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OUR TANGLED WEB:
INTERNATIONAL RELATIONS THEORY,
INTERNATIONAL ENVIRONMENTAL LAW, AND
GLOBAL BIODIVERSITY PROTECTION
IN A POST-MODERN EPOCH OF INTERDEPENDENCE

By Megan Bowman

**Graduate Program in Law
McGill University, Montreal**

November 2002

**A thesis submitted to McGill University in partial fulfillment of the
requirements of the degree of Master's of Law**

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ABSTRACT

The global crisis of biodiversity depletion sets the stage for a necessary re-definition of State self-interest in the international milieu. That re-definition is effected by a changing perception of 'self'; one that occurs through the mental lens of interdependence and long-term vision. This thesis attempts to challenge conventional precepts and present a submission for change by drawing upon constructivist thought, which asserts that current perceptions are socially constructed and rooted in "collective intentionality", such that what has been human-made can be altered by the same processes through which it came into existence. In so doing, the author employs the notions of international ethics as a shared belief and international law as an ideational instrument to facilitate that change in favor of international cooperation toward the necessary amelioration of global biodiversity diminution in order to assure our future.

La crise globale liée à l'appauvrissement de la biodiversité nous conduit nécessairement à concevoir une nouvelle définition des intérêts propres des Etats au sein de la communauté internationale. L'élaboration d'une telle redéfinition implique un changement de perception: il s'agit en effet de considérer les intérêts propres des Etats sous un angle d'interdépendance et une vision à long-terme. Cette thèse s'efforce de remettre en question les préceptes conventionnels et propose de permettre le changement en se basant sur la pensée constructiviste. Selon cette école, nos perceptions actuelles sont socialement construites et enracinées dans ce qui a été qualifié de "collective intentionality", si bien que toute chose créée par l'homme peut être modifiée par le même procédé qui a conduit à sa création. Dans sa démarche, l'auteur attribue aux principes d'éthique internationale une reconnaissance partagée et décrit le droit international comme l'instrument susceptible d'œuvrer en faveur d'une coopération entre les Etats et de permettre l'amélioration des conditions d'appauvrissement de la biodiversité dans le but de préserver notre futur.

REFLECTIONS AND ACKNOWLEDGEMENTS

Writing about international relations and the global polity is an extremely educational but rather depressing venture. As a newcomer to this discipline, I found myself experiencing alternate bouts of intellectual epiphany and existential angst, particularly as the theories about which I wrote were reflected starkly in current world events such as the Iraqi crisis and the Bali bombings in October. Unfortunately, discussing such *désabusé* with colleagues and friends does little to relieve it, as we all tend to agree that the international polity appears to be increasingly shambolic (or, in the words of one friend: “The world is going down the drain.”)

However, one must remain resilient. How can things improve if we (international lawyers, international relations theorists, the common person) do not advocate the need for and demonstrate the feasibility of change? I firmly believe in the reality of evolution: not merely as a Darwinian concept, but as a rippling out of human consciousness; of a growing awareness that all life is deeply connected and that thought, as the catalyst for action, has profound influence on the *kind* of world in which we live. In short, I believe in the power of ideas.

And the role of international law in this context gives me cause for mild celebration. I do not believe that law is a panacea for world ills, nor that it is the sole means for galvanizing cooperation. However, I do regard it as a very important tool, both in the form of an ideational instrument and as a concrete mechanism for influencing and regulating behavior. Naturally though, the effectiveness of law as a tool, like a garden hoe or a gun, depends upon the hands that wield it. I do not have much faith in politicians; I think the word ‘leader’ in this context is a grave misnomer. But I do believe in education and ‘people power’ and stimulating a ground swell that fulminates to break free of traditional furrows created by previous hands and minds in a previous time.

And thus, amazingly, in the midst of a grey day, I found illumination through writing this thesis.

I forged on, moving from an overly enthusiastic “I can save the world”, to a diminutive “nothing can be done”, to an optimistic plateau of “we can change the world, if we want to”. In my opinion, at some point, we simply *must* want to – the human desire to survive is very strong indeed. But the trick is timing: realizing, discussing and debating these ideas in order to kick-start the engines of action *before* our options are eliminated. Time reminds us of the brevity of election cycles and the longevity of radioactive waste. It is the second thing that we cannot control (the first being love, and the third being death), but which reminds us of what is yet to be done.

I apologize to the reader if my ruminations appear self indulgent, but in a rewording of a popular ‘60s dance tune: “It’s my thesis and I’ll muse if I want to”.

Certain people have joined me, voluntarily and otherwise, for parts of this journey and their invaluable contributions as traveling companions must be acknowledged.

Professor Jaye Ellis - mentor, inspirator (and sometimes respirator), benefactor and colleague - for all her guidance, support, philanthropy and efficient supervision; for knowing when to leave me alone to run amok and for offering well-rounded rationality when I had run too far; and most of all, for believing and trusting in me. Whenever I talk with her or just walk into her office, she has an uncanny knack of making everything better. I count that as a priceless gift indeed.

Jonathan Clough – close friend, intellectual sparring partner and self-styled spiritual warrior - for all his thoughtful, heartfelt insight; remarkable editing abilities; and just the right amount of world anger. Our friendship has transcended geographical boundaries to form an integral part of all aspects of my life, for which I am continually grateful.

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The 2001 McGill LL.M. students and also my Garnier St. housemates – I can sum this up with one anecdote. Only a few months ago we were having ‘last drinks’ with Horacio the Mexican before he returned home. Our conversation turned to the McGill Masters’ program, focusing on what we had learned and experienced *outside* of the classroom.

“Meeeeeeegan”, began Horacio as he shook his Gauloise Rouge at me, “as a result of the people from all around the world that I have met here, I now know three things. First, no matter where any of us were born, no matter our beliefs, childhood experiences, socioeconomic status or future aspirations, *deep down inside* we are all the same. Second, and Ola taught me this [“Ola” being his Muslim girlfriend from Jordan, with whom he spent almost the entire Masters’ degree]: love breaks through all barriers, regardless of religion, culture or language. And third, everyday is a good day.”

My family in Australia – my brothers, Marcus and Tristan, and my parents. Specifically, my parents and I differ markedly in our political ideologies - their worldview is colored by a post-war childhood, built on fear and scarcity, and could not be further from my own (although I acknowledge that it must be fairly representative of the ‘baby boom generation’). In particular, they are not too sure what all the fuss is about in relation to the environment or even to equity, but their unenlightened views facilitated the crystallization in my own head of the importance of my thesis and also assisted my anticipation of some counter-arguments. I thank them for helping me to learn the invaluable nature of a good education and a conscientious work ethic, to have my own opinions and to question authority. I thank Dad especially for offering encouragement from so far away and remembering to check that “the words were flowing” whenever we spoke together.

Finally, I give special thanks to Professor Lionel Smith (Associate Dean, Graduate Studies), Professor Jaye Ellis, and the Greenshields Scholarship Fund for providing essential financial assistance over the course of my degree.

Megan Bowman
Montréal, November 2002.

OUR TANGLED WEB:
International Relations Theory, International Environmental Law,
and
Global Biodiversity Protection in a
Post-Modern Epoch of Interdependence

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By Megan Bowman

I INTRODUCTION

“It would be naive to think that the problems plaguing mankind today can be solved with the means and methods which were applied or seemed to work in the past. Today we face a different world, for which we must seek a different road to the future [and] the emergence of a mutually interrelated and integral world. Today, further global progress is only possible through a quest for universal consensus as we move towards a new world order.”

*Mikhail Gorbachev, former Soviet President*¹

In recent years there has been much talk of “globalization”. In broad terms, it is perceived as the process of worldwide societal transformation that encompasses growth and movement in trade, investment, travel, commerce, communications, and ideas across porous borders;² and which remains extremely contentious.³ It is no longer in question that “the phenomenon of globalization defines our age and points to our future.”⁴

¹ Speech to the United Nations, December 7, 1988, titled “A Road to the Future”.

² J. Cameron, “Globalization and the Ecological State” (1999) 8(3) Review of European Community International Environmental Law 243 at 243. Cameron places specific emphasis on technology as the main reason for this expansion: *ibid.*

³ H. French, *Vanishing Borders: Protecting the Planet in the Age of Globalization* (New York: World Watch Institute Press, 2000) at 4.

⁴ Cameron *supra* note 2 at 243.

A necessary corollary of globalization is interdependence. Recent decades have seen an intensification of interaction and interconnectedness within and between domestic and international spheres and also a growing acknowledgement of interdependence within and between the physical and human environments. In particular, the alarming acceleration of environmental degradation throughout the world represents another aspect of globalization: one that embodies the interconnectedness of cause and effect beyond traditional boundaries, like the metaphorical butterfly flapping its wings.⁵

A specific aspect of global environmental degradation is the rampant transnational depletion of biological diversity (biodiversity). It is a novel phenomenon in that it straddles both local and global realms. It is a global problem because it is occurring in all regions around the world and has far-reaching consequences for all life. Yet, simultaneously, the actual *fact* of biodiversity loss occurs specifically within national borders and the causes of biodiversity diminution are both local and global and inextricably intertwined with socio-economic concerns. As such, the means of redressing biodiversity depletion necessarily encompasses a holistic and collaborative approach between nation States; one that embraces considerations of

⁵ Edward Lorenz labeled certain systems that exhibited sensitive dependence on initial conditions as having the "butterfly effect", which comes from the notion that small causes can have large effects and that it is hard to predict anything for certain ('the Chaos Theory' in mathematical terms). In a paper given to the New York Academy of Sciences in 1963 Lorenz states: "*One meteorologist remarked that if the theory were correct, one flap of a seagull's wings would be enough to alter the course of the weather forever.*" By 1972 at the meeting of the American Association for the Advancement of Science in Washington, the seagull had evolved into the more poetic butterfly and the title of his talk was: "*Predictability: Does the Flap of a Butterfly's Wings in Brazil set off a Tornado in Texas?*": www.cmp.caltech.edu/~mcc/chaos_new/Lorenz.html (accessed November 2002). The extrapolation of this theory to the global environmental context is extremely apt.

people and nature beyond one's own borders in a matrix comprised of practical and ethical considerations.

Generally, however, the protection and projection of a State's perceived self-interest in the international milieu has been an impediment to such cooperation.

Preoccupation with short-term concerns based upon a mélange of special interests from varying domestic players pervades collaborative endeavors at the international level. This simply has to change if the integrity of our planet, upon which the future of humankind depends, is to be assured.

Needler pinpoints the issue squarely: "If each state is concerned with only its own interests, how are the interests of the whole species and the whole planet to be defended and promoted?"⁶ It is my contention that the answer may lie in a changing *perception* of self-interest. To this end, theories of international relations provide guidance and this thesis focuses upon neo-realism, neo-liberalism and social constructivism. In particular, I centre upon the fundamental tenets of constructivism, which posit the existence of 'shared understandings' and the integral and influential role of ideational factors in shaping State identity, interests and behavior in the international arena. In so doing, I submit that self-interest is a constructed phenomenon that is capable of change when perceived in the context of interdependence and with long-term vision, and by acknowledging and utilizing the

⁶ M. Needler, *Identity, Interest, and Ideology: An Introduction to Politics* (Westport: Praeger Publishers, 1996) at 168.

fundamental role of international ethics and international law as shared understandings to influence that change.

A discussion of *how* the notion of self-interest can change is beyond the scope of this thesis, although the influential role of institutions and discourse ethics in this regard has been studied extensively by others.⁷ This thesis asserts *why* we should change our perspective of 'self-interest' to reflect a long-term vision of the interdependent milieu in which we live in the context of global biodiversity diminution. The focus is placed upon international ethics and the role of international environmental law as an agent of that change.

Part II proceeds by presenting the theoretical framework for this thesis in the context of international relations. It reviews key characteristics of neo-realism, neo-liberalism and constructivist theories in order to trace their evolution and to identify the pivotal constructivist notion of the capacity for changing a State's perception of self-interest in the international milieu through the interactive and influential role of shared understandings and ideational factors. This paves the way for changing State behavior toward cooperative action and policy making in relation to amelioration of

⁷ For discussion of the influential role of institutions as sources and vehicles of changing State behavior, see for example S. Weber, "Institutions and Change" in *New Thinking in International Relations Theory*, M. Doyle and G. Ikenberry, eds., (Boulder: Westview Press, 1997); R. Keohane, "International Relations and International Law: Two Optics" (1997) 38 Harv. ILJ 487 [hereinafter "Two Optics"]. For the specific relationship between institutions and Habermas's discourse ethics see for example J. Ellis, "International Regimes and the Legitimacy of Rules: A Discourse-Ethical Approach" (2002) 27 Alternatives 273; N. Samhat, "International Regimes as Political Community" (1997) 26 Millennium 349 (noting "the importance of dialogue for arriving at intersubjective understandings through genuine engagement with a multiplicity of viewpoints": at 364); and J. Brunnée and S. Toope, "International Law and Constructivism: Elements of an Interactional Theory of International Law" (2000) 39 Colum. J.I.L 19 (who refer to "rhetorical knowledge" arising from dialogue and grounded in the rationality of law as an indirect cause of change: at 71).

global biodiversity diminution. In so doing, I employ international ethics and international law in order to demonstrate that it is *in* the self-interest of States to behave in environmentally sound and ethical ways when viewed from the vantage point of longevity and interdependence. Specifically, I contend that international ethics is a crucial component of international relations, a component that assists our understanding of *why* State behavior should change, influences that change, and forms an integral link between international relations theory and the amelioration of global biodiversity depletion. I also submit that international law plays a fundamental role as a shared understanding that gives expression to our aspirations and, hence, acts as an agent of change in the international milieu.

Parts III and IV apply this theoretical framework to actuality. Part III discusses the notion of interdependence and asserts the ‘fundamentalness’ of biodiversity, paying specific attention to the perception of ‘value’ from the differing viewpoints of both developed and developing nations. Part IV explores certain international environmental law principles, namely the ecological approach, the common concern of humankind, intergenerational justice, and intragenerational benefit-sharing, as espoused in the Convention on Biological Diversity (CBD),⁸ and asserts their function as ideational factors that enshrine and reflect aspirations vital for biodiversity protection and international equity. These concepts are then applied in the context of the ethical relationship between present and future generations and the

⁸ United Nations Conference on Environment and Development, Convention on Biological Diversity, U.N. Doc. DPI/1307 (1992), reprinted in 31 I.L.M. 818 (1992).

provision of assistance between members of the present generation through expanded utilization of the Global Environment Facility.

Part V concludes with comments on the importance of international collaborative endeavor in order to ameliorate global biodiversity depletion and rebalance socio-economic inequities by viewing the 'self' as part of the whole.

II INTERNATIONAL RELATIONS THEORY, SHARED UNDERSTANDINGS, AND SELF-INTEREST

“[Reification] is the apprehension of the products of human activity *as if* they were something else than human products – such as facts of nature, results of cosmic laws, or manifestations of divine will. [It] implies that man is capable of forgetting his own authorship of the human world, and further, that the dialectic between man, the producer, and his products is lost to consciousness.”

Peter Berger and Thomas Luckmann
*The Social Construction of Reality*⁹

A. INTERNATIONAL RELATIONS THEORY - NEO-UTILITARIANISM AND SOCIAL CONSTRUCTIVISM

1. Introduction

Realism and liberalism comprise the traditional intellectual protagonists in the realm of international relations theory.¹⁰ Both schools characterize the international State system between the Westphalian Peace treaties (1648) and World War I (1914) by “international anarchy” and unstable “self-help” systems.¹¹ In particular, their emphasis on the sovereignty and autonomy of the nation State in an international system of States manifests from the Treaty of Westphalia which brought an end to

⁹ P. Berger and T. Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (Garden City: Doubleday, 1966) at 89.

¹⁰ J. Ruggie, “What Makes the World Hang Together: Neo-utilitarianism and the Social Constructivist Challenge” (1998) *International Organization* 52(4) 855 at 855.

¹¹ E-U. Petersmann, “Constitutionalism and International Organization” (1996-97) 17 *Northwestern.J.Int’l L. & Bus.* 398 at 414.

the Thirty Years War and marked the beginning of “modern” international relations.¹²

However, the two theories of realism and liberalism present diverging explanations for how and why States behave as they do in the international arena. After World War II, the commitment of ‘Wilsonian liberal internationalism’ to democracy and international organization as an antidote to war and positional jostling¹³ was relegated in favor of the political realist view of international relations as a Machiavellian game of power politics; a view which gained widespread international acceptance due to the “postwar academic aversion to idealism” in the United States.¹⁴

Subsequently, ‘neo-realism’ and ‘neo-liberal institutionalism’ gained ascendancy in the 1980s¹⁵ as progressive progeny of their forerunners. Keohane describes the outlook of both neo-realism and neo-liberalism as an “instrumentalist optic”,¹⁶ and Ruggie ascribes the term “neo-utilitarianism” to both schools.¹⁷ Such nomenclature is due to the fact that both neo-realism and neo-liberalism focus on the material interests of States as motivation for behavior, thereby ascribing an extremely limited

¹² C. Hauss, *Beyond Confrontation: Transforming the World Order* (Westport: Praeger Publishers, 1996) at 103.

¹³ Slaughter-Burley writes that American foreign policy under Woodrow Wilson attempted to project “the ordered domestic existence of a liberal state onto the inherent anarchy of the international system”: A. Slaughter Burley, “International Law and International Relations Theory: A Dual Agenda” (1993) 87 Am.J.Int.L 205 at 207-8.

¹⁴ Ruggie, *supra* note 10 at 855. Ruggie opines that this is why ideational factors in international life have been discounted and grasped poorly by international relations scholars: *ibid.* at 855.

¹⁵ *Ibid.*

¹⁶ Keohane “Two Optics”, *supra* note 7 at 488-89.

¹⁷ Ruggie, *supra* note 10 at 855.

and purely 'functional' role (if at all) to norms and ideational factors in international life. It is this last aspect of neo-utilitarianism that instigated the rise of "a very different approach to international relations theorizing" in the 1990s, namely social constructivism.¹⁸

Social constructivism (constructivism) focuses on the role of norms and shared understandings in shaping State identity and interests as well as behavior in the international arena. It regards State identities and interests as self-constructed and "focuses on the power of process and institutions to *transform* the self-perception of participants, and thus to reshape their calculation of interests."¹⁹ Thus, constructivism provides an evolutionary element to the theory of international relations, which takes us beyond the static tableau of the State system as photographed by neo-realism and builds upon and expands the neo-liberal conception of cooperation within specific regimes.

2. State Identity and Interests and Ideational Factors

This section outlines the evolution of the differing theoretical approaches toward State identity, interest, and the role of ideational factors in shaping them, in the

¹⁸ Nicholas Onuf produced the seminal work on constructivism in *World of Our Making: Rules and Rule in Social Theory and International Relations* (Columbia: South Carolina UP, 1989). See also N. Onuf, "Constructivism: A User's Manual" in V. Kubàlková, N. Onuf, P. Kowert, eds., *International Relations in a Constructed World* (New York: M.E. Sharpe Inc., 1998) [hereinafter Constructivism]. Wendt follows Onuf's nomenclature in A. Wendt, "Anarchy is What States Make of It: The Social Construction of Power Politics" (1992) 46(2) *International Organization* 391 [hereinafter Anarchy] at 393. See also Ruggie, *supra* note 10 at 855.

¹⁹ Slaughter-Burley, *supra* note 13 at 222 (emphasis in original).

international arena from the vantage points of neo-realism, neo-liberalism and then constructivism.

2.1 Overview

There are certain base commonalities between neo-realism and neo-liberalism due to the fact that both schools find root in microeconomics.²⁰ Both approaches regard the State as the primary actor in the international system; these primary actors are rational and self interested; and the system is anarchical whereby nation States must employ a self-help approach due to the lack of centralized authority in the international arena.²¹ Divergence in the two approaches occurs at this point.

Neo-realists concentrate on a self-interested State that is preoccupied with maximizing its power, ensuring its security and retaining its independence.²² As such, neo-realists are pessimistic about cooperation between States, even in the face of common interests, due to a perennial global context of distrust created by the pursuit and use of power for national interest and competitive advantage.²³

²⁰ Ruggie, *supra* note 10 at 862. Wendt writes that neo-utilitarianism is based “exclusively on ‘microeconomic’ analogies”: Wendt “Anarchy”, *supra* note 18 at 423; Brunnée and Toope opine that the role of microeconomics in each approach is “to lend greater precision and perhaps an aura of science (however dismal) to their explanatory models.”: Brunnée and Toope, *supra* note 7 at 32.

²¹ Petersmann, *supra* note 11 at 412 (Table 2).

²² *Ibid.* The seminal publication in relation to neo-realism is K. Waltz, *Theory of International Politics* (Reading: Addison-Wesley Pub. Co., 1979). For the central tenets of realism see H. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: Knopf, 1950).

²³ *Ibid.*; E. Duruigbo, “International Relations, Economics and Compliance in International Law: Harnessing Common Resources to Protect the Environment and Solve Global Problems” (2001) 31 *Ca.W.Int’l.L.J.* 177 at 180.

In contrast, Neo-liberals focus on a self-interested State that engages in mutually rewarding exchanges. In particular, the neo-liberal institutionalist approach holds that conflict between States is unusual and that “international politics resembles other political systems in which there develop norms, rules and a generally cooperative ambience”.²⁴ This ‘cooperative ambience’ is created through regimes and institutions, which provide fora for international rules and organizations in order to overcome deficiencies in the self-help system.²⁵

However, as Keohane writes, “even those who are attracted to instrumentalism and its functional logic should recognize that it handles poorly that which makes politics interesting; that is, the unanticipated consequences of human action.”²⁶ It is at this juncture that constructivism proffers its crucial contribution. Constructivism does not deny the impact of interests and power but neither does it assert their sufficiency as sole explications for State behavior.²⁷ Constructivism posits that “we *make* the world what it is.”²⁸ In so doing, it attempts to fill theoretical gaps by providing that humans construct ‘social facts’ in the world and that ideational factors exert a profound influence in international life.²⁹

²⁴ A. Stein, *Why Nations Cooperate: Circumstance and Choice in International Relations* (Ithaca: Cornell University Press, 1990) at 3.

