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Legal Bases for Securing the Integrity of the Earth-Space Environment

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Legal Bases for Securing the Integrity of the Earth-Space Environment*

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Like Wordsworth's world, the facts about humanity's contemporary damage—and threats of even more perilous future damage—to the environment are almost too much with us. They scream in horrifying detail, not merely from the face of nature but from every medium of communication. In an urgent summary, issued almost a generation ago, former United Nations Secretary-General U. Thant found a mounting "crisis of worldwide proportions," with portents long apparent "in the explosive growth of human populations, in the poor integration of powerful and efficient technology with environmental requirements, in the deterioration of agricultural lands, in the unplanned extension of urban areas, in the decrease of available space and the growing danger of extinction of many forms of plant and animal life."[1] When one recalls also the accelerating damage to the oceans, it is not surprising that the Secretary-General should have concluded that "if current trends continue, the future of life on earth could be endangered."[2]

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* Portions of this article originally appeared in 184 ANNALS OF THE NEW YORK ACADEMY OF SCIENCES 375 (1971). Permission to reprint has been granted. For clarity in statement, Professor McDougal has made a few minor changes in the original text. Additions to the references have been made where appropriate. Readers who find the organization and content of the statement difficult are referred to Lasswell & McDougal, JURISPRUDENCE FOR A FREE SOCIETY: STUDIES IN LAW, SCIENCE AND POLICY (1992).

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[1] *Report of the Secretary-General, Problems of the Human Environment*, United Nations Economic and Social Council, E/4667, 26 May 1969, at p. 4.

[2] *Ibid.*

Similarly, although our need for new and more precise information is enormous, our knowledge about the causes of all this damage, both actual and potential, appears to be increasing. Ecologists have come to emphasize what community planners have long known, that there is a maze of complex and intimate interdependences—an "indivisible web" of interrelationships—both among the features of the natural environment such as air, climate, topography, soil, geologic structure, minerals, water resources and access to waters, natural vegetation, and animal life and between such features and the institutions and practices by which people seek to satisfy all their many social and psychological needs and demands, as well as basic bodily needs for nutrition, procreation, shelter, safety, movement, and so on.[3]

These interdependences extend through many different interpenetrating communities, from local or minute to global or earth-space in range. It is in the violation of these interdependences—in the transgression of many different resource, technological, and utilization unities—that the root causes of damage to the environment are beginning to be revealed.

There would appear, further, to be a growing consensus among the peoples of the world about the appropriate overriding goals for general community action in lessening the near-disastrous damage with which we all threaten each other. The emerging aspiration of humankind is not so much for some simple conservation of resources or environment in a pristine, untouched state of nature as for an appropriately conserving, economic, and constructive employment of resources in the greater production and wider distribution of all basic human dignity values. In many contemporary conceptions, the resources of the globe are increasingly regarded as the common patrimony of the whole of humankind; practices in the exploitation of resources are being assayed in terms of their aggregate consequences for all who are affected, and cost-benefit analyses are being extended beyond mere quantitative calculations about wealth to qualitative

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[3] These interdependences are developed in McDougal, Reisman & Willard, *The World Community: A Planetary Social Process*, 21 U.C. DAVIS LAW REVIEW 807 (1988); MCHALE, THE FUTURE OF THE FUTURE (1968) 66 et seq. and MCDOUGAL AND ROTIVAL, THE CASE FOR REGIONAL PLANNING, WITH SPECIAL REFERENCE TO NEW ENGLAND (1947). For further discussion, see MURPHY, GOVERNING NATURE (1967); Dimbleby, *Restoring the Ecological Balance in* KEETON AND SCHWARZENBERGER (EDS.), THE YEARBOOK OF WORLD AFFAIRS (1969); Mayda, *Conservation, "New Conservation," and Ecomanagement*, 1969 WISCONSIN L. REV. 288.

assessment of impacts on the shaping and sharing of other representative values, such as power, enlightenment, respect, health, skill, rectitude, and affection. This would appear to be the empirical reference of the somewhat amorphous demand, so often expressed in popular discussion, that resources and environment be protected and maintained for improving "the quality of life."[4]

The invention of effective remedial measures—of appropriate technical solutions—for the better securing of these overriding goals of the general community would not, once again, appear to be beyond the reach of human creativity. The damage is not yet universal or irreversible, and the same science and technology that contribute to the difficulties also immensely enhance the potentialities for alleviation. In our national communities, many of us have had a rich and enlightening experience in the allocation, planning, development and control of resource use for multiple-value goals. If, however, appropriate account is to be taken of the interdependences that pervade both the natural environment and human practices in the shaping and sharing of values, any remedial measures of technical solutions that would be effective through time and for consequential geographic areas must eventually extend to planning, development and controls that are comprehensive, integrated, and rational for the whole global community, as well as for its many internal communities: no national communitiy today can be an island in a universe of interdetermination.[5] In addition, it is obvious that if such comprehensive planning, development, and controls are to be achieved and made to serve the overriding goals of both maintaining a secure environmental base and promoting and augmenting human dignity values, many delicate and continuing adjustments will be required in the management of processes of authority and effective power at all levels of government, from local through national and regional to global.

For specialists in law, the important question posed, in this gradual identification of the problem, is: What are the creative potentials in the management of processes of authoritative de-

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[4] *See more generally*, MCDOUGAL, LASSWELL & CHEN, HUMAN RIGHTS AND WORLD PUBLIC ORDER; THE BASIC POLICIES OF AN INTERNATIONAL LAW OF HUMAN DIGNITY (1980).

[5] Global perspectives are appropriately stressed in Kennan, *To Prevent a World Wasteland: A Proposal*, 48 FOREIGN AFFAIRS 401 (1970).

cision for contributing to the clarification and implementation of the common interests of the peoples of the world in protecting, and securing the more constructive enjoyment of, their shared environmental base? It is the thesis of this paper that these potentials are sufficiently high to afford ground, not for complacency, but for at least a modest optimism.

It is not, of course, our suggestion that existing processes of authoritative decision, or the governmental structures in which such processes occur, are adequate to secure humankind's basic goals in relation to its environment. What we would suggest is rather that we do today have sufficient general knowledge about, and skills in, the management of processes of authoritative decision and sufficient assets in our inherited, and rapidly improving, global constitutive process, and presently established public order policies about the control of resources, greatly to encourage the expectation that, if the perspectives of the effective elites of the world can be appropriately shaped, much more rational and economic processes of authoritative decision can be constituted quickly and managed for better securing basic goals.

