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SOCIAL CONSTRUCTIVISM as LEARNING, ORGANIZATIONAL and SYSTEMS THEORY in INTERNATIONAL RELATIONS

By

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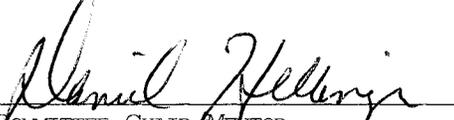P.O. Box 1346
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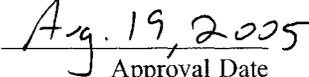KENNETH MORGAN BURKE

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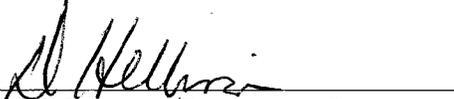
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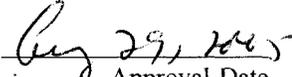
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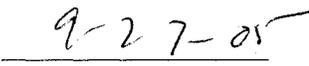
*A special thanks to all those deserving of thanks,
particularly to Webster University and my thesis
advisors for permitting interdisciplinary research.*

"Everyone thinks of changing the world,
but no one thinks of changing himself."
- Leo Tolstoy

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ABSTRACT:
Social Constructivism as Learning, Organizational & Systems Theory
in International Relations

Social constructivism originated with a movement in psychology that was a reaction to behaviorism, which has dominated educational, organizational, and systems theory since WWII, much like social constructivism in international relations is itself based on critique of the neo-realist tradition that has dominated post-world war politics in international relations. Social constructivist psychology, educational, organizational and industrial theory are methods that support general systems theory, a post WWII theory that provided for perspectives with regards to the social organization of modern industrial society. Social constructivist theory in international relations as it has recently been theorized is more of a social theory of international relations. Integrating organizational theory with social theory, sociological methods, middle range international relations theory and the construct of complex interdependence does provide for a theory more consistent with recent trends in mainstream social constructivism. This perspective is supported by synthetic epistemological views in normative philosophy and the origins of constructivism in psychology, education and learning, organizational and systems theory. While understanding the theory in this way masks close similarities to neo-liberal institutionalism, mainstream liberalism does not best characterize the theory. Following a postmodernist critique of the traditional realist and liberal theories of international relations, constructivism provides for a systems perspective that offers potential solutions to problems with the organization of international society that postmodernism fails to undertake. Emphasizing history and mirroring nineteenth century social theory that expressed concern over social forces in international society, in reflection of European imperialism, social constructivism integrates social theory with a systemics to approach similar concerns over societal forces with change in the international system from the onset of the information age, integration and the end of the Cold War.

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INTRODUCTION

International relations theory is a prearranged set of principles based on a system of accepted knowledge, techniques and methods that attempt to explain and predict facts or events which occur within the international system. Theory is concerned with relationships of cooperation and conflict that result from formal or informal relations and interactions between sovereign states within an anarchic system, with the purpose of understanding and predicting the patterns of political interaction between sovereign states in an anarchic system possessing no higher authority. International relations, an area of study that does concern itself with the human behavior in global society, is nevertheless an unpredictable sphere in practice. As such, theories of relations between states are often not entirely scientific and disciplined. This is to say, formal theory does not inevitably inform a well-composed piano concerto of decision-making; but is, in actuality, more like that of the obscure naturalist environment in a nineteenth century Russian novel. Due to the anarchic structure of the international system and the failure of traditional theories of international relations to adhere to modern scientific standards, social and political action in international society is not always focused on quality problem solving in the interests of the state, international organization and society based on the human intellect rather than force.

International relations theory is also pluralistic and differentiated. The politics of global affairs involves the interactions of a "matrix" of sociopolitical thought with at least "sixteen major religious traditions, nearly two hundred states, tens of thousands of international organizations, and more than six billion individuals;" including more than a dozen traditions with conflicting assumptions (Morgan, 2004, 351). Among these traditions is the theory for which research efforts have been focused in the realization of this thesis, social constructivism. This thesis is to explore the potential solutions that the constructivist perspective offers in solving many of the normative questions over theory in international relations and to provide valuable directions for the constructivist project in international relations at multiple levels by focusing research toward its

epistemological and historical origins and methods to expand knowledge in theory development. An introduction will involve a historic discussion of the major traditions in international relations theory, their origins, including the seminal figures and theorists, their assumptions, perspectives on rationality, methods and approaches to decision-making. It is from the mainstream approaches to relations in historical context, alongside modern and recent developments in organizational and systems theory that constructivism is best understood, and which should enlighten its project.

Social constructivist psychology, educational theory, organizational theory and industrial psychology provide for perspectives with concerns to the social organization of modern industrialized existence that support a re-thinking of general systems theory, a systemic perspective based on the ideas and work of the systems theorist Ludwig von Bertalanffy before the onset of an extensive behaviorist movement in psychology. Systems theory, supported by constructivist psychology, makes analysis of systems as a whole, emphasizing a criticism of reductionist thought. Accordingly, a social constructivist theory of international relations involves and goes well beyond levels of analysis in international relations theory. While the theory as it has recently been theorized reflects more of a social theory of international relations, coupling the social theory with middle range theory, specifically the work of Keohane and Nye provides for an international relations theory more definitively social constructivist. An argument for this perspective is itself grounded in social constructivism as it has been defined through developments in educational psychology, organizational, industrial and systems theory analysis.

As such, social constructivism masks similarities with neo-liberal institutionalism and the critique of traditional realist power politic, but shares a similar evaluation of liberalism as that of postmodernism while offering valid directions for solutions based on the critique. In this way, social constructivism primarily reflects the Enlightenment idealism of the eighteenth century and, in ways, the idealism that followed WWI. The idealism of social constructivism is itself best characterized as a systems perspective that integrates normative theory with a social theory. With

the onset of the information age and the increase of global capitalism, the social and sociological perspectives mirror the same 19th century social theory that expressed concern over the social fabric of international society and an image of humanity that responds to, and handles events with a self-interested 'rationality.' The theory reflects upon European imperialism to emphasize the need for a systemics based on constructivist psychology, social theory and sociological methods with similar concern over change in the international system, the increase of economic interdependence and integration at the end of the Cold War. A constructivist perspective in international relations suggests the utility of the analytical construct of complex interdependence, remaining aware the social nature of relations and aiming to incorporate concepts at multiple levels of analysis, organizational and institutional process based upon modern social science.

Including the introduction to international relations as an area of study, the thesis is then divided into four sections. The second section serves a major role in reviewing literature on social constructivism in international relations with further discussion of the focus on the recent undertaking of a theory-building project, which largely neglects discussion of the epistemology of social constructivism and thus does not provide for a complete understanding of the theory at its origins. A detailed understanding of the origins of constructivism and social constructivist thought provides for valuable insight into the theory of international relations. The third section includes literature review and discussion of the origins of social constructivism in education, the cognitive and social sciences in the context of systems theory, including developments in organizational and industrial psychology as well as the management sciences. The epistemological origins will thus provide insight into a structural theory of international relations. The discussion includes the influence of organizational and industrial psychology in support of general systems theory based on multidisciplinary perspectives, historical and social context, with more explicit integration of theories of knowledge and knowing from normative philosophy.

Epistemological perspectives are fundamental to social constructivist learning theory, which social constructivism integrates in order to provide for modern scientific methods in knowing, understanding, or 'constructing' our world with respects to a value for democratic thought in international society and the international system. The epistemological origins of the theory provides a basis for rational state action involving a synthetic view of the rationality of Descartes, Kant, and G.F.W. Hegel, [1] noting that power relations are to some extent necessary, but unscientific. Rational action is based on a reflective, scientific knowledge drawn from both the a priori knowledge of formal theory and a posteriori knowledge of individual and social experience, or a synthetic a priori theory of knowledge in social context. In addition to, analysis involves a historic dialectic mindful of the social nature of relations at multiple levels of analysis, enlightening what social constructivist theory characterizes as state identity, which should equally inform action in relations, based upon Kantian readings of learning, social and organizational psychology. Perspective on the origins of constructivism, including the contributions from organizational theory and industrial psychology, best directs research for the theory of international relations as recently undertaken. From which, the theory provides directions into the management and the role of international organizations as well as the reform of international systems with potential development of an institutional theory in order to guide structural change.

The theory accommodates institutional theory with systems theory to provide for organizational solutions in critique of mainstream international relations theory, approaching potential answers to dilemmas with liberalism while sharing critique of the realist tradition. More specifically, social constructivism in international relations would couple social theory with the construct of complex interdependence in the development of institutional theories to include social theories of international relations at both micro and macro structures, domestic and international political theory, drawn from theory in psychology, educational, organizational, industrial and institutional

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[1] Hegel, G.W.F., 'Introduction to the Philosophy of History,' In Beardsley, M.C., The European Philosophers: From Descartes to Nietzsche, New York: Random House, The Modern Library, 1960.

systems theory. The theory is a *scientific* realism based on normative philosophy and formal theory, pragmatism, and Hegelian dialectics to emphasize dynamic processes of change whilst remaining cognizant of social methods, human psychology, and the primacy of the human intellect. The theory relates to the continental school of philosophy as a normative basis. With valid criticisms of traditional international relations theory, the amalgamation of these multidisciplinary perspectives need inform global governance in the twenty-first century. However, we may question the optimism of the possibilities, just as idealist perspectives throughout history have undermined the realities of international anarchy. Interdisciplinary perspectives are critical to understanding a pluralistic and differentiated society. With debate in international relations and questions over theory, the area has been left in an unruly state of affairs. Idealism in an increasingly complex and technological world necessitates complex ideas and a broad range of thinking to provide for valid and reliable answers in a world of change.

Expanding knowledge from these perspectives legitimizes the theory, provides for an important lens by which to view international relations, and suggests solutions to the problems of global integration. With valid directions for better understanding international organization and the function of international organizations, the theory provides opportunity to improve relations at the juncture between structure and agency with multiple channels of contact. While sharing many of the same criticisms of the realist tradition, the rethinking of systems theory based on social constructivist rather than behavioral psychology offers possible organizational solutions to the mainstream criticisms of institutionalism. However, criticisms of social constructivism as a structural perspective for the international system remain valid. Given the nature of international anarchy, if social constructivism is to provide for the structural solutions that theory has the potential to accomplish, research need be emphasized to provide input into structural level organization and suggest answers to structural problems in the development of the constructivist research project in international organization. Important areas for research are defined in the

course of clarifying the theory. The final section summarizes the conclusions of the thesis. Major conclusions will note that while social constructivism provides for valuable and valid directions to solve criticisms of mainstream theory, other than the social theory in much of the recent theories of international relations, there remains little valuable research in the area of international relations and organizations to provide direction for valid structural level solutions.

Areas of future research is to include a general deepening of the themes incorporated in the thesis, incorporating further research in the area of industrial psychology with the application of organizational and social psychology and the possibility of guiding change and reform of major international organizations at the structural level of the international system. Research for social constructivism could include the integration of political psychology with organizational psychology, and provide insights into formal and informal diplomatic relations, etc. While critical questions are raised over the potential utility of the theory as described, the promises of social constructivism is discussed with the recognition that the methods have been primarily undertaken, and are particularly insightful in areas such as conflict resolution and peace studies, development, and international education, which are important areas for research on the theory of international relations. The values of international education and the support of educational structures to provide for, and promote interdisciplinary, institutional research based on a constructivist systems perspectives cognizant of the potentials of the methods in psychology and with respect for the human mind are discussed are discussed in conclusion. At any length, with the lack of quality research in social constructivism and system theory perspectives focused toward international relations, certainly no singular viewpoint provides answers for the future.

INTERNATIONAL RELATIONS AS AN AREA OF STUDY

Most international relations theorists recognize that the modern area of study began after the world wars with the prevailing theory drawing from the tradition of political realism. Realism has become the dominant and most widely accepted approach in explaining relations between

sovereign states and the international system. As a conventional worldview, realism concerns itself with national and international security in terms of power, with several differing formal views on how power is itself defined and over how a power balance is maintained. The political scientific institution of realism grounds itself in a long historic tradition of political science, as are the other theories of international relations that had developed throughout major epochs of world history. The most recent undertaking in political realism has dominated mainstream theory since WWII, particularly in the United States with the realist theory of Hans J. Morgenthau and Kenneth N. Waltz. However, realist perspectives lack much of its historical origins in a tradition of political theory; and its lineage of thought, genealogy and origins in normative philosophy, like much of international relations theory as a political science, is generally only studied nominally.

Realism and neo-realist theory of international relations that followed the world wars draws its normative principles from a tradition of political science based on the philosophy of the seventeenth century English philosopher Thomas Hobbes among others. Hobbesian political philosophy emphasized a negative view of human nature with the belief that humanity's naked self-interest is the fundamental problem of social existence, and the major obstacle to peace, characterizing life in a state of nature, or state of war. Hobbes noted and described this anarchy as "a perpetual and restless desire of power after power, that ceases only in death," and glorified power as a measure of worth, dignity and honor: "Reputation of power, is power" (In Pojman, 2003, 536, 538). In the first major American textbook on international politics, Hans Morgenthau begins: "The drives to live, to propagate, and to dominate are common to all men" (Morgenthau, 1967, 31). Hobbes developed his political philosophy from the basic concepts of sixteenth century political discourse, after the Protestant reformation challenged a medieval mindset and worldview, when key concepts such as 'state' and 'sovereignty' found secular definitions at the early stages of international relations. Hobbesian thought began at the final stage of violent

religious wars that bloodied Europe, ending in the 1648 Treaty of Westphalia, which established the discourse, norms, and rules for interaction that have defined relations between states since.

Earlier realist writers were historians and civil servants such as Niccolo Machiavelli, whose writings is a manifesto for the elitist power. Realist perspectives go back further to the Greek and Roman cultures and the beginnings of political science with Thucydides, whom influenced much of Morgenthau's initial realist thought directly following the world wars. The development of post-world war neo-realist formal explanations of relations between sovereign states that have dominated to the present day state of international relations was "conducted in an atmosphere that resembles the sixteenth century – a fragmented field, split among various basic principles" (Knutsen, 1997, 4-7; See Barzun, 255-259; 267). For the realist, with no rule of law governing international affairs, maintaining national security and international order is best accomplished through a maximization of a state power and military leverage as high politic atop a hierarchy of issues. Morgenthau noted: "The main signpost that helps political Realism to find its way through the landscape of international politics is the concept of interest defined in terms of power" (Morgenthau, 1967). While differentiated interpretations of history suggest that different polarities in the balance of power are inherently more stable, it is the realist tradition itself that emphasizes power structures over collective security in the best interests of the 'rational' state.

The less organic, structural realism of Waltz emphasizes concepts of the balance of power in creating order and maintaining an international order in an anarchic structural system. National and international security are maintained through power in an international system under anarchy, and enable states to maximize national interests: "with no superior agent to come to the aid of states that may be weakening or to deny any of them the use of whatever instruments they think will serve their purposes" (Waltz, 1979). Waltz echoes the social and political theory of Thomas Hobbes. Accordingly, the nature of relations between states is a conflictual zero-sum game where the authority of the state is not to be compromised. Realism also maintains that the state

acts as a unitary rational individual in increasing its military and power capabilities in order to defend itself in an anarchic state of affairs, to the extent that international, transnational and transgovernmental organizations are not to undercut the command of the state. International relations is itself defined by conflict. Alliances are not assumed reliable or sustainable. Earlier realist writers had defined a realist's rationality as *ragion di stato*, the 'reason of the state.' Important to note, however, is that rationality in decision-making was itself not well defined in the post world war realist theory. Neo-realism does suggest that rational state action implies the state is consistent, has objective, ordered preferences, "and that they calculate costs and benefits of all alternative policies in order to maximize their utility in light both of those preferences and of their perceptions of the nature of reality" (Morgenthau, 1967). Decision-making generally relies on bureaucratic 'rational models,' standard operating procedures, game theory and mathematical paradigms focused on national security, the military industrial complex and military defense.

At any length, in modern international relations theory, the concept of rationality does remain contested with application of theory to foreign policy, the balance of power, the role and action of the sovereign state and organizations in an anarchic system. At the time that Hobbes was writing, social theorists like Spinoza elaborated upon political realism's pessimistic "image of international politics as red in tooth and claw" (Knutsen, 1997, 4-7; See Barzun, 314). Some attempted alternatives to Hobbesian realism, optimistically explaining interactions not in terms of relations between princes representing states, but as cooperation between rational and self-interested individuals in an anarchic system, maintained by a merchant class. Still other seventeenth century scholars sought middle ground theory between Hobbesian pessimism and the optimism of other theorists. With political power concentrated and military command centralized by the absolute sovereigns of European monarchies, following a wave of great wars that stimulated the expansion of the modern state, the Glorious Revolution in England became the catalyst for a re-definition of politics as the English king was forced to accept checks on power.

Theorists John Locke and Immanuel Kant became prominent thinkers, inspired the American Revolution, the establishment of constitutional governments and the origins of 'liberal' institutional theories with Enlightenment idealism (Knutsen, 1997, 4-7, 117-118; See Boorstin, 180-188, 198-206). With other thinkers such as Rousseau and Thomas Jefferson, the eighteenth century brought a much more optimistic vision for humanity with the onset of modern politics.

The Enlightenment project and its contribution to international relations was all-encompassing, presenting social and political answers to the organization of the nation state, regional and global levels based on the virtues of democratic principles as a basis for peace, which were then challenged by the industrial revolutions. The Enlightenment project itself included numerous scholars that drew from the basic concepts of the realist tradition with a social revolutionary vision heightened by the political economic revolutions of the industrial age. Enlightenment thought supports the primacy of the human intellect, humanity's ability to overcome a Hobbesian 'state of nature' and achieve international cooperation and peace. The diverse thought of the Enlightenment project resulted in differentiated views emphasizing liberty and human rights. The social and political philosophies were incorporated into various systems of thought, disciplines, and traditions that ultimately culminated in an age of 'isms,' with the use of the word 'liberalism' first appearing in the English language during the 19th century, alongside radicalism, conservatism, individualism, constitutionalism, and a vast number of other theoretical 'isms.' Liberalism is itself closely related to 'idealism' in support of international organization and collective security, emphasizing the international political economy with the belief that interdependence promotes cooperation between states and democracy in the interests of peace.