²⁵ Petersmann, *supra* note 11 at 412 (Table 2). See section A.3 *infra* for discussion of the specific characteristics of the neo-liberal institutionalist approach to regimes and institutions.

²⁶ Keohane “Two Optics”, *supra* note 7 at 490.

²⁷ *Ibid.* at 492.

²⁸ Onuf “Constructivism”, *supra* note 18 at 59 (emphasis in original).

²⁹ Wendt “Anarchy”, *supra* note 18 at 399; Ruggie, *supra* note 10 at 855-56; F. Kratochwil and J. Ruggie, “International Organization: a State of the Art on the Art of the State” (1986) 40(4) *International Organization* 753 at 764-67.

Ruggie describes social facts as facts that depend on human agreement and require human institutions for their existence:³⁰

Social facts include money, property rights, sovereignty, marriage, football and Valentine's Day, in contrast to such brute observational facts as rivers, mountains, population size, bombs, bullets, and gravity, which exist whether or not there is agreement that they do.

Social facts are constituted by ideational factors.³¹ Ideational factors encompass linguistic practices, religious beliefs, "identities, norms, aspirations, ideologies, or simply ideas about cause-effect relations."³² Constructivism seeks to explore the relevance and impact of these non-material factors. "In short, constructivism is about human consciousness and its role in international life."³³

While there are many different points of departure and some of similarity between neo-realism, neo-liberalism and constructivism, I will focus upon three areas in particular for the purposes of discussing the notion of change in State identity, interest and behavior, namely: interest and identity; the role of ideational factors; and, in section 3 below, self interest and interdependence.

³⁰ Ruggie, *supra* note 10 at 856.

³¹ *Ibid.* at 858.

³² *Ibid.* at 855.

³³ *Ibid.* at 856. It must be noted that there are different 'strains' of constructivism. Ruggie differentiates amongst three variants, which he terms "neo-classical constructivism", "postmodernist constructivism", and "naturalistic constructivism": *ibid.* at 881-82. Ellis collates common themes of various constructivist authors into three categories in order to clarify their relevance to discourse-ethical insights in international relations theory, namely "democratic peace", "critical cosmopolitans", and "deliberative rationality": Ellis, *supra* note 7 at 274-77.

2.2 Interest and Identity

For neo-utilitarians, State interests and identity, namely a State's "sense of self as a nation", are regarded as "exogenous and given".³⁴ That is, neo-realism and neo-liberal institutionalism are "mostly about 'circumstances' that states 'find' in the object world around them and that constrain their behavior".³⁵ Neo-utilitarians do not offer explanations as to why States have acquired their specific identities, nor how that identity, once acquired, affects a State's interests. For neo-utilitarians, "States and the system of states simply *are*", which denies the need for any explanation as to *why*, and simultaneously precludes the potential for evolution of such interests and identity.³⁶ With no discussion or explanation of these two issues, neo-utilitarianism ignores, first, patterns of international outcomes, such as how the hegemonic position of the United States has affected the international order (including the choice of specific characteristics of international institutional frameworks such as NATO and the United Nations); and, second, changing interests of States and corollary behavior toward each other in the international milieu.³⁷

³⁴ Wendt "Anarchy", *supra* note 18 at 391; Ruggie, *supra* note 10 at 862.

³⁵ Ruggie, *ibid.* at 876.

³⁶ Wendt "Anarchy", *supra* note 18 at 392; Ruggie, *supra* note 10 at 863; Brunnée and Toope, *supra* note 7 at 32.

³⁷ Kratochwil and Ruggie, *supra* note 29 at 753-55; Wendt "Anarchy", *supra* note 18 at 393; Ruggie, *supra* note 10 at 863.

In contrast, constructivism views a State's identity and interests as endogenous and socially constructed.³⁸ Although constructivists "fully appreciate that power and interests are deeply implicated" in the shaping of interests and identity, they contend simultaneously that State identities are created partly and influenced greatly by international interaction and ideational factors.³⁹ This is due to the concept that "people and society, always having made each other, are already there and just about to change."⁴⁰ Specifically, constructivists contend that normative factors, whether international or domestic in origin, shape the interests and behavior of States directly.⁴¹ 'Normative factors' include emerging norms such as the Geneva conventions on warfare and the rise of human rights intervention at the international level, as well as internal cultural and political forces that shape domestic policy.⁴²

That is, State interests and identity are constructed, they are themselves ideational factors that are shaped by other ideational factors. Accordingly, under a constructivist canon, State interests and identity can change, which is an antithetical concept to neo-utilitarians.

³⁸ Wendt "Anarchy", *ibid.* at 394; Ruggie, *ibid.* at 864.

³⁹ Ruggie, *ibid.* at 864, 879; Wendt "Anarchy", *ibid.* at 397-98, 403, 423.

⁴⁰ Onuf "Constructivism", *supra* note 18 at 59.

⁴¹ Wendt "Anarchy", *supra* note 18 at 397; Ruggie, *supra* note 10 at 864.

⁴² Ruggie, *ibid.*

2.3 The Role of Ideational Factors

The role of ideational factors within neo-utilitarianism ontology ranges from non-existent to extremely limited. Ideational factors are utilized in “strictly instrumental terms, useful or not to self-regarding individuals (units) in the pursuit of typically material interests, including efficiency concerns.”⁴³ For neo-realism, what matters is the balance of power, not the requirements of justice;⁴⁴ accordingly, neo-realism relegates the role of ideational factors in international relations “to cameo appearances only”.⁴⁵ In a similar vein, neo-liberal institutionalists allow for a restricted causal role of ideas on policy outcomes through regimes, which comprise “a normative element, state practice and organizational roles.”⁴⁶ However, Kratochwil and Ruggie contend that the individualist ontology of neo-liberalism contradicts the intersubjectivist epistemology that is crucial to transforming State identity and interests due to the neo-liberal presumption that identity and interests are exogenous.⁴⁷

⁴³ Ruggie, *ibid.* at 855.

⁴⁴ G. Graham, *Ethics and International Relations* (Oxford: Blackwell Publishers, 1997) at 25. Hauss notes that the term ‘balance of power’ is one of the “most famous concepts” of realism, which describes a set of formal arrangements that governed international relations among major European powers after the Napoleonic wars in 1815: Hauss, *supra* note 12 at 104.

⁴⁵ Ruggie, *supra* note 10 at 865.

⁴⁶ Kratochwil and Ruggie, *supra* note 29 at 759.

⁴⁷ *Ibid.* at 753-55; Wendt “Anarchy”, *supra* note 18 at 393.

In contradistinction, the role of ideational factors goes to the heart of constructivism. Rather than assuming a preordained status quo as neo-utilitarianism does, constructivists “have sought to understand the full array of roles that ideas play in world politics”.⁴⁸ Accordingly, “[c]onstructivists hold the view that the building blocks of international reality are ideational as well as material” and that “ideational factors have normative as well as instrumental dimensions”.⁴⁹ Ruggie attributes the roots of constructivism to the sociology of Emile Durkheim and Max Weber, for their separate research concerning moral phenomena in society:

[b]oth Durkheim and Weber held that the critical ties that connect, bond and bind individuals within social collectivities are shared ideational ties...In doing so, both rejected utilitarianism on the grounds of its methodological individualism and because it failed to encompass normative self-understandings of the ends of social action – without which, they believed, instrumental rationality was devoid of meaning.⁵⁰

It is this search for *meaning* that drives the constructivist project; to explain how norms affect actors’ identities, interests and behavior such that “in certain circumstances [ideational factors] lead states to redefine their interests or even their sense of self”.⁵¹ It is this capacity for change that informs the notion of State self-interest and is particularly apt in a milieu of interdependence.

⁴⁸ Ruggie, *supra* note 10 at 867. As noted above, this is the very reason for the rise of social constructivism as a “new” international relations theory.

⁴⁹ *Ibid.* at 879.

⁵⁰ *Ibid.* at 861.

⁵¹ *Ibid.* at 868; Brunnée and Toope, *supra* note 7 at 32.

3. *Self-Interest and Interdependence*

Building on how each theory regards State identity and interests and the role of ideational factors, this section reviews how each school regards the self-perception of the State in the international arena. Accordingly, this discussion centers upon the notion of State self-interest, particularly how it may be shaped and changed by international interactions, ideational factors and the reality of interdependence.

Neo-utilitarianism focuses on the self-interest of policy elites as a motivator for State behavior. That is, the instrumentalist model identifies a ‘causal pathway’ that links State behavior in the international realm to underlying interests.⁵² However, neo-realism and neo-liberalism differ markedly in their analytic focus on the *character* of a State in the international realm.

Neo-realists claim that individual states are isolated, homogenous units, acting in the international realm as “champions of their own national interest”,⁵³ which encompasses power, territory, wealth, and position in the international system.⁵⁴ In particular, as a result of the contention that the international sphere is anarchic

⁵² Keohane “Two Optics”, *supra* note 7 at 495.

⁵³ Slaughter Burley, *supra* note 13 at 207; Brunnée and Toope, *supra* note 7 at 32. Duruigbo applies the realist position to the conception of compliance with international law, stating that realists view compliance through Machiavellian lenses whereby States will only keep their bargains when it is in their own individual interest to do so: Duruigbo, *supra* note 23 at 180.

⁵⁴ Keohane “Two Optics”, *supra* note 7 at 495, who also notes that “position” refers to offices for individuals: *ibid.* Hauss adds “other resources all of which are in short supply” to that list: Hauss, *supra* note 12 at 103.

(without hierarchy or over-arching governance) neo-realists view the pursuit and use of power by States as the primary motivators and determinants of international behavior.⁵⁵

Accordingly, neo-realists give the epithet “defensive positionalist” to their State character, whereby the key goal of State behavior is to assure survival by maintaining security and power in the international sphere. In the neo-realist world, States desire both the greatest gains for themselves and also the smallest gap in gains that favor other States. This is due to the perception that gaps in gains can be translated into increased capability of a State and therefore increased competition with established powerful States, which could result ultimately in a reduction of power or loss of security. Grieco contends that a State will forgo cooperation if it is concerned about relative gains of other States regardless of whether cooperation would progress common interests.⁵⁶ Petersmann argues that this scenario leads to a “Hobbesian war of everybody against everybody else” in which focus upon and conflicts among the short-term interests of individual actors risk endangering their common long-term interests.⁵⁷

⁵⁵ Duruigbo, *supra* note 23 at 180-81.

⁵⁶ J.M. Grieco, “Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism” in D. Baldwin, ed., *Neorealism and Neoliberalism: The Contemporary Debate* (New York: Columbia University Press, 1993) at 128.

⁵⁷ Petersmann, *supra* note 11 at 402, 412. According to the English philosopher Thomas Hobbes (1588-1679), society needs a central government to administer general rules in order to overcome a life that is “solitary, poor, nasty, brutish and short” due to the dictates of selfish short-term interests of individuals in a constant battle against each other: T. Hobbes, *Leviathan*, M. Oakenshott, ed., (Oxford: Basil Blackwell, 1960).

The Hobbes' Dilemma feeds into a discussion of game theory, or "Prisoner's Dilemma", in which negotiating strategy is contingent upon expectations of other actors' behavior. The difficulty is that decision makers in one country "know very little about how their counterparts in other countries make up their minds."⁵⁸ That is, not all actors behave rationally, which makes them unpredictable. Prisoner's Dilemma is known as a "game" where the two "players" have been arrested for a crime. Prosecutors believe they can get convictions but need the corroboration of one accused in order to maximize their prison sentences. In order to do this, the prosecutors place both accused in separate cells where they cannot communicate with each other, and inform each accused that inculcating the other or remaining quiet will have the following consequences:

If Prisoner A tells on Prisoner B while Prisoner B stays silent, B will get a maximum sentence of twenty-five years and A will go free. If B tells on A but A remains silent, B will go free while A goes to jail. If each tells on the other, both go to jail for ten years. If both stonewall, the prosecutors will have no choice but to proceed with the lesser...charge, which will get them each a year in jail.⁵⁹

Obviously it is to the advantage of each accused to remain silent; however, the lack of communication between both players means that neither will know nor even trust what decision the other makes. Thus, Keohane writes that behavior is contingent upon information, and that information must be treated as a variable in political theory.⁶⁰ Accordingly, in the absence of information, not cooperating with your 'partner' in order to get a lesser sentence seems the safer option. As a result, both players end up losing. Hauss goes further to opine that the dilemma does *not*

⁵⁸ Hauss, *supra* note 12 at 105.

⁵⁹ *Ibid.* Table 6.2.

⁶⁰ Keohane "Two Optics", *supra* note 7 at 500.

improve even if the two accused speak with each other, due to the fact that criminals are not “the most savoury characters in the world (sort of like nation states?)” and therefore, there is still no impetus to trust each other due to the intrinsically self-interested nature of each entity. In other words: “[i]t’s hard to trust when the stakes are high and you question the motivations of the person or people on the other side. It’s easy to misperceive what the other side is up to.”⁶¹

It is this distrust, this notion of ‘the other side’, and the potential for misperception that hallmark and problematize the application of neo-realist theory in the international realm. Approaching relations in a “we versus they” thought-mode galvanizes positional posturing⁶² and reinforces the illusion of independence and separateness in a world that has become inextricably *interdependent*.⁶³ These concepts of ‘us and them’ and interdependence will be explored in detail below.

The neo-realist outlook, as embodied by Prisoner’s Dilemma, has ramifications for State interaction at the international level because it posits that self-interest is an insurmountable impediment to global collaboration. Some commentators have illustrated this connection by analyzing how States negotiate, and whether or not they ratify, international conventions. Duruigbo opines that “while States may

⁶¹ Hauss, *supra* note 12 at 106.

⁶² Hauss extends this insight to include interpersonal relations and he cites the example of the Gulf War to illustrate this point. He writes that the antipathy between George Bush and Saddam Hussein ensured the impossibility of a peaceful reconciliation, noting dryly that “[c]alling someone the ‘next Hitler’ and the like tends to drive wedges between people”: *ibid.* at 106.

⁶³ Accordingly, one might ask: “How much is realism a reflection of *reality*?” In my opinion, it is a useful explanatory starting point as to how and why global relations have progressed from modernity to now. However, in terms of explaining post-modern international relations or how we ought to proceed into the future, I submit that neo-realist thought possesses a fundamental ‘lack of fit’ and is not the way forward. In my opinion, it is an explicatory tool, not a solution.

realize the value of reputation and recognize the ‘normativity’ of international law and conduct themselves accordingly, a State is unlikely to assume obligations under a treaty when it will be inimical to its interests.”⁶⁴ He cites the example of the 1986 UN Convention on Conditions for Registration of Ships⁶⁵, which has not been ratified by any major maritime or ‘flags of convenience’ States even though 15 years have passed since its conclusion, “creating the impression that the treaty negatively impacts their interests.”⁶⁶ This contention is applicable equally to State compliance (or lack thereof) with a treaty once ratified, whereby, under a neo-realist approach, States will only comply if to do so is convenient and beneficial to their self-interest.⁶⁷

However, both theory and reality have shown that this scenario is not an entirely accurate depiction of State relations in the international milieu. Robert Axelrod, a political scientist, instigated a later spin on the Prisoner’s Dilemma.⁶⁸ He arranged for game theory experts to play out the dilemma *over and over again* to see who achieved the highest score. In this new and highly iterative scenario, Axelrod observed that the ‘players’ watched, learned from and reciprocated each other’s tactics, even though they could not communicate. In so doing, they chose to cooperate with each other consistently by not informing. This strategy has been

⁶⁴ Duruigbo, *supra* note 23 at 184.

⁶⁵ United Nations Convention on Conditions of Registration of Ships, Feb. 7, 1986, 26 I.L.M 1229 (1987).

⁶⁶ Duruigbo, *supra* note 23 at 184.

⁶⁷ *Ibid.* at 180-81; Keohane “Two Optics”, *supra* note 7 at 489. Joyner adds that non-compliance can also be attributed to a lack of necessary resources (administrative and technological) with which to comply: C. Joyner, “Compliance and Enforcement in New International Fisheries Law” (1998) 12 Temple Int’al & Comp. L. J 271 at 277. This concept is explored in Part IV *infra*.

⁶⁸ R. Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1984).

labeled “tit for tat” and has had important repercussions in the realm of international relations theory. As Hauss notes, Prisoner’s Dilemma is “one of the classic examples used to teach about and justify the realist perspective in international relations [but it] produces very different outcomes if one starts thinking in the long-term rather than the short.”⁶⁹

‘Tit for tat’ strategy and the notion of long-term thinking feed into a discussion of the principle of reciprocity, pursuant to which “a State would only act if willing to accord other States the right to act in a similar manner.”⁷⁰ That is, ‘reciprocity’ means that, although a State’s self-interest may instigate certain behavior, policy elites will often proceed with ultimate action only after having considered the probable chain of events that such action may trigger within the international sphere.⁷¹ An example of reciprocal behavior follows. In July 1999 Australian authorities located South African vessels fishing for Orange Roughy close to the Australian EEZ in an area known as the Tasman Rise. Although the vessels were situated on the high seas, which is a traditional fishing ‘free for all’, Australia lodged formal complaints with South Africa on the basis that a moratorium existed between Australia and New Zealand in relation to fishing for Orange Roughy in that area. After tense diplomatic exchanges, South Africa acquiesced and the fishing vessels withdrew. While the exact reason for South Africa’s capitulation is uncertain, Rayfuse notes that possible application of a similar assertion in relation to foreign vessels fishing for Patagonian Toothfish that straddle the South African EEZ “was

⁶⁹ Hauss, *supra* note 12 at 125.

⁷⁰ Duruigbo, *supra* note 23 at 182.

⁷¹ *Ibid.* at 181-82

not lost on South Africa.”⁷² That is, by cooperating, South Africa maintained harmonious international relations while setting a beneficial precedent for the future behavior of other States in relation to its own interests.

The principle of reciprocity assists a clearer understanding of self-interest in the context of interdependence between States as depicted by the neo-liberalist model of State behavior.

For neo-liberals, States are self-interested entities but they are not presumed to be homogenous units operating in isolation from each other. In the neo-liberal world, States are more trusting and optimistic of each other’s behavior. As Wendt points out, they “concede to neo-realists the causal powers of anarchic structure, but they gain the rhetorically powerful argument that process can generate cooperative behavior, even in an exogenously given, self-help system.”⁷³

Neo-liberalists label States “the rational egoist” whereby each actor is concerned with pursuing it’s own absolute gains and not denying the relative gains of others.⁷⁴ Accordingly, the main concern of a State is the potential and actual defection (or ‘cheating’) of partners, the price of which is a reduction in one’s own absolute

⁷² Rayfuse notes that another reason could have been that South Africa accepted Australia’s proposition that its arrangement did indeed govern the stock, thereby excluding South African (or any other) claims to fish in that area: R. Rayfuse, “The United Nations Agreement on Straddling and Highly Migratory Fish Stocks as an Objective Regime: A Case of Wishful Thinking?” (1999) 20 Aust. YBIL 253 at 277.

⁷³ Wendt “Anarchy”, *supra* note 18 at 392.

⁷⁴ *Ibid.* at 400.

gain.⁷⁵ Defection may take the form of non-compliance with an international agreement such that the defector “free-rides” by reaping gains from others’ sacrifices while contributing or sacrificing nothing themselves.⁷⁶

The emergence of ‘regime theory’ and then ‘institutionalism’ was the key analytical shift for neo-liberals, which proceeded from “an apparent realization that there are difficulties involved in attempting to explain all relations among States solely on the basis of relative power and short-term calculations of self-interest.”⁷⁷ Neo-liberalism centers upon regimes, which act to both constrain and regulate the behavior of States.⁷⁸

There are variations of definition of “regimes”.⁷⁹ The most oft-cited definition comes from Stephen Krasner as “sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area of international relations.”⁸⁰ Within this framework, Krasner defines ‘principles’ as “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”, and ‘decision-making procedures are

⁷⁵ Petersmann, *supra* note 11 at 402.

⁷⁶ Petersmann, *ibid.* (Table 2).

⁷⁷ M. Byers, “Custom, Power, and the Power of Rules – Customary International Law From an Interdisciplinary Perspective” (1995) 15 *Mich.J.Int’l* 109 at 129.

⁷⁸ Kratochwil and Ruggie, *supra* note 29 at 760; Duruigbo, *supra* note 23 at 186.

⁷⁹ Jurgielewicz provides a comprehensive survey of definitions, from L.F.E. Goldie to Thomas Gehring, with particular focus on the similarity of semantics employed by both international relations theory and international law: L. Jurgielewicz, *Global Environmental Change and International Law: Prospects for Progress in the Legal Order* (University Press of America Inc., New York, 1993) at 100-105.

⁸⁰ S. Krasner, “Structural Causes and Regime Consequences: Regimes as Intervening Variables”, in S. Krasner, ed., *International Regimes* (Ithaca: Cornell University Press, 1983) at 2.

“prevailing practices for making and implementing collective choice”.⁸¹ In contrast, Ernst B. Haas describes regimes in much simpler (and arguably starker) terms as “[m]an-made arrangements (social institutions) for managing conflict in a setting of interdependence.”⁸² Krasner appears to focus on the convergence of expectations between States whereas Haas focuses on conflict management. Arguably, both definitions encapsulate a scenario in which nation states (the ‘actors’) cede part of their sovereignty to the institutions or procedures of which they form a part, even though the regime does not constitute a supranational entity. That is, States are both the governed and the governors. Moreover, the existence in Krasner’s definition of ‘norms’ and ‘rules’ connotes that regimes have established decision-making procedures and, at least, rudimentary compliance and enforcement mechanisms, which may imply that “regimes take on at least some of the characteristics of a state and thus at least peck away at international anarchy.”⁸³

In so doing, regimes attempt to address directly Prisoner’s Dilemma and ‘free-rider’ dilemma among sovereign self-interested States through the formation of ‘clubs’ as institutionalized fora for long-term cooperation. By building on the ‘tit for tat’ strategies realized by Axelrod and the principle of reciprocity outlined above, cooperation is encouraged through iteration, the sharing of information and the

⁸¹ *Ibid.*

⁸² E. Haas, “Words Can Hurt You; or Who Said What to Whom About Regimes” in S. Krasner, ed., *International Regimes* (Ithaca: Cornell University Press, 1983) at 27.