The full documentation of this thesis would require performance of a sequence of intellectual tasks, including:

> (1) the detailed specification, in their context of causes and consequences, of the more important problems arising from humanity's contemporary interaction with and exploitation of its environment;
> (2) the clarification in detail, from the perspective of an observer identifying with the whole of humankind, of basic general community policies in relation to each of these particular problems;
> (3) a survey of past experience, of prior trends in decision, at all levels of government, from local to global, in terms of approximation to clarified policies;
> (4) an investigation of the factors that have affected past decisions on particular problems;
> (5) the projection of probable future decisions and conditioning factors in relation to particular problems; and
> (6) the recommendation of new alternatives in constitutive process and public order prescriptions for the better securing of clarified policies.

The most that can be attempted here is an impressionistic indication of the basic legal assets at our disposal for undertaking inquiry and, ultimately, action. These assets include, as

suggested above, our general knowledge about, and skills in, the management of legal processes, the existing global constitutive processes of authoritative decision, and the presently established public order policies relating to the allocation, planning, development, and exploitation of resources. We will glance briefly at each of these different types of assets and note certain possible directions toward improvement.

I. PERSPECTIVES ABOUT, AND SKILLS IN, LAW

The increasingly predominant theory ("jurisprudence" or "philosophy") about law today is explicitly sociological or policy-oriented in emphasis. In this conception, law is not some frozen set of pre-existing rules or arrangements that inhibits constructive action about environmental and other problems but, rather, a dynamic and continuous process of authoritative decision through which the members of a community clarify and implement their common interests. Rejecting the mysticism of natural law emphases, the fatalism of historical emphases, and the arid technicality of analytical or positivistic emphases, this contemporary sociological or policy-oriented conception seeks to facilitate the bringing to bear upon community problems, within the constitutive processes through which common interests are clarified and implemented, all the findings and techniques of modern social and physical science. The major features of this emerging emphasis may be briefly indicated.[6]

A. Observational Standpoint

In contemporary inquiry about law we have learned to distinguish the standpoint of the scholarly observer, primarily concerned with enlightenment and skill, from that of the decision maker, primarily concerned with power—that is, for participation in the making of effective decision. Scholars, attempting to distinguish themselves and their procedures from the events (including the purposes and procedures of the participants in proc-

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[6] For detailed elaboration, see LASSWELL & MCDOUGAL, JURISPRUDENCE FOR A FREE SOCIETY: STUDIES IN LAW, SCIENCE AND POLICY (1992). These perspectives are amplified in reference to international law in McDougal, Lasswell and Reisman, *Theories About International Law: Prologue to a Configurative Jurisprudence*, 8 VA. J.I.L. 188 (1968). For historical background see FRIEDRICH, THE PHILOSOPHY OF LAW IN HISTORICAL PERSPECTIVE (2d ed., 1963); BRECHT, POLITICAL THEORY (1959).

esses of decision) that are under observation, seek to create and employ a *functional* theory both to establish a comprehensive and relevant focus of attention and to facilitate performance of certain indispensable intellectual tasks in reference to the flow of authoritative decision and of the *conventional* theories employed to explain and justify such decision. The identifications the scholar seeks are not merely with some single parochial community but, rather, with the whole of humankind's many different—often concentric, and always interpenetrating—communities and the enlightenment sought is that relevant to clarifying and implementing the common interests of all.

B. Focus of Inquiry

Eschewing definitional exercises, contemporary jurisprudence aspires to a focus of inquiry that is both comprehensive and selective, effectively relating authoritative decision to the larger social and community processes by which it is affected and which it in turn affects. This comprehensiveness and selectivity are sought by certain subordinate, interrelated emphases.

1. A Balanced Emphasis upon Perspectives and Operations

The central focus is squarely on *decision*, as effective choice, composed of both perspectives and operations. Exaggerated emphasis is avoided either on technical rules of law, too often assumed to be an accurate expression of community perspectives, or on bare, behavioristic operations, the choices in fact made and enforced by threats of severe deprivations or promises of extreme indulgences. In balanced inquiry about patterns in both perspectives and operations, the manifest content of conventional rules of law is pierced for examination of the choices in fact made, while perspectives are still subjected to systematic and realistic study as among the factors importantly affecting decision.

2. Clarity in Conception of Both Authority and Control

Authoritative decision is distinguished from naked power, and law is regarded not merely as decision, but as *authoritative* decision, in which elements of both authority and control are combined. Authority is found, not in theological or metaphysical or allegedly autonomous abstractions, but rather—in a conception at least as old as the pre-Socratic Greeks—in the empirical

perspectives of community members about who is to make what decisions, in respect to whom, in accordance with what criteria, and by what procedures. By control is meant participation in effective choices, in choices that are in significant degree put into practice; control, in this sense, may obviously be based on any of the wide range of community values.

3. Comprehensiveness in Conception of Processes of Authoritative Decision

Relevant inquiry extends beyond occasional, isolated choices, to the whole, continuous, ever-changing *process* of decision by which a community shapes and shares its values. In any community, the process of authoritative and controlling decision, which is the appropriate reference of "law," is seen to be composed of two different kinds of decisions: the "constitutive" decisions that establish and maintain the most comprehensive process of authoritative and controlling decision; and the "public order" decisions that emerge from the process so established for the regulation of all other community value processes.

The constitutive process of a community comprises the decisions that characterize and identify the appropriate decision makers, specify and clarify basic community policies (which may be demanded in varying degrees of intensity), establish necessary structures of authority, allocate bases of power for sanctioning purposes, authorize procedures for making the different kinds of decisions, and secure the performance of all the different kinds of decision functions (intelligence, promotion, prescription, invocation, application, termination, and appraisal) necessary to making and administering general community policy.

The public order decisions of a community are those that shape and maintain the protected features of its different value processes. These include the decisions by which resources are allocated, planned, developed, and exploited; by which populations are protected, regulated, and controlled; by which health is fostered or neglected; by which human rights are protected or deprived; by which enlightenment is encouraged or retarded; and so on.

4. Explicit Relation of Law to Social Process

Since authoritative decision is a response to events in social process, is affected by such events, and, in turn, has effects on

the future distribution of values, a comprehensive set of value-institutional categories—making detailed, empirical reference to interrelations among people—is employed to locate authoritative decisions in the larger social processes that envelop them. By such categorizations the different types of claims people make to authoritative decision and the varying responses of established decision makers may be compared through time and across territorial boundaries in study of the factors that affect decision and of the public order consequences of decision.

