jendrzejczyk's testimony before the House Committee on international relations (2000).

The U.S. Commission on International Religious Freedom, a bipartisan multifaith group urged Congress to reject permanent trading privileges for China unless it improves human rights protections ("Religious Group Urges Rejection of China Bill," May 2, 2000). The commission wrote in its first annual report that Chinese government violations of religious freedom increased markedly in 2000, a reference to the crackdowns on the Falun Gong spiritual movement, household churches, and Tibetan Buddhists. They concluded that unless China makes substantial improvements, it should not be granted permanent normal trading relations. The Sierra Club, the nation's largest grass root environmental group also announced its opposition to the trade deal. Executive Director Carl Pope expressed disappointment after the House narrowly approved the bill on May 24, 2000, but vowed to continue the fight for global fairness. He says in a statement immediately after the House vote, "the trade agreement fails to protect workers, their families and the environment. By accepting permanent normal trade relations,
Congress has relinquished what little leverage it had to ensure that values such as environmental protection and human rights are part of our relationship with China (2000).

**Security issues**

Security issues in the U.S.-China relations include China's weapons proliferation, China's concern over American bilateral security arrangements in the region, which include Japan, South Korea, the Philippines, and Australia, the deployment of National Missile Defense (NMD) system, and the Taiwan issue. The distinction on which security concerns are constructed is simple and straightforward: friend or foe. Using this distinction to observe China's WTO entry, the most important question is whether granting China PNTR serve to reduce or increase the risk factor over these issues? Risk communication is always about a future present (Luhmann, 1993b). But what can occur in the future always depends on decisions to be made at present. On the WTO issue, differences in observing perspective are divided by decisions concerning future gain, which presupposes the risk of creating a stronger future enemy, or preventing future loss, which presupposes the risk of alienating a future friend.

Considering China as a future friend, Bill Gill, director of the Brookings Center for Northeast Asian Policy Studies, suggested that China's further integration into the world society will encourage it to accept global norm and will likely be less inclined to disrupt regional and international security. He points out, "I think the trend is absolutely clear to anyone who takes a good look at it. As I said, further integration of China as a stakeholder in the international order, such as through granting PNTR and bringing it into the WTO, will undoubtedly have positive results for U.S. interests (2000)."
Regarding China as a current foe, Joseph Bosco, Professor of Georgetown University's Asian Studies, questions whether it is realistic to expect normal trade relations with a country with which we have such abnormal security relations? "The House vote demonstrated that for this administration and for this Congress, trade trumps human rights. The question the Senate will decide, given China's reckless proliferation, aggression toward Taiwan, and its threats to the United States, is whether trade also trumps America's national security (2000)."

The political system

The economy, values, and security are self-referentially closed systems. Their code-closed operations also constitute the condition of their openness - the resonance with the environment. Because of the differentiation of the selection of their initial distinctions, different systems are equipped with different cognitive capacities that determine, in the sense of both limiting and enabling, their responses to observed events. Like these self-referential systems, the political system is also a code-closed system. But politics also claims a special position in society. As a political tradition, the principles of autonomy and territory still provide the most important concept of self-description for the political system. Even today, politics is still expected to provide social integration and solutions of other function systems' problems.

This all-encompassing self-observation is clearly reflected in President Clinton's appeal for Congressional support. He emphatically states in a speech after submitting the PNTR legislation to Congress:

Supporting China's entry into the WTO, however, is about more then our economic interest. It is clearly in our larger national interest. It represents the
most significant opportunity that we have had to create positive change in China
since the 1970s,… We understand that America has a profound stake in what
happens in China and how China relates to the rest of the world… That's why for
30 years, every president… has worked for a China that contributes to the stability
of Asia,… We can work to pull China in the right direction… The WTO Agreement
will move China in the right direction. It will advance the goals America has
worked for in China for the past three decades, and, of course, it will advance our
own economic interests… We'll be able to export products without exporting
jobs… If Congress passes PNTR, we reap these rewards. If Congress rejects it, our
competitors reap these rewards… Of course, we're going to continue our efforts
not just to expand trade, but to expand it in a way that reinforces our fundamental
values, and for me, the way the global economic system must move. Trade must
not be a race to the bottom, whether we're talking child labor or basic working
conditions or the environment…

