

Global Consumption and Distributive Justice: A Rawlsian Perspective

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I. INTRODUCTION

The purpose of this investigation is to examine consumption inequities on a global basis from the ethical perspective advanced by the philosopher John Rawls. The first three Sections of the article describe the Rawlsian approach to distributive justice in detail, with a special emphasis on its application to primary goods and services. Then an examination of the extent to which Rawlsian justice exists globally is presented in Section IV using data collected and/or verified by the United Nations. The paper closes with implications and future research directions for creating a just world.

[S]ociety is a cooperative venture for mutual advantage [that] is typically marked by a conflict as well as an identity of interests. There is an identity of interests since social cooperation makes possible a better life for all than any would have if each were to try to live solely by his own efforts. There is a

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conflict of interests since [people] are not indifferent as to how the greater benefits produced by their collaboration are distributed, for in order to pursue their ends they each prefer a larger to a lesser share.¹

According to Rawls, a theory of distributive justice should provide a set of standards by which the distribution system of goods within a society can be judged.² The premise behind such a system is that a satisfactory existence for any particular individual is dependent upon the cooperation of all members of society. Thus, the division of economic advantages should be acceptable to everyone, regardless of status or position. Specifically, no one should feel that "they or any of the others are taken advantage of, or forced to give in to claims which they do not regard as legitimate."³

Rawls refers to his own conception of distributive justice as "Justice as Fairness."⁴ In order for this perspective to embrace society in toto, its guiding principles are derived from the original position, a situation in which a person is unaware of his or her relative status among peers. In such an environment, principles of justice "would be chosen by people who are free, equal, rational, knowledgeable about human nature and society, concerned about promoting their own well being, mutually disinterested, and ignorant of their own identity and place in society."⁵

As a result of the original position and its "veil of ignorance," no individual has a relative advantage in the establishment of principles of justice. Since everyone lacks knowledge of their true position, they are unable to develop principles that favor their particular circumstances. Rawls views these restrictions as consistent with a situation in which an enemy has the ability to assign one's place in society.⁶ Therefore, an individual would ensure that conditions are reasonable even in the worst possible circumstances. John Edgren states that principles of justice established in the original position would be:

1. general (e.g., containing no reference overtly or covertly to particular persons),
2. universal (apply to all persons),
3. publicly acknowledged,

1. JOHN RAWLS, *A THEORY OF JUSTICE* 126 (1971).

2. See COLLECTED PAPERS: JOHN RAWLS (Samuel Freeman ed., 1999).

3. John Rawls, *Justice as Fairness*, in *SOCIAL CHOICE THEORY III: SOCIAL JUSTICE AND CLASSICAL LIBERAL GOALS* 3-33, 17 (Charles K. Rowley ed., 1993); John Rawls, *Justice as Fairness*, 67 *PHILOSOPHICAL REV.* 164-94 (1958).

4. See RAWLS, *supra* note 1; JOHN RAWLS, *POLITICAL LIBERALISM* (1993).

5. STEPHEN NATHANSON, *ECONOMIC JUSTICE* 84 (1998).

6. See RAWLS, *supra* note 3.

4. such as to impose a complete ordering on conflicting claims, and
5. the final court of appeal in reasoning about ethical behavior.⁷

This position results in principles of justice that delineate the ethical distribution of the primary goods of society.⁸ In his early writings on this topic, Rawls described two fundamental principles: “first, each person . . . has an equal right to the most extensive liberty compatible with a like liberty for all; and second, inequalities are arbitrary unless it is reasonable to expect that they will work out for everyone’s advantage.”⁹ While subtle in its tone, the second principle is a direct attack on the ethical paradigm of utilitarianism, which allows greater advantages for one group in society to outweigh disadvantages for another group.¹⁰ Under the veil of ignorance, no one is aware of his or her relative status in society and, therefore, no one is willing to accept the downside risk of absolute poverty.