5. Location of Law in Its Larger Community Context

In contemporary conception it is recognized that humankind today interacts on a global and even earth-space scale, not merely in the sense of a universal science and technology, but of an interdetermination with respect to all values. One component of this larger, if still primitive, community is seen to be a process of *effective* power, in that decisions are in fact taken and enforced, by severe deprivations or high indulgences, which are inclusive in their effects. Among these effective decisions it is observed that, although many continue to be made by naked power or sheer calculations of expediency, some are taken from perspectives of authority and achieve enough control to be of high consequence. Like the all-inclusive transnational social processes, this latter transnational process of authoritative decision—sometimes ill-described as "international law"—is seen to be maintained at many different community levels and in many different interpenetrating patterns of authority and control, in affecting and being affected by the value processes of all the component communities of the larger earth-space community. A global public order is, thus, seen to affect the internal public order of all particular communities, and the public order of each particular community to affect, in turn, the global public order.

C. *Relevant Intellectual Tasks*

In lieu of traditional exercises in derivational logic and concern for limited conceptions of "science," contemporary theory about law emphasizes the deliberate, systematic, and differentiated performance of a comprehensive set of intellectual tasks, each of which is relevant to problem solving about the interrelations of law and social process. The economic and effective performance of any one task requires its relation, configura-

tively, to the formulations and findings achieved by each of the other tasks.[7]

1. Clarification of Community Policies

The most relevant clarification, avoiding circular derivations, deliberately seeks the detailed specification of postulated goals, whatever the level of abstraction in their initial formulation, in terms that make clear empirical reference to preferred events in social process. The findings and techniques of each of the other intellectual tasks are employed to estimate the aggregate consequences of alternatives in choice and to relate such consequences to common interest.

2. Description of Past Trends in Decision

In supplement to conventional summaries of complementary rules and concepts, the description of past trends in decision is related to specific, detailed types of claims to authority about detailed factual problems, and trends are appraised in terms of degrees of approximation to clarified policies for constitutive process and public order. It may be emphasized that for the more effective comparison of decisions and their consequences through time and across community boundaries, the events that precipitate claims to authoritative decision, the decisions actually taken, and both the immediate and longer-term consequences of decision for the claimants and others are all categorized "factually," in terms of value-institutional references to social process.

3. Analysis of Factors Affecting Decision

In performance of the scientific task, hypotheses are inspired by the "maximization postulate" that responses are, within the limits of capabilities, a function of net value expectation, and emphasis in inquiry is placed on both predispositional and environmental variables. The techniques and findings of modern science are brought to bear in appraising the significance of multiple factors from culture, class, interest, personality, and previous exposure to crisis.

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[7] LERNER AND LASSWELL, THE POLICY SCIENCES (1951); DROR, PUBLIC POLICY-MAKING REEXAMINED (1968). *See also* LASSWELL AND MCDOUGAL, note 6.

4. Projection of Future Trends in Decision

Expectations about the future are made as conscious, explicit, comprehensive, and realistic as possible. Developmental constructs embodying alternative formulations of the future are deliberately formulated and tested in the light of all available information. The simple linear or chronological extrapolations of conventional legal rules are subjected to the discipline of knowledge about conditioning factors and past changes in the composition of trends.

5. Invention and Evaluation of Policy Alternatives

All the other intellectual tasks are synthesized and brought to bear on the deliberate invention and assessment of new alternatives in policy, institutional structures, and procedures. Every phase of decision process, whether of constitutive process or relating to public order, and every facet of the conditioning context, are examined for opportunities in innovation that may influence decision toward greater conformity with clarified goals. Assessment of particular alternatives is made in terms of gains and losses with respect to all values and disciplined by the knowledge acquired of trends, conditioning factors, and future probabilities.

D. Explicit Postulation of Basic Community Goals

In recognition that policy choices are ineradicable components of any process of authoritative decision, a policy-oriented jurisprudence recommends that scholars explicitly postulate, and commit themselves to, a comprehensive set of goal values for the guidance of inquiry and decision. Postulation and clarification, rather than derivation from the premises of some particular faith, are recommended both for economy and for increasing the number of potential co-workers. The basic goal values postulated for preferred world public order cannot, of course, be expressive only of the exclusive, parochial demands of some particular segment of humankind, but when overriding goals are shared, particular values can admit of a very great diversity or functional equivalence in the institutional practices by which they are sought and secured.

II. THE WORLD CONSTITUTIVE PROCESS OF AUTHORITATIVE DECISION

It is sometimes lamented that, while environmental problems are global in their reach, the processes of law are not. This is a profound misconception. The contemporary world arena does exhibit a constitutive process that, though it has not yet achieved that high stability in expectations about authority and degree of effective control over constituent members that characterize the internal processes of some mature national communities, still affords, in at least rudimentary form, all the basic features essential to the effective making and application of law on a global scale. In recent decades, this emerging transnational constitutive process of authoritative decision has been expanding and improving itself at an accelerating rate, and it would not appear that vast, and possibly grandiose, structural alterations are any more necessary for coping with environmental than for other problems. Conversely, environmental problems would indeed appear so global in their reach and so immense in proportion that a whole global process for the continuous clarification and implementation of common interest, and not merely some new specialized organization or cluster of organizations, is required for their management and amelioration. The basic features of existing constitutive process suggest potentiality for the more effective management of environmental problems and may be briefly indicated.[8]

A. Participation

In recent decades, participation in world constitutive process, as in the embracing process of effective power, has been tremendously democratized—with not merely nation-states but also international governmental organizations, political parties, pres-

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[8] A more detailed statement is offered in McDougal, Lasswell and Reisman, *The World Constitutive Process of Authoritative Decision*, 19 J. OF LEGAL ED. 253, 403 (1967); BLACK AND FALK, VOL. I, THE FUTURE OF THE INTERNATIONAL LEGAL ORDER (1969) Ch. 3.

See generally, MCDOUGAL & REISMAN, INTERNATIONAL LAW ESSAYS (1981). *See also* JENKS, THE WORLD BEYOND THE CHARTER (1969); CORBETT, FROM INTERNATIONAL TO WORLD LAW (1969); JESSUP, TRANSNATIONAL LAW (1956); Schachter, *The Relation of Law, Politics, and Action in the United Nations, Hague Academy* 1 REC. DES COURS 167 (1967); and *Scientific Advances and International Lawmaking*, 55 CALIF. L. REV. 423 (1967).

sure groups, private associations, and individual human beings playing important roles. With this increase in the range of effective participants has come also a rapid proliferation in the number of territorial and functional entities demanding and being given voice. Similarly, a multiplying host of private associations, operating within the larger constitutive process, are increasingly international in membership, goals, and arenas of activity. Groups and individuals especially concerned with environmental problems have abundant opportunity to participate in all aspects of making and applying law.

B. Perspectives

The perspectives of the effective elites of the world, on which processes of authoritative and controlling decision must depend, would appear to exhibit both an increasing stability and a turgid, but perceptible, movement toward the demands, identifications, and expectations appropriate to a public order of human dignity.