Most of the critics of the China WTO agreement do not seriously question
its economic benefits. They're more likely to say things like this: China is a
growing threat to Taiwan and its neighbors - we shouldn't strengthen it. Or China
violates labor rights and human rights - we shouldn't reward it. Or China is a
dangerous proliferator - we shouldn't empower it. These concerns are valid. But
the conclusion of those who raise them as an argument against China WTO
isn't… China is one-party state that does not tolerate opposition. It does deny it's
citizens fundamental rights of free speech and religious expression. It does define
it's interest in the world and sometimes in ways that are dramatically at odds from
our own... But the question is, not whether we approve or disapprove of China's practices. The questions is, what's the smartest thing to do to improve these practices... By joining the WTO, China is not simply agreeing to import more of our products, it is agreeing to import one of democracy's most cherished values: economic freedom. The more China liberalizes its economy, the more fully it will liberate the potential of its people: their initiative, their imagination, their remarkable spirit of enterprise. And when individuals have the power not just to dream, but to realize their dreams, they will demand a greater say... (2000).

Clinton touted economic engagement as the best way to prevent social unrest, open society, and encourage democracy in China, although he acknowledged the process can be difficult. Most critics of PNTR denounced this position as a fundamental trade-off between profits and other policy concerns. From the view of other observing systems, that was probably the truth. But from the view of a second-order observation, a more pertinent explanation has to do with the political system's reduction of complexity and the enforced selectivity.

The recognition of its (the political system's) environmental complexity and the attempt to connect itself to these relations clearly reflects in the speech's incorporation of themes of national security, human rights, democracy, and national economy. But under the condition of functional differentiation, their operations no longer correspond to a shared political territory as each of these systems determines its own boundaries by its mode of self-referential operations. How to cope with its environmental complexity also reflects the political system's self-description. In a democratic state, the political system must increase its own complexity to cope with that of the environment, thus it must use
external reference to observe its self-reference. But in an authoritarian state, the political system can reduce its environmental complexity by imposing its own self-reference onto other function systems, thus using power to observe for the rights/wrong, profit/loss, legal/illegal, etc.

In a democratic system the requirement of its structural connectivity with the environment turns the system's external complexity inward. This means that in non-crisis situations, communication of the political is forced to select from a variety of different system-specific possibilities. Note that in these situations, different policy selections do not simply mean different options among possible choices; it means the selection of different horizons of possibility. The WTO case represented a typical example of such a scenario. A selection of economy also de-selected values, ideology, and possibly, security. By actualizing the economics, other horizons of possibilities recede to the periphery where they reside as a latent yet still possible selections. Although it is not impossible that economic operations can, by accidents or unintended consequences, bring about actualization in different realms of possibility. However, theoretically, there can be no causal relation between events pertaining to different horizons.

Due to its self-description as an all-encompassing system, the political system also incorporates other systems' horizons into its own. This creates a paradox for the political system; it cannot control these function systems' selections yet it is still responsible for solving their problems. A negative value for economics or ideology is also a negative value for politics although what is negative or positive is left for each individual function system to determine. The failure of the human rights groups to expand its operations to China is a problem for the government. The loss of American
labor's competitive edge in the global labor market is a problem for the government. And
the democratic system's inability to incorporate the Chinese political system into its
boundaries is also a problem for the government. The differentiation of political
resonance establishes politics as difference, not as unity. The realities of functional
differentiation demand the holder of political power to be able to facilitate different and
even conflicting communications. This is a practical paradox with no exit.

This inherent paradox is perhaps the reason why politics always oscillate between
overestimation and resignation concerning political possibilities. Politics regenerates
promises and disappointments as it continues to process events amid different horizons of
possibilities. But operating within forced selectivity, political communication
presupposes contingency; and contingency incurs risk. The risk of political decision has a
double sense: a projected future based on the chosen distinction may not become reality
and a past future based on an unchosen distinction may have become irretrievable. In the
current case, it means that the decision of granting PNTR also presupposed the possibility
that not only the promised brave new U.S.-China relations will not realize but America
will also lost its current leverage in dealing with China.