Among the 'isms' is another perspective in present-day international relations theory, which is the political and social science of Karl Marx. With historical interpretations of Marxism, the theory of international relations tends to confront epistemological concerns. It is important to note that while Marx found economic capitalism exploitative and abusive, the philosopher notes the merits

of its effects. According to Marxist theory, capitalism has a historic role, accomplishing two goals: "First, it breaks down slavery and feudalism, which are its historical antecedents. Second, it creates the social and economic foundations for the eventual transition to a higher level of social development" (Baalam, & Veseth, 2001, 72). This is the dialectical materialism of Marxist theory. Interpretations of Marxism, like that of V.I. Lenin, known for his role in the last of the great revolutions of the age of revolutions, the 1917 Russian revolution, do not entirely agree ideologically with Marx: "There can be little doubt he would have been appalled at the authority Lenin and Stalin wielded in his name" (Singer, 1980, 93). Although more than "unequivocal in his dogmas of history and economics," Marx had himself exclaimed on more than one occasion: "I am not a Marxist" (Boorstin, 1998, 229). The imperialism of the late nineteenth century was what had decisively influenced Lenin's negative view of capitalism, describing imperialism as the highest stage of capitalism. The orthodoxed interpretations of Marxism are perspectives that mirror a realist's emphasis on the state as rational and unitary where international organizations and markets, as developers of hegemony, are not to undermine the role of the domestic state.

With the industrial expansion of the nineteenth century, revolutions in the political economy with the expansion of global capitalism, colonialism and imperialism of the nineteenth century, Marxist theory of international relations analyzed relations between states in terms of class struggles between rich and poor, master and slave, ruler and ruled. Marxist theory in social and political thought, as in international relations theory, makes analysis of a historic dialectic and perpetual struggle between social classes, in opposition to the liberal theory that blossomed into the nineteenth century laissez fair economics, as with Adam Smith. Behavior in the international system is itself defined by economic status. While modern day Marxism differs from the original thought of Karl Marx, like Realism, it supports that relations between states is inherently defined by conflict, a direct result of the exploitative nature of capitalism. Marxists advocate a strong role for the state in domestic politics and economics. Marxism also undermines international

organizations, believing that they are in effect harbingers of international order, promoting a political agenda in support of capitalist motivations, are mechanisms of domination, and support the development of hegemonic realist and power political nation-states (Pease, 2003, 79-84).

'Idealism' followed briefly the World War I with the establishment of the League of Nations and Woodrow Wilson's brand of liberal thought, viewing the world war as the failures of a realist tradition in relations between states. The League of Nations did not prove to be successful in providing for a collective security arrangement, and with the rise of Hitler another war became imminent. Following the World War II, realism coupled with 19th century 'modernization' and 'development' policies, motivated to promote an American agenda abroad with the onset of the Cold War rivalry with the Soviet Union. The development policies resulted in an enormous debt accumulation in the developing world, neo-Marxist Modern World Systems theory and Dependency theories. World Systems theory focuses on the class relations of the world economy between the core, wealthy countries of the world system and the peripheral countries of the developing world. A number of semi-periphery countries act as a "political buffer between the core and periphery because poor states can aspire to join the semi-periphery instead of aspiring to rebel against domination of the core" (Goldstein, 2004, 464-465). Alongside Dependency theory, Modern World Systems theory emphasizes the lingering effects of imperialism and colonialism. Dependency theory notes the failures of the developmental policies and the lack of sustainable economic growth. As such, the periphery and semi-periphery of the developing world have become dependent on the core states of the world system, which has itself also become dependent on the periphery, developing countries of the global level of analysis as the primary debtors.

Alongside the neo-Marxist theories that developed during the 1970s and 1980s with other competing approaches, perspectives opposed to the American realist tradition attempted to provide alternatives during the Cold War, mainly as the red scare and paranoia of McCarthyism began to recede. However, realism maintained its dominance until, during the 1970s, a number

of events illustrated the failures of political realism in international relations. The first was the 1972 U.S. – Soviet SALT I Agreement with the recognition that a nuclear standoff and escalation of an arms race could have devastating consequences with attempts to "balance the power of the other [which] might not have that effect at all – quite the opposite" (Eichenberg, 2005). [1] The second was the Vietnam War, revealing the limits of military power as the United States became divided domestically, risked its global prestige and caused policy makers to re-think power balancing as a suitable guide. The third event that challenged realism was the 1973 Middle East War, when facing a nuclear alert became a sobering experience to the dangers of escalation. The oil embargo and recession that followed were also events that reinforced doubts over military force, and, more so, "revealed the interdependence of the Western economies – the inability of any one state to recover without harmonizing policies with its partners" (Eichenberg, 2005).

The failures of realism with increasing global economic interdependence resulted in a number of critiques of the theory of international relations. Most noteworthy are writings of Keohane and Nye in Power and Interdependence, which developed the analytical construct of complex interdependence to discuss "the rational cobweb which are systematically unbalanced or asymmetrical" (Knutsen, 1997, 248; Keohane, 1986, 197). The work of these theorists led to, and is primarily associated with neo-liberal institutionalism, a liberal perspective supports the international political economy, international organizations, collective security and the sustainability of alliances. American realism re-asserted itself with the Waltz's 1979 publication of Theory of International Politics, which, though more influential than any other text, incited a backlash and dispute amongst the academic ivory tower scholars of international relations theory. The response to the Waltz's realist thought was in fact a heated debate, which included modern social theories of international relations. Keohane noted respect for the realist tradition and theory with critique and iteration of conceptualizing theory according to the construct of complex

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[1] Eichenberg, R.C., 'PS-51: Lecture 1.2d, Complex Interdependence,' Tufts University, Retrieved March 9, 2005, http://www.tufts.edu/~reichenb/offerings/ps51_index/ps51_lecture1_2d.html

interdependence, which attempts a Kantian synthesis of both realist and idealist theory to achieve nonviolent transitions in the international system when undergoing dramatic shifts in the balance of power. Much of social constructivist theory and the origins of social constructivism provide insight into, and its research project is best focused specifically on developing insights into international organization. To achieve peaceful transitions as the international system undergoes dramatic structural changes with the increase of economic capitalism, theory need center on promoting valid and reliable structures through organizational theory and sociological methods.

Many of the responses to Waltz's neo-realism, specifically the social theories of international relations of the late 1970s and early 1980s, influenced the social constructivist development of a theory in international relations. The end of the Cold War muddled international relations, forcing formal theorists to redirect their efforts toward new issues other than a bi-polar balance of power. New paradigms resulted, including the foundations of social constructivism from social theory, and other perspectives such as postmodernism and feminism that developed in the 1970s, which critiqued traditional theories of international relations. With critique of liberalism and realism, postmodernist theories, even outside the purview of international relations, are often categorized with of constructivist theory, including educational, organizational and systems theory that developed from movements and advancements in psychology. The theories remain in the peripheral of international relations theory, critiquing mainstream theory primarily for not recognizing critical and social issues, such as, for example, the role of gender. Many of the postmodern theories of international relations that had become influential following the Cold War asked critical questions over traditional international relations concepts such as 'sovereignty.' Diverse and differentiated as the perspectives may be, like the pluralistic world itself, the three traditional theoretical approaches have most considerable influence with neo-liberalism closely related to developments with structural realism, and Wallerstein's world systems theory, as well as other Marxists theories, receiving their share of fair attention in international scholarship.

Table 1: MODERN THEORIES OF INTERNATIONAL RELATIONS

REALISM: Power politics and power political structures, the sovereign state is the most important actor in international relations, the state is a rational, unitary actor that acts like an individual in its own best interests, international organizations and market forces are not to undermine or impede the power and interests of the state, international relations is conflictual based on negative views of human nature.

LIBERALISM: International order and security are best maintained through collective security and international organizations, including economic relations emphasizing IPE and interdependence to promote global harmony, liberal institutionalists still maintain the state as rational and unitary.

MARXISM: International relations is analyzed according to the relationship between wealthy 'core' countries and poor 'periphery' countries, the state is a rational unit, relations between sovereign actors are inherently conflicual due to the exploitative capitalist world economic system.

If the Cold War had not left relations in a limbo over international affairs, the terrorist attacks on the World Trade Center certainly did. "Someday, the date 'September 11' will need a year after it," Goldstein, introduces in an editorial compilation of articles concerning "the day the world changed . . . there is little need to rehearse the full story" (Anderson, et al., 2004). The author continues to express that we vaguely refer to the events as 'September 11' or 9/11 "both to avoid repeating the painful specifics and because nobody is sure yet where the events are leading us . . . we are still sorting out what has and has not changed in our world and our lives" (Goldstein, 2004, 52). A review of international relations theory suggests three mainstream approaches for answering why it happened. Realism takes the center stage in attempting to solve the problem with the war in Iraq and the fears of another attack in the United States or elsewhere. However, critical questions remain over theory with increasing interdependence and technological change. Liberal theories with their support of international organization through transnational and transgovernmental agents and the establishment of multiple channels of contact between states are critiqued for lacking valid and reliable systems. While the state-centric power politic presents a dilemma, liberal theory risks the problematic of imperialism and its potential consequences.

As noted, this thesis explores the insights that social constructivist theories offer at multiple levels of analysis, including at the organizational and institutional, to aid in the development of the theory offers the structural solutions with the increase of globalism and the information age. Social constructivism is a family of theories with "many members who share some characteristic family resemblances;" the theory includes a number of variations on core constructivist claims, each of which is easily conversant with theorists often characterized as neo-liberal institutionalists, "like Robert Keohane, who is a frequent gate-crasher of many such family gatherings" (Knutsen, 1997, 279). Expansion of knowledge of constructivism will suggest that its methods include the synthetic architecture of Kant's account of reason, incorporating rationalist deductive mathematical and analytical knowledge and the inductive knowledge of experience into a synthetic a priori theory of knowledge. When integrated with organizational, institutional and systems paradigms, the theory provides for the development of social theory with middle range theories of international relations. A full and in depth exploration of theories of knowledge and knowledge acquisition in normative philosophy with interdisciplinary study will also suggest integration of theory at their epistemological origins, based upon similar developments in education, industrial and organizational and systems theory. Epistemological perspectives and developments in cognitive and organizational psychology do provide for directions for solutions to traditional criticisms of 'institutionalist' perspectives in support of international organizations, sustainability of alliances, and a collective security respectful of a pluralistic international society, etc. If research on theory is focused in the right direction, social constructivism suggests influential potential in contributing to international relations and a quality course for change.

REVIEW OF SOCIAL CONSTRUCTIVISM IN INTERNATIONAL RELATIONS

Theories by the name of social constructivism in international relations have received attention over the past decade. The perspectives that have come to be known and characterized as social constructivist were first applied to international relations by Nicholas Onuf in 1989, and were

then detailed by Friedrich Kratochwil and Alexander Wendt, each suggesting differentiated perspectives for a theoretical approach to international relations. Alexander Wendt (1999, 10-15) maintains that the constructivist genealogy in IR is itself drawn from the social theories of postmodernism, feminism, symbolic interactionism, and structuration theory. Goldstein (2004, 141) discusses constructivism with postmodernist theories of international relations, noting postmodern theory is pre-occupied with the criticism of traditional theories, specifically realism, rather than providing for an alternative, which constructivism has attempted. However, many theory-based commentators have noted that the ambiguity of constructivism as it has begun to be theorized in international relations is problematic in support of the overall acceptance of the approach, which is evidently an obstacle in instructing it as a perspective. In general, criticism notes a lack of unified content to determine how a constructivist approach to international relations would be best realized to the benefit of theory and practice in international relations.

Table 2: SOCIAL CONSTRUCTIVISM IN INTERNATIONAL RELATIONS	
? ●	Theorizes: state identity, rules and norms, social theory. "Anarchy is what states make of it?"

The theory of international relations does lack recognition of the foundations and epistemological origins of the theory, and is incomplete of many critical perspectives from the theory at its origins. In most cases, a social constructivist perspective in international relations is not a theory, but a methodology recognizing the necessity of realism, but also drawing from critiques of realism while following mainstream critiques of liberalism in attempting to provide for solutions. The social constructivist methodology does lack critical detail from its origins in the development of the theory for discussion. Social constructivists in IR have maintained a postmodernist's skepticism of traditional approaches with the development of a theory. As noted, rather than simply an analysis of state interest like realism, the literature on social constructivism emphasizes

the importance of interaction between international actors, and develops state interests, state identity and how they change with interaction. Traditional concepts such as anarchy, sovereignty and regimes are understood in how they relate to social and political cultural norms in international relations, including both legal and nonlegal rules. (Goldstein, 2004, 140-141) A review of constructivist and social constructivist theory based research and formal theory in international relations illustrates the lack of content and that the theory as it has begun to be theorized reflects primarily a social theory of relations with differentiated strings related to the traditional theories of international relations and specific epistemological or ontological views.

In most cases, these are the basic claims and foundations of a social constructivist theory to international relations that have generally become accepted for those theorists that have sought to expand knowledge of the theory. However, they are often minimalist explanations of a constructivist understanding of what may inform rationality, deserving a more in depth examination. The most substantial contribution in directing the social constructivist project has been the formal theory of Wendt with Social Theory of International Politics, which defines a foundational ontology that the author draws from the social theory of international relations by Ashley, Kratochwil and Ruggie. Wendt's contributions to theory is certainly an in depth and comprehensive development, which itself may be aided with a further examination of the origins of the theory. Neo-realism and its Critics presents the criticisms and debates surrounding neo-realism, including social theoretical perspectives from Ruggie and Ashley that have influenced social constructivist theory in international relations, including Keohane's own insights, to which Waltz responded in the book itself. Wendt (1999) follows these social theorists of international relations by providing what the author notes as a theory that competes with Waltz, but also supports it 'in some ways,' (12-15) with the recognition that there are many systemic theories and that no theory in and of itself effectively provides for an explanation the international system.

The contributors to the compilation of social theorists, edited by Keohane, and responded to by Waltz, appropriately, as Wendt has drawn from these authors, suggest similar view in terms of supporting Waltz in some ways, while also criticizing the theory of international relations. As there are multiple perspectives for the theory of international relations, the sociological foundations are critical perspectives to consider. The commentary of Ruggie (1986), among the theorists that have criticized neo-realism, begins with a discussion of the sociological methods as an evolutionary social theory, reflecting Durkheim's sociological methods (131-132). From brief discussion of these methods, each of the authors draw detailed correlations between Waltz's neo-realism and Wallerstein's Modern World Systems theory. Waltz's main argument in support of realist perspectives for security, economic order, and approaches to global management are set within a sociological framework. The theorist suggests structural realism could itself only be challenged by dramatic shifts in the balance of power, as with the end of the Cold War that followed not long after publication of the theorists' writings, or if the structure of the system were transformed into a hierarchy. The author details neo-realism as a mirror to Marxism, a perspective shared by the other theorists. Ashley (1986, 255-260) also notes neo-Marxist theories of international relations, Ruggie's identification of the correlations between the neo-realism of Waltz and Wallerstein, and then discusses each of the realist theorists that dominate the field.

Accordingly, these authors do suggest a similar positivist epistemology as that of Waltz, while still criticizing the neo-realist theory for not recognizing insights from social theory and other areas of study. According to the theorists, in order to provide for the continuance of a sustainable structural system in international relations, a neo-realist synthesis needs to account for the social dimensions of relations and source of structural change without neglecting the potential of change. In accounting for structural change, Ashley (1986) criticizes realism for not accounting for social processes as a part of history, in reference to power politics, and for the same vulnerability of an autonomous political sphere, alienating political processes from social life

(290-292). From a respective point of view, the social theorist details a dialectical model in anticipation of the social and structural processes of change in the international system that neo-realism evidently ignores. Wendt (1999) incorporates a discussion of the same, emphasizing that neo-realism does nevertheless account for change in the international system based on power structure, relating the use of power to state identity (15-18). The themes are well detailed by Keohane (1986, 1-26, 158-203) with perspective drawn from theorists of the realist tradition in international relations that have noted the same and have attempted to solve realism's dilemma.

The social theorist Cox, (1986, 210-236) unmentioned by Wendt, elaborates on the need for analysis of historic structures within a framework of action, noting the problem of hegemony, problems relating to imperialism, and exclusion of the social forces, which need in fact be recognized with the internationalization of the state, global integration and the increase of global economic capitalism. Reductionism with state centrism, limited levels of analysis and power politic results in a lack of critical objectivity when held up to standards of modern scientific methods. Post-war theory lapses from a scientific realism as "too fuzzy, too slippery, too resistant to consistent operational formulation" (Ashley, 1986, 161). Cox (1986) notes that international relations is a case where academic knowledge, reduced into separate spheres, leads to "mythical revelations," fragmented knowledge, theory and practice (204). For this specific reason, Ashley (1986) faults realism for vulnerability of an autonomous political sphere, which: "left them [realists] to the power-blind eyes of liberal interdependence thinkers and the questioning eyes of radical theorists of dependency and imperialism" (260-261). The traditional positivist lore of realism is thus itself faulted for not allowing for insights from social theory, sociology, economics, and psychology.

Social constructivist theory in international relations does differ from social theories inasmuch as constructivism specifically focuses on the active construction of relations between states rather than merely the interaction between states. The theory thus also relates to the political theory of nineteenth century political theorists that came to influence the study of international relations in

the post Cold War environment with a re-exploration of the definitions, norms and rules of international relations discourse and the normative origins of formal theory in political philosophy. The recent undertaking of a theory of international relations that has been characterized as social constructivist begins again with questions concerning international organization and concern over social forces in the international system at the end of the Cold War with Onuf's World of our Making. Many of the questions with end of the bipolar rivalry, the increase of global integration, and issues following the terrorist attacks on the World Trade Center are noted in Keohane (2002) – the author approaches debates in present-day theory from institutional perspectives, recognizing new sociological methods and theories for creating and maintaining international order (1-19, 51). To any extent, social constructivism is not necessarily a new perspective in the development and historical purview of international relations theory.