Over subsequent decades, Rawls refined these two principles, but the first continues to advocate for basic rights and responsibilities while the second concentrates on social and economic inequalities.¹¹ The latter, often referred to as the “difference principle,” remains staunchly anti-utilitarian and “holds that social and economic inequalities, for example, inequalities of wealth and authority, are just only if they result in compensating benefits for everyone, and in particular the least advantaged members of society.”¹² Also referred to as the “maximin criterion,” this principle suggests that distributive justice exists only if inequities maximize the situation of those who subsist in the minimum societal position.¹³

James M. Buchanan notes that this distribution ethic is designed to ensure compliance by all, even in the absence of law enforcement mechanisms.¹⁴ Such compliance is possible because of the principle of redress for the disadvantaged within society. Inequities, especially “undeserved” inequalities stemming from misfortunes of birth (e.g., childhood poverty) or discrimination (e.g., gender bias), must be compensated for by

7. John A. Edgren, *On the Relevance of John Rawls’ Theory of Justice to Welfare Economics*, 53 *REV. SOCIAL ECONOMY* 332, 339 (1995).

8. See generally, EDWARD E. ZAJAC, *POLITICAL ECONOMY OF FAIRNESS* (1995).

9. RAWLS, *supra* note 3, at 6.

10. Stephen W. Ball, *Economic Equality: Rawls Versus Utilitarianism*, 2 *ECON. & PHIL.* 225 (1986).

11. See RAWLS, *supra* note 1; RAWLS, *supra* note 4.

12. See RAWLS *supra* note 1, at 14–15.

13. John Rawls, *Concepts of Distributive Equity: Some Reasons for the Maximin Criterion* 64 *AM. ECON. REV.* 141 (1974).

14. James M. Buchanan, *A Hobbesian Interpretation of the Rawlsian Difference Principle*, in 29 *KYKLOS* 5 (1976), *reprinted in* *SOCIAL CHOICE THEORY III: SOCIAL JUSTICE AND CLASSICAL LIBERAL GOAL* 127 (Charles K. Rowley ed., 1993).

those who are better off socially and economically.¹⁵ Thus, all members of society are bound by the duty of fair play, which limits their pursuit of unbridled self-interest.¹⁶

II. GAPS, CRITICISMS, AND EXTENSIONS

Rawls' principles of justice are the result of the original agreement made by free and rational persons concerned with furthering their own interests. However, while details regarding this agreement, both contextually and substantively, are provided in his writings, two important issues are only loosely described. First, "primary goods" are ill-defined, using language such as "things which it is supposed a rational [person] wants whatever else s/he wants . . . things which s/he would prefer more of rather than less . . . [or] broad categories [of] rights and liberties, opportunities and powers, [and] income and wealth."¹⁷

Scholars from the economics and quality of life literatures have contributed to the debate regarding primary goods. For example, Richard Easterlin and Robert Lane demonstrated that income alone is an inferior indicator of how goods and services produce happiness or life satisfaction.¹⁸ Partha Dasgupta suggests that any measure of consumption well-being or life quality also should include health and education, noting that "health and education would seem to be the embodiment of positive freedoms, whereas income contributes to the enjoyment of this freedom."¹⁹

This viewpoint is consistent with the theoretical work of Sudhir Anand and Amartya Sen who advocate multidimensional approaches to measurement of human and gender-specific advancement or quality of life.²⁰ Their recommendations have been utilized by the United Nations to operationalize the concept of human development, which is based upon the achievement of well-being through the ability "to lead a long and healthy life, to acquire knowledge and to have access to the resources needed for a decent

15. See RAWLS, *supra* note 1, at 127.

16. See RAWLS, *supra* note 3.

17. RAWLS, *supra* note 1, at 92.

18. Richard E. Easterlin, *Will Raising the Incomes of All Increase the Happiness of All?* 27 J. ECON. BEHAV. & ORG. 35 (June 1995); See generally, ROBERT E. LANE, *THE MARKET EXPERIENCE* (1991).

19. PARTHA DASGUPTA, *AN INQUIRY INTO WELL-BEING AND DESTITUTION* 76 (1993).

20. Sudhir Anand & Amartya K. Sen, *Concepts of Human Development and Poverty: A Multidimensional Perspective*, in HUMAN DEVELOPMENT PAPERS 1997: POVERTY AND HUMAN DEVELOPMENT, UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT 1997 (1997) [hereinafter UNDP 1997]; AMARTYA SEN, *DEVELOPMENT AS FREEDOM* (1999).

standard of living."²¹ These three factors are combined to determine the values for UN human development and gender development indices across countries worldwide.