⁸³ Hauss, *supra* note 12 at 221.

reduction of transaction costs.⁸⁴ Further, rule compliance is monitored as a disincentive for defecting, and sanctions are mandated against ‘free-riders’.⁸⁵

The outcome of acknowledging international interdependence is that the desire to maintain the overall system acts as a deterrent against States pursuing their own short-term interests.⁸⁶ However, regimes have been criticized as “obfuscating and obscuring” the power relationships that neo-realists perceive as the ultimate motivator of State behavior.⁸⁷ Susan Strange writes that: “all those international arrangements dignified by the label ‘regime’ are only too easily upset when either the balance of bargaining power or the perception of national interest (or both together) change among those states who negotiate them.”⁸⁸

Neo-liberal regime theory metamorphosed into neo-liberal institutionalism,⁸⁹ which comprises a more general rubric⁹⁰ and acts to combat (to some extent) the above criticisms. Institutionalism is redolent of Kantian philosophy, which espoused the

⁸⁴ Petersmann, *supra* note 11 at 401 (Table 2).

⁸⁵ Petersmann, *ibid.*; Grieco, *supra* note 56 at 124. Slaughter-Burley sets out the ‘functions and benefits’ of international law as they correlate to the functions and benefits of international regimes: Slaughter-Burley, *supra* note 13 at 220 (Table 1). Keohane asserts the value of regimes in detail in R. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton: Princeton University Press, 1984) [hereinafter “After Hegemony”] at 244-45. In particular, Ellis notes the value of regimes as representing “an acknowledgment of the *continuity* of issue-areas across national boundaries and of the need for governance mechanisms similarly capable of extending across these boundaries” (emphasis in original); Ellis, *supra* note 7 at 281. This comment is especially pertinent to global environmental degradation, which has no regard for human-made jurisdictional borders.

⁸⁶ P. Trimble “International Law, World Order and Critical Legal Studies” (1990) 42 Stan. L. Rev. 811 at 833.

⁸⁷ Krasner, *supra* note 80 at 7; Duruigbo, *supra* note 23 at 188.

⁸⁸ S. Strange, “Cave! Hic Dragons: A Critique of Regime Analysis” in P. Diehl, ed., *The Politics of Global Governance: International Organizations in an Interdependent World* (London: Lynne Rienner Publishers, 2001) at 41, 48.

⁸⁹ Byers, *supra* note 77 at 132.

⁹⁰ Slaughter Burley, *supra* note 13 at 206.

notion that laws and political institutions can compel “even a nation of devils albeit not morally good in themselves to behave as good citizens.”⁹¹ Institutions include but are broader than regimes. Keohane divides institutions into the following three categories: first, ‘formal intergovernmental or cross-national nongovernmental organizations’; second, ‘international regimes’ defined as “institutions with explicit rules, agreed upon by governments, that pertain to particular sets of issues in international relations”; and third, ‘conventions’ defined as “informal institutions, with implicit rules and understandings, that shape the expectations of actors”.⁹²

Keohane provides that a crucial role of international institutions is their vehicle for “interpretative communities” which act to “constrain subjective interpretations, promote habitual compliance, and impose reputational costs on violators of norms, as interpreted by these communities.”⁹³ Broadly speaking, institutions are perceived by neo-liberal scholars as influencing States’ behavior, even independent of power calculations and self-interest.⁹⁴

⁹¹ Petersmann, *supra* note 11 at 426, quoting Kant in H. Reiss and H.B. Nisbet, eds., *Kant: Political Writings*, (New York: Cambridge University Press, 1991) at 100.

⁹² R. Keohane, *International Institutions and State Power: Essays in International Relations Theory* (Boulder: Westview Press, 1989) at 4.

⁹³ Keohane “Two Optics”, *supra* note 7 at 491. He also emphasizes the importance of (1) providing information to participants, and (2) linking issues to each other in the context of a broader matrix of valued activities: *ibid.* at 499. Examples of such institutions are the International Monetary Fund, the International Labor Organization, and the International Whaling Commission: *ibid.*

⁹⁴ Duruigbo, *supra* note 23 at 187. He cites the example of ship design and construction standards as representing one area in which it has been empirically and analytically shown that institutions induce and enhance compliance with international law. In particular, he emphasizes the importance of reporting as a mechanism for ensuring compliance: *ibid.* at 187-88. Likewise, Keohane posits that, in a circular relationship, institutions depend on interests, but interests (as interpreted by actors) depend on information and reputations, and finally, that reputations depend on institutions. As such, “institutions matter even if they cannot enforce rules from above because they affect reputations which are useful to cultivate”: Keohane “Two Optics”, *supra* note 7 at 500. Accordingly, Keohane submits that instrumental and normative incentives work in tandem with each other within the context of ‘valued’ institutions: *ibid.* at 501.

However, it must be reiterated that power and self-interest of individual States in the international realm is a reoccurring theme in both schools of neo-utilitarian thought.⁹⁵ Understanding the impact of this theme on State behavior within a systemic theory of how change occurs is a pervasive theme in the constructivist project.

As with neo-utilitarians, constructivists likewise retain a strong preoccupation with States as primary and autonomous actors in international life.⁹⁶ However, a key difference between neo-utilitarianism and constructivism is the latter's emphasis on a high level of interaction and interdependence between States. That is, power may affect State calculations but the extent to which it does depends on intersubjective understandings and expectations and the conceptions of 'self' and 'other'.⁹⁷

While constructivism does not deny the prevalence of power and self-interest, it centers upon the fundamental role of ideational factors in shaping a nation's sense of self in the international realm. In doing so, constructivism embraces "intersubjective beliefs", which are social facts rooted in "collective intentionality".⁹⁸ Ruggie describes collective intentionality as beliefs or intentions existing in individual

⁹⁵ For example, Keohane writes that "institutions that facilitate cooperation do not mandate what governments must do; rather, *they help governments pursue their own interests* through cooperation." (emphasis added): Keohane "After Hegemony", *supra* note 85 at 246.

⁹⁶ Brunnée and Toope, *supra* note 7 at 33, who contend that the roles of actors other than States (such as NGOs and corporations) in affecting world politics are underestimated by some strains of constructivism: *ibid.*

⁹⁷ Wendt "Anarchy", *supra* note 18 at 387.

⁹⁸ Wendt "Anarchy", *ibid.* at 397; Ruggie, *supra* note 10 at 869; Kratochwil and Ruggie, *supra* note 29 at 764; Onuf "Constructivism", *supra* note 18 at 61. The term "collective intentionality" is attributed to John Searle, *The Construction of Social Reality* (New York: Free Press, 1995) at 24-5.

heads, “[b]ut within those individual heads it exists in the form of ‘we intend’, and ‘I intend only as part of our intending’.”⁹⁹ Brunnée and Toope describe the notion of collective intentionality as “shared understandings”.¹⁰⁰

Constructivism investigates the impact of collective intentionality upon world politics. To this end, constructivists view the concept of State identity and interests as a human-made foundation upon which international relations rest and which is inherently relational.¹⁰¹

As with neo-liberal institutionalism, the constructivist view of interdependence finds expression in regimes. Collective intentionality creates meaning and can include an interpretative function; both of these characteristics manifest through international regimes.¹⁰² Constructivists regard regimes as constraining interest-based self-interpretation of behavior by States by embodying “intersubjective frameworks of understanding” that include agreement between participants as to why the regime is necessary, what objectives the regime seeks to achieve, and how future acts by participants are to be interpreted.¹⁰³

Two fundamental consequences flow from the constructivist premise of State behavior and self-interest as social constructs rooted in collective intentionality.

⁹⁹ Ruggie, *supra* note 10 at 870.

¹⁰⁰ Brunnée and Toope, *supra* note 7 at 32.

¹⁰¹ Wendt “Anarchy”, *supra* note 18 at 400; Ruggie, *supra* note 10 at 870.

¹⁰² Ruggie, *ibid.* at 870, 879.

¹⁰³ Wendt “Anarchy”, *supra* note 18 at 417; Kratochwil and Ruggie, *supra* note 29 at 764; Ruggie, *ibid.* at 870, 879.

First, what has been human-made can be un-made, or at least *changed*, by the same processes through which it came into existence. That is, the self-perception of the State can change if the collective intentionality upon which it rests changes. As Ellis writes: “new understandings and self-descriptions [as derived from and interpreted through international regimes] lead, in turn, to changes in the manner in which international and domestic spheres, international governance, and state sovereignty are understood – and therefore, to changes in their nature.”¹⁰⁴ Accordingly, collective intentionality can alter with the emergence of new understandings; that is, shared understandings can arise, change, and influence each other.

Second, collective intentionality creates new rights and responsibilities *within* the system of States in a manner that is not simply determined by the material interests of the dominant powers¹⁰⁵ and which constitutes a process that transcends sovereignty while occurring within national borders. This process of creating new rights and duties is termed “collective legitimation”¹⁰⁶ and the rise of human rights and intervention on humanitarian grounds in the international arena are prime examples.¹⁰⁷ Specifically, I contend in Part IV that collective legitimation can facilitate the provision of assistance between developed and developing nations in order to progress sustainable development.

¹⁰⁴ Ellis, *supra* note 7 at 281.

¹⁰⁵ Ruggie, *supra* note 10 at 870, 879.

¹⁰⁶ Kratochwil and Ruggie, *supra* note at 758.

¹⁰⁷ Ruggie, *supra* note 10 at 870, stating that human rights are “amazing” from the vantage point of conventional international relations theory because such rights are ascribed to individuals vis-à-vis their own States.

Naturally, both of these consequences have fundamental ramifications for international relations and the way in which world politics is conducted. Ruggie acknowledges that “there is little sign that the modern state is becoming irrelevant”,¹⁰⁸ however Wendt notes its *evolution* by writing that “the spacial coincidence between state-as-actor and state-as-structure” is undergoing transformation and deconstruction due to the development of new shared understandings between actors in a context of interdependence.¹⁰⁹

B. A CHANGING PERCEPTION OF “SELF-INTEREST”

Through the preceding discussion of neo-utilitarian and constructivist approaches to State relations in the international polity, it becomes apparent that the notion of State self-interest is “ubiquitous, regardless of the optics of international relations from which it is viewed.”¹¹⁰ But a hitherto unexplored question remains: what exactly is ‘self-interest’? Knowing how to define self-interest is integral to understanding whether or not a State’s perception of its interests, and indeed its sense of self, can *change*; and such change could be fundamental to saving the world in a post-modern epoch of global environmental uncertainty.

¹⁰⁸ *Ibid.* at 876. However, he concludes that the modern state may be becoming more of a “multiperspectival” political form, beyond and different to its original manifestation as a “single political subjectivity”: *ibid.*

¹⁰⁹ A. Wendt, “Collective Identity Formation and the International State” (1994) 88 *American Political Science Review* 384 [hereinafter *Collective Identity Formation*] at 393. His comment refers to the specific role of regimes as loci for developing new shared understandings.

¹¹⁰ Duruigbo, *supra* note 23 at 193.

The problem is that the very concept, let alone any concrete definition, of 'self interest' is highly problematic, raising pertinent questions such as "whose self?" and "which interests?"¹¹¹

A necessary starting point for an analysis of self-interest in the context of a system of nation states is discussion of the notion of 'national interest'. Joyner and Theis explain their concept of "national interest" as follows:

States chart their courses in international affairs in accordance with their national priorities, which in turn reflect their main stakes in international politics - national security, self-preservation (inclusive of political independence and territorial integrity), economic sufficiency, national prestige, ideological ambitions, and power considerations.¹¹²

That is, national interest is defined by national priorities, which in turn are defined by reference to the international milieu. Joyner and Theis' criteria of national interest are redolent of a neo-realist shopping list for the 'defensive positionalist' State. There is no doubt that these priorities exist in the State system, but is this definition misleading in its absolutism?

In the previous section, I hinted at a differentiation between 'the State' and 'policy elites', which necessitates exploration in the context of the notion of self-interest. Due to the fact that the 'State' per se cannot act or make decisions, the motivations of those who do so on its behalf are inextricably implicated in this discussion. Whose interests are we referring to? At this point, there is arguable convergence

¹¹¹ Keohane "Two Optics", *supra* note 7 at 496.

¹¹² C. Joyner & E. Theis, *Eagle Over the Ice: The U.S. in the Antarctic* (Hanover and London: University Press of New England, 1997) at 3.

between ‘national’ interests of the State as listed by Joyner and Theis and the individual interests of the decision-maker in terms of their power and standing not only within the hierarchy of their own State but also within the international milieu.¹¹³ Simultaneously, powerful lobby groups attempt to influence the notion of the national interest in such a way as to reflect their private interests.¹¹⁴ Accordingly, the ‘national interest’ is actually a mélange of different interests, and it is not always as forward-looking or ‘for the people’ as we would like.

The role of the economy plays a key role at this juncture. Duruigbo writes: “that which affects a State’s economy obviously raises the issue of the national interest, and will play a significant part in its attitude toward a particular international arrangement.”¹¹⁵ Although this statement is undisputed, it must be clarified that even the notion of a State’s ‘economic interests’ is nebulous due to the fact that the definition is influenced profoundly by the integrity and interests of key decision makers, potent economic pressure groups, and, in certain cases, the epistemic community.

Thus, the ‘national interest’ is a constructed concept, comprised of various interests and dependent upon the perception of interdependence. However, it is important to note that national or State self-interest is not an inherently villainous concept.

¹¹³ Needler, *supra* note 6 at 171; Keohane “Optics”, *supra* note 7 at 496.

¹¹⁴ Needler, *ibid.* at 171, 175.

¹¹⁵ Duruigbo, *supra* note 23 at 193.

Accordingly, we need not regard self-interest in opposition to altruism. We are not dealing with a polarity, but rather a continuum.¹¹⁶

This ‘continuum’ is due to the fact that the characterization of self-interest depends on the nature of the “self” in question,¹¹⁷ that is, how one *perceives* one’s identity.

Does a person regard themselves as a member of their family, their local community, their province, nation, or of humankind generally?

Petersmann writes that the frequent xenophobic (“we” versus “they”) thinking makes it “easy for politicians to present foreign policy measures as being in the ‘national interest’” (even though such measures may actually be detrimental to the nation) due to the fact that “in contrast to domestic policy, citizens often view foreign policy as a black box to be left to the ‘foreign policy experts’”.¹¹⁸ And with what compass do these ‘experts’ reference their foreign policies? When a ‘State’ acts in the international milieu, is it acting as defender of its own interests or as a member of an interdependent network? Often, domestic parliaments do not make the connection between national and international policy-making, due to the fact that most parliamentarians are local politicians responding to local constituents.¹¹⁹ However, the point of reference for a policy-maker’s interests is quite crucial to influencing

¹¹⁶ Needler, *supra* note 6 at 5.

¹¹⁷ *Ibid.*

¹¹⁸ Petersmann expressly refers to “we” versus “they” mercantilist thinking in the context of international trade, which tends to produce double standards in foreign trade policy-making: Petersmann, *supra* note 11 at 410-11. I submit that his argument can be applied equally to international relations generally.

¹¹⁹ Cameron, *supra* note 2 at 246.

domestic policy and its potential ramification in an international context. As

Keohane writes:

Over time, as the examples of trade politics and the European Union demonstrate, policies will alter the structure of the political economy – including existing firms and groups and their own preferences. Hence policies may alter the interests of states. Often, as historical institutionalists have argued, these changes are not anticipated by the agents who initiated the policy change.¹²⁰

Naturally, changing perceptions of State self-interest requires an entity to regard itself in novel terms. Wendt argues that “this would most likely stem from the presence of new social situations that cannot be managed in terms of preexisting self-conceptions”¹²¹ so that actors can engage in deliberate self-reflection designed to transform their interests. I contend that the alarming global depletion of biodiversity is such a catalyst. It is a global issue that has grave consequences for present and future generations and that transcends individual State practice to require international cooperative action to ameliorate it. Notions of a short-term national interest in the context of an ‘us and them’ mentality are not only inappropriate but also detrimental to our future.

So it becomes clear that we need to find new approaches to policy making in order to advance global cooperation generally, and abate global biodiversity degradation specifically, and to do so in a less ad hoc way.

¹²⁰ Keohane “Two Optics”, *supra* note 7 at 496. He asserts the facilitative role of institutions to this end.

¹²¹ Wendt “Anarchy”, *supra* note 18 at 419.

One approach may be to look to a different method for categorizing and grouping entities within the international milieu such that the nation State is no longer the primary actor in the international milieu with the result that the notion of national interest as a behavioral motivation is obviated or at least diluted.¹²² Certainly, examples exist already of transnational partnerships between State and non-State actors;¹²³ and the influential role of entities such as transnational NGOs and multinational corporations upon international relations is well documented.¹²⁴

¹²² Authors who tend to be critical of the nation State as the primary actor in international relations and the concept of sovereignty include: R. Devetak, "The Project of Modernity and International Relations Theory" (1995) 24 *Millennium* 27 at 38-40; A. Linklater, "The Question of the Next Stage in International Relations Theory: A Critical-Theoretical Point of View" (1992) *Millennium* 21 [hereinafter Next Stage]; A. Linklater "The Problem of Community in International Relations" (1990) 15 *Alternatives* at 142 [hereinafter Problem of Community]; A. Linklater, *Men and Citizens in the Theory of International Relations* (London: MacMillan, 1990) [hereinafter Men And Citizens] in which he discusses the notion of "universal political organization"; Samhat, *supra* note 7 at 355-56, 361-63; Wendt "Collective Identity Formation", *supra* note 109; Hoffman writes: "One of our greatest present difficulties is that the transnational society which crosses borders and plays a vital role in economic affairs, communications, education and science, as well as in the service of many good causes, does not coincide fully with the international system": S. Hoffman, *Duties Beyond Borders: On the Limits and Possibilities of Ethical International Politics* (New York: Syracuse University Press, 1991) at 222.

¹²³ For example, at the recent World Summit on Sustainable Development in Johannesburg, South Africa (26 August - 4 September 2002), over 220 "partnership initiatives" were introduced in the form of agreements among national governments, international institutions, the business community, labor groups, and non-governmental organizations, and other actors to carry out sustainable development activities. Examples include a partnership for cleaner fuels and vehicles announced at the Summit that will involve the U.N., national governments, NGOs, and the private sector, and a European Union "Water for Life" initiative that will harness diverse partners to help provide clean water and adequate sanitation in Africa and Central Asia:

www.johannesburgsummit.org/html/sustainable_dev/type2_part.html (accessed November 2002). It is noteworthy that Hilary French, Director of the Global Governance Project, opines that: "while some of these partnerships may accomplish worthwhile results, they are still no substitute for binding commitments from governments.": Worldwatch Institute, World Summit Policy Brief #12, "From Rio to Johannesburg and Beyond: Assessing the Summit": www.worldwatch.org (accessed November 2002).

¹²⁴ See H. Sjöberg, "Introduction and Overview" in M. Rolén, H. Sjöberg, U. Svedin, eds., *International Governance on Environmental Issues* (Dordrecht: Kluwer Academic Publishers, 1997) at 8; Samhat, *supra* note 7 at 366; and Cameron who cites the increased role of independent experts, 'policy think tanks' and special interest groups at domestic and international levels in policy making: Cameron, *supra* note 2 at 245.

However, I will focus upon another approach, one that operates within the current State system, to posit the submission that the notion of self-interest is not anathema and can actually be shaped and harnessed to include the long-term future of not just one's own nation, but also of those beyond one's borders. In so doing, I employ the notion that "[u]sing new ideas and applying them in concrete settings, filtered through an actor's perception of its own identity and interests, can result in changes of self-perception and behavior."¹²⁵

Hauss notes that: "[t]he realists and their intellectual cousins are probably right on one score. People and the organizations they form are likely to want to pursue their own interests...[however] the realists are only off the mark in the way they would have us calculate what that self interest is."¹²⁶ Two fundamental factors in a new process of calculation are 'interdependence' and 'long-term vision'. Interdependence impels a re-definition of the 'self'; a shift away from the "me" to the "we" such that our world view is broadened to transcend an "us and them" mentality.¹²⁷ Regarding policy choices through the filter of interdependence means that common concerns and the needs of the whole are inextricably interwoven with one's own. Moreover, "[i]f one thinks about long-term implications, one's short-term self-interest may well not be in one's self-interest over time."¹²⁸ In other words, "my self-interest and yours tend to converge at least in the medium to long-term. In the short-term they may be

¹²⁵ Brunnée and Toope, *supra* note 7 at 71.

¹²⁶ Hauss, *supra* note 12 at 124.

¹²⁷ *Ibid.* at 133.

¹²⁸ *Ibid.* at 123.

quite different.”¹²⁹ Thus, if we view the picture through the “mental lens” of long-term interests and interdependence, as encouraged by Hauss and in contrast to neo-realism, then the values we employ to define self-interest change dramatically and so do the potential outcomes.

An example of this contention is provided by the Australian Senate Committee which investigated the ramifications of global warming and increased greenhouse gas emissions for Australia in 2000.¹³⁰ In its report, the Committee accepted the findings of the Intergovernmental Panel on Climate Change¹³¹ that human-induced climate change is occurring. It noted that sectors of industry had claimed that the costs of reducing emissions would have detrimental impacts on Australia’s national interests and economic growth. However, it stated that convincing evidence demonstrated that Australia would be affected particularly deleteriously by climate change due to its climatic and geographical vulnerability, existing problems with soil salinity, and its economic dependence on agriculture and tourism.¹³² Accordingly, the Committee concluded that “Australia has a strong national interest in global action to dramatically cut emissions over the long-term.”¹³³ The Committee concluded that it was seriously concerned about the potentially significant economic,

¹²⁹ *Ibid.*

¹³⁰ Report of the Senate Environment, Communications, Information Technology and the Arts References Committee, November 2000, titled “The Heat Is On: Australia’s Greenhouse Future” [hereinafter the Australian Committee Report]:

www.aph.gov.au/senate/committee/ecita_ctte/gobalwarm/02ES.pdf (accessed November 2002).

¹³¹ Abbreviated as the IPCC, which is the independent grouping of scientists that advises governments on the current state of and future possibilities for global climate.

