International Governmental Organization Knowledge Management for Multilateral Trade Lawmaking

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INTRODUCTION

International trade law traditionally covered issues such as tariffs, customs administration, dumping, subsidies, and safeguards. As a
result, trade and foreign ministries primarily conducted multilateral trade negotiations. However, in the Uruguay Round, the policy scope expanded to include issues such as services and intellectual property rights. The broader trade policy agenda multiplied not only the participants and interests at the negotiation table, but also the information needs of the negotiators. With the advent of the Uruguay Round, international trade lawmaking became international economic lawmaking. Toward that end, knowledge of the world economy became central to the process of international lawmaking.

Building upon the functional theory of international governmental organizations ("IGOs") and drawing from the organizational theory of knowledge management, we conceptualize IGOs as knowledge managers, organizations with the capabilities to support multilateral trade and economic lawmaking processes. States create IGOs to further their wealth of knowledge; IGOs transfer information better than global markets. Moreover, states create IGOs to accumulate and disseminate knowledge, and thereby reduce international transaction costs.

IGOs are essentially "learners," as they acquire new information

2. See, e.g. GERARD CURZON, MULTILATERAL COMMERCIAL DIPLOMACY: THE GENERAL AGREEMENT ON TARIFFS AND TRADE AND ITS IMPACT ON NATIONAL COMMERCIAL POLICIES AND TECHNIQUE (1965) (discussing whether the General Agreement on Tarriffs and Trade is the best method of addressing the challenges of the marketplace in 1965); see also ERNEST H. PREEN, TRADERS AND DIPLOMATS: AN ANALYSIS OF THE KENNEDY ROUND OF NEGOTIATIONS UNDER THE GENERAL AGREEMENT ON TARIFFS AND TRADE (1970) (revealing the agreement terms and international effects of the Kennedy Round Negotiations); GILBERT R. WINHAM, INTERNATIONAL TRADE AND THE TOKYO ROUND NEGOTIATION 15-57 (1986) (explaining the developments that led up to the signing of the Tokyo Round and the implementation and aftermath of the signing).


4. See Martha Finnemore, International Organizations as Teachers of Norms: The United Nations Educational, Scientific, and Cultural Organization and Science Policy, 47 INT'L ORG. 565 (1993) (exploring the role of international organi-
in order to be disseminators of knowledge. Each IGO possesses distinctive domains of knowledge, including strengths and weaknesses with respect to institutional capabilities. The knowledge accumulation and management of the IGO is central to the shared-knowledge of an international regime, thereby making the IGO the crucial cooperation-facilitating institution in a given area of international relations. We present an analytic framework for the investigation of IGO capabilities and capacities as knowledge managers in future international trade and trade-related law-making negotiations.

This paper begins with a discussion of the seminal role of knowledge in the functional theory of international governmental organization as presented in the 1930s and beyond. We address the emphasis placed on IGOs by functionalist international relations scholars, international legal scholars, and political scientists, each within the realm of international relations. Next, we analyze the shift to the study of international regimes and the resulting theoretical and empirical neglect of IGO study. Additionally, we examine the organizational theory of knowledge management for application to the study of international governmental organization, especially with respect to those with possible utility to future trade and trade-related lawmaking negotiations. We conclude with a discussion of implications for theory and policy surrounding IGOs.

I. KNOWLEDGE AND THE FUNCTIONAL THEORY OF INTERNATIONAL GOVERNMENTAL ORGANIZATION

In the 1930s, a school of American and British international relations theorists known as “functionalists” explained that two pivotal trends had changed the nature of political authority in international affairs. First, technological advances in transportation (the railroad and the steamship) and communication (the telegraph and the telephone) were integrating markets geographically. As a result, the heightened competition was producing more market specialization.

5. See, e.g. DAVID MITRANY, THE PROGRESS OF INTERNATIONAL GOVERNMENT 10-11, 41-42 (1993) and DAVID MITRANY, A WORKING PEACE SYSTEM 97-141 (1966) (explaining the role of traditional nationalism in the nuclear
Increasing market specialization, they posited, was changing the very nature of knowledge. Ancient Greek philosophers, such as Aristotle, introduced rigorous method to knowledge and systematic category to what was known. Nevertheless, knowledge remained rather general, for two millennia. The sailing vessel had transported knowledge of paper and printing, porcelain and pottery, silk and textiles, and spices and crops as well as the products themselves. However, it was the railroad, steamship, telegraphy and telephony that revolutionized both commercial markets and United States politics in a manner unprecedented in world history.

Second, argued functionalists—notably, David Mitrany—the peoples of the world were placing increasing demand on their political leaders for higher standards of material welfare. The age of “let them eat cake” had ended. It became more apparent that increased wealth and prosperity depended upon the economic efficiency and growth fostered by competition and technology; each contingent upon globally integrated markets. In order to establish a truly world economy, the world’s political leaders felt popular pressure to cooperate internationally regarding trade liberalization, product standardization, and monetary independence. Politicians needed functional, technocratic specialists to achieve international cooperation under conditions of increasingly complex markets.

The functionalist school contended that the growing influence of transnational, functional, technocratic specialists meant a corresponding diminution in the influence of national politicians. National
politicians would give way to transnational technocrats in the making of public policy. One scholar explained their thinking: "International conflict is best tamed by entrusting the work of increasing human welfare to experts, technical specialists, and their professional associations. Being interested in tasks rather than power, they can be expected to achieve agreement where statesmen will fail." Thus, as the allocators of human values, states would recede in international relations. Self-interested bargaining among sovereigns would give way to efficiency and public welfare-motivated management by specialists. "World government would be gradually built upon a series of sectoral bases" according to the functionalists. The functionalist school believed politics and international relations were changing for the better.

Functionalists pointed to the rise, in the second half of the nineteenth century, of IGOs as forums for international law and policymaking as evidence of this change. The war years, in the judgement of functionalist scholars, evidenced their theories and propagated their ideas amongst policymakers to mend international relations. American, British, and French policymakers founded many IGOs at the conclusion of World War II, including the United Nations


9. Robert W. Cox et al., The Anatomy of Influence: Decision Making in International Organization 403 (1973) (explaining the functionalist theory regarding the transition of authority from states to world organizations).