Second, this approach lacks a precise definition of who represents the "least fortunate group" in society. In Rawls' estimation, the least advantaged segment typically is the poor, described "solely in terms of relative income with no reference to social position."²² However, his later work allows for this distinction to be assigned according to sex, race, and culture.²³ Relevant research that focuses on such factors comes from the economics and international affairs literatures. The former tend to concentrate on the economics of gender discrimination, consumption, and poverty.²⁴ The latter examine gender and human rights, dependence, and development.²⁵ Together they suggest that the quality of life for women globally is significantly lower than that of men.²⁶

The United Nations supports this perspective and notes that, while real progress has occurred over the last thirty years, inequalities between men and women exist throughout the world.²⁷ For example, consumption data from North and South America, Europe, and the Commonwealth of Independent States reveal that female-headed households still have a high incidence of poverty.²⁸ Additionally, this inequity is posited to be the result of a wide variety of biases in education, employment, and asset ownership.

Rawls' Justice as Fairness ethical framework also has its critics, and many of their concerns are summarized aptly in the volume edited by Norman Daniels.²⁹ For example, Thomas Nagel argues that the original position is hardly a neutral starting point but, rather, it presupposes a liberal, individualistic perspective of humankind. R.M. Hare, on the other hand, views the overall theory as too egalitarian since it imposes "any loss, however great, upon a better off group in order to bring a gain, however

21. UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT 1997, at 13–14.

22. See RAWLS, *supra* note 1, at 98.

23. See RAWLS, *supra* note 4.

24. Joan Fairhurst, *Women and the Effects of State Policy on the Everyday Environment* 13 DEV. S. AFR. 143–48 (1996); Fairhurst 1996; MARTHA C. NUSSBAUM & JONATHAN GLOVER, WOMEN, CULTURE, AND DEVELOPMENT: A STUDY OF HUMAN CAPABILITIES (1995); THE QUALITY OF LIFE (Martha C. Nussbaum & Amartya Sen eds., 1993).

25. Tony Beck, *How the Poor Fight for Respect and Resources in Village India*, 54 HUMAN ORGANIZATION 169 (1995); Wolfgang Lutz, *Female Education Likely to Lead to Long-Term Population Decline and Near-Term Gain in Quality of Life*, 16 POLITICS & THE LIFE SCIENCES 209–11 (1997); Nussbaum & Sen eds., *supra* note 24.

26. See SEN (1999), *supra* note 20.

27. UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT 1998 (1998) [hereinafter UNDP 1998].

28. See UNDP 1997, *supra* note 20.

29. CRITICAL STUDIES ON RAWLS' A THEORY OF JUSTICE (Norman Daniels ed., 1989) (originally published in a slightly different version in 1975).

small, to the least advantaged group."³⁰ Finally, David Lyons notes that the maximin principle may suggest that people are too risk averse since they appear to concentrate too much on the worst possible circumstances rather than the actual probabilities of various outcomes occurring.³¹

Interestingly, one of the biggest critics of this work has been Rawls himself, and he has made several adaptations to his theory over time. A most significant modification is his application of the Justice as Fairness paradigm to the "Law of Peoples" across societies.³² In this revision, while he disavows the difference principle as appropriate on a global basis, Rawls calls on the international community, especially the most developed and economically-advanced nations, to ensure that the basic consumption needs of the poor are met worldwide. Critics agree with this call, but they suggest that the difference principle should be the theoretical backbone of global responsibility.³³

Global applications also have been posited with regard to ecological sustainability and the environment.³⁴ Roger Taylor suggests that Rawls' cross-generational concern extends the difference principle to "the long-term prospects of the least favored extending over future generations."³⁵ In fact, the original position's veil of ignorance is expanded to include a lack of knowledge of generational inclusion. Therefore, the proper application of the difference principle requires that environmental quality also be included in the assessment of income and wealth since it impacts the resource base available to future citizens. Data from the United Nations suggest that environmental damage currently is both extensive and unequal across nations.³⁶

30. See Thomas Nagel, *Rawls on Justice*, in *CRITICAL STUDIES ON RAWLS' A THEORY OF JUSTICE* 1, 16 (Norman Daniels ed., 1989); R.M. Hare, *Rawls' Theory of Justice*, in *CRITICAL STUDIES ON RAWLS' THEORY OF JUSTICE* 81, 107 (Norman Daniels ed., 1989).