¹³² The Australian Committee Report, *supra* note 130 at xxiv:

¹³³ *Ibid.* Despite this, Australia’s per capita emissions are the highest in the world, and direct and indirect subsidies to the fossil fuel sector equate to approximately AUD\$6000 million, which is in errant contrast to the AUD\$360 million being provided by the Commonwealth for renewable energy programs: *ibid.* at xxxvi.

social and environmental impacts of climate change, particularly on Australia, and urged the Australian government to, among other things, ratify the Kyoto Protocol immediately.¹³⁴

The key to this example is that it is in Australia's long-term self-interest to cut emissions and ratify the Protocol and that, *by so doing*, Australia is also contributing to the longevity of the global environment and the future of other States. Thus, we are harnessing the notion of self-interest to facilitate the common interest; we are redefining it in a context of interdependence and long-term vision.

In this way, individual self-interests interconnect to form a web¹³⁵ that sustains the whole. The notion of "self-interest" changes; it is not synonymous with disjunctive independence nor is it an impediment to international collaboration on global issues. It merely moves upon the continuum.

But the crucial question remains: *can* self-interest change? It is at this juncture that constructivism lends its most pertinent insights. As stated above, neo-utilitarian ontology regards the world as preconstituted whereby State interests and identity are

¹³⁴ *Ibid* at xxiv. The Committee also urged the government to instigate a campaign of community awareness and undertake an assessment of the economic, social and environmental costs of a failure to adequately address climate change: *ibid*.

¹³⁵ Keohane and Nye assert that "Contemporary world politics is not a seamless web; it is a tapestry of diverse relationships": R. Keohane and J. Nye, *Power and Interdependence* (New York: Harper Collins Publishers, 1989) at 4. I agree with the lack of 'seamlessness' in the international arena, but contend that, like all tapestries, individual threads are interwoven with each other to form the whole artwork. In this sense, the authors and I concur on the notion of international interdependence, even if we employ different metaphors to describe it.

exogenous and unchanging and actors “merely enact (or fail to) a prior script.”¹³⁶

However, in this regard at least, these theories are deficient due to the historical fact that State interests and identity *have* been known to change over time.¹³⁷

Constructivism investigates and elucidates this change by explaining how norms, values, aspirations, that is, ideational factors comprise shared understandings and intersubjective beliefs, which shape a nation’s sense of self and interactive behavior in the international milieu.

C. INTERNATIONAL ETHICS AND THE NOTION OF ‘COMMUNITY’

It is my contention that international ethics is the necessary link between the constructivist notion of a changing perception of State self-interest in the international arena and amelioration of global biodiversity depletion, by embodying intersubjective meanings that contextualize social behavior. This section identifies the nature and role of ethics at the international level in the context of international change and interdependence.

As will be detailed below in Part III, the nature of biodiversity depletion is a curious phenomenon in that it straddles both local and global realms. It is a global problem because it is occurring in all regions around the world and has far-reaching

¹³⁶ Ruggie, *supra* note 10 at 876.

¹³⁷ For example, Ruggie illustrates how the identity of a State can change and “pull its interests along” by noting how both post-war Germany and Japan’s stance towards anti-militarism have changed markedly since 1945, and also that the Gorbachev revolution in the Soviet Union had profound international repercussions: *ibid.* at 863.

consequences for all life. Yet, simultaneously, the actual occurrence of biodiversity loss takes place specifically within national borders¹³⁸ and the causes of biodiversity diminution are both local and global and inextricably intertwined with socio-economic concerns. As such, the means of redressing biodiversity depletion necessarily encompasses a holistic approach, one that embraces considerations of people and nature beyond one's own borders in an ethical and practical matrix.

"Ethics" has been defined as the "systematic and critical study of our moral attitudes, actions and beliefs about how we ought to live and about what sort of people we ought to be."¹³⁹ 'International ethics' is the application of such study to the international arena. While this statement may seem simplistic, its implications and application are not.

Slaughter-Burley cites the subfield of 'international ethics' as an area in which international lawyers and international relations theorists can engage meaningfully in mutually rewarding interdisciplinary scholarship and debate.¹⁴⁰ She writes that one way to strengthen this subfield is to "argue *against* the uniqueness of the international realm" and apply the same moral criteria from domestic to international political arrangements.¹⁴¹

¹³⁸ As opposed to other global environmental issues such as global warming or ozone depletion.

¹³⁹ M. Stenmark, *Environmental Ethics and Policy-Making* (Hants: Ashgate Publishing Limited, 2002) at 14.

¹⁴⁰ Slaughter-Burley, *supra* note 13 at 224.

¹⁴¹ *Ibid.* (emphasis in original)

However, Hoffman writes that the difficulty in applying ethics to the international milieu lies in the nature of the international system itself, which, in a neo-realist view of international relations, consists of competition between *groups* “with no consensus among them and with no power above them”.¹⁴² He describes in detail why morality and moral choice is limited in the international arena due to the domestic interests of national policy-makers and the relations between States such that international politics is ‘morally inferior’ to that of domestic systems. That is, the international system tends to divide humankind into domestic groupings of “us and them”.¹⁴³ However, while Hoffman’s discussion provides points of import, it is too firmly rooted in a neo-realist view of international relations to be completely accurate. It does not take into account the rise and success of regimes and institutions as loci for collaboration and consent between States on particular issue-areas as documented by neo-liberal institutionalism, nor does it refer to the integral and influential role of norms and ideational factors that shape State behavior in the international milieu, as posited by constructivist theory.

Regardless, it must be acknowledged that the ‘us and them’ dichotomy is a reoccurring theme in international relations and a potentially debilitating approach to global environmental issues in an interdependent world where we are reliant upon considerations of ‘the other’ in order to stem global environmental degradation and promote socio-economic stability.¹⁴⁴

¹⁴² Hoffman, *supra* note 122 at 19.

¹⁴³ Hoffman at 1-17.

¹⁴⁴ The reader will note that my analysis appears to exclude consideration of the ethical status of non-human beings. Indeed, for the purposes of this thesis, I adopt a morally anthropocentric analysis, but

Perhaps the answer lies in how individuals within States perceive their own role, which in turn, may influence the behavior of policy-makers.¹⁴⁵ Samhat writes that the “fusion of national identity and political community was expressed in terms of Rousseau’s ‘general will’ by which citizens possess a *collective interest in the well-being of community*.”¹⁴⁶ Given the political interdependence between States and the environmental interdependence between humankind and biodiversity, this notion of “collective interest” could also be extrapolated to the way that citizens and also States regard other citizens in other States.

This notion of a community of humankind has been described as “elusive”,¹⁴⁷ and yet the normative implications of it resonate in the current context. Linklater explores the notion of a political community anchored in a “moral conviction that individuals belong not only to their respective sovereign states, but to a more inclusive community of humankind.”¹⁴⁸ This commitment to universalism

based in a holistic conception of the natural systems on which humans depend. I must clarify that there is strong argument, of which I am an advocate, that other biological creatures apart from humankind have intrinsic worth far beyond and outside of the instrumental value that we attribute to them. As such, humankind also owes consideration and ethical duties to biodiversity itself whereby biodiversity is a part of ‘the other’ of which I write. However, I will not pursue that line of argument in this thesis due to word constraint. For an exciting and recent article that addresses this issue in the context of postmodernist international relations scholarship, see P. Wapner, “The Sovereignty of Nature? Environmental Protection in a Postmodern Age” (2002) 46 *International Studies Quarterly* 167. For a legalistic approach to this issue, see the innovative (even by today’s standards) article by C. Stone, “Should Trees Have Standing? Toward Legal Rights for Natural Objects” (1972) 45 *Southern California Law Review* 450. See also: P.G. Brown, *The Commonwealth Of Life: A Treatise On Stewardship Economics* (Montréal: Black Rose Books, 2001); Stenmark, *supra* note 139, esp. chapters 3, 4; and O’Neill, J., Turner, R.K., Bateman, I.J., *Environmental Ethics and Philosophy* (Cheltenham: Edwards Elgar Publishing Limited, 2001), esp. Part III.

¹⁴⁵ I acknowledge that this is more relevant in a democratic nation than elsewhere, although the experience of Dr Maathai in Kenya outlined in Part III *infra* may demonstrate otherwise.

¹⁴⁶ Samhat, *supra* note 7 at 351 (emphasis added).

¹⁴⁷ *Ibid.* at 350.

¹⁴⁸ Linklater “Next Stage”, *supra* note 122 at 84.

incorporates a “redefinition of obligations to outsiders” to accord recognition to humanity as well as domestic citizenship.¹⁴⁹ Hoffman prefers an “intermediate position” which acknowledges both domestic priorities and international ethical obligations.¹⁵⁰ In contrast, Chris Brown opines that the most important spheres of justice are not cross-cultural but internal to specific communities.¹⁵¹

I submit that the notion that duties owed domestically are stronger or more important than duties owed internationally is not sufficient or appropriate in the context of global biodiversity diminution. In this context, we are dealing with cross-border issues that demand a cross-border collaborative approach to address them and which are necessarily linked to global socio-economic issues. If the “most important” spheres of justice are domestic only, then we are doomed to perpetuate the current global environmental crisis. Yet I do not subscribe to unqualified ‘universalism’ either, of which a reoccurring criticism is the danger of suppressing diversity.¹⁵² However, I do contend that umbrella principles of international ethics can be applied in a way that is sensitive to particular cultural contexts in order to ameliorate biodiversity loss. The method, causes and consequences of biodiversity depletion are

¹⁴⁹ Linklater “Men and Citizens”, *supra* note 122 at 116; Devetak, *supra* note 122 at 38-39; see also Beitz who similarly argues for a universal obligation of justice beyond the existence of separate States: C. Beitz *Political Theory and International Relations* (Princeton: Princeton University Press, 1979). Hoffman describes this ‘universal’ approach as the “maximalist position” toward distributive justice: Hoffman, *supra* note 122 at 153.

¹⁵⁰ Hoffman, *ibid.* at 155-58. In particular, he argues that while our sense of obligation is strongest in our own community, it can also exist in larger groups that form an intermediate level between national groups and humankind: *ibid.* at 157. Likewise, Samhat adopts an “intermediate option” through a “balanced structure of international and multinational groupings for the maintenance of security and the development of geographical areas”: Samhat, *supra* note 7 at 354.

¹⁵¹ C. Brown “International Political Theory and the Idea of World Community” in K. Booth and S. Smith, eds., *International Relations Theory Today* (University Park: The Pennsylvania State University Press, 1995) at 106.

¹⁵² Samhat, *supra* note 7 at 353; Devetak, *supra* note 122 at 40; Ellis, *supra* note 7 at 292-92; Brunnée and Toope, *supra* note 7 at n. 49.

partly local specific and they need to be addressed at that level, however, due to the all-pervasive and interconnected nature of the issue, ameliorative approaches need to be guided by universal standards developed collaboratively in the international milieu. The aspirational and ideational role of international law as an influencing agent of State behavior and perception of 'self' and 'other' is crucial in this context, which will be addressed below. In short, I contend that the existence of domestic community obligations do not obliterate global ethical obligations nor vice versa.

Moreover, the notion of community can be extended temporally in time as well as geographically in space. This is the notion of a trans-generational community. De-Shalit contends that "community is not necessarily defined geographically but rather as a moral entity" such that it "refers to the more spiritual aspects of life, of self-identity, or moral, political and cultural relationships."¹⁵³ That is, the terms we use to determine what 'group' we belong to reaches beyond our immediate and tangible context. De-Shalit points out that we are already part of a trans-generational community, but one that mostly relates present to past generations as evidenced by our maintenance of previous customs, which are "part of how and what we see ourselves to be."¹⁵⁴ However, trans-generational community also stretches forward to include future generations. The future takes root in the present; future generations do not just exist spontaneously, external and separate to us. They are born from us today, literally and metaphorically. Accordingly, "it is equally arguable that we do and should regard the future [and not just the past] as part of our 'selves'. In other

¹⁵³ A. De-Shalit, "Community and the Rights of Future Generations: A Reply to Robert Elliott" (1992) 9(1) *Journal of Applied Philosophy* 105 at 112-13.

¹⁵⁴ *Ibid.* at 113.

words, the processes of cultural and political debate and reflection on the common norms and values may be directed towards the future...”¹⁵⁵

The notion of a trans-geographical and also trans-generational community acknowledges the relationship between human beings around the globe today and also between present and future generations, which binds humanity together in a spatial and also linear progression of interconnection. When we acknowledge this interdependency and employ a long-term view, it becomes apparent that future and present generations share the same goals such that future needs are not less important than present ones for they rely upon each other for satisfaction. It is my contention that discharging our ethical obligations to future generations in relation to amelioration of biodiversity diminution delivers concomitant benefits to present generations and vice versa.

Accordingly, I contend that international ethics plays a crucial role in international relations. International ethics comprises “intersubjective meanings” which are the “product of the collective self-interpretations and self-definitions of human communities”.¹⁵⁶ Thus, intersubjective meanings comprise “the web of meaning” that contextualizes human behavior; a web that we ourselves have spun.¹⁵⁷ That is, international ethics and the notion of ‘community’ are crucial in shaping perceptions of State self-interest in the context of interdependence. In constructivist terms,

¹⁵⁵ De-Shalit, *ibid.*; Attfield also adheres to a theory of trans-generational community: R. Attfield, *The Ethics of the Global Environment* (Edinburgh: Edinburgh University Press, 1999) at 44, 158-159.

¹⁵⁶ Samhat, *supra* note 7 at 360.

¹⁵⁷ *Ibid.*

international ethics and the conception of ‘community’ comprise intersubjective beliefs arising from collective intentionality or shared understandings, which are capable of influencing change.

In adopting a trans-geographical, trans-generational notion of ‘community’ based in shared understanding, I reject Hoffman’s contention that the pursuit of national interest is an impediment to the application of international ethics. I acknowledge that having regard to others outside of domestic constituents and employing a long-term view in policy-making is not easy due to the fact that domestic policy-makers have responsibilities to their own electorates and are driven by the short-term nature of electoral cycles.¹⁵⁸ However, it is axiomatic that “purely selfish behavior, by destroying the social fabric, is not in [policy-makers’] self-interest.”¹⁵⁹

Hoffman writes that “[o]nly if one took the position that the sole genuine morality is that which requires selfless behavior, would the gap between interests and ethical action be unbridgeable.”¹⁶⁰ I agree with this statement; hence my contention that national self-interest can co-exist with international ethics, that they are not mutually exclusive. In constructivist terms, “the ‘self’ in terms of which interests are defined is the community; national interests are international interests.”¹⁶¹ I base this contention on the submission that employing ethical standards in the international milieu is *in* the self-interest of States. That is, practical considerations sit side by side

¹⁵⁸ Hoffman, *supra* note 122 at 231

¹⁵⁹ *Ibid.* at 17.

¹⁶⁰ *Ibid.* at 41.

¹⁶¹ Wendt “Anarchy”, *supra* note 18 at 400.

with notions of ethical duty. This contention is explored fully through discussion of the interdependence between environmental and socio-economic integrity in Part III and the relationships between present and future generations and developed and developing nations in Part IV below.

In blending ethical and practical considerations, I agree with Hoffman when he writes that the morality of international relations is “a mix of [Kantian] commands and of utilitarian calculations.”¹⁶² In this way, it may be possible to articulate a plausible approach to integrating ethics and international politics “without relapsing into the naivety and superficiality ...castigated in early idealism, and without compromising normativity by falling back into realism.”¹⁶³

D. THE ROLE OF INTERNATIONAL LAW AS AN AGENT OF CHANGE

In 1958, two seminal but diverging articles were published contemporaneously in the Harvard Law Review on the issue of whether or not law and morality exist in mutual exclusion, and whether or not they should. H.L.A. Hart asserted that, in order to preserve the integrity of the law, there is a vital distinction between ‘what the law is’ and ‘what the law should be’, whereby notions of morality and rules of law are

¹⁶² Hoffman, *supra* note 122 at 43.

¹⁶³ Devetak, *supra* note 122 at 40.

separate.¹⁶⁴ Lon Fuller criticized and rebutted Hart's positivist postulation by contending that there is an implicit "morality of order" that necessarily provides foundation for the creation of all law, such that neither realm is distinct from the other.¹⁶⁵

This notion of morality as an integral element of law fuelled and flavored Fuller's work.¹⁶⁶ His theories focused on the notion that law is constructed, which means that a fundamental aspect of law is that it is incomplete and aspirational, and that it has a "purposive" aspect, not in terms of end-goals but in terms of a "social function", namely "the function it performs generally in the lives of citizens".¹⁶⁷ As an aspirational and incomplete "enterprise",¹⁶⁸ law can be described as a continuous and creative activity,¹⁶⁹ a living project perpetually 'under construction'. Fuller described

¹⁶⁴ Although he acknowledged lines of intersection between the two, but remained firm that they are not merged: H.L.A. Hart, "Positivism and the Separation of Law and Morals" (1958) 71 Harv.L.Rev. 593.

¹⁶⁵ L. Fuller, "Positivism and Fidelity to Law" (1958) 71 Harv.L.Rev 630 [hereinafter Fidelity].

¹⁶⁶ Which encompassed an "interactive" understanding of law as well as "the internal morality of law": see discussion in this section *infra*. These concepts are detailed and explored fully in W.J. Witteveen and W. van der Burg, eds., *Rediscovering Fuller: Essays on Implicit Law and Institutional Design* (Amsterdam: Amsterdam University Press, 1999). In relation to the specific application of Fuller's theories to international law in the context of constructivism, see Brunnée and Toope, *supra* note 7.

¹⁶⁷ Brunnée and Toope, *ibid.* at n.107, who emphasize the non-instrumental nature of Fuller's "purposive" theory.

¹⁶⁸ Noting Fuller's description of law as "the enterprise of subjecting human conduct to the governance of rules": L. Fuller, *The Morality of Law* (New Haven: Yale University Press, 1969) [hereinafter *Morality of Law*] at 106. For a full discussion of this description of law, see Brunnée and Toope at 45 and n.104.

¹⁶⁹ Westerman, P., "Means and Ends" in W.J. Witteveen and W. van der Burg, eds., *Rediscovering Fuller: Essays on Implicit Law and Institutional Design* (Amsterdam: Amsterdam University Press, 1999). Winston describes this process as involving "continuous effort to construct and sustain a common institutional framework to meet the exigencies of social life in accordance with certain ideals.": K.I. Winston, "Three Models for the Study of Law" in W.J. Witteveen and W. van der Burg, eds., *Rediscovering Fuller: Essays on Implicit Law and Institutional Design* (Amsterdam: Amsterdam University Press, 1999) at 63; Brunnée and Toope state poetically that "law cannot be understood as a fully realized system sprung full-born from the head of a sovereign, or bequeathed intact from the implicit terms of a social contract": Brunnée and Toope, *supra* note 7 at 47.

law “not [as] a datum, but [as] an achievement that needs ever to be renewed.”¹⁷⁰

This ‘purposive’ aspect of law encompasses the opinion by Fuller that “moral purposes exist that can be discovered, and thus the construction of the self and of social institutions is an exercise in enhancing self-knowledge.”¹⁷¹

Brunnée and Toope build upon Fuller’s understanding of law as a purposive activity whereby “law is inevitably a construction dependent upon the mutual generative activity and acceptance of the governing and the governed. Indeed, the mutuality is even stronger in democratic systems, for the governed and the governing routinely exchange places.”¹⁷² That is, law is “interactive”.¹⁷³ Accordingly, the role of stable shared understandings, or collective intentionality in constructivist terms, between the governed and the governing play a key role in this interactive theory to give law legitimacy and authority.¹⁷⁴

Brunnée and Toope write that law which influences the behavior of actors is most likely to arise in a context of “mutual confidence and resulting *informal* normativity (a contextual regime)” (emphasis added), with the consequence that “law is not ‘the

¹⁷⁰ L. Fuller, “American Legal Philosophy at Mid-Century” (1954) 6(4) J. Legal Educ. 457 at 467.

¹⁷¹ Brunnée and Toope, *supra* note 7 at n. 107.

¹⁷² *Ibid.* at 48.

¹⁷³ *Ibid.* at 49.

¹⁷⁴ *Ibid.* at 49-51. In particular, they employ constructivist nuances to opine that stable shared understandings are only likely to arise from patterns of social interaction such that “actors ‘learn’ to read the social background against which any legal norm must be postulated and interpreted”: *ibid.* at 51. Fuller employs the notion of the “internal morality” of law in order to give it legitimacy, based on the “morality of aspiration” which exists due to the ‘purposive’ nature of law and instigates eight internal tests of legality which comprise “the internal morality of law”: Fuller “Morality of Law”, *supra* note 168 at 42-43. Brunnée and Toope summarize these tests as: generality of rules, promulgation, limiting cases of retroactivity, clarity, avoidance of contradiction, not asking the impossible, constancy over time, and congruence of official action with underlying rules: Brunnée and Toope, *supra* note 7 at 54.

ultimate' in normativity" but rather "an appropriate foundation for some, but not all, of our social aspirations".¹⁷⁵ I agree with this assertion, but add that while law is not always an appropriate *foundation* for social or ethical aspirations, which can exist quite aside from and outside of the law, it can serve as a very powerful *conduit* for expression of these aspirations, a channel through which such aspirations and norms can be promulgated to a wider audience for its edification.

It is my submission that international law is a shared understanding that is influenced by and, in turn influences, other shared understandings to create a dynamic and evolving web of meaning. This submission builds upon Brunnée and Toope's interactional theory of international law, not in the context of the legitimacy or bindingness of law, but in terms of law's dual role as an expression or conduit of aspiration and as a simultaneous influential agent that shapes and colors aspiration. This submission fits into the notion of "interaction" between the governed and the governing, but instead of focusing on that interaction as a mechanism for achieving legal legitimacy, I am concentrating on the aspirational aspect of law as a channel for change.

To that end, Parts III and IV analyze the application of international ethics in the context of global biodiversity diminution, noting the role of international environmental law as an ideational instrument (both promulgator and receptacle) and an agent of change, particularly in relation to a changing perception of 'self-interest' in an interdependent world.