10. See Harold K. Jacobson, Networks of Interdependence: International Organizations and the Global Political System 397-410 (2d ed. 1984) (offering an exhaustive list of IGOs, categorized according to typology of membership (limited or potentially universal) and purpose (general or specific)). The International Telecommunications Union was founded in 1865, the World Meteorological Organization in 1873, the International Bureau of Weights and Measures in 1875, the International Union for the Protection of Industrial Property in 1883, the International Union for the Protection of Literary and Artistic Works in 1886, the Permanent Court of Arbitration in 1889, the International Union for the Publication of Customs Tariffs in 1890, the International Labor Organization in 1919, the International Criminal Police Commission in 1923, the International Bureau of Education in 1925, the International Institute for the Unification of Private Law in 1926, and the Bank for International Settlements in 1930. Id. at 408-10.
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(“UN”), the International Monetary Fund (“IMF”), the World Bank, and the General Agreement on Tariffs and Trade (“GATT”).

Ninety-four percent of today’s IGOs were founded after 1939. More than a thousand IGOs have been established to promote multi-lateral cooperation in specific functional domains of international relations. Certain IGOs, e.g., the UN and the European Union may be described as whole “families” of sibling, special-function IGOs. The functionalist scholars of international relations draw from the teachings of the New Haven “world public order” school of international law scholars, including Myres McDougal, Harold Lasswell, Percy Corbett, and Richard Falk. Myres McDougal explained that “there are inescapable interdependencies throughout the world in resource potentialities and in institutional structures by which values are produced and distributed” and “that people make increasing identifications with larger and larger groups, from the family or locality to world community.” He believed that positive values—respect for private property, liberty, human dignity—could be maximized in the world only when the political boundaries of nation states could be overcome through the growth of a network of international organizations. He maintained that “a chief impediment to achieving such realistic orientation, and the creation of the institutions necessary... has been and is the habit of peoples identifying themselves with the state.” Percy Corbett wrote, “world order presumes world community under law; but this is not necessarily a


12. See Cheryl Shanks et al., Inertia and Change in the Constellation of International Government Organizations, 50 INT’L ORG. 594, 603 (1996) (showing that IGOs can be compared to and traced by lineage, having birth, death, and survival rates).

13. Myres McDougal, Harold Lasswell, and Percy Corbett taught at Yale’s Law School. Richard Falk studied with them and has carried forward the research tradition.


15. See id. at 1203.
community of state; it may be a community of individuals, transcending states." Richard Falk viewed the state system as inherently unstable due to inequality in wealth and power. He explained a functionalist "logic of supranationalism" and institutionalization which was transforming international relations through "non-traumatic" means.17

McDougal believed that the individual, not the nation-state, should be thought of as the "ultimate beneficiary" of international law. On the other hand, Hegel’s glorification of the state valued the human institution more than the human being. Hegel felt this had the practical effect of stripping people of their dignity and denying them protection from government abuse. McDougal said himself that his "ultimate goal is to create and preserve an universal order of human dignity through clarification and implementation." He believed the creation of a network of international organizations, with the UN as the focal point, to be primary in achieving universal respect for human dignity. To him the UN concept was "heir to all the great historic democratic movements—for constitutionalism, freedom, equality, fraternity, humanitarianism, liberalism, enlightenment, peace, and opportunity and so on."20

16. PERCY E. CORBETT, THE GROWTH OF WORLD LAW 10 (1971) (explaining that world order is a goal to aspire to or achieve).

17. See RICHARD A. FALK, A STUDY OF FUTURE WORLDS 150 (1975) (explaining Falk’s analysis and theory on the future changes to occur concerning governments and world order).

18. See Myres S. McDougal & Gertrude C.K. Leighton, The Rights of Man in the World Community: Constitutional Illusions Versus Rational Action, in STUDIES IN WORLD PUBLIC ORDER 330, 363 (McDougal et. al., eds 1960) (criticizing the commonplace view that traditional international law concerns itself only with states, and not individuals).

19. See Myres S. McDougal & Harold Lasswell, The Identification and Appraisal of Diverse Systems of Public Order, in STUDIES IN WORLD PUBLIC ORDER 3, 16 (McDougal et. al., eds 1960). Five intellectual tasks will assist in achieving the goal of clarifying and aiding in implementing a universal order of human dignity: (1) clarify the goal; (2) understand and describe the social trends; (3) analyze conditioning factors; (4) project future developments; and (5) invent and consider policy alternatives. See id. at 16-17.

20. McDougal, supra note 18, at 336 (praising the United Nations Charter as the culmination of mankind’s struggle for basic human values).
However, McDougal was not an idealist given to trite visions of world utopia. He concurred with Hans Morganthau’s post-war explanation of international relations as fundamentally about power.21 McDougal put forth a pragmatic research program, which recognized the reality of a fundamentally de-centralized world system composed of sovereign, power-seeking nation-states. He posited that, even for the righteous goal of the establishment of worldwide respect for human rights and dignity, democratic adherents should not attempt to impose their values upon non-democratic, repressive governments by means of violence. To McDougal, violence of this kind destroyed values, making the means not worth the ends.22

However, McDougal stated in a 1959 presidential address to the American Society of International Law that “it need not be stipulated...that the principle of minimum order requires the suicidal acceptance of peace at any price.”23 Within McDougal’s worldview, the measure was the maximization of values, and because values such as enlightenment, religious tolerance, wealth, and respect could not be maximized once lost, the threat or use of force by an attacker demanded self-defense. Furthermore, he believed that self-defense may be extended, in some circumstances, to aggressive pursuit of military victory against an evil greater than the use of violence itself, articulating the theory of “just war”.

Nevertheless, unlike the realist school, McDougal believed that concerted institutionalization of international law and organizations, paired with judicious use of state power, would produce a world public order, substantially improving the social, economic, and po-


23. Myres S. McDougal, Perspectives for an International Law of Human Dignity, in STUDIES IN WORLD PUBLIC ORDER 1001 (McDougal et. al., eds 1960). Minimum order is the principle that force is to be used only to preserve order, not to expand values. Id. at 1000.
Another leading scholar of international law, Louis Henkin, wrote that, “[i]n relations between nations, the progress of civilization may be seen as movement from force to diplomacy, from diplomacy to law.”

Henkin investigated international law as it was actually lived in the foreign policy of states. Analyzing the actions of states and IGOs with respect to a host of issues in international law, he concluded that states create a good deal of public international law and, by and large, comply with the laws they establish. Henkin recognized the reality of both states and IGOs as actors within international relations and did not contemplate the transformation of the state system into a supranational system. With his state-centrality premise and empiricism, Henkin can be seen as a bridge between academic international law and academic international relations.