The demands of peoples upon constitutive process increasingly emphasize the necessity for protecting common interests, with the rejection of all claims of special interest against community. The provisions of the United Nations Charter, including Art. 2(4) and various ancillary articles, have made a tremendous contribution to the clarification, if not consistent implementation, of the common interest in minimum order (the minimization of coercion and the protection of reasonable expectations created by agreement and customary behavior). Other provisions of the Charter, the Universal Declaration of Human Rights, and the multitude of more specialized covenants about human rights have, similarly, done much to clarify the details of common interest in optimum order (the greater production and wider sharing of all values).

The rich experience of humankind—as expressed in customary development, United Nations resolutions, and specialized agreements—in clarifying and implementing common interests in the enjoyment of such great sharable resources as the oceans, airspace over the oceans, international rivers, polar regions, and outer space could fortify efforts to achieve a comparable, more generalized clarification for environmental problems, which embrace all resources, including even the land masses.

Increasing interactions on an earth-space scale would appear to be fostering expanding identifications among all peoples with the whole of humankind, as well as occasional, parochial, de-

fensive reactions. Authoritative decision makers increasingly achieve an appropriate balance between inclusive and exclusive identifications.

The ineluctable spread of a civilization of science and technology carries with it, as one important component, an increasingly common map of reality and expectation about social process and environment for all people. With respect to the environment, if not social process, expectations could become more contextual, realistic, and rational, and all might come to see that they share a common fate.

C. Arenas

The structures of authority and other situations in which the participants in world constitutive process interact have exhibited in recent years both an enormous expansion and a modest movement toward organized, inclusive form.[9] A principal contribution of the United Nations and of the great host of specialized agencies and regional organizations has been in the supply of a new abundance of diplomatic, parliamentary, mixed diplomatic and parliamentary, adjudicative, and executive arenas in which the other effective participants in world power process can interact. A comparable increase has occurred in the patterns of interaction established by burgeoning private, nongovernmental associations primarily dedicated to values other than power. In consequence, the interactions of the decision makers whose choices in sum create global policy have become more timely and continuous—i.e., less episodic and more alert and responsive to crisis.

Similarly, though some official arenas remain closed to some effective participants, there has been a general trend toward openness in arenas and a parallel movement toward making appearance compulsory for participants whose choices in fact

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[9] Examples of such international symposiums include: the U.N. Conference on Environment and Development in 1992 (Rio De Janeiro), *cited in* 81 GEO. L. J. 675 (1993); Montreal Protocol on Substances that Deplete the Ozone Layer, Sept. 16, 1987, 26 I.L.M. 1550 (entered into force Jan. 1, 1989); the United Nations Conference on the Human Environment in 1972 (Stockholm), *cited in* 13 HOUS. J. INT'L L. 179, n.2 (Fall 1990); the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITIES) in 1973 (Washington, D.C.), *cited in* 8 DICK. J. INT'L L. 203, 204 (Winter 1990); and the International Conference on Global Warming in 1989 (London), *cited in* 20 ENVT'L L. 83, 100 (1990).

affect community policy. Both openness and compulsoriness are promoted by increasing interdependences in effective power.

D. Bases of Power

While many of the more important bases for influencing decision remain under the relatively exclusive control of nation-states, there appears to be a modest trend toward allocating to representatives of the inclusive community the authority and other assets required for the better securing of both minimum and optimum order.

With respect to authority, one encouraging development is the attenuation of the concept of "domestic jurisdiction" (the exclusive competence of states) and the expansion of that of "international concern" (the inclusive competence of the general community). The distinction is now made in terms of the relative impact of activities on exclusive and inclusive interests, and the competence of the general community is being extended, through varying decision functions, to all matters of transnational impact. This extension of the competence of the general community is, of course, of particular relevance for the regulation of environmental modifications and practices in resource exploitation whose transnational impacts are obvious.

Similarly, though the myth abides that very little authority is being conferred on specific international organizations, the facts about people's expectations appear to be quite different. The actual authority of the United Nations, the specialized agencies, and the regional organizations would appear to be enormous, in the sense of the support they receive from the demands, identifications, and expectations of the peoples of the world.

The more traditional principles of jurisdiction, which allocate an exclusive competence for self-help among nation-states, are also coming to be interpreted in terms of the relative impact of activities on different exclusive interests. Under contemporary interpretations, states are authorized to protect themselves, by necessary and proportionate measures, against activities from the outside that substantially affect their internal community processes. This competence, too, would appear to be of direct relevance to environmental problems.

In the allocation of the effective control necessary to sustain authority, there is, similarly, a slow movement toward greater inclusivity in fact. It may be noted that an allocation of control designed to secure an appropriate balance between inclusive and

exclusive decision making need not imply the complete centralization of control; a pluralistic distribution of values among the peoples of the world may better maintain an appropriate balance.

The worldwide spread of enlightenment and skills, facilitating perception of interdependences and common interests, and modern institutions of instantaneous communication have, of course, concentrated immense assets in the hands of inclusive decision makers. The expanding identities and loyalties of peoples, as transnational interactions accelerate, and the increasing internationalization of standards of rectitude and of respect for human rights add to these assets.[10] More tangible assets may, perhaps, yet be found in the great sharable resources—such as the oceans, the airspace over the oceans, the polar areas, and outer space—which, despite recent inroads on behalf of special interests, are still largely under inclusive competence and control.[11]

E. Strategies

Improvements in communication, expanding scientific knowledge and skills in observation, and accumulating experience in large-scale administration have all combined in recent years to facilitate a gradual rationalization of the procedures by which participants manage base values in performance of the different decision functions necessary to the making and application of law. The exploration of potential facts and potential community policies is being made more dependable, contextual, selective, and creative; the final characterization of facts and policies in prescriptive or applicative decision is being made more deliberate, rational, and nonprovocative; and the communication of the shared subjectivities indispensable to legal process is being made more effective.

1. The Diplomatic Instrument

With the multiplication of new, more stable, and more continuous arenas, the old diplomacy of occasional official or elite

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[10] For further discussion, see MCDOUGAL, LASSWELL & CHEN, note 4.

[11] For further discussion, see MCDOUGAL & REISMAN, INTERNATIONAL LAW IN CONTEMPORARY PERSPECTIVE: THE PUBLIC ORDER OF THE WORLD COMMUNITY; CASES AND MATERIALS (1981).

communication is being transformed into a kind of parliamentary representation and activity, as in the United Nations. Important new multilateral conventions have been formulated and accepted for guiding and assisting diplomatic interactions and the making and performance of agreements. New procedures are constantly being devised and tested for executive and adjudicative arenas.