¹⁷⁵ Brunnée and Toope, *ibid.* at n. 47

III INTERDEPENDENCE AND THE GLOBAL ENVIRONMENT

Interdependence reflects the new reality driven home by the global crisis... However much our circumstances may differ, fundamentally we are alike. We breathe the same air, drink the same water, share the same hopes for our children, and hunger equally for the nourishment of food, knowledge, meaning, useful work, dignity, and affection. We depend equally on this tiny, eight thousand mile wide life support system floating in the infinite cold blackness of space.

Charles Hauss, *Beyond Confrontation*¹⁷⁶

A. INTERDEPENDENCE – FROM THE CONCEPTUAL TO THE PHYSICAL REALM

1. Interdependence Within and Between the International and Domestic Levels

As discussed in Parts I and II above, over recent decades there has been intensification of interaction and interconnectedness within and between societies and States, such that the conception of one State's "political community of fate" has expanded to encompass many States' "overlapping communities of fate".¹⁷⁷ This is demonstrated by the growth in international regimes and organizations, transnational links, interpenetration of foreign and domestic policy and the corresponding need to deal cooperatively with collective policy problems.¹⁷⁸

¹⁷⁶ Hauss, *supra* note 12 at 115.

¹⁷⁷ D. Held, "Democracy and Globalization" in eds. D. Archbugi, D. Held and M. Köhler, *Re-Imagining Political Community: Studies in Cosmopolitan Democracy* (Cambridge, UK: Cambridge University Press, 1998) at 21-22.

¹⁷⁸ *Ibid.* at 20.

Thus, interdependence pervades our post-modern social and political constructs to “engender an enmeshing of political fortunes”¹⁷⁹ for which the neo-realist perception of self-interest is ill-equipped to accommodate. Accordingly, as Ellis opines: “States [can] no longer purport to control their own agenda and pursue their own ends *independent* of other states or of the international environment”.¹⁸⁰

Thus we have one sphere of interdependence: that which exists within and between domestic systems and the international milieu. This socio-political “human” interdependence is further enmeshed with the interdependence that exists within and between the human and physical environments.

2. Interdependence Within and Between Physical and Human Environments

Nowhere is the notion of interdependence demonstrated so clearly as in the natural environment that surrounds and cradles our existence. It is a constant reminder that no aspect of our physical planet exists in isolation. Suzuki illustrates how all species are connected through the intersection of life cycles, as follows:

Plants depend on specific insect species to pollinate them, fish move through the vast expanses of the oceans feeding and being fed upon by other species, and birds migrate halfway around the world to raise their young on the brief explosion of insect populations in the Arctic. Together, all species make up one immense web of interconnections that binds all beings to each other and to the physical components of the planet.¹⁸¹

¹⁷⁹ *Ibid.* at 22.

¹⁸⁰ Ellis, *supra* note 7 at 279 (emphasis added).

¹⁸¹ D. Suzuki, *The Sacred Balance: Rediscovering our Place in Nature* (Vancouver: Oxford University Press, 1997) [hereinafter *Sacred Balance*] at 126.

That is, the patchwork of diversity aggregates to form a single living whole. It is this fact that instigated the realization within the scientific community of the fundamental role of 'ecosystems' and, subsequently, of the 'ecosystem approach' in international environmental law. In particular, the ecosystem approach is fundamental for protecting biological diversity by recognizing the complex ecological interplay between species and acknowledging the need for a holistic approach in order for conservation endeavors to be truly effective.¹⁸² The ecosystem approach forms a crucial component of certain international environmental legal instruments, such as the Convention for the Protection of the World Cultural and Natural Heritage,¹⁸³ the CBD,¹⁸⁴ and the Protocol on Environment Protection to the Antarctic Treaty.¹⁸⁵ In this way, international law has not only intersected with and reflected evolving epistemic values, but it has also entrenched and shaped norms at the international level, which influence and regulate State behavior.

This last point is crucial to another limb of global environmental interdependence; that which pinpoints the intimate connection between environmental issues and human socio-economic and political conditions.

¹⁸² V. Date, "Global 'Development' and its Environmental Ramifications - The Interlinking of Ecologically Sustainable Development And Intellectual Property Rights" (1997) 27 Golden Gate U.L. Rev. 631 at 638

¹⁸³ Convention For The Protection Of The World Cultural And Natural Heritage, Nov. 16, 1972, 27 U.S.T. 37, 1037 U.N.T.S. 151 [hereinafter "World Heritage Convention"]. The World Heritage Convention provides for the protection of cultural and natural sites of universal value. The ecosystems that the World Heritage Convention protects include the Great Barrier Reef, the Everglades, and the Olympic Rainforest: *ibid.* art. 11.

¹⁸⁴ CBD, *supra* note 8 art. 2, which defines "biological diversity" as including "ecosystems and the ecological complexes of which they are a part", as opposed to merely an individual species approach.

¹⁸⁵ Concluded in Madrid on 4 October 1991, entering into force on 14 January 1998. Art. 3 provides, in part, that "The protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica...shall be fundamental considerations in the planning and conduct of all activities in Antarctica."

First, global environmental problems are due to the aggregate result of human activities taking place in local social and economic settings and, conversely, individual decisions about how to utilize the environment are influenced by international socio-economic realities, either directly or via national policies.¹⁸⁶ That is, decisions arising from ordinary human activities such as how people earn a living, how food is grown, consumptive behavior, lifestyle necessities and choices “are acts that, taken together, determine the environmental condition”.¹⁸⁷

Second, there is a fundamental link between ‘the environmental condition’ and the notion of security, which, as detailed in Part II, has lain at the heart of traditional international relations theories. Environmental issues spark conflict throughout the world and challenge the ‘comforting’ notion that such conflict is due to antagonism between persons or States in far off places. As Hauss notes: “I cannot be environmentally secure if you aren’t as well.”¹⁸⁸ While environmental factors are not the sole instigator of global security issues, they form an ingredient of the causal mix and have “become part and parcel of the kind of geopolitical disputes at the heart of international relations.”¹⁸⁹

These conflicts have devastating impacts within specific nations, which spill over into the concerns, both physical and inchoate, of other nations. For example, the

¹⁸⁶ Sjöberg, *supra* note 124 at 9.

¹⁸⁷ *Ibid.*

¹⁸⁸ Hauss, *supra* note 12 at 36.

¹⁸⁹ *Ibid.* at 47.

Sudanese civil war in 1995 had a number of causes, but the tensions were worsened by a severe drought in the southern part of the country in 1994.¹⁹⁰ As a consequence of the violent fighting, political refugees fled to Uganda and Kenya, which could ill-afford (in economic, political or environmental terms) the influx.¹⁹¹ Similarly, situations of conflict as a result of a nation attempting to gain control of, or stop another nation from gaining control of, key natural resources are well illustrated by the examples of oil monopolies and water scarcity that have instigated and exacerbated tensions (and continue to do so) between States across the globe.¹⁹²

Thus, many environmental problems touch each and every person and place on the planet, such as global warming, ozone depletion,¹⁹³ transboundary air pollution, and marine pollution. Other environmental issues, which seem to exist only in certain places, such as desertification and land degradation, transcend national boundaries in both their causes and also their consequences, which, as illustrated above, encompass socio-economic, environmental and political ramifications within and between nations. Thus, both the environment and degradation of it demonstrate “not only that our problems are transnational, but that we live in a single, completely

¹⁹⁰ *Ibid.* at 43.

¹⁹¹ *Ibid.*

¹⁹² For example, dam-building by Turkey affects the amount and quality of water that flows into Iraq and Syria; and disputes have arisen between the United States, Canada and Mexico in relation to the use of water in shared lakes and rivers: Hauss, *supra* note 12 at 48. Similarly, the oil existing in Kuwait was an attractive target for Saddam Hussein given that Iraq was on the verge of bankruptcy after its eight year war against Iran in the 1980s, and, arguably, also fuelled the US-led coalition against Iraq in the Gulf war in 1991: *ibid.* at 27-28. Control of oil in the Middle East continues to incite security issues today.

¹⁹³ *Ibid.* at 36.

interdependent ecosystem...[such that] the impact of all our actions ripple out until they affect everything and everyone else in the system.”¹⁹⁴

In particular, the issue of global biodiversity diminution is a phenomenon that encompasses and implicates both local and global realms, and intersects with other environmental and human issues.¹⁹⁵ My contention is that protection of biodiversity is fundamental for our collective survival across the globe and provides a necessary impetus for adjusting the lens of interdependence through which we (both individuals and States) must regard our perception of self-interest in the context of global relations.

B. THE “FUNDAMENTAL” NATURE OF BIODIVERSITY

1. Back to Basics

Biodiversity is defined to include “the variety of genes in localized populations of individual species, to the variety of species in a habitat, to the variety of habitats that form the mosaic of a regional or continental landscape”.¹⁹⁶ More than two-thirds of

¹⁹⁴ *Ibid.* at 46.

¹⁹⁵ For example, flora and fauna (including humans) across the globe are effected deleteriously by UV rays from a depleted ozone layer and also rising temperatures and unusual weather patterns from global warming: *ibid.* at 39 and 41. Similarly, deterioration of biodiversity instigates and exacerbates global warming, land degradation, and desertification. All of these chain reactions cause corollary problems for human socio-economic and political systems.

¹⁹⁶ J. Harte, “Land Use, Biodiversity and Ecosystem Integrity: the Challenge of Preserving Earth’s Life Support System” (2001) 27 *Ecology Law Quarterly* 929 at 932; see also CBD, *supra* note 8, art. 2. Accordingly, protection of biodiversity occurs at three levels, namely protection of variation at the genetic, the species and at the habitat levels: Harte, *ibid.* at 933.

the world's catalogued biodiversity is located in developing countries.¹⁹⁷

Specifically, the majority of estimated total species is thought to inhabit tropical rainforests¹⁹⁸ and those species are endemic to their regions.¹⁹⁹

Genetic diversity within a species and species' variation within an ecosystem ensure that both single species and whole ecosystems survive in the face of changing conditions.²⁰⁰ That is, "[d]iversity confers resilience, adaptability and the capacity for regeneration",²⁰¹ which in turn ensures that life can go on.

However, since the Industrial Revolution and particularly after World War II, the richness of our natural environment has diminished alarmingly.²⁰² Current estimates are that the world is presently experiencing a catastrophic rate of species extinction, many times greater than the natural rate,²⁰³ yielding a possibility of losing 25%-50% of all existing life forms by 2050.²⁰⁴ Many of these species have never been analyzed

¹⁹⁷ The word "catalogued" is used to denote the fact that scientists have discovered approximately 1.7 million species which represents only a small fraction of the estimated 4-111 million species: Date, *supra* note 182 at n.4.

¹⁹⁸ Approximately 50%-90% of total species are located in rainforest: A. Walcott, "The Restructured Global Environment Facility: A Practical Evaluation for Unleashing the Lending Power of GEF" (1998) 3 *Widener Law Symposium Journal* 485 at n.62.

¹⁹⁹ Meaning that they are found only in one specific geographic area and nowhere else: World Conservation Monitoring Center, *Biodiversity Profiles for 10 Countries: Assistance in Improving UNEP's GEF Work Programme – Final Report* (Washington, D.C., 1996) [hereinafter *Biodiversity Profiles*] at iii.

²⁰⁰ Suzuki "Sacred Balance", *supra* note 181 at 138.

²⁰¹ *Ibid.* at 139.

²⁰² *Ibid.* at 146-48.

²⁰³ T. Swanson, *Global Action for Biodiversity* (London: Earthscan Publications - IUCN & WWF, 1997) at 20. "Natural extinction" occurs at approximately 0.000009% of existing species per year: Swanson, *ibid.* at 19. Currently, rainforest species extinction is conservatively estimated to be occurring at 0.5% per year (assuming there are 10 million species), which translates into 50,000 species going extinct each year (or 6 an hour!) in tropical rainforests alone: Suzuki "Sacred Balance", *supra* note 181 at 150.

²⁰⁴ Swanson, *supra* note 203 at 21.

by modern biologists.²⁰⁵ Although mass extinction has occurred before, albeit infrequently,²⁰⁶ the difference now is that it is happening in a much shorter time frame and is human-induced. As Weiner notes: “[t]he story of life is punctuated by Ice Ages, volcanic winters, meteoritic collisions, mass dyings. And at the moment it is punctuated by us.”²⁰⁷

Causes of extinction include over-exploitation of species, habitat destruction and exotic species introduction²⁰⁸ due to exogenous human activities such as deforestation, human over-population and pollution. These activities are occurring across the globe, within both developing and developed countries. Moreover, due to the fact that all life-forms are connected across the globe in a complex matrix of interdependency, the extinction or diminution of biodiversity in one region has uncertain but potentially long-term ramifications in others.

But why should the world *care* about environmental degradation, specifically the loss of biodiversity? The answer is frighteningly simple: we need the environment to survive. We are biological creatures who need fresh air to breathe, clean water to drink, arable land to till and harvest in order to eat - or we die. It is the web of living

²⁰⁵ K. Raustiala, “The Domestic Politics of Global Biodiversity Protection in the United Kingdom and the United States” in M. Schreurs and E. Economy, eds., *The Internationalization of Environmental Protection* (Cambridge: Cambridge University Press, 1997) at 44; see also n. 182 *supra*.

²⁰⁶ There are five occasions indicated in the fossil record during which over 50% of the then-existing animal species were rendered extinct: Swanson, *supra* note 203 at 19.

²⁰⁷ per Jonathan Weiner quoted in Suzuki “Sacred Balance”, *supra* note 181 at 143.

²⁰⁸ Swanson, *supra* note 203 at 26.

things – biodiversity – that gives us air, water, earth and energy; the necessary and irreplaceable ingredients of existence.²⁰⁹

Specifically, Harte summarizes the major reasons why we should be concerned about loss of biodiversity in five categories, namely ecosystem goods, recreational opportunities, spiritual significance of nature, ethical and moral issues, and ecosystem services.²¹⁰ In particular, ‘ecosystem services’ sustain the world’s economies and social systems.²¹¹ Healthy ecosystems are responsible for such socio-economic necessities as soil fertility, reduction of erosion, pollination of crops, natural pest control, moderation of weather extremes such as drought and flood, maintenance of water and air quality, and maintenance of the “stage” upon which evolutionary processes occur.²¹² That is, healthy ecosystems are responsible for both quality of life and life itself.

The biologically fundamental nature of biodiversity to all peoples has been acknowledged and embodied by the designation of its protection as a “common concern of humankind” in the CBD.²¹³ As such, the CBD places the protection of biodiversity in the international realm, whereby it is no longer an exclusively

²⁰⁹ Per D. Suzuki, “Challenges in the New Millennium”, Faculty of Arts, McGill University, 28 March 2002 [unpublished] [hereinafter Suzuki Conference].

²¹⁰ Harte, *supra* note 196 at 940-41 (Table 1).

²¹¹ *Ibid.* at 942 (Table 2).

²¹² *Ibid.*

²¹³ CBD, *supra* note 8, preamble: “Affirming that the conservation of biological diversity is a common concern of humankind”.

national matter but constitutes a common fundamental value for all humankind such that its protection and preservation are a common global priority.²¹⁴

Biermann writes that four components comprise the international norm of common concerns of humankind in order to give it effect, namely the principle of ‘common but differentiated responsibilities’ and the emerging principles of transfer of technology and financial assistance, equal representation in financial decision-making, and reciprocity of obligations.²¹⁵ The first two criteria will form the basis of discussion in Part IV below.

The concept of the common concern of humankind is derived from the principle of the common “heritage” of humankind, which has only twice been included in international treaties.²¹⁶ The common heritage of humankind suggests that the “resources of an area cannot be appropriated to the exclusive sovereignty of states but must be conserved and exploited for the benefit of all, without

²¹⁴ K. Bosselmann & B. Richardson, *Environmental Justice and Market Mechanisms: Key Challenges for Environmental Law and Policy* (London: Kluwer Law International, 1999); Jurgielewicz, *supra* note 79 at 66. The principle has also been affirmed in relation to climate change, whereby “change in the Earth’s climate and its adverse effects are a common concern of humankind”: United Nations Conference on Environment and Development, Framework Convention on Climate Change, U.N. Doc. A/AAAAC.237/18 (Part II)/Add.1 (1992), reprinted in 31 I.L.M. 849 (1992) [hereinafter FCCC], preamble. Biermann argues that ozone depletion and persistent organic pollutants are also common concerns of humankind: Biermann, F., “Common Concerns of Humankind and National Sovereignty”, paper presented at the 2001 Annual Conference of the Canadian Council on International Law, Ottawa, Canada, 18-20 October 2001 [unpublished] at 7. Biermann argues that the notion of common concerns of humankind is a class of legal standard “so essential” that no abrogation may be permitted so as to ensure its very effectiveness and substance: at 2, 25. Accordingly, he discusses the possibility of the common concerns of humankind as an obligation *erga omnes* (at 31-2), a customary rule (at 18, 22-30), and *jus cogens* (at 32-34).

²¹⁵ Biermann, *ibid.* at 2, esp. 18-22 for the latter two criteria.

²¹⁶ First, in relation to the deep seabed: *Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982*, New York, 28 July 1994, 33 ILM 1309 [hereinafter LOSC-Seabed]. Second, in relation to the moon and “other celestial bodies”: *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, 18 ILM 1434 (1979), art. XI(1) [hereinafter the Moon Treaty].

discrimination.”²¹⁷ Prior to the CBD, plant genetic resources had been approached by the United Nations Food and Agricultural Organization (FAO) as “a heritage of mankind and consequently should be available without restriction”.²¹⁸ Developed countries were satisfied with this provision, but rejected the concomitant stipulation that commercial products derived from germplasm be treated also as public goods. Accordingly, during negotiations of the CBD, developing countries turned away from the designation of biodiversity as common heritage in order to ensure equitable reciprocity of resource sharing.²¹⁹ Moreover, the ‘lesser’ categorization of “common concern” of humankind places emphasis on the common obligation to *protect* biodiversity for the sake of humankind, as opposed to exploiting it.²²⁰

²¹⁷ Jurgielewicz, *supra* note 79 at 65-6.

²¹⁸ International Undertaking on Plant Genetic Resources, FAO Conf. Resolution 8/83, art. 1.

²¹⁹ C. Gulati, “The ‘Tragedy of the Commons’ in Plant Genetic Resources: the Need for a New International Regime Centered Around an International Biotechnology Patent Office” (2001) 4 Yale H.R. & Dev. L.J. 63 at 75. Spectar notes that this was due to the perception that a public trust approach to biological and cultural resources, which exist mainly in developing nations, would be to “[put] up [plant genetic resources] for grabs by entrepreneurs from the developed countries eager to turn such public domain items into private intellectual property.”: J. M Spectar, “Patent Necessity: Intellectual Property Dilemmas in the Biotech Domain and Treatment Equity for Developing Countries (2002) 24 Hous. J. Int’l L 227 at 245. This stance is also reflected in art. 3 of the CBD, which provides that States have “the sovereign right to conserve or exploit their own resources pursuant to their own environmental policies”: CBD, *supra* note 8. Thus, the CBD recognizes state sovereignty over territorial natural resources and, in so doing, marked a paradigm shift away from the preexisting stance of common ownership and unrestricted use of germplasm: M. Footer, “Intellectual Property and Agrobiodiversity: Towards Private Ownership of the Genetic Commons” (1999) Yearbook of International Environmental Law 42 at 61. This outcome is a reflection of the broader debate that underlay negotiations at UNCED regarding developing nations’ right to development and permanent sovereignty over natural resources: see C. Mensah, “The Environment After Rio: The Role of the Developing Countries”, in L. Campiglio, L. Pineschi, D. Siniscalco, T. Treves (eds.) *The Environment After Rio: International Law and Economics* (London: Graham & Trotman/ Martinus Nijhoff, 1994); and more generally N. Schrijver, *Sovereignty Over Natural Resources: Balancing Rights And Duties* (New York: Cambridge University Press, 1997).

²²⁰ Biermann, *supra* note 214 at 5. Franck and Sughrue describe the common heritage provisions in both the Moon Treaty and the LOSC-Seabed as “a mercantile model of common heritage equity” in which exploitation and equitable allocation of the resource is given higher priority than conservation: T. Franck and D. Sughrue, “Symposium: The International Role of Equity-as-Fairness” (1993) 81 Geo.L.J. 563 at 590.

2. “Fundamental” to Everyone in a Pluralistic World?

Thus, the maintenance of global biodiversity and ecosystem health is the lynchpin to life as we know it. The acknowledgement of that fact has been enshrined in the international legal norm of “common concern of humankind”. In asserting that biodiversity is ‘fundamental’ I am presenting it as a brute fact and not, in constructivist terms, as a social construct. However, the way humans relate to biodiversity, our interpretation of it, is indeed constructed. As Wendt writes: “[a] fundamental principle of constructivist theory is that people act toward objects...on the basis of the meaning that the objects have for them.”²²¹ The lack of uncompromised attention by governments around the world to ensuring protection of biodiversity seems to reflect this constructivist principle, by presenting a different view of ‘reality’ to the one of biological necessity outlined above.

States vary enormously in their capabilities, interests and values, which introduces the complicating element of heterogeneity into a seemingly simple equation.²²² In international society, priorities are varied and often driven by short-term considerations such that immediate social and economic concerns seem to far outweigh that of our basic biological needs. The next section attempts to address the issue of how the ‘fundamentalness’ of biodiversity forms an essential ingredient of a functioning pluralistic international society, as a result of the necessary life-giving

²²¹ Wendt “Anarchy”, *supra* note 18 at 396-97.

²²² The concept of heterogeneity, particularly in the context of international cooperation is addressed extensively in Keohane, R., and Ostrom, E., eds., *Local Commons and Global Interdependence: Heterogeneity and Cooperation in Two Domains* (London: Sage Publications, 1995).

status of and services that flow from global biodiversity. This discussion takes place in the context of the varying agendas and priorities of developed and developing nations.

2.2 The 'Value' of Biodiversity to Developed Nations

As acknowledged previously, that which affects a State's economy will raise the issue of its national or self-interest. In relation to developed nations, I will focus upon the rise of the pharmaceutical and biotechnology sectors as a trigger for reconfiguring the 'value' of biodiversity in the context of economics and the national interest.