The functionalist prediction that IGO technocrats would supplant state policymakers as the most important decision-makers in world politics never came to fruition. States have clung to their sovereign claims of independence despite deepening global interdependence.

A group of international relations scholars conducted a major, systematic empirical study of “decision making in international organization” by investigating behavior within IGOs such as the International Labor Organization (“ILO”), the UN Environmental, Social and Cultural Organization (“UNESCO”), GATT, and the UN Coun-

24. For explanations of when benefit of force outweighs the cost of loss to peace and order, see, e.g., Community Regulation of Combat Situations, in LAW AND MINIMUM PUBLIC ORDER 550 (Myers S. McDougal & Florentino Feleciano eds., 1961); Resort to Coercion, in LAW AND MINIMUM PUBLIC ORDER 121 (Myers S. McDougal & Florentino Feleciano eds., 1961).


26. See HAAS, supra note 8, at 23 (“The distinction between the political and the technical, between the politician and the expert, simply does not hold because issues were made technical by a prior political decision.”).
cil on Trade and Development ("UNCTAD"). Though the investigators placed considerable emphasis upon the behavior of states, they did so within the context of a detailed study of IGOs. This study would prove to be the last substantial study of IGOs as organizations.

II. INTERNATIONAL GOVERNMENTAL ORGANIZATIONS AS KNOWLEDGE MANAGERS

In his influential *After Hegemony: Cooperation and Discord in the World Political Economy*, International relations scholar Robert Keohane argued that sovereign, self-interest seeking states cooperate multilaterally—or not—in order to achieve their national goals in world politics and the world political economy. Moreover, Keohane contended that, from a rational choice perspective, states establish what he called "international regimes" to facilitate the efforts. In Keohane's terms, international regimes are a "governing arrangement" for transnational and interstate relations, i.e., "sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations"; principles are "beliefs of fact, causation, and rectitude"; norms are "standards of behavior defined in terms of rights and obligations"; rules are "specific prescriptions or proscriptions for action"; decision-making procedures are "prevailing practices for making and implementing collective choice."

Drawing an analogy to industrial organization explanations for the existence of firms in the commercial marketplace, Keohane asserted that international regimes exist because they reduce the costs of in-

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27. For the details of the study and its findings, see Cox, *supra* note 9.
30. Stephen D. Krasner, *Structural Causes and Regime Consequences: Regimes as Intervening Variables*, in *INTERNATIONAL REGIMES* 1, 2 (Stephen D. Krasner ed., Cornell Univ. Press 1983). This collection of essays was initiated by then editor Robert Keohane and first delivered by successor editor Stephen Krasner in volumes 35 and 36 of INT'L ORG.
terstate transactions in international relations. International regimes “mak[e] it cheaper for governments to get together to negotiate agreements,” “reduce transaction costs of legitimate bargains and increase them for illegitimate ones,” “organize issue-areas so that productive linkages (those that facilitate agreements consistent with the principles of the regime) are facilitated, while destructive linkages and bargains that are inconsistent with regime principles are discouraged,” and reduce information asymmetries because “some actors may know more about a situation than others.”

Under Keohane’s leadership, political scientists largely shifted their collective attention to the application of the international regime conceptual framework of international relations. Two young scholars, reviewing the then fledgling international regime research program, recommended erasure of the conventional boundary between studies of international relations and domestic politics.

Indeed, the international regime research program had produced considerable social-scientific progress along several related research lines, especially that international relations are “two-level bargaining games” conducted simultaneously intrastate as well as interstate and that “ideas” or beliefs animate international relations and political outcomes as much as do national interests. A plethora of scholar-

31. See Keohane, supra note 29, at 89-94. Once a regime is established, the regime is less expensive for a state to deal with as a source of information than it would be if the regime did not exist at all. See id. at 90; see also William G. Ouchi, Markets, Bureaucracies, and Clans, 25 ADMIN. SCI. Q. 129 (1980) (explaining that organizations arise in response to needs for efficiency).

32. Keohane, supra note 29, at 90-93.

33. See Stephan Haggard & Beth A. Simmons, Theories of International Regimes, 47 INT’L ORG. 491 (1987) (exploring regimes and their roles in international relations).

34. See Robert D. Putnam, Diplomacy and Domestic Politics: The Logic of Two-Level Games, 42 INT’L ORG. 427 (1988); see also DOUBLE-EDGED DIPLOMACY: INTERNATIONAL BARGAINING AND DOMESTIC POLITICS (Peter B. Evans et al. eds., 1993) (offering a more in-depth explanation of the relationship between international and domestic diplomacy).

ship has provided ample analysis of how international regime domains have contributed to progressive social science regarding international relations—even if some these works offer little more than intellectual “mopping-up,” in the pithy prose of Thomas Kuhn.36

However, an unfortunate result for international relations scholarship has been that the study of IGOs has advanced theoretically and conceptually at a much slower pace than other aspects of international regimes. The international regime has emphasized states and their national policy institutions, ideas (principles and norms), treaties and agreements (rules), and decision-making procedures, thus slighting IGOs. In the early years of the international regime research program, two scholars explained that the field had evolved cumulatively and progressively and that regime concepts had become more interesting than the formal organizations.37 These regime concepts remained more interesting to the field’s mainstream. For example, a recent scholarly policy monograph laid out a research agenda in support of “deeper integration” among states along conventional international regime lines.38 Its companion monograph pointed out that transportation and communication technology advances and already-achieved national trade policy liberalization demand even “deeper integration” through regional as well as multilateral institutional means. Yet, the monograph does not provide theoretically-grounded explanations or analytic frameworks, and apparently accepts the conventional research agenda as well.39


37. See Friedrich Kratochwil & John Gerard Ruggie, International Organization: A State of the Art on an Art of the State, 40 INT’L ORG. 753, 774-75 (1986) (explaining that international organizations are turning away from standard international institutions and focusing on international behavior instead).

38. See Miles Kahler, International Institutions and the Political Economy of Integration 11-18, 77-79 (1995) (presenting a discussion on the role of international institutions in economic change).