China policy: from the view of second-order observation

The state-centric view of international relations postulates the state as an
autonomous, unified, and rational actor. Foreign policy prescribes actions for the state
with the purpose of pursuing its interests in interactions with other states. But the
problem of this view in the context of U.S.-China relations is that both parties acted like
schizophrenics rather than rational role players. Even proponents of the most
confrontational approach would agree that America’s relations with China involve
elements of both contention and cooperation. Both countries' interests converge in some areas while diverge in others. Unable to produce a complete description of the state by this action framework, observer of the state copes with this difficult by introducing time or different level of realities. For example, National Committee on U.S.-China relations (1999) recommends that in pursuing a working relationship with China that reflects U.S. interests and enjoys domestic support, Washington must adopt different strategies by distinguishing between immediate and longer term priorities. Winston Lord, former ambassador to China, denounced the apocalyptic and apologetic views and called for a nuanced, lengthy, and multi-layered engagement in dealing with the differences between U.S. and China (1999). The introduction of temporal or issue-oriented differences into the state's self-description allows the state to act by identifying itself with a future state or a temporary multiple self.

The action theoretical framework presupposes an acting subject who intends to achieve goals by rational calculation. This framework easily leads to the assumption that it is the task of politics to steer society, and this immediately leads to the realization of its failure (Luhmann, 1997c). Systems theory is in this respect in a better position to provide a self-description of the politics and its operations.

In terms of temporal complexity, the difference between past and future, policymaking is an effort of self-steering of the political system that seeks to bring about a desirable future present. Steering, according to Luhmann, means the reduction of a difference; it is "a very specific use of distinction, namely the attempt to reduce the difference (1997c)." When driving a car, for example, steering refers to the reduction of a difference in the spatial relationship of a movement. In a firm, steering refers to the
reduction of the difference between a projected earning and current earning. In politics, it may refer to efforts to keep one in office, which means the reduction of any temporal complexity, such as an election, between now and then. In this sense, all self-referential systems are also self-steering systems; it is almost impossible to let the future come as it comes. Based on the structure of its autopoietic operation, a system always projects a future state and subsequently direct its operation to reach that state. The meaning of future is understood as whether an imagined system state can be achieved.

Despite the use of different terms, this discussion of self-steering system does not differ too much from that of action theory. But once the concept of steering is re-entered into the notion of functional differentiation, a totally different view of social steering emerges. First, as there is not a privileged position in a functional differentiated society, politics cannot represent or even steer society. According to Luhmann, "...the fact that society is differentiated into functional systems which are not only distinct objects each with its own will and difficult to control but also different ways to realize the whole society as a distinction of sub-system and sub-system environment is difficult to reconcile with the concept of central steering (1997c)." This leads to a second point that the political system is only one system among others which are working to achieve their intended futures. "Attempts to minimize differences take place everywhere, they are everywhere the making of society, and at the same time society produces different by allowing difference-minimizing programmes to start and operate under functionally specific aspects (1997c)." Every subsystem in society constantly steers itself by its specific vision of future present. The political system is no exception.
Within the context of U.S.-China relations, every observing system has its intended goals and seeks to minimize the difference between two points in time. So observing with the distinction of minimizing a difference in profit or loss, one division of the economic system may attempt to include China in the WTO while another attempt to exclude it. Observing with the distinction of minimizing a difference in human rights violations, a human rights group may attempt to use PNTR bill as its leverage. And observing with the distinction of minimizing a difference in possible challenging to American security, some policy analysts believe that WTO membership would draw China into a more cooperative regional and global stance while others see a co-relation between China's economic growth and military expansion.

However, observing with the distinction of power/powerless, both inside and between national boundaries, a political system has no choice but to use other function system's difference-minimizing programs as its distinctions in steering itself. A good economic policy, for example, does not mean that it can revive the economy but that it can facilitate the economic system to steer itself successfully. In this way, politics has weighted on itself the burden of every other systems' steering efforts. So the goals of China policy can be whatever it takes to facilitate those difference-minimizing programs; they include opening the Chinese market, improving human rights, to contain China militarily, resolving weapons proliferation, resolving trade deficits, resolving the Taiwan and Tibet issues, etc.