The rise in biotechnology²²³ innovation, pharmaceutical production and intellectual property rights in the Western world over recent decades is a primary source of domestic revenue and interest for certain nations, particularly the United States.²²⁴

As noted previously, the specter of vast pecuniary interest impels strong

²²³ "Biotechnology" is described as "the techniques by which changes made to DNA or genetic materials in plants, animals, and microbial systems leading to useful products and technologies.": L. Guruswamy and J. McNeely *Protection of Global Biodiversity: Converging Strategies* (London: Duke University Press, 1998) at 7.

²²⁴ Certainly the United States has enormous pecuniary interests in this area as was demonstrated during negotiations of the Protocol on Biosafety to the Convention on Biological Diversity (adopted 29 January 2000) [hereinafter Biosafety Protocol] available at www.biodiv.org/biosafety/protocol.asp (accessed November 2002) in Cartagena. Apparently Rafe Pomerance, who was a policy analyst with Friends of the Earth and the World Resources Institute but then became Deputy Assistant to the Secretary of State, stated that he was "not going to let anyone do anything that might harm a 68 billion dollar a year industry in the United States." (R. Lavanya, "The Cartagena Protocol – a Battle over Trade or Biosafety?", Yale Center For Environmental Policy, 1999 www.twinside.org.sg/title/lavanya-cn.htm (accessed November 2002)).

governmental support for relevant industry and also a strong governmental stance during treaty negotiations to secure the perceived 'national interest'.

In this regard, elements of the CBD engendered much commercial angst within the United States' biotechnology industry, particularly the provisions relating to technology transfer and benefit sharing²²⁵ such that President Bush Snr. refused to sign the CBD for fear of harming domestic industry. Subsequently, President Clinton urged Congress to adopt the CBD in 1993²²⁶ but it remains unratified by the United States. Six years later in 1999, the United States took a similar stance during negotiations of the Protocol on Biosafety to the CBD (the Biosafety Protocol)²²⁷ at Cartagena due to the same concerns about jeopardizing domestic industry,²²⁸ even

²²⁵ CBD, *supra* note 8, arts. 15, 16 and 19.

²²⁶ However, Clinton vowed simultaneously that the United States would resist any efforts to decrease the level of protection over intellectual property rights: Letter of Transmittal from William J. Clinton to the United States Senate, Convention on Biological Diversity 1, Nov. 20, 1993, cited in M. Kruger, "Harmonizing TRIPS and CBD: A Proposal From India" (2001) 10 Minn.J.Global Trade 169 at n. 51. It is no coincidence that the United States was the major instigative force behind the Agreement on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) at the Uruguay Round of world trade negotiations in 1994, nor that pharmaceutical and biotechnology representatives reputedly dominated TRIPS negotiations: F. Abbott, "The TRIPS Agreement, Access to Medicines and the WTO Doha Ministerial Conference" FSU College of Law, Public Law Working Paper No. 36 and QUNO Occasional Paper No. 7, October 2001 at 5, 12-14. Marrakesh Agreement Establishing the World Trade Organization [hereinafter WTO Agreement], Annex 1C, Legal Instruments - Results of the Uruguay Round (1994) - Agreement on Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, Dec. 15, 1993, 33 I.L.M. 81 (1994) [hereinafter TRIPS].

²²⁷ The Biosafety Protocol, *supra* note 224. The Biosafety Protocol was eventually concluded in January 2000 in Montreal and opened for signature in May 2000. It is not yet in force. Art. 1 states that the objective of the Protocol is to promote the "safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health". However, due to the dominant role of trade concerns in negotiations, the main focus of the Protocol became its application to the transboundary movement of Living Modified Organisms.

²²⁸ The USA spearheaded a group of grain exporting countries, comprised of Australia, Canada, Chile, Uruguay, Argentina and the USA, termed the "Miami Group". Apparently, the Miami Group maintained "hardline and inflexible positions on most issues" and enjoyed a strong and mutually supportive relationship with the industry lobby: Lavana, *supra* note 224.

though the United States is not a member of the CBD and, as such, cannot be a party to the Biosafety Protocol.²²⁹

Ironically, in the fervor to protect biotechnology and associated rights, politicians and industry representatives overlooked the protection of the very *ingredients* that make that technology possible. There appears to be a perception that, as a result of our technological sophistication, we are remote from and independent of nature.²³⁰

However, the surge of biodiversity prospecting (bioprospecting) activities in recent decades in order to feed these very technologies evidences the contrary. As

McManis provides:

About one quarter of all prescription drugs in the United States contain as their active ingredient a compound extracted or derived from plants. Sales of these plant-based drugs amounted to an estimate US\$15.5 billion in 1990. In Europe, Japan, Australia, Canada and the United States, the market value for prescription and over the counter drugs based on plants in 1985 was estimated at \$43 billion. Around the world, almost 121 prescription drugs are made from higher plants, almost half of which come from the tropics, and 74% of which were discovered by following up on native folklore claims.²³¹

Similarly, modern biotechnology is capable of creating living modified organisms (LMOs) that may be used directly in seeds, food or crops in order to confer greater productivity or pest resistance.²³² In particular, agricultural LMOs form the basis of a

²²⁹ Pursuant to CBD, *supra* note 8, art. 32(1). Of the other developed countries in the Miami Group, Australia has not yet signed the Protocol and Canada has signed (on 19 April 2001) but has yet to ratify: <http://www.biodiv.org/biosafety/signinglist.asp?sts=sign> (accessed November 2002).

²³⁰ G. Heal, "Markets and Sustainability" in R. Revesz, P. Sands and R. Stewart, eds., *Environmental Law, The Economy and Sustainable Development* (London: Cambridge University Press, 2000) at 411.

²³¹ C. McManis, "The Interface between International Intellectual Property and Environmental Protection: Biodiversity and Biotechnology" (1998) 76 Wash.U.L.Q. 255 at 273.

²³² per Secretariat of the CBD press release 29 January 2000, quoted in Stoll. P-T., "Controlling the Risks of Genetically Modified Organisms: The Cartagena Protocol on Biosafety and the SPS Agreement" (1999) vol. 10 Yearbook of International Environmental Law 82. Common examples include tomatoes, grains, corn and soybeans.

multi-billion dollar global industry.²³³ However, as with pharmaceuticals, the original ingredient of biotechnology is biodiversity. Moreover, LMOs are limited by their *lack* of diversity, making them more susceptible to obsolescence than wild species. Therefore there is a continuing need for diverse genetic stock for cross-breeding, as exemplified by the US Department of Agriculture's extensive search through all 6,500 known varieties of barley before it found an Ethiopian strain capable of conferring resilience against a virus that threatened California's barley crop worth US\$160 million.²³⁴

Thus, the essential ingredients of modern pharmaceutical and biotechnological products fit into Harte's category of 'ecosystem goods' provided by biodiversity and these goods are responsible for significant revenue to developed nations. The Western world, and particularly Western industry, is not independent of biodiversity at all.

So why is there a disconnect between the disinclination to ratify an international agreement to protect ecosystem goods and reaping with gusto the financial benefit derived from them? Arguably, the issue is that our 'bottom line' has become economics but that our method of calculating 'value' is faulty and potentially disastrous. Gulati states that it is a "[b]asic principle of property law that as the economic value of property increases, it is less likely to be destroyed."²³⁵ However, the problem is that conventional economics fails to account for the critical services

²³³ *Ibid.* Pharmaceuticals derived from LMOs form the basis of an even larger industry: *ibid.*

²³⁴ Raustiala, *supra* note 205 at 44.

²³⁵ Gulati, *supra* note 219 at 64.

provided by natural ecosystems, as listed previously. Economists do not take the environment into account; instead they render 'external' all the services that nature performs. In 1997 a team of ecologists, economists and geographers published groundbreaking research concluding that the economic value of ecosystem services is approximately \$33 trillion each year,²³⁶ that is, slightly more than the world GDP for 2001.²³⁷ Despite this revelation, economic incentives to maintain these natural services remain inadequate.

Moreover, conventional economics does not take into account the long-term costs of production, such as environmental, health and other social factors. For example, non-organic food is less expensive than organic equivalents largely because the impact of pesticides on the land and human health are not factored in.²³⁸ Similarly, the price of gasoline does not include the cost of resulting health and environmental detriments due to the pollutants it produces.²³⁹ In assessing evidence of the economic effects of abating the production of greenhouse gases, the Australian Senate Committee noted that: "the cost to Australia of new investment in abatement measures, and anticipated higher fuel and energy prices, would be lower than the potentially vast economic, environmental and social costs of *not* acting to reduce emissions".²⁴⁰ In particular, the Committee noted that these latter costs, as well as the potential gains from adopting low-cost energy efficiency opportunities, had been

²³⁶ H. French, *Vanishing Borders: Protecting the Planet in the Age of Globalization* (New York: WorldWatch Institute Press, 2000) at 18.

²³⁷ Being US\$31.2 billion (at market exchange rates): www.imf.org/external/pubs/ft/weo/2001/03/pdf/chapter3.pdf (accessed in November 2002).

²³⁸ Hauss, *supra* note 12 at 66.

²³⁹ *Ibid.*

²⁴⁰ The Australian Committee Report, *supra* note 130 at xxvii (emphasis added).

omitted from economic modeling undertaken to estimate the costs of emissions abatement.²⁴¹

My submission is not that economics is obsolete, but that, in its current form, it is an incomplete formula and therefore an erroneous litmus test of 'value'. As Hauss notes: "In almost every area of production, the failure to include the cost of the natural resources themselves or that of sustaining the environment after production leads to a distorted picture of what economic life is really like"²⁴² and that in turn leads to a distorted picture of what we call 'reality'.²⁴³

Given that economic considerations are an important component of self-interest, short-term calculations of profit and loss are inept and the key lies instead in a long-term view, which absorbs a number of relevant factors and not just the interests of powerful industry lobby groups and a deficient market formulae. In so doing, our understanding of 'benefits' and 'detriments' and, eventually, 'self-interest' may change.

This is illustrated clearly by the words of the Australian Senate Committee when it opined that the current protective governmental stance toward the fossil-fuel sector suggested "a preference for short-term, cheap abatement options...without complementary measures for long-term strategic investment in industries of the

²⁴¹ *Ibid.*

²⁴² Hauss, *supra* note 12 at 66.

²⁴³ or in Fuller's words: "in human affairs what men mistakenly accept as real tends, by the very act of their acceptance, to become real." Fuller "Fidelity", *supra* note 165 at 631.

future.”²⁴⁴ The Committee was persuaded that a future, low-carbon-based economy would provide increased employment, manufacturing, export and investment opportunities when viewed from a longer-term perspective.²⁴⁵

2.3 Developing Nations - Development and the Environment

The previous section asserted the relevance of healthy functioning ecosystems in the face of perceived competing priorities of developed nations. Similar discord exists between environmental protection and developmental aspirations of developing and least developed nations. These ‘competing priorities’ were acknowledged with the rise of the concept of sustainable development. The chronology of sustainable development is detailed below to reveal that, far from being competitors, development and environmental considerations are ineluctably interconnected in a relationship of reliance.

(a) The Rise of Sustainable Development and the Need for Global Cooperation

Global environmental issues were introduced to the world arena for the first time at the Stockholm Conference on the Human Environment in 1972. The Conference instigated the creation of the United Nations Environment Program (UNEP) and the

²⁴⁴ The Australian Committee Report, *supra* note 130 at xxxii.

²⁴⁵ *Ibid.* at xxxii-xxxiii.

Declaration on the Human Environment (Stockholm Declaration),²⁴⁶ which has been described as the progenitor of modern international environmental law.²⁴⁷ The Stockholm Conference mandated an integrated approach to development planning in recognition that cessation of environmental degradation and growth are not only compatible but inextricably entwined together. Specifically, Principle 13 of the Stockholm Declaration urges States to “adopt an integrated and co-coordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve [the] environment for the benefit of their population”. This notion of ‘benefit’ encompasses socio-economic benefit and is a recurring and augmented theme throughout the chronology of sustainable development.

In 1980, the International Union for the Conservation of Nature and Natural Resources (IUCN), with the assistance of the World Wildlife Fund and UNEP, published the World Conservation Strategy.²⁴⁸ The World Conservation Strategy addressed the need to integrate conservation objectives with development policies by defining “conservation” as “the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations”.²⁴⁹

²⁴⁶ United Nations Stockholm Conference on the Human Environment, Declaration on the Human Environment, U.N. Doc. A/CONF.48/14 Corr., at 3 (1972), reprinted in I.L.M.1416 (1972).

²⁴⁷ For example, see B. Boer, “Institutionalizing Ecological Sustainable Development: The Roles of National, State and Local Governments in Translating Grand Strategy into Action” (1995) 21 Willamette Law Review 307 at 307.

²⁴⁸ International Union for the Conservation of Nature and Natural Resources et al., World Conservation Strategy: Living Resource Conservation for Sustainable Development (1980).

²⁴⁹ *Ibid.* at 1(4).

Subsequently, the World Conservation Strategy was supplemented with the World Charter for Nature, a document that emanated from the United Nations General Assembly in 1982. The Preamble of the Charter recognizes that, *inter alia*, the degradation of natural systems by excessive consumption and misuse of natural resources leads to the breakdown of the economic, social and political framework of civilization.²⁵⁰

Shortly after, the United Nations established the World Commission on Environment and Development (the Brundtland Commission) as an independent body to address global environmental issues. In 1987 the Brundtland Commission produced the report titled “Our Common Future” (the Brundtland Report),²⁵¹ in which it demonstrated how “the environment and economic growth are linked together in a complex web of cause and effect.”²⁵² The Brundtland Report examined the extent of global environmental degradation as a result of increased industrialization²⁵³ and concluded that “development...[must meet] the needs of the present without compromising the ability of future generations to meet their own need”.²⁵⁴ That is, development must be environmentally sustainable.

²⁵⁰ The Charter’s preamble also recognizes that: humankind is part of nature; that every life form is unique and warrants respect regardless of its worth to humans; and that humans can alter nature and exhaust natural resources by their actions. For a summary of the Charter’s “General Principles” and “Implementation” sections, see Boer, *supra* note 247 at 309-10.

²⁵¹ World Commission on Environment and Development, *Our Common Future* (1987) [hereinafter *Brundtland Report*].

²⁵² W. Andreen, “Environmental Law and International Assistance: The Challenge of Strengthening Environmental Law in the Developing World” (2000) 25 *Columbia Journal of Environmental Law* 17 at 21; *Brundtland Report*, *supra* note 251 at 67-91.

²⁵³ *Brundtland Report*, *ibid.* at 67-91.

²⁵⁴ *Ibid.* at 43. Despite the fact that this definition of “sustainable development” has been the source of much criticism and speculation (for a list of disgruntled commentators, see Andreen, *supra* note 252 at nn. 23-24), it has nonetheless instigated fundamental worldwide dialogue about the entwined issues of growth, need and equity.

The overarching sentiment arising from the Brundtland Report is as follows:

“Development cannot subsist upon a deteriorating environmental resource base; the environment cannot be protected when growth leaves out of account the costs of environmental destruction”.²⁵⁵ The symbiotic relationship between growth and the environment had crystallized.

Rio de Janeiro was the next and, arguably, most productive destination along this formative path of sustainable development, at which the United Nations Conference on Environment and Development (UNCED)²⁵⁶ was held in 1992.²⁵⁷ The primary documents emanating from UNCED include the Rio Declaration on Environment and Development (Rio Declaration),²⁵⁸ Agenda 21,²⁵⁹ the CBD, and the Framework Convention on Climate Change (FCCC).²⁶⁰ These documents enunciate a number of fundamental principles in relation to sustainable development and global cooperation.

Specifically, Agenda 21 is a program of action for sustainable development that advocates a “change in course” away from “deepening economic divisions within and between countries” towards social, environmental and economic prosperity for

²⁵⁵ Brundtland Report, *supra* note 251 at 37.

²⁵⁶ Also known as “The Rio Conference” and “The Earth Summit”: Boer, *supra* note 247 at 312.

²⁵⁷ UNCED was born of the Brundtland Report’s recommendation for a global conference at which to address global environmental degradation: per Boer, *ibid.* at 311.

²⁵⁸ United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, U.N. Doc. A/CONF.151/5/Rev.1 (1992) reprinted in 31 I.L.M. 874 (1992) [hereinafter Rio Declaration].

²⁵⁹ United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, U.N. Doc. A/CONF.151/PC/100/Add.1 (1993) [hereinafter Agenda 21].

²⁶⁰ FCCC, *supra* note 214.

all via a “global partnership for sustainable development.”²⁶¹ This sentiment builds upon the Brundtland Report, which emphasized the importance of international cooperation in developing sustainable human lifestyles and reversing humanity’s damage to the biosphere.²⁶² The culmination of endeavor over two decades toward international recognition and acceptance of linkage between the environment and development is embodied in Principle 4 of the Rio Declaration. It states simply “environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it”.

Finally, these precepts were revisited recently at the Johannesburg Summit in 2002, which was an “opportunity to rejuvenate the quest to build a more sustainable future” by forging more cohesive global partnerships for the implementation of Agenda 21.²⁶³ Kofi Annan describes the measures that are needed to do so:

If we are to achieve sustainable development, we will need to display greater responsibility - for the ecosystems on which all life depends, for each other as a single human community, and for the generations that will follow our own, living tomorrow with the consequences of the decisions we take today.²⁶⁴

²⁶¹ Introduction to the Final Text of Agreements Negotiated by Governments at the United Nations Conference on Environment and Development (UNCED), June 3-4, 1992, Rio de Janeiro, Brazil (United Nations Dep’t of Public Information), 1992, cited in Boer, *supra* note 247 at 314.

²⁶² *Ibid.* at 261-307.

²⁶³ UN policy paper “Taking Action For Earth’s Future”:

<http://www.johannesburgsummit.org/html/brochure/brochure12.pdf> (accessed November 2002).

²⁶⁴ Secretary-General of the United Nations, *ibid.* at 1. Unlike UNCED, the Johannesburg Summit did not produce any international conventions. However, it did produce five documents to guide implementation of sustainable development, namely: Partnerships/Initiatives to strengthen the implementation of Agenda 21; Plan of implementation of the World Summit on Sustainable Development [Revised] (23/9/02); Draft Political Declaration (4/9/02); United Nations World Summit on Sustainable Development, Chairman’s Summary of Roundtables, A/CONF.199/17/Add.1 (2002); and United Nations World Summit on Sustainable Development, Summary of Partnership Plenary Session on Regional Implementation, A/CONF.199/16/Add.3 (2002): on-line at <http://www.johannesburgsummit.org/html/documents/documents.html> (accessed November 2002).

(b) The 'Value' of Biodiversity to Developing Nations

The preceding potted history of the rise of sustainable development provides a theoretical starting point. This next section attempts to apply the theory to actuality in the context of developing nations. The key question here is: why should developing nations address the protection and sustainable use of biodiversity?

In reality, the first priority for governments of developing and least developed countries is survival: that is, meeting the basic needs of their people in the face of climbing debt, increasing populations and systemic poverty. Their mantra has become one of economic growth in order to secure social benefit.²⁶⁵ As such, "most developing countries... lack both the political priority and the financial as well as technical capacity to fulfill their current international conservation obligations".²⁶⁶

However, the problem is that biodiversity depletion due to exogenous human activities is occurring *within* developing countries, which has a specific and intricate connection to their systemic concerns.

As stated previously, one of the key functions of biodiversity is to provide 'ecosystem services', which support economic and social stability throughout the

²⁶⁵ R.S. Pathak embodies this stance in the following statement: "For developing countries, the pursuit of development will continue to remain at the forefront of their national aspirations. It cannot be otherwise." R.S. Pathak, "International Trade and Environmental Development: A View from India" (1994) 1 *Indiana Journal of Global Legal Studies* 325 at 333.

²⁶⁶ per Robert Munro, Kenyan Policy Advisor on Sustainable Development, in S. Bilderbeek, ed., *Biodiversity and International Law: The Effectiveness of International Law* (Amsterdam: IOS Press, 1992) at 16.

world. While not the only causal factor, the disruption and disintegration of these services in developing and least developed countries is a direct and fundamental link to their socio-economic/ political issues. Deforestation causes soil erosion and the clogging of downstream rivers, intensifies flooding and droughts, and causes water sources to dry up; vegetation removal, such as cutting down trees for firewood, exhausts soil fertility and catalyses desertification.²⁶⁷ Land degradation, particularly in drylands areas such as Africa, is regarded as a “priority issue” by affected continents²⁶⁸ because it bears significant socioeconomic and political ramifications such as migration and food security risks.²⁶⁹ Poor farmers are pushed onto marginal land; sanitation becomes inadequate; food, water and air quality is compromised.²⁷⁰ Squalor, poverty, disease and over-population prevail.²⁷¹ The health of human society has a fundamental nexus to environmental integrity.

Dr. Wangari Maathai, a Kenyan biologist and human rights’ activist, has first-hand experience of this equilibrium. Dr. Maathai instigated the “Green Belt Movement” in Kenya, in which 150,000 women have planted 20 million trees in Kenya since 1977. She attests that the planting has “prevented soil erosion, made rain, held drinking

²⁶⁷ Andreen, *supra* note 252 at 18; Hauss, *supra* note 12 at 45.

²⁶⁸ B. Kjellén, “The Desertification Convention: Towards Creating a Multilateral Framework for Coping with Global Threats” in M. Rolén, H. Sjöberg, U. Svedin, eds., *International Governance on Environmental Issues* (Dordrecht: Kluwer Academic Publishers, 1997) at 71.

²⁶⁹ *Ibid.* at 70. Apparently, the Group of 77, and the African countries particularly, pushed desertification as a dual development-environment issue at UNCED, proposing a Convention to combat desertification on equal footing with the CBD and FCCC: *ibid.* at 71.