The international regime research program nevertheless has faced criticism from the beginning. An essay in the original *International Regimes* volume included an essay which assailed the concept as "imprecise and wooly," "value-based," "static" and "narrow-minded", and "rooted in a state-centric paradigm that limits vision of a wider reality", deeming it a "fad" offering "little in the way of long-term contribution to knowledge." In the same issue of *International Organization* in which the international regime research program was proclaimed a progressive step forward for the field, another scholar declared bluntly: "[f]or the international organization field, the concept of regime has meant almost intellectual chaos. . . . [T]he study of international organization has become broadly defined as the study of patterns of international cooperation and conflict; rendering it indistinguishable from the study of international politics." One critic bemoaned the shift from the study of international governmental organizations to international regimes for having spewed ambiguous explanations of cooperation and conflict. He rallied for further studies of the interactions among IGO secretariats and the national governmental bureaucracies in order to attain a "concrete understanding of how cooperation happens." Studies appeared which analyzed international regimes with barely any reference at all to the international governmental organizations. For example, Gilbert Winham explained the Tokyo Round multilateral trade negotiations wholly without reference to the GATT secretariat or its executive head. In contrast, two previous books, regarding earlier

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41. J. Martin Rochester, *The Rise and Fall of International Organization as a Field of Study*, 40 INT’L ORG. 777 (1986). Rochester provides an excellent citation-rich analysis of the international organization research tradition from its origins in the thought of Dante, Bentham, and Kant through the contributions of nineteenth century peace and war scholars as well as the seminal functionalist international relations scholars of the 1930s through the 1950s.


43. *See WINHAM, supra* note 2, at 363-401. In a back cover blurb, Robert Kohane described the book as "definitive."
rounds of trade negotiations from the 1960s and 1970s, provided such references. Similarly, a recent study of the 1986-1994 Uruguay Round negotiations argued that the GATT Secretariat decisively contributed to the agreement outcomes of the Round.

That IGOs conduct activities and perform roles in the international relations system was only cursorily noted throughout the international regime analysis of the past two decades. Presumably, scholars deemed the role of IGOs as insignificant. Theoretical and conceptual neglect likely accounts for empirical neglect. A fuller understanding of the function of IGOs in promoting multilateral cooperation is sorely needed.

The function of IGOs should be delineated beyond the facile explanation that international regimes "facilitate agreement" by "reducing transaction costs." An IGO is an organization composed of people; it exists in brick and mortar to perform certain tasks of service to its state-member constituents and to the world community.

First, IGOs gather, analyze, and disseminate information. For example, the IMF and the International Bank for Reconstruction and Development ("World Bank") are the premier providers of world economic information even in a "knowledge-based" world economy with highly developed financial markets and sophisticated private sector economic information providers.

Second, IGOs provide a forum for administrative and research support for the negotiation of new rules by its members. For example, information and analysis provided by the Food and Agriculture

44. See CURZON, supra note 2 at 48-53 (providing examples of books that refer to the GATT General Director and Secretariat staff).


46. Ernst Haas, one of the leaders in the study of IGOs before and after the advent of the international regime conceptual framework, wrote a supportive essay in the original INTERNATIONAL REGIMES volume. He does not seem not to have seen any logical conflict, nor do I. See Haas, Words Can Hurt You; or, Who Said What to Whom about Regimes, in INTERNATIONAL REGIMES 23, 60 (Krasner, ed. Cornell Univ. Press 1983).

47. See supra note 28 and accompanying text.
Organization ("FAO") was critical to GATT Uruguay Round multilateral trade negotiations regarding sanitary and phytosanitary standards.

Third, IGOs provide administrative and legal support for its members regarding rule compliance and dispute settlement. For example, the World Trade Organization ("WTO") legal staff advises dispute settlement panelists and appellate body members regarding trade law when member states submit their conflicts for adjudication.

Fourth, IGOs provide administrative services to the members. For example, the World Health Organization ("WHO") offers public health advice and policy support and UNESCO helps education institution-building in many developing countries.

Fifth, IGOs formally institutionalize social norms and values held by its membership. For example, the UN General Assembly ("UNGA") issued numerous declarations in opposition to Portugal clinging to its colonial possessions long after decolonization was otherwise completed and in opposition to the apartheid policies of the government of South Africa.

III. ORGANIZATIONAL THEORY OF KNOWLEDGE MANAGEMENT

Private enterprises exist because they manage knowledge better than unrestricted markets and are as efficient as competitors. Private enterprises decline and eventually expire when they fail to manage knowledge better than unrestricted markets or competitors. Even in our age of the Internet, when knowledge is "out-there" and available seemingly at will, knowledge, ever-embedded into organizations and managed through deliberate strategies, is the ultimate source of competitive advantage.

Business enterprises are much more than depositories of discrete facts. Business enterprises are neither dictionaries nor databases; they are "know-how" institutions in the commercial marketplace. They possess the organizational capabilities to turn information and know-how into customer-valued products and services. Management practitioners and scholars contend that knowledge management, which has always been relevant to business success, has now become vital in our era.
As the world economy becomes increasingly integrated and competitive, doing business becomes increasingly complex. Technologies are changing rapidly, fomenting turbulence in commercial markets. As a result, competitive advantages are increasingly difficult to sustain. Thus, knowledge management is a central purpose for leadership and organization of commercial enterprise.

Human knowledge cannot be encompassed in a single technique, discourse, or discipline. Human understanding has over time become differentiated like goods and services in a marketplace, divided into disciplines and sub-disciplines, trans-disciplinary fields and sub-fields, organized and compartmentalized, not merely for the sake of convenience, but to promote cognition itself. Organization and compartmentalization are not static and fixed, but dynamic and mutable. Knowledge and learning capabilities tend to become institutionalized as sector-specific knowledge, organizing principles, and governance structures and these patterns of sectoral competitiveness tend to establish their path-dependent trajectories. Technological innovation similarly tends to be patterned along natural trajectories because technological paradigms prescribe directions for further research and development, and incremental innovation. This excludes other possible paths.

The collective knowledge, know-how, and learning of an organi-

48. See Stephen Toulmin, HUMAN UNDERSTANDING: THE COLLECTIVE USE AND EVOLUTION OF CONCEPTS 7 (1972) (explaining that boundaries of different academic disciplines result from existing divisions of intellectual authority).

49. See id. at 113-160.

50. See Herbert Kitschelt, Industrial Governance Structures, Innovation Strategies, and the Case of Japan: Sectoral or Cross-National Comparative Analysis?” 45 INT’L ORG. 453, 455-56 (1991) (stating that each of the four paradigms, the “classic” approach, modified “classic” approach, sectoral approach, and the modified sectoral approach each have a different theory as to why this is the case); see generally MICHAEL J. PIORE AND CHARLES F. SABEL, THE SECOND INDUSTRIAL DIVIDE: POSSIBILITIES FOR PROSPERITY (1984).