To this extent, the social theory does differ from recent social theories inasmuch as Wendt downplays epistemology for ontology, believing epistemological perspectives tend to confront tribulations and differentiated views. The views do support reasons for which Wendt (1999) notes the necessity of a clear definition of systemic theories, and the need to recognize social structures and political cultures in the relations between states (7-18). The majority of perspectives in theory-based research follow the core ontology of Wendt, or other perspectives that have come to be characterized as social constructivism, rather than a historical or in-depth epistemological analysis of the origins of social constructivism, while also providing for précis, critique and feedback on the core theory as undertaken by Wendt. For example, research by Copeland (1999, 187-212) is an analysis of Wendt's foundational work on theory as ontology, arguing for social constructivism in international relations with a critique of Wendt's argument against structural realism and traditional approaches. Hopf (1998, 171-200) similarly follows the ontology of social constructivist framework for theory building to follow through with other research in the attempt to clarify the core of social constructivist claims with critique of the research project at present.

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The research notes constructivism is a challenge to realism, and Copeland, (2000) expresses that Waltz's neo-realism is "a particular target for constructivist arrows" (187). The author then begins to detail the influential work of Wendt as the most sophisticated and challenging constructivist critiques of the realist tradition. The research discusses Wendt as a moderate theorist, elaborating upon Social Theory of International Politics. The author notes that while Alexander Wendt has contributed to theory, the critique of structural realism has its flaws. The analysis as defined by Copeland correlates with much of the theory-based research by Hopf (1998), noting the common criticisms of social constructivism; the author questions whether or not "it can buy into mainstream social science without sacrificing its theoretical distinctiveness," and evaluates the failure to develop a research agenda that can effectively provide alternatives to mainstream theory (171). The research nevertheless suggests that Wendt is accomplished in the attempts to elaborate upon the core constructivist theory of international relations, acknowledging that Wendt has achieved for constructivism what Waltz had achieved for the realist tradition.

The theory-based research concludes, suggesting: "the promise of constructivism is to restore a kind of partial order and predictability to world politics" (Hopf, 1998, 171-172). The analysis by Copeland (2000, 189) itself does remain less optimistic, believing that Wendt's argument that anarchy has no logic, but only Hobbesian, Lockean, or Kantian cultures, suggests that the neo-realist and neoliberal paradigms remain strong competitors to social constructivism in explaining changing levels of cooperation. Each of the discussed literatures suggest for greater clarification of social constructivist claims in international relations, relying on the need to distinguish between conventional and critical constructivism, and suggesting a research agenda that provides for more valid alternative understandings of mainstream international relations theory. The divergent perspectives are respectively defined by Knutsen (1997) as a relativist string of constructivism based on postmodernist thought and an empiricist string of constructivism based on ideas in social theory and sociology as epistemological in origin (280). Each of the authors

identify the similarities between neo-liberal institutionalism and social constructivism, and, in the same way each of these perspectives on constructivism in international relations reflect more of an institutionalist views as a simple, 'rational,' individualist or conventional constructivism, downplaying epistemology for traditional theory, rather than social or historical perspectives.

The theory-based research does discuss epistemological and ontological concerns in social constructivist theory alongside noting the importance of state identity, but without adequate detail on what exactly is meant by state identity. An analysis of constructivism by Guzzini (2000, 156-7) also suggests two divergent threads of constructivist thought, one drawn from epistemological origins and a sociological constructivism drawn from critique of rationalism, positivism and individualist relativism. Guzzini (2000, 147-182) and Checkel (1998, 324-348) offer sociological approaches, more epistemological and of difference to the ontological perspectives drawn from Wendt. Research from Checkel (1999, 545-560) examines European institutions to argue a social constructivist understanding of the historical process. The theory-oriented research by Checkel (1998, 1999) and Guzzini (2000) emphasizes sociological understandings of institutions and action rather than what is termed 'rationalist' or positivist methods for state action. Accordingly, the research suggests more a social theory rather than reflecting neo-liberal perspectives. While Checkel (1999, 545) notes the need for the 'rationalist toolbox,' Guzzini (2000, 156-162) emphasizes an sociological view, which the author refers to, and characterizes as a sociological constructivism; criticizing individualism in favor of collective and a social intersubjectivity.

The difference is the difference between American and European theories of cognition, organization and development that do have epistemological origins in normative philosophy and theories of knowledge and acquisition. The European string emphasizes social development and downplays individualism "in favor of social representations. These representations are images and concepts jointly created and used by members of a community" (Morgan & Schwalbe, 1990, 148-164). Social constructivist perspectives in favor of social representations represent the

critical, sociological or empiricist constructivist thought based on critique of positivist rationality. The criticism of individualism – reductionism and a tendency toward a lack of responsibility in adhering to norms – is agreeable as noted with concerns to state-centrism, bounded rationality and perspectives from organizational psychology. With the critique, the author notes that constructivism is a rejection of individualist analysis as: "Worst-case thinking . . . preparing for the case that people did behave according to purely materialist egoistic desires," (Guzzini, 2000, 158-60) for which the theory of Waltz is noted as an example. To this extent, the research rejects the positivism of Waltz, as noted in criticism, as well as Lockean empiricism; which does not extend freedom from violence in disputes. Lockean culture has a different 'logic' than Hobbesian, noting its empirical nature of the senses as one of rivalry rather than enmity in it's representation of self and other (Wendt, 1999, 279). Lockean views are common institutionalist perspectives, primarily represented by a globalist agenda of institutional and corporate agency.

However, while social constructivist theory regards itself as a theory that provides the solutions that postmodernist theories fail to develop, and as learning concepts and organizational perspectives are only noted with discreet brevity, the research falls short of expanding upon valid insights from constructivist theory. The origins in education are critical. In understanding the potential solutions that the theory provides, and to expand upon the possibilities of developing improved organizational and institutional paradigms, a critical examination of the functions of organization drawn from critical views in learning and psychology is necessary. As the instructional and organizational models based on constructivist thought are perspectives that support development in systems theory, providing for a more in depth discussion of the epistemology of social constructivism is required. Perspectives from the epistemological origins are necessary to the development of the theory in order to direct the research project for social constructivism toward the possibility of improving upon institutional theories of international relations, rather than mere critique and re-dressing of social theories of international relations that

originated with the discussed criticism of Waltz. Through the organizational, industrial and systems theory that has developed from, and has incorporated constructivist psychology, lays much greater potential and possibilities for the constructivist project in international relations.

Although these epistemological origins are not identified in the international theory developed by Wendt (1999), the author does make discussion of systems theory in the advance of a social constructivist theory of international relations (7-18). The theorist discusses that the implications of systemic theories of international relations are reason for the theorist's criticism of neo-realism and neo-liberalism "for not recognizing the ways in which the system shapes state identities and interests" (Wendt, 1999, 7-18). The structural theory of Waltz is a theory at the international and domestic level of analysis, reflecting methods in behavioral psychology rather than constructivist psychology. The mainstream theory thus suggests a different systemic theory of structure in international relations, noting the mistake of thinking of systems theory as a perspective only equated with realist power structures and politics, or the structural neo-realism of Waltz. We may conclude that the perspective the theory undertakes is the constructivist oriented systems theory based upon a rethinking of a systems theory by Ludwig von Bertalanffy, which preceded Waltz, but which was riddled by systemic applications of behaviorist persuasions in numerous areas.

A more extensive analysis of social constructivism from such a perspective, as a methodology rather than a theory of international relations, is suggested by Checkel (1998), arguing that constructivism has succeeded in broadening theoretical discourse, but that social constructivism "lacks a theory of agency" (324). As such, recent theoretical underpinnings for social constructivism have sought to integrate insights and assumptions with middle-range theory, critiquing neo-realist and neo-liberal theory not according to their assumptions and ideas, but what they ignore, which is the content and sources of state interests and the social fabric of world politics. The theory-oriented research draws from the research by Finnemore (1996), Kaztezenstein (1996) and Klotz (1995) to discuss how international institutions reconstitute state

interests, noting the need to develop reliable organizational and institutional theories of relations. The author then notes study of the United Nations Educational, Scientific and Cultural Organization. The research comments on the organizational changes these organizations need and have begun to undertake with the changing discourse at UNESCO an example of the potential development for constructivism in international relations as an institutional theory.

In Checkel (1999, 549), the author discusses institutional theory, to give emphasis to a sociological and constructivist understanding of institutions and European integration rather than the 'rational choice' or historical institutionalism. The forty-year European project of integration is discussed; noting that there has been has been little focus on researching and identifying the socialization and identity-shaping effects. The author argues that both rationalist and sociological perspectives are necessary for understanding the construction of European institutions and why Europeans are divided over integration, which "has led to a fundamental shift in actor loyalty and identity, while others claim the opposite" (Checkel, 1999, 545). The author indicates that the dominant rational choice and historical processes need be supplemented by more sociological understandings, implicit in terms of the dynamics of social learning, socialization, routinization and normative diffusion, suggesting a more organizational approach for social constructivism in international relations theory. The argument, based on the belief that research need be driven by dialogue, favors the constructivist approach critical of individualism as only loosely epistemological.

Like Wendt (1999, 326-336), concepts of learning are discussed in the context of structural changes, based on models not exclusive from on another. Checkel (1999) extends the argument with human rights, summarizes findings and concludes that at the intersection between structure and agency of actors "norms, discourses, language and material capabilities interact with motivation, social learning and preferences," need be a point of research emphasis (546-558). The author also notes the need for processes of social learning in organizational and institutional theory in international relations, and the need for the development of new models for decision-

making that addresses issues from both sociology and rationalism, which does have valuable insights into the constructivist research project. The author then emphasizes that epistemological and sociological perspectives offer greater theoretical coherence. The author notes the two major strings of middle ground theorizing for social constructivism in international relations. As with a elucidation of the theory that followed the end of the Cold War, as discussed by Guzzini (2000, 156), social constructivism is noted as a challenge to mainstream theory which is critiqued as an unscientific positivist science that does not recognize or respect the social nature of relations.

The social construction of knowledge specifically concerns the sociological string of social learning detailed by Wendt (1999), characterized as "complex" rather than "simple learning" (327). The theory-based research differentiates the epistemological perspective from the ontological observations of Wendt. The author does not completely reject ontological arguments in constructivism, summarizing constructivist double hermeneutics as epistemologically about the social construction of knowledge, and ontologically about the construction of social reality. The perspectives, as defined, relate to a key precept in social constructivism, which is the intersubjective nature of knowledge. The research gives attention to the social construction of knowledge and intersubjectivity in institutional processes and international relations theory, separated from individualism. In order to illustrate the problems of individualism, Guzzini (2000) notes how intersubjectivity relates to international relations theory (165). The author relates the social construction of knowledge and intersubjectivity to diplomacy as an example of an area best 'characterized' as social constructivism, alongside the international media and journalism.

The author concludes that the intersubjective interdependence of units of analysis must become a research agenda on its own before linking levels of analysis with concepts of power and power balancing. The theory-based research characterizes social constructivist perspectives on the analysis of power alongside those perspectives in international relations that have sought to re-interpret power relations during the 1980s, suggesting a neo-liberal perspective on the balance of

power. The author emphasizes a sociological context for power, relating to analysis by both Ashley and Bourdieu. Power is discussed in relation to intersubjectivity, which in itself identifies "the sociological and interpretive turn in constructivist international relations – knowledge is a social construction; international politics is not simply a series of individualist choices in a naturalized environment, but a social construct defining and constructing identities" (Guzzini, 2000, 174). The author concludes the promise of social constructivism in international relations.

The social theoretical perspectives provided by these authors do relate to the discussed origins of post Cold War social theory in international relations with the emphasis on historical and social structures, critique of logical positivism and strict individualism as failing to meet modern scientific standards. The historical and epistemological perspective on social theory and the origins of social constructivist theory is important to consider, particularly as much of the theory-oriented research for the theory of international relations seems to lay much emphasis on the critique of realism based upon Wendt's ontology and meta-theory. Investigating the epistemology of social constructivism is equally beneficial to further an investigation of social constructivist perspectives, including the relevance and necessity of institutionalist theories of international relations. Guzzini (2000) argues that the recent success of social constructivism in international relations is linked to the social science of Ulrich Beck's "reflexive modernity," and the effects of the end of the Cold War upon international society, emphasizing the need for epistemological approaches (147-182). As reflexivity is a central to constructivism, it is argued that Ulrich Beck and 'reflexive modernity,' with an awareness of the limits of technical progress, is the foremost historical development of social constructivist theory in international relations.

Important to note, as by Morgan (2004, 360), is that the international relations theory of Keohane has been characterized a social constructivist, from an interpretive school that itself notes the importance of the interactions between states from a social scientific perspective. Recognizing the constructivist elements of institutionalism is purposeful, and many of the developments in

organizational, institutional and systems theory based on constructivist psychology have the potential to improve upon the 'liberal' institutional theories of the 1970s by focusing on the structure and process of international organizations internally and their relationship to the external environment. It is insightful to interpret the analytical construct of complex interdependence in terms of constructivism, and to couple social constructivist theory with middle range theory and institutionalist systemic perspectives. In addition to theory on interdependence, Keohane suggests an idealism with increased global economic integration. Keohane (2002) refers to a sociological perspective integrated with traditional theory: "What I call sophisticated liberalism," based on premises of the sophisticated thought of social and political philosophers like Kant that sought alternatives to political realism "precisely because they have seen the world in terms similar to those of the realists – not because they have worn rose-colored glasses" (52-53).

Table 3: 'TYPES' OF CONSTRUCTIVISM IN IR LITERATURE

SOCIOLOGICAL:	Social construction of knowledge, intersubjectivity, anti-positivist, collectivism rather than individualism, epistemolo-gical, 'social constructivism' originates with reflection over European imperialism and questions raised over the social organization of international society, discussion of organ-izational and 'complex' learning theory with state identity.
CONVENTIONAL:	More individual than sociological, intersubjectivity, less epistemological than ontological, reflects a state-centrism and international relations view like that of neo-liberal in-stitutionalism to postmodern, conventional research remains critical, characterized by 'simple' learning, more 'rationalist.'

In clarifying and expanding knowledge, it is important to identify the origins of 'constructivism' and 'social constructivism' were labels given to a movement in psychology based on theories of cognition by the Swiss psychologist Jean Piaget and the Russian social psychologist Lev Seminovich Vygotsky, referring to how individuals actively construct knowledge. The major perspectives before constructivism were several forms of behaviorism, riddled with dichotomies –

rationalism and empiricism, subjectivity and objectivity, etc, i.e. Kantian dualisms. Traditional psychology insisted on universal attributes of the mind and universal laws of learning. Piaget's psychology was a reaction to the behaviorist tradition of psychology, which is also true of a recent systems theory and the organizational movement that began in the 1970s, sharing views similar to a social constructivist critique of political realism at multiple levels. Constructivism seeks to solve the historical problem of psychology, its failure to recognize the active mind and understand structural transformation in organization and development. Ernst von Glasersfeld (Weinberg, 1975) related social constructivism as originated in the writings of Piaget and Vygotsky to the field of systems theory. The educational theories drawn from constructivism are instructional perspectives that support developments in organizational, industrial and systems thinking, facets of systems theory first developed by Bertalanffy following WWII. The theory is critical to understanding social constructivism in international relations, but never discussed.

Just as constructivist theories in education and organizational theory support general systems theory, a social constructivist perspective would seek to support and provide directions to many of the structural problems that result with increased global integration, with endeavors focused on providing for solutions to the mainstream critiques of liberal institutionalist theory based on a shared critique of realism. As an area of needed research, the investigation provides for the foundations and directions needed based upon the organizational and industrial theories that have developed from, and have influenced multiple areas of study. In order to develop perspectives on social constructivism in international relations, organizational theory, the analytical construct of complex interdependence and a number of interdisciplinary scholarly works will be utilized. The methods from learning, organizational and systems theory elaborate upon, clarify social constructivist methods, and inform its perspectives on decision-making and rational action at all levels of analysis in international relations theory. Research in the theory of international

relations need emphasize development of new industrial paradigms, noting that complex problems necessitate complex solutions with greater systemic and environmental awareness.

In the same vein, while reductionist views will fail to solve problems with globalization, realism and behaviorist thought need not be entirely undermined and should be viewed as complimentary methods in the organization of international society based on democratic thought. The conventional wisdom in education may best clarify constructivism. As with Keohane and Nye (1989) whom speak of the failures and successes of their research to express: "no one has developed a coherent theory of learning in international politics" (267). The guiding principle is that the different educational theories and models that inform instructional and organizational design are not necessarily to be viewed as competing. The implication for international relations theory is that agents, organizations, and even the state can learn as a collective system. Accordingly, research on expanding knowledge and usage of social constructivism in international relations is best approached through the development of an international systems theory as it is supported by both educational theory, organizational and industrial psychology. These critical areas must gain greater interest and support in the hierarchy of issues, for which a decline in positivist state-centric perspectives is necessary in the development of newer paradigms for international relations with concerns over the juncture between state and agency.