Phenomenologically, the political system is forced to select amid untenable complexity. It may be able to select one or two or even more but never all possible communications. What to select depends on the meaning that the political system
ascribes to its action. In an election year it may select theme of values and human rights to connect itself to larger votes; in other times it may select theme of economy to secure its political funding. An apparent example is the early Clinton administration's linkage between China's MFN treatment and human rights records but only to de-link them under pressure from business community. The inconsistency in America's China policy has broader roots than policymakers' vagaries. As mentioned, Sutter (1998) suggests that it is the result of pluralistic inputs in policymaking. But pluralism does not explain why the state cannot coordinate its internal differences and sustain a unified China policy. From the view of second-order observation, the problem of inconsistency lies in the problem of complexity, enforced selectivity, and political system's self-reference. Whatever the political selects, other steering efforts will not disappear. They remain in the scene and keep steering themselves toward imagined future states. Politics cannot control these observing systems for it cannot use power to replace money, values, ideology, and, faith. Above all, politics is only one dimension of the functional differentiation of modern society.

Implications for China policy

This second-order systemic approach has painted a much more complicated picture of communication in U.S.-China relations. The state-centric view sees international relations as interactions between two or more states. America is able to maintain a friendly relationship with Canada or Japan but not with China because the formers behave in a manner that is in accordance with American interests. But this action-oriented view operates at a conceptual level that cannot deal with the complexities of modern international relations. Today, economic, scientific, religious, legal, or
moral/value relations that are produced at a global scale no longer have a "national" character. A better definition of "the international" must be understood as communications produced by social systems at a transnational scale. The state system is but one international communication system among others.

It reaffirms that the notion of communication is not to be understood as communicative action, in the Habermasian sense, but as self-referential operations produced by social systems. A successful international communication does not mean two or more nations have reached an understanding between each other. Rather, a successful international communication indicates that a system is able to operate and reproduce itself across national borders in that national sovereignty does not impede its operations. For the state, recognizing itself in an international system is to admit that the distinction on which that communication is produced has become part of its internal complexity. This relation may be forced upon by its environment, but it does not deny the fact of self-reference, for it is above all still a selection. In international arena, a state does not behave as an autonomous rational subject. A state communicates those communications made up its internal complexity, and in that it reproduces itself.

This second-order approach to international relations can eliminate some misconceptions as well as provide new insights to the current U.S.-China relations.

1. Within the context of functional differentiation, a "containment" policy is never tenable, therefore, the debate of "containment" vs. "engagement" is meaningless. Seeing the world through a political map, a containment or engagement policy may make sense in terms of spatial demarcation; but seeing the world through the lens of functional differentiation, the political clear-cut distinction of domestic/foreign disappears and is
replaced by distinctions of profit/loss, right/wrong, legal/illegal, sin/salvation, etc. The world re-emerges along these patterns of difference with a temporal complexity of before/after difference. It is still possible to pursue a one dimensional containment policy by forming militarily alliance, such as the current U.S. Pacific alliance system. But with increased economic, social, and cultural involvement, the overall effect of a one-dimensional containment is drastically truncated. The argument of containment serves little more than political rhetoric that reflects a specific version of political self-description.

2. A systems-theoretical understanding of U.S.-China relations rejects the action oriented scenarios of a positive or negative future China. The pessimistic school predicts a malignant China as the inevitably anti-American power in the 21st century while the optimistic school figures a benign China gently transformed by economic modernization. But the two different outlooks are actually based on a same operation: they predict a future without an observer, or with too many observers. The future is constructed on collective negative or positive memories of different systems, and it assumes a situation in which multiple negative or positive conditions will come altogether. This is a future of either faith or bias. With the notion of functional differentiation, different problems in the relationship are confronted with different possible actualization and negation. It can be predicted that the future of the relationship will still mixed with cooperation and confrontation on different fronts.