2. The Ideological Instrument

The potentialities of instantaneous communication around the globe, to mass audiences beyond elite groups, promise both greatly to increase participation in global constitutive process and profoundly to affect performance of many decision functions, such as—especially—promotion, prescription, and application.

3. The Economic Instrument

Though direct control over resources and the management of wealth processes are still largely reserved to the exclusive competence of nation-states, the organized general community is acquiring an increasing experience in the promotion of economic development and in the management of credit and monetary policies. Some expansion of this role could greatly enhance the potential of the economic instrument in promoting desired world public order.

4. The Military Instrument

Despite the failure of the original plan to establish within the United Nations a permanent military force for the maintenance of minimum order, the United Nations has had some minor successes in different parts of the world in assembling and employing small forces. Somewhat greater cooperation has been achieved at regional levels. Perhaps these successes could again stimulate plans for a more ambitious inclusive employment of the military instrument in support of general community policies.

The promise of the integrated employment by the organized general community of all four instruments of policy, in the management of all relevant base values, for the improvement of sanctioning process in the establishment and maintenance of desired world public order remains, of course, largely for future

exploration. In the meantime, the more important sanction for transnational law, as for most national law, resides in the perception by community members of their interdependences and common interests and in their expectations about reciprocal, unilateral indulgences and retaliations in relation to such interdependences and interests.

III. OUTCOMES

In consequence of the gradual modification and improvement in all these varying phases of constitutive process there has been a parallel improvement in the culminating outcomes of the process in the different types of decisions taken. The relevant decisions appear to be becoming more comprehensive, in the sense of embracing all necessary decision functions; more inclusive, in the sense of extension toward participants and interactions affecting common interests; more rational, in the sense of conformity to the basic public order demands and expectations of the peoples of the world; and more integrative, in the sense of molding the potentially divisive claims of peoples into the perception and fact of common interest.

A. Intelligence

The recent proliferation of international governmental organizations and the enhanced participation in constitutive process of political parties, pressure groups, and private associations have immensely increased facilities for the gathering, processing, and dissemination on a global scale of the intelligence necessary to rational decision. The emerging technology of observation and communication by outer-space instrumentalities offers still further augmented potentialities. The massive and complex intelligence required for effective management of environmental and resource problems appears to be well within reach but will require cooperation on a larger scale than heretofore throughout the entire constitutive process.

B. Promotion

The increasing democratization of participation in world processes of effective power, the availability and openness of the new structures of authority, and the contemporary instrumentalities for communication have, similarly, brought a new comprehensiveness and intensity to the active advocacy of policy

alternatives before authoritative decision makers. The ease with which demands can be formulated and propagated, and support mobilized, for the enactment and application of new authoritative prescriptions is already being demonstrated on a global scale in relation to environmental problems.

C. Prescription

Historically, the making of transnational law has gone forward by way of articulated multilateral agreement and of unarticulated, habitual, cooperative behavior, from which expectations about authority and control are derived. The practices of the United Nations have both given a tremendous boost to these traditional modes of lawmaking and added a new dimension that reflects a closer approximation to parliamentary enactment. The activities of the International Law Commission and of the General Assembly, through its committees, have greatly rationalized prescription by multilateral agreement, as witness the important new conventions about the oceans and outer space. The opportunities afforded in the General Assembly for the representatives of many different communities to state their conceptions of prevailing law and to articulate these conceptions in formal resolutions have, further, greatly eased the historic burden of identifying customary law and clarifying its content. It is this latter modality of General Assembly resolution, greatly foreshortening the time necessary for establishing customary law and affording an economic mode for articulating consensus about common interest, that increasingly bears the hallmarks of parliamentary enactment. Clearly, if inherited prescriptions about the protection of the environment are inadequate, the prescribing process offers few impediments to their being made adequate.

D. Invocation

Though some arenas remain closed to some participants, as the International Court of Justice at present is to individuals and nonstate entities, most participants today either have many arenas open to them or else can easily find a surrogate or champion who does have access, for stimulating the application of community prescriptions. The community member who would complain about the violation of prescriptions for environmental protection has abundant opportunities for a hearing.

E. Application

Historically, the great bulk of the applications designed to put general community prescriptions into controlling effect in particular instances have been made in interactions between foreign office and foreign office or in national courts. The fact that the same participants have had to be, alternatively, both claimants and appliers has been not so much a source of bias as a guarantee of aggregate decision in terms of common interest. In recent decades there has been a modest movement toward third-party decision—through international courts, arbitral commissions, and various structures of authority within international organizations—and toward compulsory attendance by participants whose activities are alleged to transgress community prescriptions. Important recent illustrations of this trend appear in conventions relating to the conservation of fisheries and to the law of treaties. If compulsory jurisdiction becomes acceptable in relation to environmental problems, there is no want of models for making it effective.

F. Termination

The same developments in United Nations practice that have brought a new economy and flexibility to performance of the prescribing function have resulted in comparable improvements in procedures for putting an end to outmoded prescriptions and arrangements, with appropriate measures for the compensation of those who suffer disproportionate loss. In lieu of traditional assertions of unilateral naked power or reliance on a mutual consensus difficult to achieve, parties contending about termination today more frequently resort to organized authoritative arenas, such as in the United Nations or *ad hoc* conferences, and to collective determinations.

G. Appraisal

The same factors that contribute to improved performance of the more general intelligence function serve equally to facilitate specialized inquiry about the adequacy of past decision processes to secure postulated goals. The expanding contemporary world focus of attention could encourage all participants, official and nonofficial, to undertake more systematic and intensive appraisal of the success of past trends in decision in coping with environmental problems.

An examination of the internal constitutive processes of the different particular territorial communities contained within the larger global process would of course reveal that most of these communities possess much more mature and fully developed processes—amply endowed with supervisory, regulatory, entrepreneurial and corrective competences—for making and applying the law necessary to the more effective management of environmental problems within their exclusive territorial boundaries.[12]

IV. INHERITED PUBLIC ORDER IN RELATION TO RESOURCES

Our inherited prescriptions about the allocation and exploitation of resources, comprising in sum our environment, are not as archaic, irrelevant, and inadequate as is sometimes suggested. The exigencies inherent in the cooperative, interdependent exploitation of the world's resources have imposed severe restraints on the assertion of special interests, even in relation to the land masses, and have encouraged the mutual recognition and reciprocal protection of common interests, both inclusive and exclusive, especially in relation to sharable resources. The general community, acting through the constitutive process described above, already allocates resources between inclusive and exclusive uses in a way designed to maximize inclusive competence, seeks to regulate and limit the injurious employment of resources by communities in relation to each other, makes abundant provision for facilitating the productive and harmonious employment of resources, exhibits the beginnings of an appropriate network of planning and development institutions, and even aspires, through an increasing concern for human rights, to achieve a more rational relation of peoples to resources.[13] The

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[12] This theme is documented with respect to the United States in MCDOUGAL AND HABER, PROPERTY, WEALTH, LAND: ALLOCATION, PLANNING AND DEVELOPMENT (1947). *See also* OSCAR S. GRAY, CASES AND MATERIALS ON ENVIRONMENTAL LAW (1970), and MALCOLM F. BALDWIN AND JAMES K. PAGE, JR. (Eds.) LAW AND THE ENVIRONMENT (1970).