EXPANDING KNOWLEDGE AND USAGE

In advising directions for the social constructivist project, the necessity of drawing from the micro foundations of constructivism, cognitive psychology and organizational theory, in order to aid the development of a structural theory and describe how structure does affect the identities of agents in international relations, has been suggested. Systems theory is itself concerned with systems as a whole. For this reason, Checkel (1998) notes that the constructivist approach to international relations reaches "well beyond the level-of-analysis" in traditional international relations theory, (325) and levels of analysis are emphasized by Guzzini (2000, 156) as levels of

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observation. In many ways, systems theory dates back to antiquity with Greek philosophers that had created systems of ideas in addition to answering questions about the organization of social life, as with, for example, Plato and Aristotle. The philosophers of the Enlightenment followed in the same tradition and answered questions over social organization by influencing the establishment of democratic governments. With the global expansion and industrial revolutions, modern industrial life again faced questions over social organization. The first to develop the ideas and applications of modern 'systems theory' was Bertalanffy, who, following WWII, sought to develop participatory models and systems tools for the organizational and management sciences that dawned with the industrial age. General systems theory is an interdisciplinary area of academic study. With critique of Newtonian assumptions in the organization of social and political life, systems theorists emphasize concepts such as "wholeness, directiveness, teleology, and differentiation [that] are alien to conventional physics," and which "are, in fact, indispensable for dealing with living organisms or social groups" (Bertalanffy, 1969, 34; See Peterson, 2003). [1]

Newtonian science is in many ways embedded in our modern systems, based upon the belief that all of nature could be known and calculated by a rational mind from the workings of a constant and static universe with no beginning to the workings of atomic structure. Newtonian mathematics thus supports a mechanistic view of the mind, life and society, which is the rational basis of the logical and analytic schools of philosophy based upon absolutes and the existence of absolute knowledge as the foundations for reason and rationality. Epistemology and theories that concern how knowledge of the world is acquired and validated are critical to understanding systems perspectives and its relationship to more modern science. The logical and analytic school originates with philosophers such as Rene Descartes and Aristotle, and is itself supported by the post war logical positivism with philosophers such as Carnap, Hempel, and Reichenbach. The

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[1] Peterson, J.E., 'Systems Perspective, History and a few insights,' Retrieved July 16, 2003, http://www.oberlin.edu/faculty/petersen/ENVS340/340%20Overheads/340.05SystemsPerspectiveIIHistory&Insight.ppt #517,5,Slide%205

scientific realism of Descartes influenced much of the historical origins of the political realist and power political tradition with the social and political philosophy by Thomas Hobbes. Descartes supports that verifiable knowledge exists independent of experience, which requires basis on doubt and reflexivity, and is itself defined by the philosopher Immanuel Kant as an a priori theory of knowledge. A priori knowledge is the formal deductive logic of normative, formal theory including mathematical knowledge held as natural or statistical laws sovereign from experience, whereas experiential or posteriori knowledge is of the senses rather than of the logical mind.

Kant believed that neither the a priori knowledge of logic nor the posteriori knowledge of experience were accurate, and defined a synthetic a priori theory. The social and political thought of Kant and others such as Jean-Jacques Rousseau belong to a tradition of philosophy that followed the age of reason with the Enlightenment thought, and which had been an inspiration to, as well as rational justification of the American movement for independence and the establishment of constitutional governments. The age of reason challenged the medieval worldview, following Descartes famous edict 'cognito ero sum,' basing reason on doubt, contesting the doctrines of faith and empiricism of the sensations as obscure subjectivity. In critique of pure reason, Kant had argued for the basic and necessary role of both essentialism and a priori knowledge. The philosopher supported Enlightenment ideals, the primacy of the human intellect and rational powers while reflecting an early romantic tradition with the poets Schelling, Schiller, even Goethe, and German idealists such as Fichte and Hegel. German romanticism "felt quite in harmony with Kant's epistemology" (Gadamer, 1994, 7-19) and embraced the mutual understanding between an organic experiential psychology and reason. While the later romantic traditions and systems of thought have lacked the same judiciousness, Kant's contribution to modern philosophy is itself comprehensive, from epistemology, to ethics, and judgment, etc.

In so many ways, with the establishment of a constitutional democracy, European thought is found throughout the Declaration of Independence, the Bill of Rights and U.S. Constitution (See

Barzun, 395-396). The movement for independence was itself based upon the Enlightenment idealism embodied by the social and political philosophy of Immanuel Kant. At the same time, one of the "ways in which American experience liberated the New World was by freeing men from the notion that every institution needed a grand formulation of systemic thought" (Boorstin, 1958, 139, 151, 149-168). The founders of American democracy did not entirely identify with the Europe's 'mental prisons' of philosophy. Like Kant's critique, French rationality, of itself, did not suit well the diverse traditions of the differentiated American cultural fabric, and the democratic experiment was as much defined by the natural experiential discovery of explorers and geographers, histories, botanists, environmentalists and the naturalism of 'common sense' as it was by the reason of Enlightenment. With some irony, from the industrial revolutions of the nineteenth century and the mechanization of human life, following the world wars, Bertalanffy's systems theory sought to bring this spirit to international society, based upon modern science, psychology, and social scientific and sociological readings of Kant's epistemology of a synthetic a rational and empirical theory of knowledge. The systems thought offers valid solutions where Kant has left the logic of rationalism divergent to the empiricism of experiential psychology.

Exclusively experiential knowledge, posteriori knowledge, is an inductive knowledge based on the senses of the observer, an empiricism in the tradition of David Hume and John Locke, which are the key names associated with liberalism and the liberal way, alongside, for example, economist Adam Smith. Empiricism reduces the mental faculties of the mind and reason to emotions and experiential sensations of the senses. Locke had expressed belief that "knowledge of the existence of any other thing, we can have only by sensation" (In Pojman, 2003, 686). Hume expressed that knowledge is not "attained by reasonings a priori; but arises entirely from experience" (In Pojman, 2003, 737). The epistemologies of these philosophers of experience have origins in a Homeric tradition of poetry with romanticized, organic, and nearly mythical, subjective views of the mind. The British romantic poet Samuel Taylor Coleridge, for example,

spoke of the psychology of poetic design as the 'spontaneous overflow of emotions,' analogous to the natural and organic growth of a plant, in opposition to the mechanistic and atomistic traditions of eighteenth century psychology influenced by Newtonian thought (Abrams, 1953, 177-183). Through the influence of Hume and Locke, parallel views represent a romantic tradition that found its inspiration and origins with the American Revolution, and, more specifically, the effects of the French Revolution, which, more radical and bloodier than the American, resulted in a fervent revolutionary age in support of Western democracy, human rights, freedom and liberty.

The revolutionary age, particularly the effects of the French revolution and industrialization, created new conduits mass participation in economics and politics, and successfully overthrew the old world order where power was concentrated in the elitist order of European monarchies. The early European romantic traditions also led to the passionate nationalism of the nineteenth century with the burgeoning of economic capitalism, the mechanization of the industrial revolution and global expansion. The industrial revolutions "unleashed an unprecedented dissemination of Western-style capital, products and modes of economic and political organization to all parts of the globe" (Knutsen, 1997, 187). European colonialism gradually transformed itself into rapacious and repressive imperialism, stripping indigenous lands of raw materials to fuel the industrial engines of the ever more competitive modern nation-states. Universal human progress with European scrambles to colonize new lands resulted in "abuses of conquest, commerce, and administration, and wider patterns of military, economic, and racial domination," (Conklin, & Fletcher, 1999, 5-6) which left an ethnic conflict in the wake of the nineteenth century that still affects the world today as many developing countries were born from colonial dominance. The more aggressive Marxist perspectives resulted in the wake of, and following the world wars, mitigating concerns expressed by nineteenth century social philosophers that expressed concern for the social and cultural fabric of international society.

At the turn of the century, European powers were eventually disappointed by the promises of the global expansion. Profits fell, costs increased, and conflicts became more violent than what had been expected. A number of social scientists began to express concerns over human behavior driven by material interests and rational calculation, splintering "the modern image of man as a coherent individual who responds rationally and intelligently to events" (Knutsen, 1997, 199-201). Ulrich Beck investigates modernity's confrontation of the onset of industrial society, reflecting on the problems of social organization and critique of society. Its presence in international relations originates with the self-awareness of European international society at the time of 19th century global capitalist expansion, recognizing that it "could no longer assume or impose its rules as being universally shared" (Guzzini, 2000, 142-182). The social thought of Max Weber asked critical questions over the organization of modern life, correlating with others that expressed concern over the social fabric of international society in reflection of European imperialism, marking the beginning of modern organizational theory and academic disciplines in the management and systems sciences. Weber does follow a tradition of sociology reflecting the early German idealism of Kant and Hegel, in opposition to the more positivist sociology of Emile Durkheim and Auguste Comte. Knutsen, (1997) makes the correlation between the critiques of traditional international relations theory by social theorists at the end of the Cold War and recent attempts to define a social constructivist approach to international relations (199, 278-283). The social theories draw a relationship between the international system following the Cold War with that of the pre-war international system of the late nineteenth century, when the organizational principles that guided social thought and action fell into a dichotomy between rationalism and empiricism.

The social theory brings to mind the story of Faust in the second drama written by Johann Wolfgang von Goethe. The play begins similarly to the first part of Goethe's drama concerning the bored and disenchanted Faust, neither knowledge or love will please him. As Mephistopheles enters the scene, Faust, staring at the limitless ocean, suddenly understands his desires, to develop

the coastline. Mephistopheles agrees to help Faust, with his willingness to help an emperor win a war. No sooner than Faust's agreement, the coastline is transformed from it's organic natural state into an industrial park with factories producing products for consumption and the satisfaction of employing thousands with useful work. Upon admiring the productivity of his work, Faust notes a home nestled amongst some old surviving trees at the center of his industrial complex, inhabited by an old couple, whom are, in fact, Baucis and Philemon, whose story is told in Chapter VII of Ovid's Metamorphosis. Faust has everything he could possibly need or want, power and success, but the view of the home tortures him and he orders it to be destroyed. In order to do so, Mephistopheles must resort to killing the old couple. When Faust finds out about their death, he is astonished at Mephistopheles' actions, disheartened and nostalgic to the point that his accomplishments are meaningless to him. Reflecting on his success, Faust embodies a postmodernist reflection on modernity and the industrial revolutions with the onset of the machinery of the modern world. He remembers the love he left in the first part of the drama after the romanticism had died, and then only wants the simple country life that he had left behind.

With the questions and concerns raised with regards to the organization of social and political life following the industrial revolutions, the onset of modernity and the reflection of postmodernism, perspectives suggest differentiated views on the need to develop newer paradigms, ways of thinking, perceiving and interpreting. Following the world wars, under the leadership of the United States and allied powers, international organizations were established with the attempts to better facilitate international affairs, encourage collective security and cooperation between states, and promote global economic prosperity. Bertalanffy sought to promote the influence of systems theory at the same time, but with the onset of the Cold War, the domestic environment and the international leadership of the United States changed, and the systems science was not well received in post war American culture. Except for security arrangements through NATO alliances, from an internationalist agenda of collective action with support for human rights, the

U.S. mindset shifted to the power political dominance against a Cold War rival. The Soviet Union became the impetus for structural realism. Idealism in international relations was thwarted as political realists, whom outright rejected what had been characterized as "the 'utopianism,' 'legalism,' or 'idealism' that they [realists] associated with liberal writers on international affairs" (Keohane, 1986, 9-10). As the rise of Hitler and authoritarian regimes cast a doubt on collective security, with the Soviet rivalry, political realism swept international relations, which had only been a formal academic discipline of political science since the short time between world wars.

As the "furniture in the stern First Empire style" (Knutsen, 1997, 5-6) defined international relations, American logical positivism contributed to a systemic thinking based upon what was perceived to be a scientific organization of social life. Rather than the rationality of Descartes, based on doubt and reflexivity, the epistemology of logical positivism relies on more Aristotelian formal logic, alongside the thought of Comte and the Darwinist science of the nineteenth century. Aristotle's physics and absolute knowledge, in rejection of Platonic ideas and following in the tradition of earlier Greek atomistic philosophy, supported Newton's mechanical view of the natural world and the human mind (Abrams, 1953, 158-167). With Comte is the rejection of a synthetic a priori knowledge, believing that humanity need transcend the subjectivity of empiricism, the ultimate obstacle that inhibits the pure scientific development of a higher social order. The philosopher expressed that "a perfectly synthetic view of human nature was, then, impossible . . . all must now acknowledge that the Positive spirit tends necessarily towards the formation of a comprehensive and durable system" (In Beardsley, 1988, 732-735). From the behaviorist tradition of psychology to the organizational and management sciences, to the post war political realist tradition in international relations with the political theorists Morgenthau and Waltz, including influence from modern engineering sciences developed systemic applications of positivism in support of the 'Newtonian and mechanical assumptions of the industrial age.

In education and organizational theory, behavioral psychology emphasizes deductive and positivist knowledge based on the power politics of authority and a system of reinforced rewards and punishments to condition behavior in the organization of social life, focused on individual rather than social and collective learning, a stringent skills based instruction and work environment (Skinner, 1986). [1] The psychologist Skinner noted from his experimentation with rats: "Control the reinforcer and you can control the behavior" (See MSIT, 2005). [2] Advances in science during WWII influenced behaviorism: "Skinner's transition from inventive scientist to social inventor can be traced to the circumstances of World War II, which provided him with opportunities to explore the technological ramifications operant psychology" (Smith & Woodward, 1996, 298). The application of these ideas in education, management, and organizational theory were broadened to systems usage with the onset of the modern engineering sciences. Resulting in the 'hard systems' of process and structure, and, as case in point, postmodernist critiques following the counterculture of the 60s and disillusionment with 'the system,' the seminal theorists of post war systems theory were quite "disturbed by [extensively behaviorist] applications of systems ideas in government, industry, and the military" (Hammond, 2003, 1-4, 11-12, 22-25; Hull, 1970, 352-353). All of these developments followed a common behavioral 'rationality' based on the 'logical' thought of Newtonian mechanics and modern engineering, which was, in many ways, had heightened with the onset of the power political bipolar rivalry.

Although there are differing working definitions of the organizational dynamics in universities, a system of process and decision-making as discussed with a positivist power political agenda relates to the bureaucratic institutional culture in higher education. In the classroom, it is a teacher-centered rather than student-centered instructional strategy. The system of structure is noted as anarchical to the extent that in "many research-led universities . . . the bounds of

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[1] Society for the Experimental Analysis of Behavior, 'B.F. Skinner's one-minute description of operant behavior,' 2004, Retrieved July 16, 2005, http://seab.envmed.rochester.edu/society/sound/skinner.ra

[2] MSIT, 'Learning Theories,' Retrieved June, 2005, http://msit.gsu.edu/calandra/it8000/Learning%20Theories.ppt#256,1,Learning Theories

rationality interfere both with observation and interpretation" (Lueddeke, 1999, 237). In the organizational sciences, the view relates to a coercive style of management based on the power of an authority figure to create and maintain order. The theory is an alienating, rationalist and primarily economic organizational science where service and obedience are bought, management responsibility for employee moral is secondary: "Authority rests essentially in designated offices or positions and the employee is expected to obey whoever occupies a position of authority regardless of his expertise" (Schein, 1970, 56-7). With a separation from environmental response and valuable feedback, the role of the individual becomes de-valued from the overall organizational process and action becomes obscured. In much the same way, with regards to contemporary institutions that follow organizational paradigms based on Newtonian mechanics, corresponding to 'manipulative' systems, the 'rationalist' and bureaucratic organizational paradigms inhibit structures to self organize and adapt with respects to life, mind, and society.

Table 4: POLITICAL REALIST INFLUENCE IN SYSTEMS SCIENCE

TEACHING STRATEGY:	Strict behaviorism, teacher-centered based on the deductive knowledge of authority, individual tasks, students are passive learners, individual rewards and punishment, reinforcement and conditioning, primarily skills-based learning through rote methods, with lecture as the principal source for instruction, generally based upon textbook knowledge.
MANAGERIAL STRATEGY:	Behaviorist, authority rests solely with the supervisory and management, isolating, individualistic, skills-based work environment, coercive reinforced system of rewards and punishment, individuals motivated primarily through monetary gains and recognized within the organization in terms of same.
INSTITUTIONAL SCIENCE:	Heavily bureaucratic, competitive culture, 'hard system' in process and structure, logical positivist political agenda, authoritarian and conservative, elitist and power political view, Hobbesian culture of rivalry and enmity, Newtonian, systemic reductionism at all levels, protectionist 'closed system.'

Important organizational and systems theory concepts include conceptualizing systemic thinking in terms of systems of process, of organizational structure, of meaning - or ideology - and of

knowledge-power at multiple levels of analysis - organizational and structural. A system of process is concerned with efficiency and reliability at individual, organizational and systems levels, involving systems decision-making conceptually and operationally. At the organizational stage, the system of process concerns the organizational theory that informs action; at the individual level, it concerns a personal system of how an individual methodologically approaches organizational responsibilities, etc. A system of structure concerns the functions of the organization as related to process, systems of meaning concern the viewpoint, perceptions, interpretations, and interactions of the decision-makers, including improvement strategy (Flood, 1999, 98-124). An ideological system will dramatically affect organizational reliability and efficiency in both systems of process and structure. A system based on positivist Newtonian assumptions, political realism, behaviorist thought, primarily recognizing solely the a priori knowledge of authority will markedly lack valid and reliable systems, fail to recognize the active functions of the human mind and provide for efficient systems at multiple levels of analysis.

The same is true with a political realist bureaucratic culture, making the theory of international relations a "poor candidate to correct the flaws in much institutional work." (Keohane, 2002, 6-8). To this extent, while the organization is constrained by structure, process and the social and behavioral environment both conceptually and operationally, individuals within the organization are inhibited from making endurable and positive change with a changing environment. Reflecting critics of neo-realism, social theorists, in particular, note that international relations finds that it is unable to move beyond an eighteenth and nineteenth century theory and practice. The Newtonian views also suggest why young American academics failed in their attempts to solve the errors of the theory that followed the world wars; theory remained a dark metaphysic of "subjectivist veils," described as "the stuff of legends," noting Ashley's (1986, 263) critique of realism in international relations. For this reason, political realism is itself viewed as unscientific with a reductionist view of the state separate from the whole of the international system,

undermining the possibility of improved methods and the development of new perspectives. While at times reflecting the ancient science of Ptolemy, with the chance that the theorist can claim the validity of seventeenth century scientific methods, Waltz (1986), for example, notes the explanatory value of Newtonian science in support of his theory of international politics:

> Newton's theory of universal gravitation provided a unified explanation of celestial and terrestrial phenomena. Its power lay in the number of previously disparate empirical generalizations and laws that could be subsumed in one explanatory system, and in the number and range of new hypotheses generated or suggested by the theory, hypotheses that in turn led to new experimental laws . . . A theory is not the occurrences seen and the associations recorded, but is instead the explanation of them . . . . For the explanation one looks in classical physics to the whole Newtonian system (32-33, 37).