3. Another common misconception in U.S.-China relationship is the illusion of a causal relation between discrete events. A common speculation is that WTO membership not only gives important sectors of the U.S. economy greater access to China's market but
also encourages China to move toward democratization and to establish a market economy based on international norms. In turn, the rule of law can facilitate a climate that help improving China's human rights practices. It is not impossible that WTO membership will bring about positive changes in China. To be sure, it increases China's internal complexity. The more complex a system becomes, the more autonomous each individual functional domain enjoys, and the less arbitrary any one subsystem can be. However, it is one thing to say that increased system complexity multiplies its realities and possibilities, yet it is quite another to say that the WTO membership will lead to improved human rights practices. The autopoiesis of communication conforms to the non-transferability of communication. Self-referentially closed, a successful communication in one area will not induce communication in another. Likewise, an unsuccessful communication in one functional domain should not hamper already successful communications. This conclusion discourages the assumption that China's entry to the WTO will bring about other achievements in U.S.-China relations.

4. Observing itself with the Westphalian state system in international relations, the state inevitably have difficulties to come up with a complete self-description as communications of economic, social, scientific, or religious relations no longer correspond to state sovereignty. The theory of functional differentiation can provide a more comprehensive self-description of the state as a system whose unity lies in its difference. Policymaking within an environment of structured complexity must be seen as an act of selection among preexisting communications. In this sense, the political system is not the real policymaker but the one who steers itself by determining whose policy is to be privileged. But whatever the selection may be, the political system must be aware that
no one communication can represent the state as a whole, and an act of selection is at the same time acts of de-selection. With this understanding, politicians can be better informed in anticipating consequences of policy decisions with reference to those unselected communications.

5. Last but not least, this notion of communication suggests that the possibility of a good U.S.-China relationship lies not in an ingenious China policy but in future China's increased internal complexity. The current problems between the two countries are by and large due to the inability of U.S. observers, be it ideology, values, religion, or security, to expand their operations into China. In their dealing with China, these observers' proposed information is denied and no responses of understanding are produced. Such unsuccessful communications must be understood as the result of incompatibility between two different system complexities. For example, when Washington raised human rights issues to Beijing's attention, the real observers in the encounter were U.S. value system and the Chinese Communist system. One used right/wrong while the other used power/powerless in observing the situation. There can be no communication in the current problematic areas unless China forgoes the current practice of using power to observe for value, law, religion, and knowledge, etc. To make things worse, perhaps the single most important observer on the Chinese side is nationalism, which uses the distinction of win/loss to observe itself in every international encounter.

Successful communication between the U.S. and China requires that the two are able to reproduce themselves in their dealing with one another. Such a scenario requires that the two political systems use a same set of distinctions in observing their operations,
which also means they must have similar internal complexity. Incorporating China into the WTO is a good policy for not only does it enable the economy to be further differentiated from politics but it also provides an opportunity for other observers to observe the process of differentiation in the Chinese system. System complexity cannot be forced upon but can be achieved only through a system's own selection and evolution. This evolution is a long-term process.

Conclusion

Luhmann defines observation as "any kind of operation that makes a distinction so as to designate one (but not the other) side (1998a, p.47)." Insofar as the characteristics of distinction are realized, observation does not depend on the observer nor on the method of observation. This concept of observation transcends the traditional distinction between cognition which controls attention and the social operations that enact communication. Observation's asymmetrical nature indicates that information is predetermined by those who observe. Communication is observation based on the distinction between information and possibilities, or in cybernetic terms, between information and noises.

For realism, international relations are communications constructed on the distinction of state system with the information of political or economic power. In this first order observation, distinctions are used but not reflected as a contingency for the observers themselves. "The distinction is postulated but not designated in the designation (Luhmann 1998a, p.47)." Realism does not see its contingency and it cannot see what it cannot see. Observation of the second order includes contingency in meaning and can reflect it conceptually. Most importantly, it can see communications build on other
possibilities. In the case of international communication, a second-order observer can see the international world society as a complex network of communications constructed on various subsystems of communication, each observes itself based on its own selected information, its different meaning constituting process.