The essay in the latter volume (at p.297) by Professor A. Dan Tarlock, "Current Trends in the Development of an Environmental Curriculum," is an excellent history of scholarship and teaching in the United States.

A vast recent literature offers detail with respect to United States law. For example, see: *Symposium, Law and the Environment*, 55 CORN. L. Q. 633 (1970); *Symposium, Control of Environmental Hazards*, 68 MICH. L. REV. 1073 (1970); Comment, *Toward a Constitutionally Protected Environment*, 56 VA. L. REV. 458 (1970); Comment, *The Air Quality Act of 1967*, 54 IOWA L. REV. 115 (1968).

[13] For related discussion and further detail, see SCHNEIDER, WORLD PUBLIC ORDER

potentialities afforded by our inherited prescriptions for assisting movement toward improved environmental protection may be economically indicated in relation to certain basic, perennial problems.

A. The Allocation of Resources

The principal achievement of past constitutive process in relation to resources has been in establishing that the great sharable resources of the globe—that is, those admitting of a high degree of shared use by reasonable, mutual accommodation, such as the oceans, the airspace over the oceans, international rivers, the void of outer space, and certain celestial bodies—remain subject to relatively inclusive competence, open for inclusive use and not subject to exclusive appropriation by particular states.[14] This outcome, though increasingly threatened today by accumulating demands in terms of special interest, is fortified by the clear experience of humankind that it is inclusive competence and use that most often promote the greatest production and widest distribution of goods and services for the benefit of all. Only with respect to the land masses and closely proximate waters and airspace, which admit of the least degree of shared use, have states reciprocally honored each other's claims to comprehensive, continuing, and exclusive competence, and with the contemporary accelerating interdependences in the use of land masses, even this exclusive competence is becoming attenuated and being made a matter of degree.

Similarly, with respect to those resources that it has permitted to be subjected to exclusive appropriation, the general community has imposed quite severe conditions and limitations on such appropriation. These include a genuine "occupation," in the

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OF THE ENVIRONMENT: TOWARDS AN INTERNATIONAL ECOLOGICAL LAW AND ORGANIZATION (1979). For more circumscribed studies, see, for example, Handl, *Environmental Protection and Development in Third World Countries: Common Destiny-Common Responsibility*, 20 N.Y.U. JOURNAL OF INTERNATIONAL LAW AND POLITICS 603 (1988); *International Responsibility for Manmade Disasters*, PROCEEDINGS OF THE AMERICAN SOCIETY OF INTERNATIONAL LAW 320 (1987); and Handl & Lutz, *An International Policy Perspective on the Trade of Hazardous Materials and Technologies*, 30 HARV. INT'L L. J. 351 (1989). *See also* Nanda et al., *Ten Years After Stockholm-International Environmental Law*, PROCEEDINGS OF THE AMERICAN SOCIETY OF INTERNATIONAL LAW 411 (1985).

[14] For detail, see MCDOUGAL, LASSWELL AND VLASIC, LAW AND PUBLIC ORDER IN SPACE (1963) Ch. 7. For a comprehensive illustration, see SAHURIE, THE INTERNATIONAL LAW OF ANTARCTICA (1992).

sense of a comprehensive and continuous process of enjoyment and utilization, made known to all the world, and limitations on the quantity of the resources subject to appropriation, as well as requirements for development within a reasonable time.

From these perspectives of authority, the general community clearly retains inclusive competence over many of the resources importantly affecting the quality of the environment. It could preclude the exclusive appropriation by states of any new resources made available by advancing science and technology for control of climate and environment, and it could condition the continuing control even of resources subject to exclusive appropriation to conformity with the dictates of common interest in the maintenance of a necessarily shared environment.

B. The Regulation of Injurious Employment in Use

The general community, through its present constitutive process, seeks to minimize the losses caused both by major, deliberate attacks by states on each other's territorial integrity and by the less comprehensive, often unintended deprivations that inevitably attend transnational interaction.

The protection that the general community establishes against major, intended deprivations that threaten territorial integrity and independence today derives principally from the United Nations Charter and the ancillary procedures established thereunder. The basic prescription is that of Article 2, paragraph 4, which provides:

> All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purpose of the United Nations.

It would appear the common expectation of most of humankind that this policy of minimum order, indispensable to law in any community, applies not merely to activities on earth and to traditional exercises with the military instrument, but also to human activities anywhere, as in outer space, and to any new techniques of coercion and deprivation made possible by manipulation of environmental variables.[15]

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[15] These expectations are described in MCDOUGAL AND FELICIANO, LAW AND MINIMUM WORLD PUBLIC ORDER (1962).

The protection established by contemporary constitutive process against less comprehensive, relatively nondeliberate, more ordinary acts of deprivation builds largely on customary international law, as occasionally reinforced by explicit agreement. A continuous flow of authoritative community decisions and of unilateral acknowledgements for many decades appears to be establishing that states regard themselves as reciprocally responsible for such deprivations, even to a degree approaching absolute liability. Perhaps the most famous and influential case in this line of decision is the *Trail Smelter Arbitration*[16] between the United States and Canada. In this arbitration, the tribunal found Canada responsible to the United States for damage caused by sulfuric fumes emitted by a smelter in British Columbia and affecting large areas in the state of Washington. Certain language from the opinion has been often quoted as a concise formulation of the international prescription:

> . . . under the principles of international law . . . no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.
> . . . the Dominion of Canada is responsible in international law for the conduct of the Trail Smelter and, apart from the undertakings in the Convention, it is the duty of the Government of the Dominion of Canada to see to it that this conduct is in conformity with the obligation of the Dominion under international law as herein determined.
> . . . The Trail Smelter shall be required to refrain in the future from causing any damage through fumes in the State of Washington. To avoid such damage the operations of the Smelter shall be subject to a regime or measure of control as provided in the present decision. Should such damage occur, indemnity to the United States shall be fixed in such manner as the governments acting under the convention may agree upon.