From such a perspective, Waltz rejects Kantian philosophy and the possibility of any quality or useful social theory of international politics and society. The political theory of Waltz represents a 'pseudo-realism,' that with Morgenthau, among others, following WWII, had also coupled with 19th century 'modernization' and 'development,' with import substitution the symbol of hope for developing countries. The 'rational' development policies resulted in an enormous debt accumulation in the developing world, and eventually the neo-Marxist modern world systems theory and dependency theories that are mirrored to the tradition of post war American power political realism. As noted, the general criticism of realism centers on viewing the theory as unscientific, failing to recognize insights from sociology, psychology, history and economics with regards to the social fabric of international life, and for not providing a theory that acknowledges change and social forces as the source of change within the international system (Keohane, et. al., 1986). While critics that are more ardent argue a medieval mindset, we will extend polite respect for Waltz's theory of international politics as seventeenth and eighteenth century science, since the primary critiques of neo-realism are consistent with the failures of Newtonian thought. The inaccuracies are also consistent with critiques from other views in formal theory, including constructivism in education, developments in organizational psychology and systems theory.

Newton believed time and space were separate, the universe constant and static with no beginning. Einstein revolutionized physics. Time and space are now known to be interwoven and inseparable where solutions to Einstein's famous equation suggests the universe is itself dynamic rather than static, and began at a specific point in timespace. From Einstein's unification of time and space began the work of physicists in the area of quantum mechanics, which investigated the structure of the atom, particle waves and motions in relation to force and mass, revealing significant failures in Newtonian mechanics. As Newton's assumptions about structure, absolute time, space and knowledge are embedded in the perceptual a priori 'logic' and 'rationality' of modern day systems, the work has also revealed sure philosophic as well as systemic consequences. For this reason, educators, organizational psychologists and systems theorists have sought to influence greater respect for structural dynamics and the human mind in the organization of life, critiquing the Newtonian assumptions of the industrial ages and modern systems. The perspectives cannot risk the reductionism of Newtonian thought: "This reductionist conception of nature encourages discipline-based thinking, which makes disciplines distinct and definitive elements of knowledge" (Flood, 1997, 80-81). Reductionism remains among trials of modern industrial life, in addition to, and as a result of, unscientific ways of thinking about educational, organization and management. The critique of these organizational paradigms mirror critiques of international relations theory with the belief that realism fails to provide for an accurate scientific method respectful of the human mind, social life and modern existence.

The work of Niels Bohr first exposed the failures of Newtonian thought. The revelations support critique of positivist epistemology in both the social and political sciences as well as the natural sciences, validating Kantian synthetic a priori theory with knowledge and psychology like Einstein's synthetic views of motions in time and space as 'intimately interwoven,' with other "physical properties of the world . . . interwoven as well" (Greene, 51, 1999; See Capra, 2002). Rational thought is inextricable from perceptual and conceptual knowledge as well as cognitive

psychology, with knowledge and perceptions like the inseparable fabric of time and space without any chance or possibility for absolutes. To this extent, quantum theory reveals the uncertainties of knowledge with numerical data as the only sure a priori knowledge and synthetic a priori theory no more than the interpretation, representation, and expression of probable knowledge (Heisenberg, 1999, 86-92, 94-101, 124-127; Jeans, 1981, 63-69, 125-155). Knowledge of the world is itself entirely dependent on the 'eye of the beholder.' Practice must remain cognizant of relativity in perspective with the praxis of theory in context: "to understand the meaning of a specific practice, event, or indeed text," where perceiver and observer need reconstruct "its historical emergence and place it in the complex web of social and political life" (Critchley, 2001, 45).

Even more so, Heisenberg's uncertainty principle reveals the uncertainty and limits of mathematical knowledge as the final touchstone of rational thought. With the problem of measurement in determining the accuracy of knowledge regarding the momentum and position of particles, matter is itself now known to be bundled waves of mass and energy, composing a framework that would collapse if Newton were accurate (Hiesenberg, 1999, 160-161; Polkinghorne, 2002, 32-4, 56, 58, 77, 107). While work in quantum science itself continues to reveal the inextricability of an a priori synthesis relative to the perceiver in time and space, Kantian perspectives, and the need for more accurate representations of human psychology, the results also lead toward the impenetrable consequences and the dark perplexities of an ultimately unknowable reality with regards to outer and inner worlds. Herein lays the inability of ever being able to arrive at sound verifiable truth, a nihilistic thought in contradiction of reason. Here we find the dark realities with Nietzsche's will to power beyond good and evil and above the law, domestic or international for that matter, and disenchantment of being: "The concept of politics has then become completely absorbed into a war of spirits" (In Hollingdale, 1977, 25). Here, Dostoevsky's dark cellar where the underground man paws for the chance to prove his truth, pessimistic and bitter as the shadowy characters wandering the dark city of a Dickens's novel.

The obscurity of the subconscious with Freudian psychoanalysis, Conrad's heart of darkness as well as Comte's positivism and political realist power politics find their real meanings with intangibility of reality, the failures of classical science and seemingly logical, rational mind.

Within the international system, herein is a power political state-centrism best understood in terms of the Hobbesian dilemma, which is discussed principally in the context of the influence of American realism. The problem of a Hobbesian dilemma results from dramatic shifts and imbalances within an anarchic system, noted with respects to the international system following the end of the Cold War and questions over world leadership as an imbalance of power and the likelihood of authoritarian and predatory states liken when power is concentrated. With uncertainty in international politics, the political realist tradition in international relations by assumption assumes a state-centrism, the maximization of power with military force atop a hierarchy of issues, and power relations in order to preserve the security of the state in an anarchic system: "No human order is proof against violence" (Waltz, 1986, 99). Keohane, (2002) describes the dilemma: "Hobbes's dilemma encapsulates the existential tragedy that results when human institutions collapse" (64). With constitutional government the historical answer to the dilemma, the institutionalist response has sought to resolve the problem through the establishment of international organizations: "by building reliable representative institutions, with checks on the power of rulers, hence avoiding the dilemma of accepting either anarchy or a predatory state" (Keohane, 2000, 68-69). The organizational psychologist notes a similar problem in fulfilling individual needs when alienated from organizational process. For that reason, the individual may fail to fulfill or be aware of responsibilities, to cope with process and structure, even exhibit hostility toward others, etc. With the individual separate in part from the whole, dilemmas arise when policies and practices, work design, or an inefficient process and structure leaves individual needs largely unsatisfied, and thus the lack of good office and organization.

Here we find the depths of a postmodernist sigh. Just as modern physics has encountered 'many worlds of interpretation,' amid the 'prisons of philosophy' and various 'isms' of thought, here we also find a ray of hope. As quantum mechanics affirms Kantian epistemology, it is much different from a Hobbesian atomic science and Waltz's behavioral psychology where "states are free to do any fool thing they care to do, but they are likely to be rewarded for behavior that is responsive to structural pressures and punished for behavior that is not" (Waltz, 1979, 915). In the fabric of human knowledge, modern physics affirms an epistemology that has sought to harmonize the individual with the collective through the psychology of both empirical and rational mind. The failures of Newtonian mechanics in theorizing dynamic structures based on axioms inconsistent with the natural world, in acknowledging and representing change with inaccurate representations of knowledge as absolute, does suggest similar systemic problems in modern day institutions. However, they also suggest solutions based upon the discoveries. From the principle of uncertainty, the work in quantum theory by Heisenberg and Erwin Schrödinger validate a Kantian epistemology with a basis for the social construction of knowledge. Rational and respectful of experiential psychology with true learning, it is informed by organizational principles that recognize synthetic a priori psychology of social structure, context and history.

The core foundations of these perspectives are descriptors of quantum logic, wave mechanics, matrix mechanics and matrix methods, represented by recent work in systems theory and analysis. The methods enable the possibility for organizational solutions, in support of a more humanistic view of domestic and international society based on faculties of the intellect. Numerous social and political philosophers critique the pure logical positivist rejection of posteriori psychology. Each supports applications of perspectives in the advancement and critique of strict deductive epistemologies and positivist science. The continental school of philosophy is a perspective that itself mirrors close similarities to social constructivist methods in education and organizational psychology. As continental philosophers have critiqued the analytic

school, it draws from Kantian synthetic a priori theory of knowledge and brings together theory and practice in systems of philosophy, based upon the faculty of judgment in Kant's third critique of pure reason. Continental philosophers take interest in approaches to unifying the dualisms in modern philosophy that were the result of Kantian thought; and, in answering critical questions about nihilism in modern society, including perspective on contexts. The school of philosophy is interested in bridging the gap between knowledge and wisdom, recognizing the importance of language and the difference between truth and meaning. Approaches incorporate epistemology with dialectic in reflection of the origins of philosophy with Socratic dialogue (Critchley, 2001, 1, 22, 26-27, 29-31, 42-45). As a result, valid knowledge need also involve a Hegelian view with the interaction and dialogue between, if not a synthesis of a thesis and antithesis, in support of the social construction of knowledge based on Kantian perspectives and constructivist psychology.

Table 5: THEORY AND PRAXIS
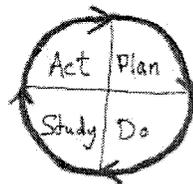
Modern science provides methods for the applicability of these concepts from normative philosophy and theory into practice, based upon the validation of Kantian epistemology relative to the perceiver. With particles waves of energy and mass, though the position and momentum immeasurable and the reality that knowledge is ultimately unverifiable, they may be represented as mathematical objects through matrices with the properties of matter to provide for practical observations. As an example of practices, the formulation of operators satisfies for communication and the relationship between momentum and position of particles, or probable knowledge as a description and representation of observables in the physical world (See Thomas,

1996a). [1] The equation below represents probable mathematical representation of the position of a particle wave based on the calculation of the momentum of the observable, or a wave of knowledge in the fabric of time and space as a mathematical description of probable knowledge.

Table 6: POSITION OPERATOR

Position Operator: x

Momentum Operator: $\dfrac{\hbar}{i}\dfrac{\partial}{\partial x}$

then $[x, p_x] = x\left(\dfrac{\hbar}{i}\dfrac{\partial}{\partial x}\right)\psi - \left(\dfrac{\hbar}{i}\dfrac{\partial}{\partial x}\right)x\psi$

$= \dfrac{x\hbar}{i}\dfrac{\partial\psi}{\partial x} - \left[\dfrac{x\hbar}{i}\dfrac{\partial\psi}{\partial x} + \psi\dfrac{\hbar}{i}\dfrac{\partial x}{\partial x}\right] = -\dfrac{\hbar}{i}\psi = i\hbar\psi$

$\therefore [x, p_x] = i\hbar$ as postulated.

The use of an operator in order to provide for communication and representation of particle waves is like use of an operational definition in formal research methods, techniques and procedures where 'x' represents an operational, descriptive, definitional or categorical position from formal theory, normative philosophy, or the conclusions of previous research. Matrices enable physicists to obtain a mathematical research 'sampling,' for both deductive and inductive scientific methods tested by applying the reverse in the use of a momentum operator as below.

Table 7: MOMENTUM OPERATOR

Momentum Operator: p_x

Position Operator: $-\dfrac{\hbar}{i}\dfrac{\partial}{\partial p_x}$

then $[x, p_x] = \left(-\dfrac{\hbar}{i}\dfrac{\partial}{\partial p_x}\right)p_x\psi - p_x\left(-\dfrac{\hbar}{i}\dfrac{\partial}{\partial p_x}\right)\psi$

$= \left[-\dfrac{p_x\hbar}{i}\dfrac{\partial\psi}{\partial p_x} - \psi\dfrac{\hbar}{i}\dfrac{\partial p_x}{\partial p_x}\right] - \dfrac{-p_x\hbar}{i}\dfrac{\partial\psi}{\partial p_x} = -\dfrac{\hbar}{i}\psi = i\hbar\psi$

$\therefore [x, p_x] = i\hbar$ still as postulated.

In the same way, the above represents a momentum operator based on a calculation of the position for the representation of probable knowledge of the motion and momentum of the particle, or possible knowledge as in the case of the use of an operational definition in research

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[1] Thomas, D., 'Formulating Quantum Operators,' Quantum Chemistry Homepage, Retrieved July 16, 2005, http://www.cobalt.chem.ucalgary.ca/ziegler/educmat/chm386/rudiment/quanmath/form.htm

methods. In the area of research methods, techniques and procedures, Kant's synthetic a priori knowledge is itself best understood as incorporating the a priori conclusions of quantitative research with the less positivist methods of qualitative research in order to compose a research method of scientific and disciplined inquiry: "Scientific and disciplined inquiry is based on a systematic approach . . . . inductive and deductive reasoning with characteristics to produce an approach to understanding that, though sometimes fallible, is generally more viable than relying on tradition, experts, personal experience, or inductive or deductive reasoning alone" (Airasian & Gay, 2003, 5, 8-10, 15-17, 79-85, 164-168). Alongside interpretive and qualitative approaches, ethnography, historical research and grounded theory in research methods, is a process of critical inquiry. The methods enable a procedural and scientific approach for the analysis of formal knowledge and mathematical quantitative data with the development of theory and practice in social, historical, and environmental context. All ethical principles for formal research, consent and freedom from harm are respected, recognizing truths validated by the modern sciences.

> No research study can capture the full richness of the individuals and sites that they study. Although some research approaches lead to deeper understanding of the research context than others, no approach provides full comprehension of a site and its inhabitants. No matter how many variables one studies or how long one is immersed in a research context, there always will be other variables and aspects of content that were not examined. Thus, all research gives us a simplified version of reality, an abstraction from the whole . . . There are limits to our research technologies. (Airasian & Gay, 19, 2003)

The same is true in the modern sciences to the extent that all becomes nothing more than probability. Hence, in order to provide for a balanced approach, the need for a participatory and democratic agenda so that participants may gain from a cooperative learning experience and enable a framework for collective decision-making in communities of practice. Teacher research or action research is a research methodology that incorporates these basic concepts at a more individual level of classroom practice. Action research was first developed for the organizational sciences as early as the 1940s and later broadened to include systemic usage with the development of methodologies by systems theorists (Flood, 1999, 53-6, 58, 68; Weiner, 2003, 320-

321). Data collection may be formal or informal and all-encompassing, including observation, interviews, questionnaires and surveys, and readily available data from the classroom coupled with formal theory and other research. Analysis is carried out through a series of consecutive, iterated spirals in a process of observation, interpretation and calculation of data, proceeding through a number of iterations before arriving at a core solution (Airasian & Gay, 2003, 14-15, 168-169; See Imants, 2003, 295-6; See Kearsley, 2005). [1] The procedure is a 'spiral learning' for continual inquiry and improvement, individual and collective learning to encourage a systemic thinking and to include greater levels of analysis over time with the application of principles in practice.

TABLE 8: Spiral Learning
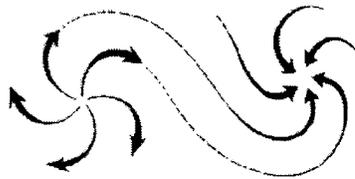
The basic steps of action research involve researching and sharing experiences and the results of individual action research with a professional community. In order to develop a communal practice and the application of theory to practice, educators, or individuals within the organization need a participatory and democratic framework to share experiences. As noted from the theory that first developed the methods, the cyclical nature of the research initiates a natural practice where researcher cannot be separated from the situation as an external observer: "They are co-interpreters and co-creators of the systems of meaning constructed in the process of action research" (Flood, 1999, 54). Research is to steer collective decision-making, professional action and practices toward social change based on collective process, developing a systemic awareness to avoid reductionism in both educational and organizational practices while developing professional communities (Imants, 2003, 296-299, 301-307; Flood, 1999, 54-56). Action research

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[1] Kearsley, G., 'Constructivist Theory (J. Brunner),' Retrieved July 16, 2005, http://tip.psychology.org/bruner.html

enables teachers to critically examine and determine strategies for their own classroom, based on the contextual needs of a differentiated learning community. While the methods did not receive immediate attention in the original organizational theory, the potential for action research methodology in guiding innovation and change did reveal itself and prove useful in education.

- Action research takes time. The participants need time to get to know and trust each other and to observe practice, consider changes, try new approaches, and document, reflect, and interpret the results.
- In action research, the power relations among participants are equal; each person contributes, and each person has a stake. Collaboration is not the same as compromise, but it involves a cyclical process of sharing, of giving, and of taking. The ideas and suggestions of each person should be listened to, reflected on, and respected.
- The interpretive nature of action research means that the participants will develop support to trust in each other and value the project.
- Reflective practice is the mindful review of one's actions, specifically, one's professional actions. Reflection requires careful consideration as one seeks patterns and relationships that will generate meaning within the investigation. Reflection is a challenging and critical assessment of one's own behavior as a means of developing one's craftsmanship.
- Growing and changing are part of the developmental cycle of life. Change is ongoing and, at times, difficult, but it is an important element in remaining effective professional communities. (Airasian & Gay, 2003)

Action research is only one example of how systems theorists have sought to develop methods more respectful of human mind and democracy. First developed by Kurt Lewin, Action research methodology has been further developed by systems theorist Peter Checkland and applied by organizational and industrial psychologists in broadening the field to improve organizational process. Methods include action science, action learning, cooperative inquiry and action inquiry. Action science is a dialectical change theory envisioning change as "the outcome between a thesis and antithesis," focused on dynamic social processes of change (Weiner, 2003, 320-321). Action learning enables researchers to work to understand social theories by applied in the action of the situation. Cooperative inquiry is a grounded strategy with researchers evaluating outcomes in light of collective learning experiences. Action inquiry is a process of developmental inquiry based on feedback from the environment. The systems perspectives enable an individual's ability to improve personal practices through a process of critical inquiry, integrating social practices,

planned research procedure and reflexive learning within systems of process, structure, meaning and knowledge – and are drawn from social constructivist methods in the systems sciences. Accordingly, modern physics validates the methods of social constructivism and systems science in support of social, democratic and egalitarian management sciences in the organization of life.