After the Cold War and Tiananmen Square incident, there have been more than one observers in the making of America's China policy. Different observers observe and operate based on their own patterns of difference. Each observer makes its own China policy in the attempt to minimize a difference between present and a future present. Complexity presupposes selection, and selection presupposes contingency. In every policy decision, the political system has to determine which communication in its environment is to be privileged. Politics can reduce its own complexity but not that of its environment. Whatever the policy selection, unselected communications would not disappear but remain as part of its environmental complexity. America's inconsistent China policy has its root in the complexity of modern society. Modern society does not have a top or center; it evolves, and cannot be control. Each subsystem "thinks' by re-entering its system/environment distinction into its operation. There exists no observer-independent reality. We observe the world according to our own system internal rationality, and in that we recreate the world. Luhmann call this phenomenon "the facticity of the observer (1998b)."
CHAPTER 6

CONCLUSION

Summary

In Chapter 1, it was argued that political realism is conceptually unfit to offer an adequate description of the complex U.S.-China relations and explanation of the inconsistent and unintegrated characters of China policymaking. I suggested that Luhmann's systems theory has the potential to provide a conceptual basis of a theoretical framework to describe and analyze the situation. Political realism constructs its narrative of international politics entirely on the medium of political power. International relations are reduced to a realm of autonomous state power relations. However, from the view of systems theory, such a narrative drastically reduces the complexity of communications produced within the modern world society. Functionally, state power is just one distinction on which meaningful communication can be self-referentially constructed. Political realism's simple conceptual scheme cannot see that it cannot see the complexity of modern international relations. It adds more confusion to an already confused policymaking process.

A paradox of the above proposition is that the observations of political realism's observation and the situation of China policymaking are exclusively based on Luhmann's...
systems theory. That is to say, systems theory criticizes political realism and analyzes China policymaking based on nothing but systems theory. Instead of avoiding this self-referential circle, following Luhmann, I argued that paradox and circularity are necessary features of all observation. Observation's self-referentiality is extensively discussed in von Foerster's second-order cybernetics, Maturana and Varela's autopoiesis, and Spencer-Brown's law of forms. I introduced the concept of observation, or rather, second-order observation, postulated by these theories in Chapter 2. They provide the epistemological foundation for Luhmann's systems theory. Systems theory is a theory of observation of systemic operations, be it interaction, organization, or society, at a second level.

Systems theory's key concepts were explicated in Chapter 3. I focused on those essential to the understanding of self-referential communication systems. They are the observation devices of my analysis of China's accession to the WTO. Chapter 4 is a comparison of Luhmann and Giddens. According to Luhmann's definition that social systems are communication systems, there can be only one society - the world society. And according to the concept of functional differentiation, the boundaries of society's subsystems can no longer be geography, language, culture, or tradition. Only the political subsystem continues to use territorial frontiers to regulate its operations. Modern society uses meaningful communication to distinguish its subsystems, such as science and economy. These subsystems spread over the globe. Within this context, international relations mean more than inter-relations between states. International relations are operations of one modern society in which different subsystems operate based on their different autopoietic operations. Systems theory is not the only sociological theory that offers the possibility to conceive international relations within the context of globalized
social relations. Giddens' structuration theory and his subsequent discussion of modernity also view social relations at the global level. Why Luhmann instead of Giddens? I present my justification in Chapter 4.

I used the 106th (2000) congressional debate on whether to grant PNTR to People's Republic of China, and thus pave the way for China's WTO membership, as my case study to apply systems theory to an empirical international affair in Chapter 5. I used concepts of systems theory to formulate a set of propositions as my framework of analyzing U.S.-China relations. The framework can be seen as a descriptive-analytical framework designed to guide observation of international relations in general and U.S.-China relations in particular. Based on this framework, I depicted international relations not as relations among territorial states but as system-specific communicative events produced at the global scale. As distinctions of observation and communication increase, the same thing can be distinguished in many different ways. Thus, China's accession to the WTO has different significance to very different observing systems. As such, I identified the root of inconsistent and unintegrated characters of China policymaking in different systems' observations of themselves and their environments. Then, from the view of second-order observation, I defined the meaning of China policymaking as the effort of self-steering of each individual system to bring about a desirable future system state. Lastly, I presented the study's implications for current China debate, which cannot be derived from political realism.