The same authoritative policy that infuses this decision could be documented in many other specific decisions and in a great variety of state and private practice. Among the more famous cases are the *Corfu Channel* decision in the International Court

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[16] *Trail Smelter Arbitration Tribunal Decision*, March 11, 1941. Text in 35 AM. J. INT. LAW, 684 (1941).

of Justice and the *Lake Lanoux Arbitration.*[17] The most relevant practices, exhibiting expectations about responsibility, would include the recognition as lawful of "contiguous zones"—beyond the territorial sea—that are reasonably designed to protect against external injury; the mutual tolerance of "self-defense" or "self-help" anywhere on the high seas that is necessary and proportionate for dealing with threatened deprivation; and the emerging, generally accepted customary regime with respect to international rivers, which establishes "reasonableness" as the touchstone for adjusting the equities in use among riparians who cannot avoid affecting each other. The easy acceptance in multilateral convention and otherwise of strict liability for space activities and nuclear damage reflects comparable expectations.[18] The contribution of private, nonofficial practice to authoritative expectation is dramatically demonstrated in the voluntary settlement of the *Torrey Canyon* case and in the establishment of a continuing private association to deal with comparable future disasters.

C. Facilitating the Productive and Harmonious Employment of Resources

The best exemplification of the high potentials of inclusive competence for effecting the productive and harmonious exploitation of sharable resources is the historic international law of the sea, which for some centuries has served the function of clarifying and securing, by shared reciprocity and mutual restraint, the common interests of all peoples in the greatest possible production and widest possible distribution of

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[17] Citations and discussion appear in INTERNATIONAL LAW ASSOCIATION, HELSINKI RULES ON THE USES OF THE WATERS OF INTERNATIONAL RIVERS (1966) 20 et seq.; Taubenfeld, *Weather Modification and Control: Some International Legal Implications*, 55 Calif. L. Rev. 493 (1967); and *Some International Implications of Weather Modification Activities*, 23 INT. ORG. 808 (1969).

[18] Nanda, *Liability for Space Activities*, 41 U. COLO. L. REV. (1969); Vlasic, *The Space Treaty: A Preliminary Evaluation*, 55 CALIF. L. REV. 507 (1967); Dembling and Arons, *The Evolution of the Outer Space Treaty*, 33 J. OF AIR LAW AND COMMERCE 419 (1967).

For more general revelvant discussion see Utton, *Protective Measures and the "Torrey Canyon,"* 9 BOSTON COLL. I. OF A. L. REV. 613 (1968); Jordan, *Recent Developments in International Environmental Pollution Control*, 15 MCGILL L. J. 279 (1969); Healy, *The International Convention on Civil Liability for Oil Pollution Damage, 1969*, 1 J. OF MARITIME LAW AND COMMERCE 317 (1970); Mendelsohn, *Maritime Liability for Oil Pollution: Domestic and International*, 38 GEO. W. L. REV 1 (1969).

values from the oceans.[19] The basic framework of this law—established in the more comprehensive world constitutive process by habitual, cooperative behavior—has been, in a largely decentralized and unorganized arena, a few simple customary prescriptions, applied with an extraordinary economy and effectiveness: that all peoples enjoy equal rights of access to the oceans and to the appropriation of resources, such as fish, with respect to which exclusive appropriation is permitted; that each state makes and applies law to its own national ships and that no state may assert its exclusive, unilateral competence over the ships of other states save for violations of international law; and that no state may question the competence of another state to confer its nationality on a ship. These few simple prescriptions have, of course, been supported by a whole host of ancillary, implementing rules, established both by custom and by multilateral agreement, for fixing rules of the road, securing safe navigation, repressing piracy, promoting conservation, restraining pollution, accommodating and integrating different interests, and so on. The evidence would seem clear that over the centuries, despite the difficulties of recent days, this regime of inclusive competence, with a minimum monopolization of either authority or use, has served the whole of humankind well in creating the greatest net gains both in the indivisible value of general security and the divisible values of wealth, enlightenment, well-being, and so on.

A comparable regime is in process of being extended, both by customary prescription and by explicit agreement, to the sharable resources of outer space and the celestial bodies but, unhappily, has as yet been oniy partially extended to airspace over the land masses.

Even with respect to the land masses, commonly regarded as admitting of the least degree of shared use, a regime of modestly inclusive competence may be observed to serve the interests of a world economy and society. The prescriptions most importantly comprising this regime are those popularly described as "private international law" and as relating to the "responsibility

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[19] For a detailed exposition see MCDOUGAL AND BURKE, THE PUBLIC ORDER OF THE OCEANS (1962, 1987 with a new introductory essay); BURKE, TOWARD A BETTER USE OF THE OCEAN (1969); JOHNSTON, THE INTERNATIONAL LAW OF FISHERIES (1965, 1987 with new introductory essay); Johnston, *Law, Technology and the Sea*, 55 CALIF. L. REV. 449 (1967).

of states."[20] The first set of these prescriptions are principles of jurisdiction—the principles of territoriality, nationality, protection of interests, impact territoriality, passive personality, the "proper" law of "contracts" and "torts," and so forth—which confer a competence on states to protect their internal community processes and their nationals from injury, even that originating beyond their boundaries. The second set of principles constitute an international "bill of rights," antedating the contemporary prescriptions about human rights, which impose certain limits on the competences of states, with respect to events otherwise within their "jurisdiction," for the protection of aliens and their property. In recent decades this aspiration in customary prescription toward a world economy and society has been significantly implemented by explicit agreements and new specialized organizations, as in the International Monetary Fund, the International Bank for Reconstruction and Development, and the General Agreement on Tariffs and Trade.

D. The Performance of Planning and Development Functions

The inclusive performance of planning and development functions has received great impetus from the recent proliferation of international organization. The number of organizations—governmental and nongovernmental, specialized and nonspecialized, general and regional—engaging in such functions in relation to activities with a direct bearing on environmental control is so vast as to defy even listing.[21]

The most comprehensive and important inquiries and activities obviously stem from the United Nations and its affiliated enterprises, but regional organizations and private associations are beginning to play increasingly significant roles.

For some indication of the range and complexity of contemporary planning and development activities, we note in relation to each of certain major resources a few of the organizations engaging in such functions.[22]

Energy Resources:

The International Bank for Reconstruction and Development

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[20] Yntema, *The Historic Bases of Private International Law*, 2 AM. J. COMP. LAW 297 (1953); DUNN, THE LEGAL PROTECTION OF NATIONALS (1933).

[21] A modest survey is offered in Report of the Secretary-General, *see* note 1.

[22] This itemization of resources is borrowed from Crane Miller.