As contemporary sciences since Einstein has challenged traditional science and mechanics, and systems theorists have begun to define new systems paradigms, with the same arguments against behavioral persuasions, the organizational psychologists of the 1970s sought solutions to the consequences of post-war developments in management, eventually resulting, for example, in the human resource management and human relations movements. Social constructivists have provided for improved methods, based upon a Kantian systems science, validated by modern science and respectful of human mind and psychology in the organization of modern life. The normative philosophy does reflect a more accurate modern scientific methods and progress in instructional design, as is also true with recent developments in the organizational and industrial psychology of systems science. Political scientists also sought alternatives to political realism, which dominated international relations, similarly resulting in a greater respect for human rights in foreign policy. However, where traditional theories are criticized, as in the case of the postmodernist mirror to constructivism and other critiques, social constructivist thought suggests probable solutions through a systems thinking based on emergent paradigms and practices.

"In the Heisenberg relation to quantum physics" and questions over rationalist structures of organization, "problems of order and organization appear whether the question is the structure of atoms," or with the similar trends "that have appeared in psychology . . . psychological atoms as it were," (Bertalanffy, 1969, 31) which brings into question mechanistic assumptions concerning the organization of living biological organisms. Newtonian mechanics suggest problems of wholeness, dynamic interaction and organization with the applications of its principles in organized systems. With Newton's mechanical system interpreted as a science of the mind, "he

put science on the wrong track for two centuries" (James, 1981, 190). It is necessary to study the parts and processes of organization in isolation; "but also to solve the decisive problems found in the organization and order unifying them, resulting from dynamic interaction of parts, and making the behavior of parts different when studied in isolation or within the whole" (Bertalanffy, 1968, 31; Flood, 1999, 80-89; Laszlo, 1972, 8, 22, 29, 113-112; See Rutgers, 2005). [1] The methods, and theory developed is a scientific realism not in the discipline of a power political worldview. It is an interdisciplinary constructivist organizational theory with efforts to conceive a dynamic social theory applicable to modern system, at difference to a mechanical view, and with "a statistical theory of psychology and social organization akin to field and particle theoretical approaches in physical theory" (Hull, 1970, 352). Beyond eighteenth century physics, it now accepted that parts and wholes are necessary not only for a proper analysis of systems, but to lift human beings from being conditioned to reductionist thinking, and, at the same time, to identify the importance of contexts, social theory, organizational psychology and respect for the primacy of the mind.

Table 9: PRAXIS IN SPIRAL LEARNING   .

The Gestalt psychology or constructivism of Jean Piaget was a reaction to behaviorism, critiquing behaviorism for not recognizing the active functions of the mind, reflecting the humanistic tradition of psychology with Lewin, Werner and Maslow. Piaget's constructivism belongs to a tradition of educational reformists that dates back to the late seventeenth century with scholars such as John Amos Comenius. Cormenius was a scholar and reformist that critiqued schooling

[1] Rutgers, 'What is Physics?' Retrieved July 16, 2005,
http://www.physics.rutgers.edu/~lath/271/slides/lec_01.ppt#291,10,Slide%2010

on a number of points with which Piaget had agreed. The educator sought to reform schools from being prisons, reducing rote learning and engaging the interests of the child through the arts, problem solving and project methods, "stirring the imagination by dramatic accounts of the big world" (Barzun, 2000, 181, 407). Comenius reflects the pre-industrial thought of 16th century thinkers such as Thomas More and Francis Bacon, in anticipation of constitutional democracy and eventually the social and political thought of Thomas Jefferson whose plans for education in Virginia were as important to securing the ratification of the U.S. Constitution as drafting the declaration. Social constructivist theory itself adheres to a Kantian view of knowledge acquisition. Learners actively construct their own understandings of a priori knowledge, and need take part in experiential learning with the belief that knowledge and meaning is also constructed posteriori by way of a participatory and democratic classroom. The theory advocates for a collective environment with individual learning to enable students to define their own ideas and develop perceptions, as well as socially to develop appropriate skills through dialogue. Numerous research studies support social constructivism in education with the primary grades and early elementary education, including noteworthy success at junior and high school levels.

Learners actively construct their own understandings of a priori knowledge, and need take part in experiential learning. With the belief that knowledge and meanings are also constructed posteriori, students need gain the critical social skills necessary for a pluralistic and democratic society. Educational theory based on constructivism recognizes that while students learn experientially, in the same way, individuals also actively process external knowledge based upon differentiated experiences, perspectives, perceptions, ideas and beliefs. Much like the Newtonian view of the universe, behaviorist psychology is itself based on the rational assumptions of a universal mind and truths, with students as passive recipients of the formal knowledge of an authority figure. While constructivism bases its values on the universal capabilities of all minds, each and every individual brain is diverse with different backgrounds and experiences, and will

evidently perceive in differentiated ways based upon prior experiences, learning styles, personality types, intelligences, identities, backgrounds and formal knowledge base (Demetriou, et al., 1992, 79, 101-102; Flavell, Miller & Miller, 1993, 1-3). Instructional design thus does necessitate a synthetic learning design respectful of differentiated environments. Learning is itself based on providing approaches with the organization of individual and social instructional architectures respectful of the students' active minds, noting the difference between a logical and a meaningful psychological design. As such, rather than laddered and singular perspectives, constructivists provide for structured but flexible curricular design and a web of knowledge that students are free to explore, remaining involved and active to prevent misunderstandings while not dominating.

To this extent, social constructivism and cognitive theory focuses more on enabling and empowering individuals to develop their own intellectual capacities, beliefs and identities, rather than blindly accepting the knowledge of authority. The principles of Piaget's original models of cognition have developed to include neo-Piagetian models on information processing in addition to cycles of cognitive development and functioning. The development of constructivist psychology and educational theory has also expanded to include sociological models and collective learning theory emphasizing the social construction of knowledge and meanings (Demetriou, et al., 1992, 98-101; Lueddeke, 1999, 246-247; Biggs, 1992, 277-279). The social models note the importance of language and the necessity of recognizing contexts: "the area of application is embedded in the ideological texture of the given society at a given time" (Valsinger, 1992, 65; Biggs, 1992, 283). These paradigms are epistemological models of individual and social cognition that compose the educational theory known as the social organization of cognitive development, or social constructivism (Demetriou, et al., 1992, 2; Flavell, Miller & Miller, 1993, 3-22). The influence of constructivist thought can be found throughout the sciences, from biology to anthropology to mathematics. The critical foundations compose the development of structural

dynamics, or the dynamic structural theory, based on the primacy of the mind, influencing the development of new perspectives in organizational psychology in support of systems theory.

The influence of social constructivism is higher education is primarily in the form of problem-based learning. Morgan (2003) details active learning techniques, a critical social constructivist concept, in the context of teaching international relations in undergraduate settings where important modes of learning such as "building meaning through problem-solving, creating products, role-playing and, of course, conceptual analysis, evaluation, synthesis, and critique" are emphasized (352). Hendry, Frommer, and Walker (1999), as a philosophy "that has major implications for all levels of education" (359) detail a constructivist perspective in problem-based learning. The applications of the methods with medical students are detailed, noting additional research that has been utilized in the field for decades. The techniques involve a structured learning experience with students autonomously constructing knowledge, so that they learn to function and solve-problems in a variety of group settings. Another perspective by Brown, S.W. and King (2000, 245-254) discusses pedagogy with problem-based learning in international studies, defining problem-based learning as meaning making in the context of authentic problem solving situations with individuals that may or may not share their same views, grounding learning in an environment to encourage and develop vital social and collective learning skills.

Higher education is central to the development of a learning society, which need "nurture notions such as life-long learning," and enhance at multiple levels the "capacity to meet international standards as they relate to teaching, scholarship and research" (Lueddeke, 1999, 235). Education is pivotal: "the third estate between the free market and the autocratic hand of regulation and management," in achieving a democratic ideal based on Kantian social and political philosophy (Olssen, 2004, 261-263). Respectful of a pluralistic and diverse international society, interdisciplinary theory need evaluate practice and practice need inform theory. There remains the need to shift perceptions and empower students with the knowledge and skills and an

international awareness by developing the field of learning. Students must be cognizant of the perspectives of "actors beyond their immediate peer groups and larger cultural communities;" students of international relations need understand different political cultural contexts, in development of their perceptions and ideas in the spirit of innovation (Morgan, 2003, 363-365).

With constructivism, multiple perspectives are provided for in order to develop critical thinking and a number of ways of perceiving the context of a situation with an emphasis on cooperative discussion and collaboration, application of principles linked to changing objectives and environments, rather than merely a strict adherence to textbook knowledge. An educator developing an instructional design based on constructivism strives to facilitate an educational culture, constructing an environment to "assist students as they explore it by designing experiences that encourage assimilation and accommodation" (Chin, 2005; CDP, 2005; Groth, 2005). [1] Methods suggest enduring learning comes from a meaningful, social context with the learners as individuals. Instructors motivate the students by involving them in participatory activities where they make choices and take action for their own education. Education strives to educate the whole person, involving meaning and skills based instruction. Learning is challenging, suggesting higher-level questions through both individual and collective learning whereas behaviorism involves lower level questions and independent learning with little opportunity participate in the social construction of knowledge. It is not difficult to recognize why the methods, respectful of the human mind, have had influence in a number of within the natural and social sciences, organizational and industrial psychology, and multiple other areas of study.

The growth in the area of study broadened the strength and vitality of "psychology and its increasing fusion with the social and biological sciences," which suggested new approaches in

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[1] Chin, I, 'Instructional Design Approaches,' An electronic Textbook on Instructional Technology, Washington University, Retrieved March 9, 2005, http://depts.washington.edu/eproject/Instructional%20Design%20Approaches.htm
CDDP, 'CASP Training Program and Philosophy,' Retrieved March 9, 2005, http://p2001.health.org/st02/APpnd1.htm
Groth, L, 'Approaches to Organizational Theory,' Retrieved March 9, 2005, http://www.lars.groth.com/appb.htm

organizational psychology at the time that the field was in its early stages (Schein, 1970, 6-13).

The development of the field of change in organizational psychology of the 1940s, 1950s, and 1960s that concerned itself with a system of behaviorist thought, initiated as organizational psychologists began to center themselves and their work on "a new series of questions which derive from the recognition of the system characteristics of organizations. These questions deal not so much with the behavior of individuals as with the behavior of groups, subsystems, and even the total organization in response to internal and external stimuli" (Schein, 1980, 5-7; See Luedekke, 1999, 251; Imants, 2003, 301). As constructivist psychology is itself based on critique of behaviorism, the organizational theory is also in reaction to the logical positivism in the postwar management sciences. The development of organizational and industrial psychology alongside newer systems perspectives began to emerge when the behaviorist movement that dominated the fields of education and management faced a crisis, surrounded by rapid changes and increasingly technologically advanced systems (Hammond, 1999, 86, 229-233; See Hull, 1970, 352-353).

Table 10: KANTIAN CULTURE IN SYSTEMS SCIENCE

TEACHING STRATEGY:	Social Constructivist, student-centered based on the deductive knowledge and experiential, participatory learning, individual and collective group methods, students actively construct knowledge, students critically think and develop the ability to assess successes and failures, 'brain based' intrinsic and rewards, extrinsic, skills and meaning-based instruction, including both lecture and other learning architectures.
MANAGERIAL STRATEGY:	Complex management, individuals are of significance and respected as human beings, skill and meaning based tasks. Intrinsic and extrinsic motivators, individual and collective work environment, management more egalitarian, individuals are allowed choices, decisions are arrived at collectively, management facilitates rather than dictates.
COLLEGIAL SYSTEM:	Research based institutions, internal and external social environments are of significance and respected, informed by modern methods in organizational psychology, interdisciplinary agenda, systemic awareness based on problem solving rather than rivalry or enmity, a more 'open system.'

The critique of earlier organizational paradigms mirror those critiques of international relations theory with the belief that realism fails to provide for an accurate scientific method respectful of the human mind, social life and existence while accounting for change within complex systems. Like international relations theory, organizational systems also remain dogmatic to Newtonian views despite developments in the science of social organization and development. The same is true of post-war international relations theory, which does not account for change within the international system. The systems theory also concerns the behavioral level and the social sciences of particular importance in accounting for the organizational dynamics of complex interdependence at multiple levels of analysis, including the level of the international systems. However, like the Kantian synthetic a priori knowledge that does not singularly reject or accept either a priori or posteriori knowledge, or perspectives in education and organizational theory that provide for critique but do not entirely reject behaviorist thought, newer developments in systems science does not reject the scientific realism of positivism (See McDonough, 2003). [1] Largely, the theory is itself drawn from the critiques of 'rationalist' assumptions in systems sciences that came to dominate the area following World War II, when uninformed of psychology, social environment and context, providing for the tools that suggest directions and social solutions. As noted by Wendt (1999, 47-64) it is possible to adopt an idealist position and maintain commitment to science, to accept positivism with respect for the primacy of the human mind, life and society.

Newer perspectives in the organizational sciences are based less on strict rationalist and economic models with the supervisory figure occupying a position of absolute authority to maintain order through a system of reinforced rewards and punishments. Rather, managerial schemes tend to be based on participatory models informed by social methods, organizational psychology and respect

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[1] McDonough, C, 'Logical Positivism and Behavioral Epistemology (Radical Behaviorism),' The 29th Annual Association for Behavioral Analysis, Retrieved July 16, 2003, http://www.hawthornecountryday.org/about_us/chris_slides/sld001.htm

for the self-actualized individual within the organization (Schein, 1980, 22-30, 55-72; See Lueddeke, 1999, 244-245). With the decline of power concentrated in authority and competition between the members of the organization, a more participatory process encourages innovation and creativity. The core conceptual framework for the organizational theory is complex management strategy. A complex management strategy recognizes that individuals work independently and within group processes in complex ways, psychological motivations are complex, learning through organizational experiences are complex, alienation from organizational processes is a complex problematic that inhibits individual and organizational self-actualization, the factors that relate to individual and group satisfaction is complex, complex organizations necessitate strategies that account for the nature of their organizational processes and relationship to the environment.

The strategy emphasizes the need for an effective "diagnostician" that "must value a spirit of inquiry" (Schein, 1970, 69-76). With the organizational model of complex management for organizational and institutional systems to achieve and maintain these aims, is the recognition that certain approaches may be wrong in certain situations with certain individuals, but purposeful in others. This is to say, organizations must act in context: "that the frame of reference and value system which will help the manager most in utilizing people effectively is that of science and of systems theory" (Schein, 1970, 71). Formal theory involves recognition of the complexity of human nature and the organization of effective managerial strategies in terms of maintaining goals and objectives by motivating to provide for efficient and reliable systems of process and structure, respectful of the interests of the individuals within the organization. However, structural change and technological innovation are not synonymous with advancement. While some structures may inhibit, and others present appropriate opportunities for innovation and change, for more reliable and valid systems, enduring change need focus on what happens within those structures with concerns to expanding knowledge, developing perceptions, cognitive abilities and beliefs (Imants, 2003, 295). At any length, developments in theory provide for greater

awareness of social and psychological factors, including the organizational context and its relationship to external environments as often the foremost source of a systems complexity.

Leuddeke (1999, 235-260) discusses a constructivist framework for change and innovation in higher education, citing research on the dilemmas in higher education, and the need for more efficient management. The author focuses the purpose of the research article to provide for the principles of different models of organizational change for higher education, referencing models of organizational behavior drawn from constructivist psychology and learning theory. In this sense, instruction need reflect the social environment, the diversity of the classroom and community, as well as independent learning styles; organizations need adjust to meet the contextual social needs of their clients, and individuals of the professional community within the organization need an appropriately structured framework for shared normative values in decision-making. The perspective on organizational change within higher education notes that the learning environment will increasingly begin to meet with "more demanding students who will want flexible teaching patterns to enhance their career prospects; more challenging learning and research programs; and closer integration at regional and local levels while networking internationally" (Lueddeke, 1999, 255). The academic culture and decision-making processes as structures necessitating organizational and developmental change are also detailed alongside the major organizational structures and the systems of ideology in institutions of higher education.

Research includes a number of strategies for change and the need to consider structural and political influences in the attempt to optimize human resources and improve the quality of instruction. In higher educational environments, optimal concepts and ideas are identified with a collegial system. A collegium undertakes valuable efforts and attempts to optimize their 'human resources' with focus and attention given to individuals within the organization. The adaptive and generative processes for guiding innovation and change in higher education, which adhere to many of the same principles in organizational psychology, are social constructivist inasmuch as it

involves the active construction of meaning and awareness of political, social and cultural environments in a process of change based on participatory and democratic methods. In doing so, organizational and educational leadership entails the encouragement of "uncovering of meaning that is already embedded in others' minds, helping them to see what they already know, believe, and value, and encouraging them to make new meaning" (As cited in Lueddeke, 1999, 247).