51. For a discussion of these trajectories, see RICHARD R. NELSON AND SIDNEY G. WINTER, THE EVOLUTIONARY THEORY OF THE ECONOMIC CHANGE (1982).

52. For an explanation of this phenomenon, see Giovanni Dosi, Technological Paradigms and Technological Trajectories, 11 RES. POL’Y 147 (1982).
zation have been said to be its "core competence." The sum of an organization's core competence is greater than its parts. The organization possesses knowledge-based capabilities, which yield a competitive advantage and produce goods and services. It is an artifact of organization, not of an individual, making it difficult for a competitor to emulate. Core competence is the product of organizational leadership, structure, and process; whereas knowledge is integrated within organizational behaviors and routines in order to create and sustain capability. This drives organizational strategy, including product or service selection and delivery, organizational design, and human resource management.

Organizations possess "knowledge assets" which may be categorized into specific domains of competencies. Establishing taxonomy of knowledge specific to a particular organization affords access, diffusion, and dissemination as well as identification of knowledge gaps or misfits within core competency. These knowledge assets may be explicit, such as written articulations of a design or formula, but often are tacit, existing in the "heads" of staff members.

The challenge of extracting and utilizing knowledge from its staff members is an important aspect of knowledge management for organizations. Articulation of knowledge domains and the organizational exercise of developing the categories can facilitate information sharing amongst the members of the organization. Discrete knowledge may be deemed proprietary intellectual property, to be protected by technical means and organizational procedures with respect to relevant intellectual property laws. Knowledge management involves decisions about what knowledge to shield and what knowl-


55. See, e.g. Edward Rubin, The New Legal Process, the Synthesis of Discourse, and the Microanalysis of Institutions, 109 Harv. L.Rev. 1393, 1413 (1996) (noting that in an institutional setting, most individuals do not act as individuals, but rather as members of a complex organization whose motivations, behaviors, and knowledge are highly affected by their institutional settings).
knowledge to disseminate. An organization's competitive advantage ultimately rests upon its capacity to learn as an organization.\textsuperscript{56}

Learning is "largely an information-processing activity in which information about the structure of behavior and about environmental events is transformed into symbolic representations that serve as guides for actions."\textsuperscript{57} In other words, it is the result of simple processes of replacement. "Problem-solving," on the other hand, requires greater leaps of mental replacement (such as analogy). "Innovation" requires the greatest leaps of mental replacement. Yet, nevertheless, both problem-solving and innovation are forms of learning.

Learning may be "observational," i.e., the outcome of the perception of someone else's experience or "experiential," i.e., the outcome of the trial-and-error of one's own experience.\textsuperscript{58} According to educational psychologists, learning is dependent upon cognition and motivation.\textsuperscript{59} Cognition is the learner's ability to process information—selection, acquisition, construction, and integration. Motivation means the learner's goals, sense of efficacy or control, and expectancy for success. The two are interdependent and dynamic, as cognitive structures and learning strategies relate to personality and motivation characteristics.

Individual learning relates to, but is not identical to, organizational learning. Organizations are more than collected individuals; organizational learning is more than collected individual learning.\textsuperscript{60} An organization learns when "encoding inferences from history into routines that guide behavior;" "routines" being rules, norms, procedures,

\textsuperscript{56. See Linda Argote, ORGANIZATIONAL LEARNING: CREATING, RETAINING AND TRANSFERRING KNOWLEDGE (1999); PETER SENGE, THE FIFTH DISCIPLINE: THE ART AND PRACTICE OF THE LEARNING ORGANIZATION (1990).}

\textsuperscript{57. ALBERT BANDURA, SOCIAL FOUNDATIONS OF THOUGHT AND ACTION: A SOCIAL COGNITIVE THEORY 50 (1986).}

\textsuperscript{58. See id. at 51, 106.}

\textsuperscript{59. For a discussion on what drives learning, see Lyn Corno and Richard E. Snow, Adapting Teaching to Individual Differences among Learners in HANDBOOK OF RESEARCH ON TEACHING (Merlin C. Wittrock ed. 1986); Paul Pintrich et al., INSTRUCTIONAL PSYCHOLOGY, 47 ANN. REV. OF PSYCHOL. 611 (1986).}

\textsuperscript{60. For a distinction between the two forms of learning, see Daniel H. Kim, The Link between Individual and Organizational Learning, 35 SLOAN MGMT. REV. 37 (1993).}
beliefs, paradigms, and codes.\textsuperscript{61} Organizational learning depends upon organizational characteristics, including complementary organizational notions of "climate" and "culture." Organizational climate means characteristics of size, structure, complexity, reward-structure, leadership style, and resource-base. Organizational culture, in contrast to organizational climate, refers to values, attitudes, appreciation systems, behavior patterns, local knowledge—the "way we do things around here."\textsuperscript{62} Characteristics of climate and culture may either encourage or inhibit the cognition essential to learning.

Organizational learning depends upon the existence of "shared mental models" or "consensual knowledge" (akin to the "cognitive structures" of individual learning), which encourage the integration of new knowledge into organizational routines.\textsuperscript{63} Shared mental models for knowledge management, the seminal characteristics of organizational culture, promote the communication of new information and learning within the organization. The lack of such models makes the communication of new information and learning within the organization exceedingly difficult. However, even when shared mental models do exist, they do not erase the intra-organizational cultural differences that exist within any sizable group of people. For purposes of communication toward organizational learning, these cultural differences must be overcome.

Nevertheless, cultural differences within an organization are to be welcomed, not erased. Innovation means finding creative, new solutions to problems—effective organizations seek to innovate new products and services and to innovate the ways they deliver these products and services. Since innovative societies apparently value autonomy, diversity, and rational method,\textsuperscript{\textsuperscript{64}} it may well be that inno-


\textsuperscript{63} Kim, \textit{supra} note 60, at 43.

\textsuperscript{64} For evidence of this common link between innovative societies, \textit{see} Huff, \textit{supra} note 6.
ervative organizations value individual autonomy and encourage staff members to consider new ideas and possible new solutions. Furthermore, innovative organizations value staff diversity, individuals who bring different, if complementary, knowledge-sets, experiences, and cultural attitudes. Diversity creates a vigorous internal marketplace of ideas, which can, if given some order and discipline by management, produce creative problem solving.\textsuperscript{65} Organizations must value reasoned, analytical experiment and rational, scientific method. Values of individual autonomy, diversity, and experiment become institutionalized characteristics of organizational climate.