31. See David Lyons, *Nature and Soundness of the Contract and Coherence Arguments*, in *CRITICAL STUDIES ON RAWLS' A THEORY OF JUSTICE* 141 (Norman Daniels ed., 1989).

32. See John Rawls, *The Law of Peoples*, 20 *CRITICAL INQUIRY* 36 (1993b).

33. See T.M. Scanlon, *Distributive Justice and the Difference Principle*, in *CRITICAL STUDIES ON RAWLS' A THEORY OF JUSTICE* 169–205 (Norman Daniels ed., 1989).

34. See e.g., Clem Tisdell, *The Nature of Sustainability and of Sustainable Development*, 4 *MIDDLE EAST BUS. & ECON. REV.* 21 (1992).

35. Roger Taylor, *The Environmental Implications of Liberalism*, 6 *CRITICAL REV.* 265 (1993); Rawls, *supra* note 1, at 285.

36. UNDP 1998, *supra* note 27.

III. STUDY OBJECTIVES

This investigation examines the extent to which Rawlsian justice exists worldwide from the perspective of the difference principle. Specifically, the following three objectives arise from the previous discussion:

- To explore inequities in primary goods/environmental damage worldwide.
- To explore inequities in wealth and authority by gender worldwide.
- To examine the extent to which these inequities are compensated for worldwide by improved quality of life for the poor.

IV. RAWLSIAN JUSTICE FROM A GLOBAL PERSPECTIVE

A. Data Collection and Indices Development

The data employed in this investigation were collected by the United Nations Development Programme (UNDP), which is charged by the Economic and Social Council of the same organization to examine human development worldwide. The UNDP has an annual budget of approximately \$1.5 billion to support 124 field offices and nearly 6000 individual projects around the globe.³⁷ These efforts culminate in their Human Development Report, which has been published annually since 1990. This report provides a yearly update on the status of key variables related to human progress and empowerment, poverty, and environmental degradation for 174 member nations.

Data contained in the UNDP Report from 1998 (and used in this study) are from a variety of original sources including UNDP, United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEF), and the World Bank. Over time, UNDP has continuously improved the quality of data through its support efforts with individual countries. However, when valid and reliable information are unavailable, they are reported as missing data in the annual volume.

Almost all of the data needed to explore the research objectives are in the form of composite indices (see the Appendix for more details on each of the indices). The UNDP has championed multidimensional approaches to defining primary goods and their impact upon consumption quality of life that are consistent with our theoretical discussion.³⁸ For example, the

37. CHARLES PATTERSON, *THE OXFORD 50TH ANNIVERSARY BOOK OF THE UNITED NATIONS* (1995).

38. UNDP 1997, *supra* note 20.

conglomerative approach is operationalized by the UNDP through the Human Development Index (HDI). This composite index contains three variables: longevity (measured by life expectancy); knowledge (measured by adult literacy and combined primary, secondary, and tertiary enrollment); and standard of living (measured by real Gross Domestic Product (GDP) per capita). The HDI is calculated for each country to allow for intercountry comparisons. The three individual indicators are reduced to a scale between zero and one, and they are combined to form the composite. The combined indices (HDI) represent the level of human development attainment in a particular country, with the maximum value equal to one. Thus, HDIs less than one show the relative distance a country must travel in order to equal the best possible life circumstances across all nations.

The *deprivational* approach, on the other hand, is operationalized by the UNDP through the Human Poverty Index (HPI). This composite index contains the same three variables as the HDI, but they are defined using different indicators: longevity is determined by the percentage of people expected to die before age forty; knowledge is determined by the percentage of adults who are illiterate; and standard of living is determined by the percentage of people who lack access to safe water, the percentage of people who lack access to health services, and the percentage of children five years or less who are underweight. Consistent with the HDI, the HPI is calculated for each country to allow for intercountry comparisons. As before, the three indicators are combined to form the composite. This number represents the percentage of citizens living in poverty and reveals how widespread deprivation is in a particular nation.