Like the multiple other perspectives, systems theorists have also sought to reconsider systemics and provide insights into new developments with recent scholars "concerned with understanding the organizational decision-making processes in society in order to make them more responsive to human needs and not simply to manipulate or control them" (Hammond, 12; See Hull, 351-365). Stafford Beer's contribution to systems theory is in the field of operational research and management sciences with organizational theory as a social system that learns and adapts, invented upon team syntegrity and scientific models of management with a context for democratic participation. Ackenoff's interactive planning and operations research is based on participatory methods, enabling organizations to achieve expression of democratic hierarchy, incorporating systemic perspectives from organizational psychology. Checkland's systems theory aims to embed action research in the developmental and organizational process, emphasizing learning and improvement strategies. Churchman's theory also emphasizes a research-based organization (Flood, 1999, 4-5). Finally, Senge's organizational learning draws upon the same epistemological and origins for the development of new systems paradigms.

Checkland's methodology and the concept of a human activities system has influenced educational and social systems design approaches that derived from the work of systems theorist Bela Banathy, emphasizing community involvement and the limited role of the 'expert.' Banathy founded the International Systems Institute, which holds annual conference 'conversations' on "practice of participatory or 'systemic' design" (Hammond, 2003, 58, 258). In Checkland's soft systems theory, the democratic hierarchical systems dynamic represents the evolution from hard

systems organizational strategies of the 1940s and 1950s, involving themes "comprehensively addressed in a collection of papers from the 1994 annual meeting of the United Kingdom Systems Society" (Hammond, 2003, 256). At difference to the hard systems approach modeled on bureaucracy and quantitative analysis, Checkland developed a systems methodology (SSM) to clarify perceptions based on the constructivist idea that "social reality is not a given but is a process in which an ever-changing social world is continuously re-created by its members" (Hammond, 2003, 258; See Flood, 56-60, 68-6). In addition to supporting the utility of action research in the organizational developmental process, the systems theorist advanced the domain of information systems, supported method for critical feedback in organizations, and developed systems theory tools for the improvement of organizational and systems design and process.

These are the systemic analytical constructs that would best inform the social constructivist project in international relations as a systems theory, and do go well beyond the levels of analysis in international relations theory to include personal, organizational and institutional theory with structural theory. It is important to separate them from the fashionable and trendy popular strategies in systems management that have found a market since the 1980s. Clegg, Colado, and Rodriguez, (1999) discuss global management of international organizations, noting the work of Senge alongside other trends in management, such as Drucker, as organizational mythologies that undermine structural anarchy and the hard systems of bureaucracy in international organization, (2-3, 18; See Wendt, 1999, 246-312) much less provide for valid insights into the structural level of the international system. Thus, suggesting considerate questions over the theory of international relations if its methods have not been entirely accepted at the micro level. It is important to be able to recognize the epistemological foundations and ideological background of these perspectives in domestic and international management as with the diversity of the perspectives, many of which make claims that constructivism is drawn from, or closely aligned with their worldviews (See Furunsten, 15, 59, 36-57, 103, 157). While Senge's organizational theory is itself

often categorized with these management 'guru books,' methods in Senge's discipline need be read in the context of systems theory and with the other systems theories as discussed. An ability to recognize ideology and epistemological details and political cultures is itself fundamental.

To any extent, with critique and criticism in mind, Common (2004, 35-47) also presents difficulties in applying the organizational concepts to the public sector and a political environment, as with providing for adaptive development within 'hard systems' of process and structure that followed the behaviorist movement in the systems and organizational sciences. Questions and problems include implementation when the public sector overemphasizes the individual, resists change and is characterized by a 'blame culture' of competition and enmity.

> . . . organizational learning can improve policy-making, or how policy choices are made. However, policy learning should proceed with caution; can governments simply 'shop around' for policies or programmes that can easily be implemented? Can ready-made solutions from abroad substitute for domestic policy innovation? Will policy learning simply reinforce the politics /administration dichotomy if it fails to lead to organizational learning? (Common, 2004, 36)

Aside from the trials of applying the concepts to a political environment and government, the methods provide insights into Checkel (1998, 328-330) and the possibility of a social constructivist institutional theory. Research undertaken with organizational changes in UNESCO, the newer organizational paradigms undertaken in addressing security issues with NATO, and the role of international organizations in reconstituting state interests with the Apartheid in South Africa are critical perspectives. By the 1990s, theory in organizational psychology and the newer paradigms advanced central concepts on improving work environments, performance and satisfaction with respects to beliefs, feelings, and behaviors in the area of industrial psychology, including broader systemic usage to influence overall organizational effectiveness, "or individual well-being" (Weiner, 2003, 2-3). "It is an important dimension in the evolution of the general-systems project that deserves further consideration" (Hammond, 2003, 261). These perspectives have become valuable, grounded in the core concepts of social constructivist psychology, mirrored to its

epistemological perspectives, (Demetriou, et al., 1992, 2; Flavell, Miller & Miller, 1993, 3-22; Flood, 20-28; Airasian & Gay, 2003, 9-10), and do have certain potential for guiding innovation in the area of international organization. They have certain relationships to the modern physics, validating methods based on the primacy of the mind and grater respect for human psychology in systems.

Efforts may be undertaken to provide for systems theory paradigms to facilitate the dramatic structural changes that result with economic interdependence, regional and integration, which may include, for example, analysis of multinational corporations and agents driving globalism with the increase of economic capitalism, alongside research on insights that constructivism may provide for the political economy. Methods need be focused with concern to the functions, structure and process of these organizations so that they may realize organizational paradigms and a systemic awareness respect of social, environmental and cultural concerns at the juncture of structure and agency. Research need include focus at the individual, domestic, interstate and global levels of analysis. Not at all unlike the systems perspectives that had initially focused on a cooperative and interdisciplinary paradigms in organizational processes, but which became increasingly focused on behavioral sciences "to justify the claims to power and prestige of the technocratic elite" (Hammond, 2003, 10-11). For the development of research to be successful in government, as noted by Common (2004, 43-44), the public sector needs an evaluated program of proven success, with the success of any innovation readily identifiable. As often undermined in traditional theory, higher-level research provides opportunity to legitimize international organizations, improve methods and gain the support needed for more sustainable solutions.

However, there no in depth and substantial research in the area of international relations and international organization that directly applies the organizational and industrial theory as discussed, other than by way of the social theory that has come to be known as social constructivism in international relations. Genuine efforts should be focused on providing for methods that ensure more authentic democratic managerial paradigms and cooperative

frameworks so that international organizations are not viewed negatively as carriers of economic capitalism, mechanisms of control, and carriers of a host countries values and norms. Rather, systems should legitimately accomplish goals of solving collective action problems, promote global welfare and economic prosperity, develop shared values and norms, integrate and create interdependences, and provide "assistance to the victims of international politics," (Pease, 2003, 66-7) respectful of a pluralistic international society, individual beliefs and collective needs. With a consideration of the way in which realism undermines the role of international organizations, an area for research concerns how organizational and industrial psychology can benefit the field of change within major international organizations at multiple levels, as in harmonizing the state and international interests, with valid, reliable and legitimate claims in order to guide innovation.

Basic research in nongovernmental organizations does note the challenges to organizational learning but the potential for its development, and argues for the feasibility and relevance of the learning organization in the management of NGO's (Twigg & Steiner 2002, 473; Block & Borges 2002, 461). With further research on the organizational methods drawing insights from organizational psychology, newer paradigms from the discussed management sciences, relying on action research and a research organization, work in NGOs could guide innovation and change as well as theory development. The methods are essential in a sector that must harmonize management with efficient and appropriate intervention and development in cross-cultural settings, which often takes place in "inherently unstable and uncertain contexts, their complexity and diversity . . . means that to develop capacity for learning and to make the connection is even more important" (Block & Borges, 2002, 463). NGO management meets difficulty, as, while there are some specialized courses available, traditional management schools are not suited for the sector, which necessitates greater respect for participatory models and social perspectives in organization. Schein (1970, 106-115) notes understanding the relationship between environment and organization as essential to establishing quality channels, which are necessary perspectives in

facilitating solutions to critical issues, for example, in development and other areas where analysis at the level of the international system are also critical to the improvement of micro level practices. Hence, the necessity of social constructivism in international relations with respects to state 'identity,' which need be informed with research focused toward the areas as suggested.

The theory reflects the values of Bertalanffy's original systems theory, which sought an organizational science where management is cognizant of individual and social needs, is concerned with the belonging and identity of individuals in organization, and emphasizes intrinsic and extrinsic individual and collective rewards. Methods relate to those underscored by Ashley (1986, 290-292) in suggesting a dialectical model in anticipation of dynamic processes of change, applying the concepts to regime theory. The theory also represents the underlying ideas detailed by Wendt in the development of a constructivist theory for the structural level of the international system. The views concern social and organizational dynamics in relation to its environment where, as noted by Schein (1970) the organization must define its boundaries and fulfill its functions while recognizing that it also represents the external environment: "From these various other roles they bring with them demands, expectations, and cultural norm" (105-106). Historical perspectives lay insight into and are essential to an understanding and definition of what is noted as the identity of the state. The methods for guiding change detailed by Cox (1986, 242) are a grounded theory as both a positivist and historicist approach, which includes qualitative social methods, relating to concepts of state identity as discussed by Copeland (2000, 187-189) and Hopf (1998, 174-177), which need emphasize praxis of theory with practice. Individualist approaches result in an epistemological reductionism; however, purely sociological approaches and intersubjectivity to avoid problems of individuation with the aggregation of action in a process of socialization risks a group think and dissonance that is not necessarily a preferable alternative.

Research in NGOs specifically focuses on the internal structure and process of organization and their influence upon the external environment have begun to undertake organizational strategies

in the development of a social constructivist theory of international relations. For these the concepts to be implemented in the public sector and government, the benefits of developing a more advantageous policy need be recognized at the level of the perceptions and beliefs of decision makers in the political environment. There must be "an incentive to learn . . . to the extent that they appear more effective or efficient than the alternatives," with identifiable evidence that methods have proven to be successful elsewhere (Common, 2004, 43). For this reason, research in social constructivist methods at the organizational level, based on the paradigms and areas of study discussed, is important. Research must be compatible and consistent with the existing values, experiences and needs of the decision makers in the political environment before any innovation and change is itself implemented in the public sector, with an identifiable and easy to understand level of specialized knowledge. If research on improving human factors, in broadening the field, maintains a high level quality and validity, methods developed in international organizations and transnational agency may be applied, drawing insights from organizational and systems theory analysis at multiple levels of human structure.

Research undertaken in peace studies and conflict resolution, though not discussed in the literature on constructivism in international relations, are substantial perspectives that could be characterized as constructivist. Vasquez (1995, 211) emphasizes a structural view of peace studies that need involve institutional order and organization, drawn from a collaboration of scholars and practitioners in domestic and global conflict resolution funded by the United States Institute of Peace. The research is drawn from multidisciplinary studies in political science, social psychology, law, management, sociology and ethics, expressing concern over global politics in a post Cold War era where "politics and coercion are not very effective means of contention and resolution" (Vasquez, Johnson, Jaffe, & Stamato, 1995, 1). Noting the need for a structural approach to peace and conflict resolution, the interpersonal and individual level is emphasized, including techniques that focus on interpersonal disputes as they provide insights to "dynamics of conflict,

cooperation, and conflict resolution across levels of analysis" (Vasquez, 1995, 211). Focusing on organizational processes of conflict management with the active processing of a resolve is an important area and pertinent for further research, purposeful in development of constructivism in international relations. International structural problems have root cause in history and past decision-making; solutions begin with a change in present thinking, necessitating a systematic and structural approach to conflict resolution and peace with related interdisciplinary research.

Practice focused on informal methods of diplomacy and conflict resolution with the Palestinian and Israeli conflict, detailed by Kelman (1997), is derived from a "variety of sources, such as law, psychotherapy, management theories, group dynamics, decision theory, the study of conflict resolution in traditional societies, and theoretical models from the entire range of social science disciplines" (213). Related methods were undertaken in resolving the conflict in Northern Ireland (Cunningham, 1998). Micro processes such as detailed in conflict resolution through group problem solving workshops, serve for change in the larger system by functioning as a microcosm of the macro system, a laboratory for input into systemic development, a setting for direct interaction, and as a coalition across conflict lines for the nucleus of a new relationship (Kelman, 1997, 216-217). The social psychologist notes the role of the scholar practitioner and the contributions of university settings for an academic and organizational base as central. The scholar-practitioner and the university system enable legitimization and realization of research for resolving conflict. With methods drawn from organizational theory, curricula for conflict management, not solely focused in international relations, include methods in individual dynamics, work environments and communities (Johnson, 2005). [1] Active processes of conflict

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[1] Maiese, M., 'Problem Solving Workshops,' Beyond Retractibility.Org, Colorado: Intractable Knowledge Base Project – Conflict Resolution Consortium, Retrieved June 22, 2005, http://www.intractableconflict.org/m/Anal_Prob_Solv.jsp

management drawn from an awareness of the human, psychological dimensions of conflict are becoming legitimate in the analysis and resolution of international conflicts (Maiese, 2005). [1]

The university system and domestic educational systems have the potential of being significant drivers for educating and pursuing the research necessary. Given the reality that the field of study for organizational paradigms based on social constructivism lacks significant research, methods at the micro level and institutional research need be emphasized for the development of methods before any structural level or institutional approach can be advanced. Education and development by guiding innovation and change within higher education, improving the field of instruction and learning at all levels both within organizations and at domestic and international systems of learning, cannot be undermined. The importance of education at the domestic level of the state is emphasized while noting the consequences of the neo-liberal economic ideologies of major international organizations such as the World Trade Organization and the effects of economic policy and globalization on maintaining stable democracy, which is itself a potential obstacle in providing for quality international education (Olssen, 2004, 231-234). Organizational paradigms based on constructivist systems theory would support an egalitarian systemic structure and seek to provide for solutions and improvement strategy with the rise of economic capital, which is also pertinent for further research in directing the social constructivist project (See Weiner, I.B., 2003, 401-422). The emphasis on these points is essential to a Kantian ideal for democratic governance, international cooperation and collective security, a pluralistic society, industrial and organizational designs respectful of environmental, political and social cultures, and of human psychology, with the recognition of an authentic understanding of democracy at many levels.

The core of the criticism against Hobbesian realism, power politic and coercive means with military force as the primary form of leverage is at the center of Kantian social and political

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[1] Johnson, R., 'Conflict Resolution,' Retrieved June 22, 2005, http://www.co-operation.org/pages/conflict.html

philosophy, detailed in <u>Perpetual Peace</u>. Kant recognizes the evils of an anarchic system. However, "below the surface of Kant's argument, there are veins of rich ore from which Kant mines one of the most optimistic doctrines in the tradition of International Relations theory: humanity also possesses reason; and as human rationality inevitably evolves, all people will increasingly recognize the evils of international strife, and will work to put an end to all wars" (Knutsen, 1997, 126). Kantian idealism is itself defined by harmonizing relations between sovereign state structures with, and through international organization based on principles of the human intellect. As established patterns of "democracy appears as increasingly unable to deal with the complex issues and problems, which transcend state's borders . . . . the scale of human organization no longer corresponds with the nation-state" (Olsson, 2004, 243-5; See Wendt, 1999, 297-308). Research in Kantian oriented systems theory based on social scientific views, in deepening themes with the development of theory, need focus on guiding change and innovation respectful of state structures and vice versa, approaching and developing greater systems awareness within the critical area of organization to promote new perspectives at multiple levels.

With an increasing number of contacts between sovereign states, international relations theory necessitates broadening levels of analysis beyond traditional analysis. The first of the levels of analysis concerns the influence of individual decision-makers and provides for individual-level explanations of outcomes in international relations and society, including the psychological dynamics in decision-making. The domestic level of analysis concerns the sovereign state, sub-state or societal influences that affect the actions of the state in international relations. The interstate, international or systemic level of analysis concerns the interactions between states. The fourth level of analysis is the global level, which explains international relations in terms of global trends that transcend states: "This level of analysis deserves particular attention because of the growing importance of global-level processes" (Goldstein, 2004, 15). Related to levels of analysis is the first of three characteristics of complex interdependence, which is multiple

channels of contact among nations, including interstate relations, international organizations, diplomacy, etc. Multiple channels of action between states leads to the second and third facets of complex interdependence, which are an increasing lack of a hierarchy among issues and the decline of power politics, pressured coercion and military force as the primary form of leverage.

Table 11: CRITICAL ANALYTICAL CONCEPTS

LEVELS OF ANALYSIS:	Individual - Domestic - Interstate - Global.
COMPLEX INTERDEPENDENCE:	[1] Establishing multiple channels of contact between societies in the international system [2] in order to bring about beg off in the use of military force as the primary form of leverage, to the extent that [3] linkages in relations between states bring about the lack of a hierarchy of issues and flexible, changing agendas.
SYSTEMS THEORY CONCEPTS:	Conceptualizing organizational and institutional functions according to systems of process, structure, meaning - or ideology - and knowledge/information; best based on interdisciplinary methods, constructivist organizational and industrial psychology - internally and with respect to the external environment - democratic and research based.

Multiple channels of contact between sovereign states includes the trans-governmental with concerns to international organizations at the international level, such as the United Nations or NATO, and the transnational relations of international actors such as NGOs, multinational corporations, and other non-state actors. The agents of multiple channels of contact between societies, or actors as they are discussed, including the role of the sovereign state, are those agents that at each level of analysis that create order, or according to social constructivism, 'construct' the social fabric of the international system. With structural theory, the agents of complex interdependence are also the subject of debate at the juncture between structure and agency, particularly with the issue of the sovereignty of the nation-state. From a constructivist perspective, this is an important theme at the individual level within organization, the organization within the domestic level, the state at the interstate and international level, or

interstate agents at a regional and global analysis, and concerns the nature of relations in order to guide change within the system. From which originates the postmodern and constructivist critiques and criticism of the traditional theories in international relations primarily for not recognizing the social nature of relations between states and actors. The critique concerns and may be extended to the lack of organizational theories in international relations that provide for a developed systems thinking integrated with the social sciences and awareness of perspectives discussed to establish qualities channels of contact between agents in international society.