²⁷⁰ Andreen notes that 1.1 billion people in cities in developing countries suffer from unhealthy levels of air pollution: Andreen, *supra* note 252 at 19. Further, the World Bank estimated that health costs related to air pollution in China alone will rise to \$98 billion by 2020: *ibid.*

²⁷¹ *Ibid.* at 18. Andreen notes that lack of sanitation, sewage treatment and fresh water result in water-borne diseases that account for 80% of all illnesses in the developing world: *ibid.* Further, the urban population in the developing world is “skyrocketing at the rate of 150,000 people every day”: *ibid.* at 19.

water in the ground, cleaned the air, created a source of fencing and timber for building homes, and produced income for over 80,000 people".²⁷² Green Belt methods have been adopted in other countries of the region in order to build upon the success of the movement with desire to alleviate the socio-economic plight of other peoples.²⁷³ Dr. Maathai's view of the situation is born of necessity: "[w]e have a special responsibility to the ecosystem of this planet. In making sure that other species survive we will be ensuring the survival of our own."²⁷⁴

Of course, it must be stated clearly that this nexus has equal relevance to developed countries as well as developing countries. However, in the specific case of developing nations, the point is that there are quintessential gains from biodiversity protection and sustainable use in relation to improved quality of life and the development agenda. Indeed, as Maximo Kalaw, the Green Forum representative from the Philippines, stated at the Global Consultation on the Development and Enforcement of International Environmental Law (the Consultation)²⁷⁵: "the problem

²⁷² Green Belt Movement information booklet, August 2001. The Movement began with a small nursery in Maathai's backyard and has now progressed to planting in other African countries. In so doing, the Movement has educated and empowered people and strengthened community bonds, "transforming desperation into a blaze of self-determination and environmental awareness": *ibid.* Dr. Maathai stated that Greenbelt representatives also conduct workshops abroad in order to educate people in other nations, including developed nations such as the United States: Maathai, W., "The Green Belt Movement", Faculty of Arts, McGill University, 7 February 2002 [unpublished].

²⁷³ 'Green Belt' countries in the region include Tanzania, Uganda, Malawi, Lesotho, Ethiopia, Zimbabwe. Moreover, Dr. Maathai stated in conference that Greenbelt representatives also conduct workshops abroad in order to educate people in other nations, including developed nations such as the United States: Maathai, *supra* note 272.

²⁷⁴ www.rightlivelivelihood.se/recipe1984_4.html (accessed 21 October 2002).

²⁷⁵ The Consultation was organized by the Netherlands Committee from IUCN during 1990-1991 on the subject of international environmental law: Bilderbeek, *supra* note 266 at 1 The Consultation culminated in the International Environmental Law Conference in the Peace Palace in The Hague, in preparation for UNCED in 1992: *ibid.* The objective of the Consultation was to seek views from predominately developing country representatives on the need for and features of a more effective environmental law system, with a special focus on the preservation of biodiversity. The Consultation was seminal in shaping the agenda at UNCED and creating a draft convention on biodiversity: *ibid.*

should not be seen [by developing nations] as [only] that of having a capacity for implementing “international conservation obligations”, but as one dealing with the capacity to *benefit* from conserving their biological resources.”²⁷⁶

The fundamental nature of the environment generally, and biodiversity protection specifically, to the interests and priorities of developing and least developed nations is manifest. As a consequence, “[b]ecause the health of the human economy depends upon the health of ecosystems, the protection of ecological integrity is a challenge we dare not avoid”.²⁷⁷

²⁷⁶ (emphasis added) per Maximo Kalaw, in Bilderbeek, *ibid.* at 16. Of course, it is acknowledged that implementation capacity is a vital issue, which will be addressed in Part IV *infra*.

²⁷⁷ Harte, *supra* note 196 at 930.

IV INTERNATIONAL ETHICS AND GLOBAL BIODIVERSITY

PROTECTION: GOING BEYOND BOUNDARIES

“In the growing jurisprudence and ethos of sustainable development, the key words are ‘globalization’ and ‘equity’”.

*Justice Emeritus Pathak, Supreme Court of India*²⁷⁸

A. OVERVIEW

Part III demonstrated that biodiversity is fundamental for all life and quality of life and sustainable development is a challenge we ‘dare not avoid’. However, what of the practicalities involved in implementing the corollary obligations that flow from this challenge? This brings us to the application of ethics at the international level in the context of global biodiversity depletion in order to address the notion of ‘ecological justice’ and also the practical achievement of the lofty goals of sustainability, so crucial to our survival.

As stated in Part II, I adhere to the notion that moral duties exist toward other peoples and other States beyond one’s own borders and time. What is the moral basis of that duty and how might it be applied in actuality? The next section attempts to address these questions by focusing on ethical duties owed to future generations and between developed and developing nations, and the role of international law in

²⁷⁸ Pathak, *supra* note 265 at 339, and former Judge of the International Court of Justice.

shaping and informing such duties, in the context of biodiversity conservation and sustainable use.

**B. ETHICAL DUTIES OWED TO OTHER PEOPLE IN THE
CONTEXT OF BIODIVERSITY DIMINUTION**

1. Ethical Duties Owed To Future Generations

**1.1 Sustainable Development and the Principle of Intergenerational
Justice**

As documented in Part III, the definition of sustainable development produced by the Brundtland Report was that “development...[must meet] the needs of the present without compromising the ability of future generations to meet their own need”.²⁷⁹

The definition implies that *use* of the environment is acceptable, but that it is constrained by obligations not to misuse the environment in unsustainable ways²⁸⁰ such that development is carried out with long-term vision into the future. Thus, an integral value component of sustainable development is the intertemporal

²⁷⁹ This definition was reiterated in Principle 3 of the Rio Declaration: “The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations”: Rio Declaration, *supra* note 258.

²⁸⁰ B. Norton, “Sustainability, Human Welfare, and Ecosystem Health” (1997) 1(2) Environmental Values 97 at 617. He terms this the “social scientific” approach due to its anthropocentric focus on human welfare over time, without accounting for limitations imposed by characteristics of the environment itself: *ibid.*

relationship between present and future generations. This component is captured by international law in the principle of 'intergenerational justice'.

The principle of intergenerational justice centers on the notion that each generation receives a natural and cultural legacy from previous generations and has an obligation to ensure that legacy endures for future generations. It blends legal and normative aspects to embody both the notion of trusteeship and moral obligation²⁸¹ between interconnected (albeit distantly) human beings in recognition that our present actions have ramification for the world tomorrow.

However, delimitation and application of the principle are not uncontroversial. In particular, I will note briefly four arguments that have manifested to curb or even deny obligations to future generations. First, some commentators have noted the contention that present generations owe no obligation at all to the well being of future generations because we do not know who they are nor whether they will even exist.²⁸² Second, we do not know what future generations want; they cannot speak and we do not have access to an understanding of their preferences nor values,²⁸³

²⁸¹ Commentators agree that the principle is a blend of legal and moral aspects, but different authors emphasize different aspects of the principle. Some focus on the notion of holding the earth "in trust" for future generations: Jurgielewicz, *supra* note 79 at 65; E. Weiss, "Conservation and Equity between Generations" in T., Buergenthal, ed., *Contemporary Issues in International Law: Essays in Honor of Louis B. Sohn* (Kehl: N. P. Engel, 1984) at 246; Attfield, *supra* note 155 at 45. Others emphasize the moral 'rightness' of the obligation: Stenmark, *supra* note 139 at 27, Norton, *supra* note 280 at 618; J. Gaba, "Environmental Ethics and Our Moral Relationship to Future Generations: Future Rights and Present Virtue" (1999) 24 Colum.J.Env'tl.L. 249 at 252; and Attfield who writes "[t]o sell future generations short is both wrong and inequitable.": Attfield, *ibid.* at 156.

²⁸² R. Elliott, "The Rights of Future People" (1989) 6(2) *Journal of Applied Philosophy* 159 at 161; D. Parfit, "Future Generations: Further Problems" (1982) 11(2) *Philosophy and Public Affairs* 113 at 114; Kavka dubs this the "paradox of future individuals": G. Kavka, "The Paradox of Future Individuals" (1982) 11(2) *Philosophy and Public Affairs* 93 at 95.

²⁸³ De-Shalit, *supra* note 153 at 106; Gaba, *supra* note 281 at 260-62.

which may be divergent among themselves and different to our own. Gaba notes that in past centuries “social views about humanity’s relationships to nature and to one another have varied widely”²⁸⁴ and, as such, we cannot know how to properly effect our obligations to future generations. Third, intervening events might occur in the future to mitigate likely impacts of our present actions, for example, the development of new technology or the switch to alternative resources.²⁸⁵ Fourth, we have stronger obligations to present generations, which override any conflicting duties owed to future generations.²⁸⁶ That is, intragenerational justice supercedes intergenerational justice. I will address these arguments by exploring the moral basis for the principle of intergenerational justice.

1.2 Moral Foundation of the Principle and its Relevance to Biodiversity Protection

At the heart of the principle lies the realization that a ‘causal dependency’ exists between present and future generations, whereby “present actions and policies will affect the interests of people who exist in the future.”²⁸⁷ Present generations must take responsibility for this dependency. Thus, even though we cannot identify now who future individuals will be, whichever ones eventually live will be affected for better or worse by our current actions. Accordingly, we owe these future human

²⁸⁴ Gaba, *ibid.* at 260.

²⁸⁵ Gaba refers to this as the “futrurity discount factor”: *ibid.* at 273.

²⁸⁶ Elliot, *supra* note 282 at 168; Attfield, *supra* note 155 at 160; De-Shalit, *supra* note 153 at 105-107, noting that no right is absolute which raises a potential issue of adjudication between present and future rights’ holders.

²⁸⁷ Elliot, *ibid.* at 162.

beings Kantian ‘duties of imperfect obligation’, which are “duties not owed to assignable individuals but no less real than duties corresponding to assignable rights.” That is, we adopt an “impersonal concern” approach, which accommodates the notion that ‘people’ will exist in the future for whom our present acts have repercussion.²⁸⁸

In relation to global biodiversity depletion, this acceptance of causal dependency between generations is paramount. Once a species is extinct, that is it. Even the invention of future ameliorative measures cannot reverse past extinctions of biodiversity nor restore to pristine condition ecosystems that have been compromised indelibly. Moreover, the flow-on effects upon the web of life of eliminating or compromising strands may not manifest in the natural world, let alone be discovered by humans, for many generations. We are just not sure of the impact of species loss, direct or indirect, upon other species’, for example the effects on the food chain and/or ecosystem complexity. What we have, is what we have; our innovation in scientific discovery cannot change that, nor can our ignorance about the extent of ecological interplay disguise it. Accordingly, the nature of our obligations must be understood in a larger context, which Norton terms a “complex ecological system” whereby sustainable activities are “activities that do not

²⁸⁸ Elliot phrases this in terms of striving to ensure not that the rights of a specific or known individual or set of people are not violated but rather that “whoever comes into existence will have rights and it is the violation of the rights of individuals which we wish to avoid” *ibid.* Elliot further notes that “while the concern is not for particular people it is particular people whose rights will be met if we act on the basis of the impersonal concern”: *ibid.* at 163.

destabilize the large-scale, dynamic, biotic and abiotic systems on which future generations will depend.”²⁸⁹

The reader may ask: so we have an obligation to future generations, specifically to ensure biodiversity integrity, but what is the nature of that obligation and what is the countervailing right that future generations hold? In a nutshell, I posit that it is the right to choice and the concomitant obligation to ensure the existence of choice. That is, even though we may not know the preferences or values of future human beings, we have a moral duty to pass on at least what we have now, to retain the tools and framework with which they can make a *choice* about what they value by searching from meaningful options as to how best to give effect to their preferences. The impact of our current actions on the autonomy of future generations is the crucial element of a moral analysis of the principle of intergenerational justice.²⁹⁰ The content of this obligation is difficult to quantify but I adhere to a minimalist duty of non-maleficence as opposed to a Rawlsian notion of beneficence.²⁹¹ That is, we have a duty to preserve and pass on to future generations a quality of civilization at least equal to what this generation received as opposed to the more onerous and nebulous duty of ensuring that future generations receive more than previous generations.²⁹²

²⁸⁹ Norton, *supra* note 280 at 104.

²⁹⁰ Certain commentators opine likewise: Gaba, *supra* note 281 at 275; Weiss, *supra* note 281 at 248 and 251.

²⁹¹ Non-maleficence encompasses a negative duty to avoid harm to others, whereas beneficence is a positive duty to enhance others' wellbeing: Gaba, *ibid.* at 271, nn.58-59.

²⁹² Rawls describes this latter duty as involving a “just savings rate” to determine the extent to which an existing generation should forego consumption in favor of future generations: J. Rawls, *A Theory of Justice* (Cambridge: Belknap Press of Harvard University Press, 1971). Gaba opines that this obligation is limited to require only maintenance of an acceptable level of wealth once that level has been achieved: *ibid.* at n.77.

1.3 An Intragenerational Approach to Applying the Principle

Having identified the foundation and nature of the moral obligation owed to future generations, I will explore application of the principle of intergenerational justice by employing an intragenerational justice approach.²⁹³

As mentioned above, the fourth argument in relation to constraining application of the principle of intergenerational justice is that duties we owe to the future are weaker and subservient to those we owe to the present. As stated in Part III, there is a fundamental nexus between environmental integrity, development and socio-economic conditions. Moreover, the notion of a trans-geographical and trans-generational community as discussed in Part II, highlights the causally dependent relationship between not only current human beings but also between present and future generations, which binds humanity together in a spatial and also linear progression of interconnection. When we acknowledge this interdependency and employ a long-term view, it becomes apparent that future and present generations share the same goals. It is my contention that discharging our obligations to future generations in relation to amelioration of biodiversity diminution delivers concomitant benefits to present generations and vice versa. In this sense, future

²⁹³ There also exists a legal rights' based approach, which is well-discussed by commentators, particularly in relation to resolution of the question of how future individuals can have present legal rights. I will not canvass that discussion in this thesis due to word constraint, but see for example Elliot, *supra* note 282 at 101-102; Attfield, *supra* note 155 at 156-158; Gaba, *supra* note 281 at 279-283; Kavka, *supra* note 282 at 93-95; De-Shalit, *supra* note 153 at 107. Of equal interest is Gaba's rejection of a rights' based approach in favor of an Aristotelean virtue ethics approach which focuses on the moral qualities of the decision-maker as opposed to the 'rightness' or otherwise of the outcome of the decision: *ibid.* at 283-287. However, Attfield opines that the concept of virtue is unsuited to supplying guidance for decision-makers in relation to ethical conflicts: *ibid.* at 156.

needs are not less important than present ones, for “action relating to the needs of coming decades...can often make a greater difference than short-term measures” to addressing current concerns.²⁹⁴

In particular, I contend that we may be able to discharge our obligations to future generations by addressing issues of ecological justice between members of the present generation. This is because the “rectification of current injustices is often a prerequisite for environmental justice in future generations” due to the probability that biodiversity depletion and socio-economic concerns are “likely to be exacerbated in the future unless they are redressed in the present, [including the adoption of institutional changes] to prevent their reoccurrence and to bequeath more equitable social and international relations to posterity.”²⁹⁵

Accordingly, developed nations have an obligation to assist developing nations to develop sustainably. The next section will analyze in detail the nature of this obligation to provide assistance. In short though, this assistance is fundamental to ensuring choice for future generations by progressing justice within the present ones. In so doing, we may implement the mandate in Principle 2 of the Stockholm Declaration that “the natural resources of the earth, including air, water, land, flora and fauna...must be safeguarded for the benefit of present and future generations through careful planning and management.”

²⁹⁴ Attfield, *ibid.* at 165.

²⁹⁵ *Ibid.* at 163.

2. *Ethical Duties Owed Between Developed and Developing Nations*

2.1 **Historical Tensions and Moral Mandates**

Historically, environmental protection has been dismissed as a luxury that only wealthy nations could afford.²⁹⁶ Indeed, in the context of international ethics and ecological justice, the uneasy relationship between developed and developing countries necessitates exploration.

Developing countries view a great proportion of the current environmental crisis as the responsibility of developed countries due to their actions in *becoming* industrialized. As Wilson points out: “global warming would not be an issue except for the emissions of the developed countries who are making the most fuss about it.”²⁹⁷ Moreover, there is a patent hypocrisy in developed countries continuing their extremely consumptive lifestyles at the expense of the environment, while simultaneously expecting developing countries to forego industrialization.²⁹⁸

Western ‘consumption’ feeds into two other ethically charged issues. The first is the development of the international economy during colonialism whereby the world became divided into “the naturally industrial and the dependant satellite providers of

²⁹⁶ Andreen, *supra* note 252 at 19.

²⁹⁷ W. Wilson “Environmental Law as Development Assistance” (1992) 22 Northwestern School of Law of Lewis & Clark College 953 at 955.

²⁹⁸ Date, *supra* note 182 at 657.

resources and markets.”²⁹⁹ That is, generally, developing countries are resource-rich and developed countries have become technology-rich. Second, this dichotomy has, arguably, been exploited and exacerbated by the experience of ‘bioprospecting’. In order to secure beneficial plants and processes, biotechnology companies send their representatives to biodiversity-rich sectors of the world in order to search for wild species whose genes (or germplasm³⁰⁰) can yield new medicines and agricultural advances.³⁰¹ This practice has drawn criticism as perpetuating neo-colonialism in the developing world due to the numerous examples of industry representatives from developed countries utilizing traditional knowledge and taking raw resources from biodiversity-rich sectors of developing countries, manufacturing something ‘new’, patenting it, and reaping the exclusive rewards without acknowledging or compensating the source.³⁰²

As such, the notion of an “ecological debt” owed by developed to developing nations has manifested in the last decade from the realization that developed countries have only been able to attain industrialization through the unhindered exploitation of global natural resources.³⁰³

²⁹⁹ C. Thomas, “Transfer of Technology in Contemporary International Order” (1999) 22 *Fordham International Law Journal* 2096 at n.3.

³⁰⁰ “Plant germplasm” is the genetic information encoded in the seed: J.R. Kloppernberg Jr. and D.L. Kleinman, “Seeds of Controversy: National Property versus Common Heritage” in *Seeds and Sovereignty* at 173.

³⁰¹ W. Reid, et al., *Biodiversity Prospecting: Using Genetic Resources for Sustainable Development* (New York: World Resources Institute, 1993) at v.

³⁰² Specifically, critics have referred to it as “biocolonialism”: Spectar, *supra* note 219 at 236.

³⁰³ Bilderbeek, *supra* note 266 at 17-18.

Given that developing countries are now denied the same irresponsible path to development that developed nations have already taken, assistance for sustainable development and biodiversity/environmental protection from developed to developing nations is not only a practical consideration but also a moral mandate. As Justice Emeritus Pathak writes:

[Developed countries], in turn, must recognize that the entire Rio edifice has been structured on the premise of a global partnership – a partnership envisioned as much in their interest and for their benefit as it is for the developing countries. Mutual need, not charity, characterizes the Rio process.³⁰⁴

In so saying, he has identified the practical aspect of providing assistance as part of a “global partnership”. That is, the provision of financial and technological assistance to developing nations by wealthier nations has the following consequences. It assists the compliance by developing countries with international environmental treaties which gives better outcomes for the environment and increases the realization of global security and environmental integrity, which has manifest benefits for developed nations. The future is greatly dependent upon recognizing these mutual interests and harnessing them with long-term vision such that present and future generations are accommodated.

Moreover, discussions of practical benefits fit concomitantly with the notion of a moral duty to provide assistance. This is based on the notion of ecological justice whereby developed countries have an ethical duty to assist developing countries to develop sustainably in order to repay their ecological debt, to assure the future of the

³⁰⁴ Pathak, *supra* note 265 at 339.

planet, and to overcome the hypocritical mantra of “do as I say, not as I did”. In the words of José Borrero:³⁰⁵

[a]t some point, the deepest root of the environmental crisis is not only in the form or style of human interaction with nature, but in the way how the human beings interact among them[selves]...Our debt with nature, which is the measure of the environmental crisis, must be paid with the old coin of social justice.

2.2 The Notion of Ecological Justice

The ethical and practical dimensions of providing assistance fuse together in the notion of “ecological justice”. Ecological justice is the intertwined product of human ethics, namely interpersonal relations, and environmental ethics, namely human beings’ relationship to their natural environment.

The notion is aptly embodied in Principle 12 of the Stockholm Declaration:

[r]esources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning and the need for making available to them, upon their request, additional international and financial assistance for this purpose.”³⁰⁶

Obligations arising from environmental international treaties have created commensurate pressure for developing country and least developed country

³⁰⁵ Columbian representative at the Global Consultation on the Development and Enforcement of International Environmental Law, with a Special Focus on the Preservation of Biological Diversity, The Hague, 1990-1991, quoted in Bilderbeek, *supra* note 266 at 19.

³⁰⁶ Biermann opines that Principle 12 of the Stockholm Declaration could provide a conceptual basis for the emerging legal norm relating to the provision of assistance encapsulated by the “newly encoded obligations under international law” that relate to the provision of financial and other assistance by developed to developing nations: Biermann, *supra* note 214 at n.68.

signatories in relation to compliance costs. Compliance costs occur by undertaking to change one's own environmentally unsound practices and to comprehensively monitor and report upon such practices. The implementation of this undertaking requires significant financial, technological and administrative resources.

A crucial question is: how can "global" environmental issues, such as biodiversity depletion, be ameliorated if the majority of nation States cannot effect that amelioration?³⁰⁷ It is my submission that the provision of financial and technological assistance by developed to developing nations facilitates meaningful implementation of international environmental obligations by developing countries to address environmental degradation with the concomitant result that "innovative"³⁰⁸ environmental treaties are not reduced to empty rhetoric. Moreover, the provision of assistance by developed countries ensures that they take appropriate responsibility for having instigated certain global environmental problems and for assisting developing countries to develop in a sustainable way.

³⁰⁷ In other words, innovative environmental regimes "which are not implemented effectively may not simply be worthless: they may be worse than worthless if they give the impression that all is well when the opposite is in fact true.": D. Freestone "The Challenge of Implementation: Some Concluding Notes" in A. Boyle and D. Freestone, eds., *International Law and Sustainable Development: Past Achievements and Future Challenges* (New York: Oxford University Press, 1999) at 360.

³⁰⁸ That is, recent multilateral environmental agreements that obligate states to ameliorate environmental degradation on sovereign soil, such as the Montreal Protocol on Substances that Deplete the Ozone Layer, 26 ILM 1550 (1987) [hereinafter Montreal Protocol], CBD and FCCC, are innovative in not only their objectives but also how those objectives are to be achieved via international cooperation. For example, the Montreal Protocol was deemed "unprecedented because it represents a concerted international effort to prevent harm to the environment before it occurs": Thomas, *supra* note 299 at 2104, quoting Theron A. Mehr.