Organizational learning and knowledge management begin with the organization’s capacity to ensure that the correct new information is acquired. In previous eras of less rapid change in the organizational milieu, an organization could succeed when a cadre assumed responsibility for knowledge acquisition, such as one or two “scanners” or “contact people” trusted by the organizational leader or by the organizational leaders themselves.\textsuperscript{66} Increasingly, however, knowledge management requires that an organization have a design and culture where everyone within the organization shares in the responsibility for bringing new information into the organization. The new model of knowledge management designs organizational structures and processes with the intent to create a learning culture. Members of the organization participate in outside-the-organization opportunities for new knowledge acquisition, ranging from formal mechanisms such as conferences and seminars to informal know-how trading opportunities such as social gatherings.\textsuperscript{67} Professional and technical staff augment their knowledge acquisition through par-

\textsuperscript{65} See Maureen T. Hallinan, \textit{Diversity Effects on Student Outcomes: Social Science Evidence}, 59 OHIO ST. L.J. 733, 751-33 (1998) (explaining that contact between diverse groups can lead to improved relationships between persons who differ by race and ethnicity; that a commitment to diversity fosters a desire to work together to achieve common goals).

\textsuperscript{66} See Harold L. Wilensky, \textit{Organizational Intelligence: Knowledge and Policy in Government and Industry} 10 (1967) (stating that those chosen as “contact men” were valued for such things as their knowledge of the political, social and cultural ideas of the society and for their ability to mediate between the organization and the outside world).

participation in transnational "epistemic communities" of like-educated, common knowledge domain people who share information. Appropriate reward systems are designed to motivate staff members to acquire new information and learning.

Knowledge management starts with the acquisition of new information. Ultimately, however, knowledge management depends upon the capacity of the organization to transform the raw information into actionable knowledge; individual learning into organizational learning. Knowledge management and organizational learning demand the institutionalization of communication systems within the organization. Effective communication systems "push" and "pull" knowledge within the organization. Moreover, they employ techniques of organizational structure such as cross-functional teams and of information technologies such as electronic mail. Formal training programs contribute to effective communication and help build the organizational capacity to learn. Communication techniques are designed to mesh with organization-specific tendencies of climate and culture.

The capabilities of new information and communication technology create new potential for knowledge management. When printed matter mail and voice telephony were the primary means of communication, managers across distant locales could not always get the right information at the right time. Telephony service revolutionized twentieth-century communication and has been fundamental to the industrial age, but it has become capable of much more at the dawn of the new century. The telephone has been converging with the computer and the computer has become a communication device due to the Internet.

In little more than a generation, information technology has been revolutionized by the microchip and digital compression. The for-


69. The following paragraphs are based upon conversations with Professor Paul Almeida of the Georgetown University School of Business.

70. For a history of these technology advances, see MICHAEL S. MALONE, THE MICROPROCESSOR: A BIOGRAPHY (1995); NICHOLAS NEGROPONTE, BEING DIGITAL (1995).
mer put extraordinary information processing and storage capacity into offices and homes during the period of 1975 to 1995; the latter took incompatible means of computation and communication—telephony, broadcast television, cable, wireless—and made them speak the same languages of ones and zeros, establishing a new network era. Network computing and communication network computing represent a revolution in information-distribution capabilities.

Communication techniques include electronic mail and electronic data exchange, video conferencing, mail, telephone and fax delivery systems, and face-to-face meetings. Each technique possesses a trade-off with respect to its capacity for information delivery, the breadth of information delivery, the richness of information delivery, and the formality of information delivery. The communication and information technology revolution is transforming both workplace and marketplace, making knowledge management truly possible. Nevertheless, the efforts of a given organization’s staff truly actualize the possible.

IV. INTERNATIONAL GOVERNMENTAL ORGANIZATION KNOWLEDGE MANAGEMENT FOR MULTILATERAL ECONOMIC LAWMAKING

IGOs possess certain features common to most organizations, including leadership by an executive head and administration through a formal structure of bureaucracy called a “secretariat.” The executive head of an IGO will be effective only if the shoals of member state relations, bureaucratic management, and milieu conditions can be navigated. An IGO executive head helms an organization with substantial information gathering capabilities and organizational capaci-

71. For a discussion of how the computer and microchip changed information distribution, see generally GLOBALIZATION, TECHNOLOGY, AND COMPETITION: THE FUSION OF COMPUTERS AND TELECOMMUNICATIONS IN THE 1990s (Stephen P. Bradley et al. eds., 1993).

72. To understand these changes, see THE FUTURE OF SOFTWARE (Derek Leebaert ed., 1995); and THE FUTURE OF THE ELECTRONIC MARKETPLACE (1998).

ties. Accordingly:

The key task for any executive head is to use his strategic location in his organization's communication network and the platform his position affords him to mobilize a consensus in support of organizational goals. How influential an executive head will be depends in large measure on his success in performing this task. The dimensions of the task vary with circumstances and time, and prescriptions for success have been highly individual.  

An IGO may perform for its constituents services across a wide range of issue domains of international relations, earning the label "general function IGO." Conversely, an IGO may perform services regarding a narrow set of closely related issue domains, receiving the label "specific function IGO." IGOs such as the UNGA, the Association of Southeast Asian Nations, and the Group of 77 ("G-77") are general function organizations, which take up issues ranging from peace and security to economy and human rights. IGOs such as the ILO, the International Telecommunications Union ("ITU"), and the Food and Agriculture Organization ("FAO") are specific function organizations, which concentrate on the issue domains indicated by their names. Special-function IGOs greatly outnumber general function IGOs—hundreds of the former (sixty-one percent economic, twenty-eight percent social, ten percent security/military) to a few of the latter (two percent of the total population).  

In general, IGOs play a variety of roles in international relations. A particular IGO, however, tends to be mainly a rulemaking forum, such as the UNGA or WTO, or a provider of services, such as the examples of the World Bank and the WHO. The dominant purpose

75. See Shanks et al., supra note 12, at 601.
77. See, e.g. Keith Clark, Sovereign Debt Restructurings: Parity of Treatment Between Equivalent Creditors in Relation to Comparable Debts, 20 INT'L LAW
of the IGO shapes its service delivery and knowledge management practices.