Economic development is an example where constructivist theory could address critical problems. In many ways, economic development for traditional societies has its normative origins with the imperialism of the 19th century, based upon ideological and economic motives to 'civilize' what they believed were backwards societies. Following WWII, the World Bank and International Monetary Fund were established with economic development as part of their primary functions, to provide loans and encourage foreign direct investment, which, in the post-war environment, advocated a strong role of the state. The international organizations follow an orthodox view of economic development, reflecting a positivist economic science and Newtonian absolute knowledge that fails to recognize critical issues. Development from orthodox methods is itself determined by standard economic measures including the increase of gross domestic product per capita over time, import and export figures, and levels of industrialization, etc. A country is 'developing' as it transitions from a traditional society to a modern society, measured by the increase of wage labor, a cash society, and consumerism (Goldstein, 2004, 495-499; Pease, 2003, 177-181). Today, the 'Washington Consensus' with the World Bank and IMF facilitate developmental programs by the name of Structural Adjustment Programs (SAPs). The programs and economic ideology of these major economic institutions are now implemented via economic neo-liberalism, which encourages a laissez faire economics with the deregulation of the state.

Development from orthodox economic views, like those represented by the developmental programs of major international financial organizations such as the IMF, have been criticized for not recognizing the social, cultural and environmental needs of the developing country. Multinational corporations are particularly criticized for a lack of respect for the social welfare of the country with which it may partner in order to 'promote' economic development. With a stringent focus on modern industrial standards, the international organizations are also critiqued for encouraging a form of modern economic imperialism, rather than proper and efficient development. More heterodox or critical views of development have less orthodox measures of growth, not entirely based on GDP or market exchanges as a basis of the quality of life. Development from a critical perspective includes the ability to meet human needs through one's own initiatives, the development of the social and cultural rights, the empowerment of marginalized social groups, education, human rights, basic health needs, and respect for the environment, etc. While criticized for a confrontational approach, the UN Conference on Trade and Development was the first conference that challenged the practices of orthodox development, giving a voice to 'critical' issues in development (Pease, 2003, 177-181). UNCTAD has pressured organizations such as the WTO to recognize rights and need for human resource development.

UNDP, the United Nations Development Program, is also an international organization involved with economic development. UNDP practices are often more agreeable to the orthodox economic measures and standards of the developed nations, coordinating programs with the World Bank and IMF. Even so, the organization has critiqued the consequences of strictly orthodox methods; an advocate bottom-up development, and includes initiatives respectful of critical approaches. Nevertheless, a common definition for appropriate and effective developmental policies that harmonize orthodox economic and critical approaches with sociological methods, in order to solve the problem of the increasing disparity between developed and underdeveloped countries, remains to be agreed upon. The systems theory discussed can help to provide more appropriate

and developed organizational momentum by providing for more reliable and efficient process at multiple levels, including directions at the structural level collaborating and making headway in initiating research a research agenda between major economic institutions and at domestic and local levels of analysis. Research need provide for greater insights into developmental policies based upon sociological perspectives to improve upon international and institutional economic theories, as well as to validate and develop modern systems approaches in international society. A critical area for research need examine the role and effects of multinational corporations at the juncture between state and agency and their effects upon social and environmental conditions.

Again, for purpose of further discussion, a Lockean culture relates to the corporate model of decision-making. Academic circles and organizational dynamics are much different from that of the corporate world, but that the corporate model does create a competitive "imperatives of massification" in higher education (Lueddeke, 1999, 237-8). The critique of Lockean empiricism is related to Wendt (1999, 193-245), noting the problem of corporate agency in international relations theory with a definition of the state, identity and interest in relation to the structure of the international system. Traditional liberal institutionalism does not entirely provide for a system of ideology to ensure that the role of international organizations will provide for a systemic perspective to evade the perception that they are "tools that core states use to exploit or control the weak," (Pease, 2003, 81) and as only carriers of hegemonic values. With multiple channels of action, the Lockean rivalry of neoliberal institutionalism, alongside a realist state with the integration of global economies, led to the statecraft of European imperialism, and ultimately the Marxist critiques of liberal economic theory and institutionalist theories. In this sense, Lockean reason, defined in the political philosopher's essay entitled An Essay Concerning Human Understanding. Locke expressed about knowledge of the world as: "nothing more but ideas floating in our minds, and appearances entertaining our fancies, without the real existence of

things affecting us from abroad," (In Pojman, 687) [1] implying a reductionism and thus resulting in a Lockean dilemma not unlike the Hobbesian dilemma of state-centrism. In and of itself, the view implies a subjectivity not conducive of quality solutions - particularly in situations that necessitate proper problem solving techniques, or when coupled with a competitive individualism - as within the anarchic system, bureaucratic systems or a negative behavioral environment.

Hence, the critique of traditional approaches to systems design and the failure to provide for valid solutions in international relations theory by integrating social and sociological methods, to recognize context and dynamic systemic complexity in organization of modern social life. Hammond (2003) notes the critique with the recognition that the behaviorist movement in organizational sciences has conditioned individuals and institutions, particularly those institutions that generate patterns of global capitalism, with a highly competitive individualism, "resulting ultimately in the domination of the many by the few, through increasing concentrations of wealth and power among an ever more exclusive minority" (275). Recent developments note that motivating individuals within organizations and ensuring satisfaction in their relationship to the environment necessitates social methods respectful of the individual and collective social processes while not undermining either in organizational design. Bertalanffy (1969) focused much of his ideas in systems science on the critiques of modern institutions and recognized the importance of viewing an 'independent human system' in critique of Hobbesian systems science:

> . . . . he emphasized the importance of considering the interactions between individual and the environment, as well as the biological and psychological dimension of human behavior.

> The nature of the relationship between the individual and the society as a whole was central to Bertalanffy consideration of values. He argued that the social system require different moral concepts from those that apply to individual behavior, and that an appropriate value system for complex social systems has not yet evolved. Instead, the individual is "entangled, controlled, and governed . . . by impersonal social forces." He thought moral codes should expand to

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[1] Locke, J., 'An Essay Concerning Human Understanding,' In Pojman, L.P. (Ed.), Classics of Philosophy, 2nd Ed, New York: Oxford University Press, 2003: 687.

include larger social entities in order to "safeguard the individual from being devoured by the social Leviathan." While systems analysis contributed to the development of high levels of rationality in means, it often reinforced complete irrationality in terms of the goals it served. Bertalanffy hoped to expand the contributions of systems analysis to include questions of meaning, which he saw in terms of interconnections within a system. (Hammond, 2003, 128)

Keohane (2002, 2-4), in speaking of the evolution of the work that he had undertaken with Nye, makes the point of separating himself from mistaken labels such as liberal institutionalism, neo-liberal institutionalism, classical liberal economics, neo-liberal economics, and the liberal labels that have been given to neo-conservatives and economic policies such as the 'Washington Consensus.' In clarifying liberalism, the theorist notes the formal definitions in the normative philosophy of Kant, including republican liberalism, commercial liberalism, and regulatory liberalism. In doing so, the author continues to describe what is referred to as a sophisticated liberalism, incorporating "sociological perspective on interests into a synthesis of commercial and regulatory liberalism" (Keohane, 2002, 49-50). The sophisticated liberalism is another 'construction' that integrates social theory and methods with mainstream approaches. In many ways, it reflects social constructivism. With the development of organizational and institutional paradigms, improving institutional theory and the role of international organizations does suggest valid solutions with the debate at juncture between structure and agency. The theory provides for the possibility of newer paradigms in international relations respectful of the social nature of interaction with multiple channels, to address issues based on critique of institutional theory.

An important perspective provided by social constructivist theory in education is that different theories of instruction are not entirely to be understood as competing approaches and may be integrated as complimentary methods. The same, Keohane (2002) recognizes complex of issues with an institutionalist approach to international relations, noting different standards and theories in social and political theory "are by no means incommensurate paradigms; rather they are labels for loosely grouped interpretations that differ along a variety of dimensions" (6-7). The organizational movement, as discussed, was in many ways mirrored by with the revival of neo-

'institutionalism' in the 1970s. Multiple channels are analogous to integration among the parts of an organization to solve problems of alienation and reductionism. The theory sought a 'construction' of ideas and integration of "structural realism and structural liberalism as the discipline's competing but closely related orthodoxies," incorporating levels of analysis into theory has "tried to give both sides legitimacy, which each side accepted for itself but denied to the other" (Gould, 84; Onuf, et. al., 10). Nevertheless, the institutional theory undertaken with the increase of multiple channels and interdependence, though they are increasingly important, is not always successful in providing solutions to the dilemma of maintaining international order.

> . . . complexities of organizational, political and psychological processes. Policy-relevant learning is an organizational, political, and psychological phenomenon. Shifts in social structure and political power determine whose learning matter. Furthermore, organizations must have an institutional memory and socialization procedures if lessons learned by one cohort are to be assimilated by another. (Keohane & Nye, 1989, 254-255)

Expanding theory in international relations to include levels of analysis and the debate over levels of analysis is critical to solving the problem of reductionism in system thinking. The problematic of reductionism in Newtonian science, organizational and systems theory is that it derives scientific statements through abstraction and generalization while the modern scientist has progressed beyond the static reductionism of Newton. Levels of analysis is also critical to understanding developing solutions to the problems with the interaction of the state and international actors in an anarchic system, which involves the critical debate between social constructivist and structural theories of international relations, defined in terms of the juncture between structure and agency. Wendt (1999) makes thorough analysis of this debate and the relationship of the debate with levels of analysis and systemic theories of international relations as they "invoke unit-level properties and interactions – just in different ways because their respective structures are on different levels of analysis" (10-15). While there are different perspectives on levels of analysis, the realist tradition in international relations theory in general undertakes analysis of only the levels of the sovereign nation-state and international system.

Modern science supports the epistemology of Kant who recognized power in creating and maintaining order in an anarchic system was mechanically unsound and that it had no equilibrating properties. To Kant, while acknowledging the realities of anarchy, international cooperation and the political will to establish symmetric relations through collective security and international organization rather than state power in relations between states is a rationality greater than asymmetry and reductionism. Newer paradigms for international relations need be undertaken "to overcome what they saw as the increasing fragmentation of knowledge and to build bridges across the ever widening chasms between the various ways of understanding our world, developing a new paradigm" (Hammond, 2003, 10). Humanity, governmental institutions, international organizations and institutions of higher education have the ability to promote constructive approaches to solutions in international relations, improved diplomatic methods, a developmental focus, to teach, and provide structural approaches to peace and cooperation based on modern methods respectful of the human mind, life, society and environment in context.

Providing for sound organizational and systems thinking based on constructivist methods with respect for the active human mind and social theory in the social organization of domestic and international life does reflect the original values of systems theory, which similarly developed from systemic and structural approaches to peace and peace studies. Many of the insights that developed in social constructivism fail to surface in much of the formal theory and literature to provide for accepted and valid directions applicable in international relations theory. Further developing the field of research from social constructivist methods at the micro, organizational and institutional levels would significantly strengthen the possibility for a more developed institutionalist theory of international relations, and could provide for applications from systems theory respectful of the active human mind, life and dignity. Critical questions need be asked about internal functions of international organizations and their relationship with the external environment in order for multiple channels of action to effectively provide achieve the decline in

the use of military force, in support of numerous critical issues in international relations. In what way can industrial psychology and social constructivist methods focus leadership within the WTO to provide for improved methods and practices? How may industrial psychology improve relations at the juncture between the state and transgovernmental organizations such as the United Nations? How can systems theory provide insights into outsourcing, integration and free markets, the role of multinational corporations, NAFTA and CAFTA at the juncture between state and agency and with concerns to domestic level questions and politics in facilitating international agreements? What directions does it provide for improved diplomatic methods?

Research undertaken within microstructures of organization and transnational activity and relations through NGOs and transnational business, including major transgovernmental agencies through the influences of learning systems and higher educational institutions need steer structures in positive and authentic directions while legitimizing the methods in order to guide international society based on modern scientific perspectives. Momentum and leadership need be represented at both micro level processes as they affect the macro level, and at the structural level of the international system. Without risking reductionism, the methods need be emphasized at multiple levels of analysis concerning both the internal functions of organizations and their relationship to the external environment at the juncture between state and agency. Research could benefit the development new paradigms of international organization based upon the original values of systems theory and initial directions for international organization following the second world wars, constructivist methodology and socio-historical theory. With the appropriate leadership, the utility of organizational psychology, industrial psychology and systems theory to promote quality channels at interstate, transnational, and interstate levels with transgovernmental and transnational organizations and the role of the domestic state, while not without its challenges and obstacles, should not at all be undermined. Even so, the nature of international anarchy should also not be undermined. Social constructivism and system theory analysis merely

represents a different perspective on rational action from that of traditional theories in international relations, recognizing social methods in context. Theories of international relations cannot risk a reductionism, must provide for analysis at multiple levels, and include systems analysis in order to empower the field with a number of interdisciplinary academic views.

CONCLUSIONS

The theory of social constructivism in international relations, increasingly gaining attention, and the perspectives that have come to be known and characterized as social constructivist, each represent elements of social constructivism as a systems theory. The system theory that is noted in social constructivist theory had originated with the systems thought following WWII, and recently, like the social constructivist theory of international relations, has undertaken the development of newer perspectives based on constructivist psychology. The constructivist movement originates with disillusionment from the behaviorist systems theory that followed the Second World War, much as critics of neo-realism have sought alternatives to the theory of international relations. As postmodern theory is pre-occupied with the criticism of traditional theories, specifically realism in international relations and behaviorist structural models in the organizational sciences, rather than providing for an alternative, constructivism has attempted solutions in systemic thinking, which is essentially best represented by educational theory and movements in organizational psychology, the human resource management and human relations movements. These are perspectives that offer a much greater depth into the theory of international relations as a systems theory, and its position with respects to traditional approaches, based on critique and providing directions for the enlightenment of international institutionalist theories.

The recent undertaking of a theory of international relations that has been characterized as social constructivist begins with questions over international organization and social forces in the international system at the end of the Cold War with Onuf's World of our Making. The theory relates to the political theory of political theorists such as Hegel that influenced the study of

international relations in the post Cold War environment with critical analysis of the definitions, norms and rules of international relations discourse and the normative origins of formal theory in political philosophy. A revival of concepts from normative philosophy and ideas concerning the construction of collective 'selves' and 'others,' which were investigated not only in international relations scholarship under conditions of increasing interdependence, is relevant to modern social scientific methods at all levels of analysis with multiple channels of action between society in international affairs while not undermining the individual. The theory couples these critical origins with epistemology and ontology as directives in guiding action, where rules, norms and laws are important guideposts for the development of theory and practice. With the promise of developing institutional and organizational theories of international relations respectful of social forces, social constructivism provides promise for harmonizing state structures with an anarchic international system centered on the significance for the sovereign state. International relations need not remain an obscure anarchy based on modern medieval state centrism; constructivism provides for the methods and organizational theory in order to enlighten traditional methods.

While theory-based research has critiqued a lack of content to determine how a constructivist approach to international relations would be best realized, a social constructivist perspective in international relations is best understood as a methodology, where traditional definitions, paradigms and concepts are based upon the context and political, organizational and systemic cultures. From cultures of anarchy, social theory is emphasized, for which social constructivism provides insight into answering critical questions over the nature of international affairs based on social scientific methods. The methodology emphasizes the social nature of relations between states, particularly at the juncture between structure and agency with the increase of multiple channels of interaction at the end of the Cold War and the onset of global integration with the information age. The emphasis on sociology is itself based upon a social constructivist psychology, rather than the strictly positivist behavioral psychology and American realist

tradition that took power in international relations theory following the world wars. Like the theory of international relations, constructivism makes analysis of systems as a whole. For this reason, social constructivism goes well beyond levels of analysis to include both domestic and international structural levels, and organizational levels to suggest directions for institutional theory with analysis of the systemic process at the critical juncture between state and agency.

The social perspectives provided by constructivism originate with post Cold War social theory in international relations. The historical and epistemological perspectives on social theory and the origins of social constructivist theory are critical. While the theory as it has recently been undertaken reflects more of a social theory of international relations, coupling the social theory with middle range theory, the construct of complex interdependence and social theory, provides for a more accurate social constructivist theory of international relations. A constructivist perspective in international relations would be best understood in terms of the analytical construct of complex interdependence, while also emphasizing the social nature of relations. From this perspective, the theory provides for a basis of rational state action that engages a synthetic view of the rationality of Rene Descartes, Immanuel Kant, and G.F.W. Hegel, noting that power relations are to some extent necessary, but unscientific. In this sense, social constructivism has similarities with neo-liberal institutionalism, but reflects more the Enlightenment idealism of the eighteenth century and the idealism that followed WWI. Rational action is based on a reflective, scientific knowledge that is both an a priori knowledge and a posteriori knowledge, or a synthetic a priori knowledge, involving a historic dialogue mindful of the social nature of relations. To a greater extent, if international relations theory is to provide for quality solutions in the relations between states, practice must recognize the importance of praxis in socio-political contexts.

The recent theory is linked to the effects of the end of the Cold War upon international society, emphasizing the need for new paradigms from the organizational and systems theory that originated from methods in education. The movement is itself exemplified by methods in

organizational psychology and recent developments in systems theory and systems analysis with an awareness of the limits and ambiguities of technical and social progress if methods do not account for the social organizational of systems dynamics. In international relations, the theory mirrors the nineteenth century social theory that expressed concern over the social fabric of international society, in reflection of European imperialism, relating social theory with a systemics based on constructivist psychology and a similar concern over changes in the international system with integration and the onset of the information revolution. Social constructivism involves methods at the individual, organizational, systemic, and structural perspectives as systems theory makes analysis of systems in their entirety. It is this perspective on social constructivism that would best direct the research project in international relations, and provide valuable insights into global management of international organizations and development of institutional theory respectful of state and social structures in international society. However, if social constructivism is to provide for structural solutions that it has the promise to provide, methods need be further researched and undertaken at multiple systemic levels of analysis.

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