The International Atomic Energy Agency
The World Meteorological Organization
Natural Environments:
UNESCO
The World Wildlife Fund
Animal Life:
The Food and Agriculture Organization
The International Whaling Commission
Vegetation and Soils:
FAO
UNESCO
International Society for Plant Geography and Ecology
Inter-American Institute of Agricultural Sciences
Water:
FAO
WHO
UNESCO
IAEA
IMCO
The International Association on Water Pollution Research
The Council of Europe
Air:
IAEA
IMCO
WHO
The Council of Europe
The International Association Against Noise
Minerals:
Various United Nation agencies
Many specialized private associations
Weather and Climate:
WMO, including World Weather Watch Program
International Civil Aviation Agency.

E. The Relation of Peoples to Resources

The most obvious inadequacy in inherited public order concerns the relation of people to resources. The access of peoples to communities (and hence to the resources exclusively appropriated by such communities) and movement between communities is made dependent largely on the "nationality" of individuals, and states are permitted to prescribe and apply highly restrictive policies in the granting and denying of nation-

ality.[23] In a global arena in which expectations of violence are high, states recognize, and reciprocally honor, a common interest in the exclusive protection of their bases of power and take the most severe measures to make certain that their members remain available to themselves and their allies and do not undermine internal power structures. They impose, and acquiesce in, highly arbitrary restrictions on freedom of circulation and freedom to change memberships, and employ stringent negative sanctions to secure conforming conduct.

Some amelioration of historic attitudes has begun to appear in the contemporary human rights program, which projects prescriptions favoring freedom of movement between communities and freedom to change community memberships; in the increased honoring in the United Nations of the right of peoples to "self-determination" when based on appropriate conditions of security and economy in the shaping and sharing of values; and in the accelerating movement toward a more rational regional organization of the world arena and world society. The preferred policy, most compatible both with human rights and the productive employment of resources, appears to favor a high voluntarism in travel, affiliation, and participation. For the rational shaping and sharing of most values, the present boundary lines between nation-states are as outmoded as the comparable demarcations between provinces within nation-states.

Transnational efforts to control population growth raise even more difficult, and almost unprobed, issues of policy and legal technique.

V. ALTERNATIVES FOR IMPROVEMENT

One of the premises with which we began our discussion was that changes in the environment, whether beneficial or injurious, are an inextricable component of the continuous process of social interaction by which resources are employed in the shaping and sharing of values: injury to the environment may not be inevitable in such process, but the practices by which injury is inflicted are indistinguishable from the ordinary practices of production and distribution and are omnipresent. Another premise was that emerging general community goals in relation to protection of the environment extend, beyond the mere mini-

[23] WEIS, NATIONALITY AND STATELESSNESS (1956).

mization of particular losses, to the maximization of gains in the production and distribution of all human dignity values.

From these perspectives and in a world of ever-increasing interdependences, it is apparent that the demanded quality of environment is, and must continue to be, affected by every feature both of global constitutive process and of the internal constitutive processes of its lesser constituent communities. It is sometimes proposed, as by George Kennan,[24] that there immediately be created a new specialized international governmental agency charged with the performance of the intelligence, promotion, invocation, and appraisal functions with respect to environmental problems. Conceivably, such an organization—if accorded the necessary bases in authority, manpower, and finances—could do much to improve the functioning of global constitutive process in relation to its purposes. Clearly, however, it would not be enough: there would remain the functions of prescribing new and more appropriate standards as general community policies and of applying these policies in particular instances to put them into controlling practice; even in relation to the intelligence, promotion, invoking, and appraising functions, the new agency could not be given authority over all the activities in production and distribution that affect environment without constituting in effect a comprehensive world government in lieu of present constitutive process; and the internal constitutive processes of the different territorial communities making up the world arena would still require renovation.

The observer who would be effective in recommendation about environmental protection need not decry, and may on the contrary rationally participate in, efforts to create new and more appropriate institutions for the performance of decision functions in the world arena. Such efforts, however, if they are to be most effective, should be made but integral parts of a more comprehensive, incremental endeavor to reshape the whole of the features of global constitutive process, including the processes of the constituent communities, for the improved performance of the necessary functions. The problem of establishing and maintaining an appropriate global environment is just as indivisible and all-pervasive as is the problem of maintaining the general security against military attack. Neither problem is likely

[24] Kennan, note 5.

to be solved either by partial, halfway measures or by utopian schemes that would shatter existing processes and begin anew.

The most fundamental approach to new alternatives will seek systematically and deliberately, at both global and lesser levels, and in every available structure of interaction, to improve performance of each of the seven decision functions described above. When basic community goals are clarified and kept constant, many different structures of authority may serve with equivalent effects in facilitating performance of the necessary functions. Some of the implementing, ancillary policies that might be sought in the improvement of each function may be indicated:[25]

> Intelligence: dependable, comprehensive, selective, creative, available.
> Promotion: rational, integrative, comprehensive, effective.
> Prescription: effective, rational, inclusive.
> Invocation: timely, dependable, rational, nonprovocative.
> Application: rational, contextual, uniform, effective, constructive.
> Termination: prompt, balanced, effective, ameliorative.
> Appraisal: dependable, continuing, independent, contextual.

When consideration is given in detail to improvement of the application function for minimizing losses from particular injury, attention might extend beyond judicial applications for fixing responsibility for injury already inflicted to a whole range of potential sanctions for serving various particular subgoals embraced within the larger policy of minimizing losses. These more particular subgoals include prevention, as long-term efforts to minimize the occasions for injury; deterrence, as precluding injury immediately threatened; restoration, as putting an end to injuries already in process; rehabilitation, as the short-term binding up of wounds; and reconstruction, as the longer-term redesign of the situation to preclude future injury. The range of potential sanctioning practices for serving these subgoals obviously infuses the whole of the larger community social process.

The task of highest priority for all genuinely committed to the goal values of human dignity is, of course, that of creating

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[25] This presentation draws, as does other segments of this paper, on unpublished collaborative studies with Harold Lasswell and Michael Reisman. For a somewhat less sanguine view than that here presented, insisting that "systemic" as well as incremental changes are required, see Falk, *Toward Equilibrium in the World Order System*, 64 AM. J.I.L. 217 (1970).

in the peoples of the world the perspectives necessary both to their more realistic understanding of their common interests in relation to the environment and to their invention, acceptance, and initiation of some of the many equivalent measures in constitutive process that might better secure such common interests. It is the message of the maximization postulate that people act, within their capabilities, to enhance their values. If this Conference makes its appropriate contribution, that contribution will be in increasing the capabilities of all people for preserving and enjoying their world.