Epistemological contributions

The systems-based framework developed in this study makes a number of conceptual contributions to the study of U.S.-China relations in specific and international
relations in general. First, the epistemology of second-order observation demands that, in observing policy processes, one must ask, "who is making the policy?" This contrasts markedly with political realism in which the state is the taken for granted policymaker. Systems theory does not deny that policies are formulated through state apparatuses. However, if one looks through the administrative processes of policymaking, one can see that the real policymaker is the distinction on which particular policy is made possible. It can be the economy, ideology, or national security. The meaning of a particular policymaking is to be understood in relation to the specific meaning constituting system, which enables such an observation and operation. Policymaking is no other than a self-referential observation and operation of the distinction behind the scene.

The second guideline for observing the formulation of policy process suggested by systems theory is that its communication approach demands a non-reductive investigation of the complex policymaking environment. Political realism depicts the environment of foreign policymaking as an anarchical realm in which self-interested states struggle against one another for power. This self-description of international relations drastically reduces the dynamics of international relations to a one dimensional power relation among states. The systemic communication approach enables one to see the comparability among different communication systems and to conceive the unity of modern society in its difference. Accordingly, the unity of international relations must be conceived as the differential observations and communications based on different modes of system reference.

The non-reductive principle then forces one to face the problem of structured complexity in which the state operates. The increased complexity of modern international
relations has two consequences in relation to the state. First, the more complex a society's subsystems are, the less freedom each individual subsystem enjoys. The integration of the system is also a process of reciprocal reduction of the degrees of freedom of its subsystems. The state's operations are inherently constrained by economic, ideological, moral, and legal principles. Whatever the state does, it must measure its action against these observing systems. Secondly, given a surplus, and the limitation, of the state's possible selections and its operational closure, the state is necessarily operating with a "incomplete" self-description. A state cannot control its own temporal complexity but can only hope its steering efforts, its policymaking, can bring about a more complete future self. However, unless the state changes its self-description as the unit of social integration and control, the state's image of itself will never be a complete one.

The above propositions all led to one conclusion: the diminishing role of the state in international relations. A proper description of modern international relations, as I have tried to achieve in this dissertation, has painted a totally different picture of the state from that of the political realism. In modern international relations, the concept of the Westphalian state system functions no more than a self-description of the political apparatus. It is a semantic invention, and does not provide any meaningful boundaries for meaning constituting autopoietic operations. Territorial units are not autopoietic systems. The state is a subsystem of the political system of the societal system. At this level, we can identify autopoietic operations. The unit of observation is power and not China or America. In Luhmann's systems theory, the state is not a system. A meaningful observation of international relations cannot be made on the distinction of state
differentiation. Based on systems theory, I suggest functional differentiation is a better
distinction to observe international communication.

Final thoughts

This study has adopted a critical stance toward the current international relations
practices and the dominant international relations theory. As mentioned in Chapter 2,
political realism and the Westphalian state systems use one another as their operative
distinctions for observations and operations. They function to reaffirm each other's social
existence. Temporally, political realism and practices of the state system function to
reduce each other's temporal complexity. The reproductions of realist discourse and
international relations on the basis of the state system reduce possible change in each
other's autopoietic operation. New theories of international relations are unwanted
because they increase the complexity of theoretical observation. They introduce new
distinctions for observation and argue that new lines of operation and communication are
possible. From the view of second-order observation, whether a new theory can
successfully challenge the current dominant paradigm is not to be determined by the
phenomena observed but by the acceptability of the observing device. I have introduced a
new distinction for observing international relations in this study, thus adding a possible
temporal complexity into the current political practices and theoretical observation. But
whether it can make a difference in the world is not to be determined by its conceptual
strength or adequacy of description but by the politicians and scholars who observe. This
conclusion again attests to Luhmann's notion of "the facticity of Observation."

169
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170


171

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