In relation to biodiversity, the notion of ecological justice is embodied in the CBD, particularly in the provisions relating to ‘benefit sharing’³⁰⁹ and the comprehensive legal duties of industrialized countries to reimburse developing nations for their conservational efforts, which builds on the common concern of humankind criterion of ‘common but differentiated responsibilities’.³¹⁰

Article 15 of the CBD grants authority to national governments to allow access to their genetic resources on mutually agreed terms but subject to domestic legislation and prior informed consent mechanisms.³¹¹ However, article 15(2) states that parties are to “facilitate access to [their] genetic resources for environmentally sound uses” by other states and not to impose restrictions that run counter to the CBD objectives.

In return for the right of access to genetic resources granted by source countries³¹² (which will be predominately developing nations) the CBD stipulates that recipient countries have concomitant obligations, including:

- (i) to take legislative, administrative or policy measures with the aim of sharing equitably (and upon mutually agreed terms) the results of research and development, the benefits arising from the commercial utilization of genetic

³⁰⁹ CBD, *supra* note 8, arts. 15, 16, 19. Note also that the concept of ecological justice can be said to reside in art. 8(j) of the CBD that relates to the knowledge, innovation and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biodiversity.

³¹⁰ CBD, *supra* note 8, arts. 20, 21. Biermann notes that the CBD does not differentiate environmental obligations in the same clear-cut manner as the Montreal Protocol and FCCC due to the fact that most biodiversity is located in developing countries such that a ‘phase-out grace period’ and stricter obligations for developed nations would be nonsensical: Biermann, *supra* note 214 at 13. As such, differing obligations are embodied in the financial provisions of the CBD instead.

³¹¹ CBD, *supra* note 8, arts. 15(4), 15(1) and 15(5) respectively.

³¹² *Ibid.* art. 15(2)

resources,³¹³ and the results from biotechnologies based upon genetic resources;³¹⁴ and

- (ii) to provide or facilitate access to and transfer of technologies that: (a) are relevant to the conservation and sustainable use of biodiversity, or (b) make use of genetic resources; and do not cause significant environmental damage.³¹⁵

These ‘benefit sharing’ provisions of the CBD embody an attempt to rebalance preexisting inequities between developed and developing nations. These provisions not only combat hypocritical cries of selfish need from developed countries³¹⁶, but they also provide developing countries with a means of developing sustainably to the benefit of themselves, the environment and, consequentially, developed nations. The tenor of these provisions is not just legal but also normative, whereby there is a moral duty to share technology and other benefits derived from plant genetic resources to the source country.

This fusion is demonstrated again in the CBD financial assistance provisions from developed to developing countries, which builds upon the notion that States have

³¹³ *Ibid.* art. 15(7).

³¹⁴ *Ibid.* art. 19(2).

³¹⁵ *Ibid.* art. 16(1). These provisions have ignited outcry among advocates of strong intellectual property rights protection and form part of the basis of an opaque relationship between the CBD and TRIPS: see generally Ministerial Declaration, WT/MIN(01)/DEC/W/1, 14 November 2001[Doha Declaration], provision 19; V. Tejera, “Tripping over Property Rights: Is it Possible to Reconcile the Convention on Biological Diversity with Article 27 of the TRIPS Agreement?” (1999) 33 *New Eng.L.Rev.* 967; and Bowman, M., “Ethics, Profit & The Global Environment: Unsustainable Rhetoric In An Age Of Trade Liberalization?” [on file with author, awaiting publication].

³¹⁶ Whereby developed nations take plant genetic resources without compensation but refuse to share the derivative benefits with source nations.

“common but differentiated responsibilities” for sustainable development as recognized in the Rio Declaration.³¹⁷ This notion is embodied in the concept of the common concern of humankind and refers to the greater responsibility of developed states to address global environmental problems and to rebalance pre-existing inequities. It also acknowledges their superior financial and technological resources to facilitate such remedial action.³¹⁸

2.3 Financial Assistance and Technology Transfer

The doctrine of ‘common but differentiated responsibilities’ goes to the heart of effective environmental treaty implementation. As stated in article 20(4) of the CBD:

The extent to which developing country Parties will effectively implement their commitments under this Convention will depend on the effective implementation by developed country Parties of their commitments...related to financial resources and transfer of technology...³¹⁹

Financial assistance and technology transfer are fundamental means of facilitating ecological justice. To this end, assistance from wealthier nations to facilitate the

³¹⁷ Rio Declaration, *supra* note 258, Principles 7 and 23.

³¹⁸ B. Richardson “Environmental Law in Postcolonial Societies: Straddling the Local-Global Institutional Spectrum” (2000) 11 Colorado Journal of International Environmental Law and Policy 1 at 67.

³¹⁹ Further, art. 21 establishes the mechanism for financial resources, which is accountable to the conference of the parties and which must operate within a democratic and transparent system of governance; art. 20(3) states that the provision of financial resources may take place through bilateral and/or multilateral channels; and art. 20(2) states that developed nations are to provide new and additional financial resources to developing nations in order to facilitate their environmental protection obligations: CBD, *supra* note 8.

amelioration of biodiversity diminution by developing nations comprises Biermann's second criterion of the principle of common concerns of humankind.³²⁰

The need for financial assistance to implement environmental treaty obligations had been addressed by the Brundtland Commission but became painfully obvious during the Consultation prior to UNCED. Three conclusions were undisputed: first, global ailments warrant global action; secondly, such action would require enormous financial input immediately; and third, most developing countries lacked the financial resources to do so.³²¹ Accordingly, consulted experts concluded that implementation of international conservation strategies would be impossible without a transfer of financial resources from developed to developing countries, a form of "guarantee over the costs of participation" in new global enviro-legal instruments.³²²

Accordingly, the Global Environment Facility (GEF) was designated the financial mechanism for the CBD. The GEF is a joint undertaking between the United Nations Development Program (UNDP), UNEP and the World Bank,³²³ which operated initially as an interim financing mechanism³²⁴ but now exists permanently as the

³²⁰ Biermann, *supra* note 214 at 13-16. He terms this criterion "the principle of international environmental solidarity": *ibid.* at 13.

³²¹ Per Roger Wilson (Greenpeace International, Netherlands) in Bilderbeek, *supra* note 266 at 20.

³²² *Ibid.*

³²³ French, *supra* note 236 at 153. The involvement of the World Bank unsettled developing country parties due to the fact that its composition is dominated by donor States. Developing nations sought instead to place the financial mechanism under the control of the Conference of the Parties: Raustiala, *supra* note 205 at 47.

³²⁴ It was an interim mechanism between 1991-1994, after which it was evaluated and restructured to address several key criticisms: see generally A. Walcott, "The Restructured Global Environment Facility: A Practical Evaluation for Unleashing the Lending Power of GEF" (1998) 3 Widener Law Symposium Journal 485.

largest financier of global environmental projects and sustainable development in developing and least developed countries.³²⁵

The GEF provides grants and concessional funds to countries as “new and additional” funding for the “incremental costs” of providing global benefits.³²⁶ That is, GEF funds are designed to be “new and additional” resources beyond those spent by the individual beneficiary nation on sustainable development efforts.³²⁷

Generally, the GEF operates in four focal areas, one of which is the prevention of biodiversity loss through the depletion of natural resources and habitat degradation.³²⁸ In addition, the GEF addresses land degradation issues, primarily deforestation and desertification, as they relate to the four focal areas.³²⁹

The GEF has been criticized for its apparent bias toward projects that reflect the priorities of developed nations by requiring that a project demonstrate a “global environmental benefit” in compliance with the four focal areas.³³⁰ In contrast, as outlined above, environmental woes within developing countries and least developed

³²⁵ GEF Forest Program Fact Sheet, July 2001 [hereinafter Fact Sheet]; French, *supra* note 236 at 60.

³²⁶ World Bank Operations Evaluation Department, *Financing the Global Benefits of Forests: the Bank's GEF Portfolio and the 1991 Forest Strategy* (Washington D.C., World Bank, 2000) [hereinafter OED Evaluation] at xi. This mandate is reiterated in the CBD, *supra* note 8, art. 20(2).

³²⁷ The Global Environment Facility, Operational Strategy (1996) [hereinafter Strategy] at 5. Once the host country's efforts have been determined to be deficient, the GEF provides extra or “incremental” costs to countries for projects of global benefit, above and beyond the costs they would otherwise expect to encounter in their development: French, *supra* note 236 at 154.

³²⁸ The other three focal areas are: the elimination of greenhouse effects on climate change; the protection of international waters; and the prevention of ozone layer depletion: OED Evaluation, *supra* note 326 at xi.

³²⁹ C. Di Leva, “International Environmental Law and Development” (1998) 10 *Georgetown International Environmental Law Review* 501 at 514.

³³⁰ Noted in Richardson, *supra* note 318 at 66; French, *supra* note 236 at 154; J. Werksman, “Consolidating Governance of the Global Commons: Insights from the GEF” (1995) 6 *Yearbook of International Environmental Law* 27 at 51, and R. Dolzer, “Global Environmental Issues: The Genuine Area of Globalization” (1998) 7 *Journal of Transnational Law and Policy* 157 at n.27.

countries relate to different issues such as desertification and soil infertility, air and water pollution, and toxic-waste pollution.³³¹ Thus, there has been apparent frustration amongst beneficiary countries “who resent the tendency of donor states to be more concerned about responding to abstract global threats than about addressing urgent local environmental needs”.³³²

I submit that such projects can have concomitant global and local benefits due to the interconnectedness of environmental issues such that even seemingly local issues have global effects and vice versa. As detailed previously, global biodiversity depletion has fundamental ramifications for local concerns in developing countries. Developing nations can utilize this interrelationship to take advantage of the existing eligibility criteria. As a practical response, a project proposal can be ‘shaped’ to fit within one or more of the focal areas. For example, land degradation is now a valid area for GEF funding and should be maximized for project proposals dealing with, for example, land arability, vegetation loss and soil erosion. Furthermore, funding in the biodiversity portfolio occurs for several ecosystem types, namely: arid and semi-arid lands; coastal, marine and freshwater areas; forests; mountains; and also agrobiodiversity,³³³ all of which have direct relevance to local issues and the experiences of local communities within developing and least developed nations.

³³¹ Richardson, *supra* note 318 at 66.

³³² French, *supra* note 236 at 154.

³³³ Fact Sheet, *supra* note 325. In particular, “agrobiodiversity” relates directly to agricultural and farming issues as they pertain to biodiversity loss.

Moreover, endogenous capacity-building is crucial to fulfilling the environment and development agenda enounced in UNCED and to assist developing countries to meet their international environmental treaty obligations. As a result, GEF assistance must go beyond financial aid to include capacity building and technology transfer so that developing countries can become self-sustaining and environmentally sound simultaneously.

Capacity-building includes technical assistance and cooperation, which is already utilized widely in GEF projects for purposes such as designing trust funds,³³⁴ creating inventories of biological and forestry resources, designing environment management plans,³³⁵ and drafting model legislation.³³⁶ Moreover, the GEF Council is currently exploring a framework for strategic collaboration and GEF action to guide capacity building.³³⁷ I submit that the next step is to integrate technology transfer as part of GEF ‘funding’ such that the GEF is the formal mechanism for giving effect to the ‘benefit sharing’ provisions as well the provisions relating to financial assistance.³³⁸

³³⁴ For example, in order to progress the Mgahinga and Bwindi Impenetrable Forest Conservation Trust in Uganda, the GEF provided initial funding of US\$4 million and also technical assistance to design the fund: World Bank Environment Department, *Issues and Options in the Design of GEF Supported Trust Funds for Biodiversity Conservation* (Washington D.C., World Bank, 1995) [hereinafter Trust Fund Papers] at 70. This approach is common to nearly all GEF-supported Trust funds: see *ibid.* at 69-79.

³³⁵ OED Evaluation, *supra* note 326 at 6.

³³⁶ Di Leva, *supra* note 329 at 515.

³³⁷ Joint Summary of the Chairs, item 13, GEF Council Meeting, May 9-11, 2001 at www.gefweb.org/Joint_Summary_of_the_Chairs.pdf (accessed in November 2002).

³³⁸ Naturally, nations can transfer technology and access to benefits pursuant to the CBD outside of the GEF. My submission is that including such transfers as *part* of the function of the GEF provides a formal conduit for doing so, which in turn helps to ensure that such transfers are not perceived as ad hoc or the responsibility of only a few benevolent nations.

The reference to technology transfer in the CBD appears to revive aspects of the New International Economic Order (NIEO) Framework, which emerged from the United Nations Conference on Trade and Development held in 1964.³³⁹ The NIEO documents sought to re-order the international economy according to two principles: economic redistribution and international cooperation.³⁴⁰ Transfer of technology, specifically, “access on improved terms to modern technology” and “commercial practices governing transfer of technology”,³⁴¹ was required in order to transform developing countries from “mere satellites of the industrialized economic center”.³⁴² However, despite attempts to complete an appropriate code of conduct, the momentum to do so dwindled along with the NIEO movement generally in the early 1980’s.³⁴³

Technology transfer has been described as “more valuable than other resource transfers because of its greater productive capacity,”³⁴⁴ which means that technology assists independent wealth-creation within a nation and also increases competition between nations.³⁴⁵ This is due in part to the fact that “technology” refers to ‘clean’

³³⁹ Being the UN General Assembly resolution titled “Declaration on the Establishment of a New International Economic Order” (G.A.Res. 3201, U.N. GAOR, 6th Spec. Sess., 2229th mtg., Supp. No. 1, at 3, U.N. Doc A/9559 (1974)); and the “Programme of Action on the Establishment of a New International Economic Order” (G.A.Res.3202, U.N. GAOR, 6th Spec. Sess., 2229th mtg., Supp.No.1, at 5, U.N.Doc. A/9559 (1974) [hereinafter the NIEO Documents].

³⁴⁰ Thomas, *supra* note 299 at 2106.

³⁴¹ NIEO Documents (Programme of Action), *supra* note 339 at art. 4(p), at 4.

³⁴² Per Thomas, *supra* note 299 at 2106.

³⁴³ Thomas attributes this “dwindling” to the lack of agreement between developing and developed countries about technology transfer specifically, and the onset of the debt crisis generally: *ibid.* at 2107.

³⁴⁴ *Ibid.* at 2110.

³⁴⁵ The difficulty is that, for these very reasons, wealthier nations (spurred by their industries) are often reluctant to facilitate transfers and seek to retain strong property rights over technology: *ibid.* at 2110. Particularly, industry seeks to enforce intellectual property rights, which is an ongoing issue.

and cutting-edge technologies only. Thus, the transfer of 'clean and green' technology assists developing countries to develop sustainably by allowing them to switch to least-polluting technologies and industry. It is also due to the various forms that technology transfer may take. Benefits may include financial payments, training of administrative personnel and researchers, transfer of 'clean and green' biotechnological equipment and know-how and/or a share of any profits from the use of genetic resources.³⁴⁶ Finally, transfer of the very rubric for and results of beneficial research ameliorates dependency on not only developed countries but also biodiversity-depleting activities as an income source.³⁴⁷

Benefit sharing in the form of technology transfer and technical cooperation is the vehicle by which developing and least developed countries may augment endogenous capacity in order to conserve and sustainably use biodiversity, to implement their obligations under international agreements and, overall, to develop in a sustainable way. As such, requiring the transfer of technology, especially environmentally sound and capacity building technology, "recognizes that some resources are so crucial for the general good that we should make these resources available to all who need them."³⁴⁸

This apparent conflict prevented resolution and progression of rules for technology transfer two decades ago and remains an unresolved issue today.

³⁴⁶ CBD News, vol. 1, no. 2, May-August 2001 at 1. Note also President Clinton's statement in 1993 that "flow-back benefits" to source countries include "technology transfer through training, cooperative work programs and improved access to information": quoted in Tejera, *supra* note 315 at n.121.

³⁴⁷ Such as clear-felling tropical rainforests for woodchips or export timber.

³⁴⁸ Kruger, *supra* note 226 at 194. Biermann contends that the obligation to provide assistance has become a rule of customary law such that the legal principle of global environmental solidarity obliges developed nations to provide developing nations with "the necessary financial and technological means to adopt effective policies to address common concerns of humankind, and that

It is submitted that achieving consonance for the mandate of technology transfer and financial assistance is in the long-term interest of the global community. Both transfer and assistance encourages environmental, economic and political stabilization within developing countries,³⁴⁹ which has obvious benefits for the rest of the world. Moreover, such transfer and assistance also satisfies the doctrine of ‘common but differentiated responsibilities’ enounced at UNCED and pursuant to the principle of common concern of humankind, which in turn satisfies the ecological debt and moral duty owed by the developed world toward developing nations.³⁵⁰

Creation of these rights and responsibilities within the State system employs the constructivist notion of collective legitimation noted in Part II. Collective legitimation springs from shared understandings in a matrix of normative influences and practical considerations. It acknowledges that:

the state is...increasingly playing international roles that involve a degree of collective legitimation that is not traditionally associated with the Westphalian model – most notably in the European Union, but also in certain aspects of [international] economic relations, the environment, and even security policy.³⁵¹

developing countries concurrently have a legal right to request such assistance.”: Biermann, *supra* note 214 at 18, 22-30. While Biermann’s assertion remains contentious, it must be noted that the ramifications of financial and technological assistance as customary international law are powerful indeed, both in normative and practical terms. It means that the provision of assistance is not discretionary; that wealthy nations cannot assert their ‘national’ interest as valid barriers to transferring finance or technology to developing nations to facilitate implementation of their international environmental obligations because such transferal is a concomitant international environmental obligation on the part of developed nations.

³⁴⁹ Thomas, *supra* note 299 at 2110.

³⁵⁰ Note also the comment by a representative of the British BioIndustry Association in relation to the technology transfer provisions of the CBD: “[w]e think its quite right morally to let developing countries have the technology...We don’t feel that its interfering with our profitability, and its helping people, so what’s wrong with it?”: quoted in Raustiala, *supra* note 205 at 54.

³⁵¹ Ruggie, *supra* note 7 at 876.

To this end, arguably the GEF establishes an international norm in relation to global cooperation based on moral considerations as well as mutual benefit. Despite initial misgivings on the part of both developed and developing nations, the GEF has been described as “an innovation in global governance, as it bridges the United Nations and Bretton Woods systems”.³⁵² The very notion of a formal international financial mechanism as a conduit through which the international community can work together in “mutual need, not charity” to ameliorate global environmental and socio-economic issues provides an effective means of influencing State behavior in the international realm.³⁵³

In so doing, State self-interest is satisfied while simultaneously realizing the notion that “[b]uilding an international system founded on notions of equity and fairness is a better solution for humanity overall.”³⁵⁴

³⁵² French, *supra* note 236 at 153.

³⁵³ However, it must be emphasized that the GEF is a limited entity, both in terms of its financial resources and due to the specific focus-areas within which it operates. As such, its presence does not permit individuals, corporations and nation states to abdicate their own responsibilities to act to alleviate environmental degradation in developing and least developed countries.

³⁵⁴ Duruigbo, *supra* note 23 at 198.

V CONCLUSION

Every social transformation...has rested on a new metaphysical and ideological base; or rather, upon deeper stirrings and intuitions whose rationalized expression takes the form of a new picture of the cosmos and the nature of man.

Lewis Mumford

The global crisis of biodiversity depletion sets the stage for a necessary re-definition of State self-interest in the international milieu. That re-definition is effected by a changing perception of 'self'; one that occurs through the mental lens of interdependence and long-term vision. Hoffman writes: "[w]e need a sense of direction, a concern for the long-term – not mere muddling through from day to day",³⁵⁵ however, Brunnée and Toope opine that "people, being what we are, muddling through will often be necessary".³⁵⁶ It is my contention that we *do* need a long-term plan, but one that acknowledges human imperfection and diversity while accommodating our aspirational goals.

In so doing, I acknowledge that such shifts are possible when "large communities of people reach new agreements about fundamental principles."³⁵⁷ This thesis has attempted to challenge conventional precepts and present a submission for change by drawing upon constructivist thought, which asserts that current perceptions are socially constructed and rooted in collective intentionality, such that what has been human-made can be altered by the same processes through which it came into existence. I have employed the notions of international ethics as an intersubjective

³⁵⁵ Hoffman, *supra* note 122 at 199.

³⁵⁶ Brunnée and Toope, *supra* note 7 at 46.

³⁵⁷ Hauss, *supra* note 12 at 158.

belief and international law as an ideational instrument to facilitate that change in favor of international cooperation toward the necessary amelioration of global biodiversity diminution in order to assure our future.

In particular, international ethics is a crucial nexus between constructivist theory and ameliorative action. International ethics assists the realization that “[t]he real voyage of discovery consists not in seeking new lands but in seeing with new eyes”,³⁵⁸ by viewing the world in which we live as a trans-geographical, trans-generational community, where individual thought and action ripple out to affect the whole, for better or for worse. In other words: “on n’est pas seul puis-qu’on est ensemble”.³⁵⁹ To this end, acknowledgement of the relationship between present and future generations and the provision of assistance through expanded utilization of the GEF between members of the present generation are essential due to the practical reality of intertwined socio-economic and environmental conditions and ethical notions of ecological justice.

Moreover, the role of international law as an agent of change is crucial to this endeavor. The integration of international environmental law into vertical and horizontal political spheres ensures that the values that law embodies and the aspirations it aims to promote influence not only State practice but also broader realms of thought and discussion. Concepts such as the ecological approach, the common concern of humankind, intergenerational justice and intragenerational

³⁵⁸ Marcel Proust, quoted in Hauss, *ibid.* at 113.

³⁵⁹ “We are not alone because we are together”: Michel Berger, singer-songwriter, song titled “On n’est pas seul”.

benefit-sharing enshrine and reflect aspirations that are vital for biodiversity protection and international equity. These are integral norms that help to shape the kind of world in which we want and can choose to live.

In so doing, we spin a dynamic and evolving “web of meaning” that contextualizes human behavior; a web that is ineluctably and fatefully intertwined with the biological web of life.

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