Compared to typical organizations, IGOs possess some unusual characteristics. The national identities of IGO staff members vary widely and IGO decision-makers navigate through complicated processes involving organization insiders and outsiders. External influences extensively influence mission, activity, and life at IGOs. An organization is an "open system" which, like a biological organism, evolves interdependent with its milieu.\(^7\) An organization has permeable boundaries such that organization and milieu develop together. Structure and process of organization—authority relationships, rules, routines, and operational procedures—are established for effectiveness given particular milieu circumstances. The milieu\(^7\) of international politics and relations, the world economy, transnational cultural patterns, social stratification, and technology changes strongly shape the context in which IGOs operate.

Most fundamentally, however, national governmental representatives extensively influence the mission, activity, and life at the IGO through constitutional claim. National governments found the IGO either directly or through other IGOs, establishing in its charter its mission, rules of decision-making, and basic organizational functions. More importantly, national governments frequently select the executive head and may influence selection of senior and even junior staff. National governments influence programs, activities, administrative practices, and budgets. IGOs are not sovereign actors; they are constrained by their member states, as well as events upon world political and economic stage. However, IGO executive heads do

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857, 859 (1986) (explaining that the World Bank provides services such as international soft loans).


79. See HAROLD SPROUT & MARGARET SPROUT, THE ECOLOGICAL PERSPECTIVE ON HUMAN AFFAIRS (1965) (recommending that the term "milieu" be used to emphasize the political, economic, and social dimensions rather than "environment," which tends to conjure in people's minds meanings associated with ecology, natural resources, and pollution).
have substantial sources of power that can be leveraged to guide the organization's behavior and role in facilitating multilateral cooperation.

From its inception in the late 1940s through the 1970s, GATT primarily existed to facilitate multilateral trade cooperation by hosting rounds of tariff reduction negotiations among the industrialized countries. During the 1970s, the GATT members established a multilateral trade negotiation ("MTN") in order to reduce non-tariff barriers to trade. Non-tariff barriers posed a special challenge to trade negotiators as they were difficult to measure and, hence, tricky to evaluate their impact. Nonetheless, Tokyo Round negotiators were able to create "linkage" opportunities provided by the round's broad ability to formulate important trade policy agreements. At the conclusion of the Tokyo Round, the GATT MTN was hailed as the birth of the most important institutional innovation in world trade since the creation of the GATT itself.

During the 1970s, the GATT confronted demands from developing countries for a New International Economic Order which would entail fundamental reform of the concepts underlying the trade regime, though what developing countries received was a more modest set of new rules regarding contingent-exemptions from GATT rules and tariff preferences. Developing countries presented proposals for restructurking the world political economy at the first UN Conference on Trade and Development in 1964. They demanded trade preferences for their manufactured goods, commodity price stabilization, resource and technology transfers, reduction in freight and service

80. See Gilbert R. Winham, INTERNATIONAL TRADE AND THE TOKYO ROUND NEGOTIATION 371, 371-375 (1986) (explaining that an interesting feature of the Tokyo Round was the trade-offs, or linkages that were established between various issues and that linkages are an important mechanism for promoting agreement in negotiation).

81. See John H. Jackson, The Birth of the GATT-MTN System: A Constitutional Appraisal, 12 LAW & POL'Y INT'L BUS. 21 (1980) (stating that the MTN was the first significant negotiation effort to address problems of non tariff measures affecting international trade since the GATT was first established).

82. For illumination on what developing countries gained through the reforms of the 1970s, see ROBERT E. HUDEC, DEVELOPING COUNTRIES IN THE GATT LEGAL SYSTEM (1987).
charges, debt rescheduling and reductions, and a new forum to replace GATT. Inspired by the success of the Organization of Petroleum Exporting Countries' ("OPEC") oil cartel in 1973-74, a group of seventy-seven developing countries used their numbers in the UN to vote in a Declaration on the Establishment of the New International Economic Order ("NIEO"). As the UN had one-nation-one-vote decision-making, unlike the weighted-voting IMF and World Bank and the rarely voting GATT, the G-77 succeeded in passing their manifesto. The declaration contained policy preferences and asserted the right to nationalize foreign business enterprises, create commodity cartels, and regulate multinational corporations.

The G-77 used the UNCTAD forum to establish raw materials and agricultural cartels—the Commodity Common Fund ("CCF")—which aimed to monitor and manage supply, demand, and therefore, prices. The CCF created stocks of the commodities as a means to manage the supply, modeled after OPEC's success with the oil cartel.

The GATT’s attempts to solve the economic problems of developing countries in the 1960s and 1970s were largely feeble. The sole exception was the tariff-cutting offered by the Generalized System of Preferences, which were trade preferences valuable to developing country exporters even if critics charged that importers manipulated the system for their own benefit. Neither the Kennedy Round negotiations in the 1960s nor the subsequent Tokyo Round negotiations in the 1970s contributed much to development. If anything, these negotiations sometimes adversely affected developing country interests, such as the antidumping and subsidy/countervailing duty agreements


and the Multi-fiber Agreement.

During the 1980s, the GATT trading regime confronted challenges less fundamental in terms of economic philosophy but more threatening with respect to international relations. Namely, the United States government complained that its dispute settlement capabilities were inadequate. Indeed, GATT dispute settlement procedures were often hostage to recalcitrant states. Accordingly, dispute settlement reform became an important priority of the Uruguay Round MTN initiated in 1986. Fundamental procedural reforms were institutionalized by a 1994 agreement of the membership.

In the 1980s, non-tariff barriers challenged the GATT institution even more than in the previous decade, becoming an important priority of the leading governments within GATT membership. The GATT members also challenged the regime to facilitate trade barrier reduction and policy harmonization in areas new to GATT diplomacy, including trade in services and the so-called "trade-related" economic policy issues of intellectual property and investment. The successful Uruguay Round culminated in a series of significant agreements. The members founded the WTO, phased out the Multi-fiber Arrangement, reduced agricultural trade barriers, brought a framework agreement to trade in services, and established minimum standards for intellectual property protection, all due to the breadth of the Uruguay agenda and the linkage bargain diplomacy practiced by GATT and other IGO secretariats.

The 130-plus WTO member states are planning a new round of multilateral trade negotiations. Multilateral trade negotiations have become complex affairs in international relations with more than 130 members of the WTO. More importantly, the issues placed on the negotiation agenda are many and concern a wide range of economic policy matters. Possible new round issues include intellectual property rights, environment, labor, corruption, health, safety, product ef-

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86. For an explanation of how these procedures were abused, see ROBERT E. HUDEC, THE GATT LEGAL SYSTEM AND WORLD TRADE DIPLOMACY (1990).

87. For a list of these procedural reforms, see HANDBOOK OF WTO GATT DISPUTE SETTLEMENT (Pierre Pescatore et al. eds., 1998).

88. For a list of the headquarters and functions of these IGOs, see the APPENDIX.
ficacy regulation, competition regulation, and electronic commerce.

The WTO, if it is to fulfill its role as a rules-promulgation forum for its membership, will cooperate with other functionally specific IGOs. These IGOs will include: UNCTAD, the World Bank, WIPO, the UN Environment Program ("UNEP"), ILO, WHO, FAO, International Standards Organization ("ISO"), and ITU. 88

CONCLUSION

Our conception of IGOs as knowledge-managers refocuses attention on IGOs, positing them as objects of legitimate and ever-important study. We follow a course set by Ernst Haas who placed knowledge in the center of the life and study of IGOs. 89 However, as Haas candidly admits, he merely offered a set of concepts and a typology, not a grounded theory of IGOs. We argue that knowledge accumulation and management of the IGO is central to the shared-knowledge of an international regime. Therefore, the IGO is the crucial cooperation-facilitating institution in any given area of international relations.

Studying IGOs as organizations, which manage knowledge in support of multilateral trade and economic lawmaking processes, informs both state-centered international relations scholarship conducted by political scientists and rule-centered international law scholarship conducted by legal scholars. Thus, we offer a conceptual bridge between these two complementary, but often disjointed areas of scholarship. 90 Furthermore, studying IGOs on this level informs non-state-centered international relations scholarship as well. Transnational epistemic communities, affiliations of technical specialists, and knowledge-intensive public and private organizations are vital contributors to international trade and economic lawmaking negotia-

89. To understand the importance Haas placed on knowledge, see ERNST B. HAAS, WHEN KNOWLEDGE IS POWER: THREE MODELS OF CHANGE IN INTERNATIONAL ORGANIZATION (1990).

90. For a discussion of this newly evolved hybrid of scholarship, see Anne-Marie Slaughter et al., INTERNATIONAL LAW AND INTERNATIONAL RELATIONS THEORY: A NEW GENERATION OF INTERDISCIPLINARY SCHOLARSHIP, 92 AM. J. INT'L L. 367 (1998).
We focus on the role of IGOs as participants in epistemic communities, serving a fundamental role in knowledge creation and dissemination. As the new multilateral trade negotiation round is planned by the member states of the WTO, preparatory work has begun with analysis by the Brookings Institution, the Council on Foreign Relations, and the Institute for International Economics. \(^9\) These policy monographs indicate that the new round agenda will likely be the most ambitious yet, thereby challenging the WTO to provide a forum support function for these negotiations. None of these policy monographs have addressed the expanse of the information and knowledge management needs of the proposed negotiations. Nor have the monographs noted the knowledge-management capabilities of the WTO or the institutional capacity of the WTO to provide a negotiation forum for so many issues of international trade policy.

It has been 25 years since the last major comparative study of IGOs. Our conception of IGOs as knowledge managers calls for the intensive study of IGOs in order to investigate their competencies, knowledge management capabilities, and organizational capacities. Policymakers, practitioners, and scholars must know more about where to find information. They must understand the competencies, analytical capacities, and knowledge management capabilities of the key IGOs.

Further study regarding people and organizations, rather than information and data, will provide vital new information to national policymakers regarding the capacities and capabilities of their IGOs. Moreover, it will inform staff, executive heads, member governments, and non-governmental organizations participating in initiatives to improve knowledge management at IGOs. Study will inform new entrants when they join the WTO and the scholarship of acces-

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91. For an explanation of these contributions, see KNOWLEDGE, POWER, AND INTERNATIONAL POLICY COORDINATION (Peter M. Haas ed., 1992).

92. For examples of such preparatory work, see TRADE STRATEGIES FOR A NEW ERA: ENSURING U.S. LEADERSHIP IN A GLOBAL ECONOMY (Geza Feketekuty and Bruce Stokes eds., 1998); BROOKINGS TRADE FORUM (Robert Z. Lawrence ed., 1998); LAUNCHING NEW GLOBAL TRADE TALKS: AN ACTION AGENDA (Jeffrey J. Schott ed., 1998).
tion,\textsuperscript{93} contributing important understanding regarding the form and function of IGOs.

APPENDIX

The headquarters and function of the above IGOs are as follows:

\textbf{WORLD TRADE ORGANIZATION (“WTO”), Geneva}: the central institution of world trading system; the forum host for a new multilateral trade negotiation round.

\textbf{UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (“UNCTAD”), Geneva}: secondary institution of the world trading system but important to developing countries; possesses substantial, if perhaps underutilized, analytical capabilities.

\textbf{WORLD BANK, Washington, DC}: undergoing a transformation from a multilateral investment bank to a multilateral “knowledge institution” regarding development; possesses extensive knowledge management capabilities, especially regarding developing countries.

\textbf{WORLD INTELLECTUAL PROPERTY ORGANIZATION (“WIPO”), Geneva}: the key multilateral institution regarding intellectual property; a UN agency which provides services to multinational companies and, thus, not dependent upon member contributions and possessing wealth sufficient to provide extensive knowledge management capabilities.

United Nations Environment Program ("UNEP"), Nairobi: key multilateral institution regarding ecology and the environment; administers important international environmental treaties.

International Labor Organization ("ILO"), Paris: key multilateral institution regarding labor; only IGO with member representation from management and labor as well as national governments; establishes international norms regarding labor policies such as work week and child labor practices.

World Health Organization ("WHO"), Geneva: key multilateral institution regarding public health and health care with emphasis upon developing countries; issues of pharmaceutical health, safety, and efficacy regulation, biotech policy considered within the forum.

Food and Agriculture Organization ("FAO"), Rome: key multilateral institution regarding the production of food and agricultural products with emphasis upon developing countries; issues of food standards and agricultural health and safety, biotech policy considered within the forum.

International Standards Organization ("ISO"), Geneva: key multilateral institution for the establishment of international standards regarding products, infrastructure, and management production processes; facilitates cooperation among private nongovernmental organizations and national public organizations.

International Telecommunications Union ("ITU"), Geneva: key multilateral institution for cooperation regarding international communication infrastructure and policy; important institution regarding the development of electronic commerce.

United Nations Educational, Scientific, and Cultural Organization ("UNESCO"), Paris: key multilateral institution for issues related to education, science, and culture, especially regarding
developing countries; provides services to member countries to improve educational and scientific institutions and to protect cultural heritage.