The UNDP recently has advanced a second poverty measure, HPI-2, to capture the dimensions of poverty within industrial countries.³⁹ Based on the same three factors as the original index (now called HPI-1) as well as one additional component, HPI-2 contains a set of indicators that are more appropriate to the way poverty is manifested in developed countries. The HPI-2 is composed of longevity (measured by the percentage of a country's population expected to die before age sixty); knowledge (measured by the percentage of the population that are functionally illiterate); standard of living (measured by the percentage of the population whose disposable income is less than 50 percent of the median for their country); and social exclusion (measured by the percentage of long-term unemployed in the labor market).

With regard to gender, the United Nations has developed the Gender-Related Development Index (GDI), which uses the same variables as the HDI, to examine consumption quality of life of women. The primary

39. UNDP 1998, *supra* note 27.

difference between GDI and HDI is that the GDI makes adjustments for variances in achievement between women and men for each country in life expectancy, educational attainment, and income. Thus, the GDI is the HDI adjusted for disparities between the genders (i.e., lower or higher values for women than men have) in basic human development. In Rawlsian terms, higher values reflect greater “wealth” for women in a particular society.

The UNDP also has developed an index that provides a measure of the authority dimension for women. The Gender Empowerment Measure (GEM) gauges the extent to which women are able to hold positions in politics as well as professional and technical areas of employment. Overall, the four variables that make up the index reflect women’s relative (percentage) empowerment with regard to economic participation and societal decision-making. Higher values of this index reveal greater levels of “authority” for women.

While the UNDP has yet to advance composite measures of environmental damage or degradation, data from United Nations collection efforts exist to allow for their development. For example, the United Nations has gathered extensive information on carbon dioxide emissions, one of the leading causes of the destruction of the protective ozone layer and global warming.⁴⁰ These data were used to determine the environmental damage index (EDI). The variables employed are carbon dioxide emissions as the share of world total along with the estimated population (in millions) in 1995 (see the Appendix for more details). The EDI composite yields a percentage per capita emissions value and this statistic is evaluated in the analysis.

Taken together, these indices inform the three study objectives in the following manner:

1. Inequities in primary goods are determined by differences in the HDI across nations and regions of the world. Inequities in environmental degradation are examined through the use of the EDI developed for this study.
2. The GDI and the GEM determine inequities in wealth and authority by gender, respectively, across nations and regions of the world. Additionally, differences between the HDI and GDI for each country reveal relative wealth for women when compared to the country as a whole.
3. The HDI determines possible compensation for these inequities worldwide.

40. *Id.*

B. Results

The United Nations divides countries of the world into three distinct categories based on their HDI values. For example, the high group has HDI scores of .81 or more, the medium group has HDI values that range from .51 to .80, and the low group contains countries with values of .50 or less. Across all countries, HDI values range from .960 (Canada) to .185 (Sierra Leone). The mean HDI scores for the three groups are .891 (high), .673 (medium) and .355 (low) (see Table 1 for more details).

The high HDI group is composed of sixty-four countries (37 percent of all independent states within the data set) from North America, Western and Northern Europe, and portions of Asia and the Middle East. The medium group (sixty-six countries and 38 percent of the data set) comprises mainly countries from Eastern Europe, Latin America, and segments of the Middle East, Africa and East Asia. The lowest HDI scores (forty-four countries and 25 percent of the total) are generally from nations located in sub-Saharan Africa and South Asia.

Results for the first part of study objective one, involving inequities in primary goods as determined by differences in the HDI, were significant (see Table 1). Analysis of Variance (ANOVA) tests performed on the HDI scores demonstrates that significant differences exist among groups ($F = 792.85$, $P < .000$).⁴¹ Bonferroni post-hoc analysis shows that each of the groups is significantly different from the others at a .01 confidence level.

TABLE 1
Human Development Index (HDI) Results

<i>HDI Summary Statistics</i>					
<i>Group</i>	<i>HDI Range</i>	<i>Mean HDI Score</i>	<i>Geographic Areas</i>		
High	.96 to .81	.891	North America, Western/Northern Europe		
Medium	.80 to .51	.672	Eastern Europe, Asia, Latin America, Middle East		
Low	.50 to .19	.354	Sub-Saharan Africa South Asia		
<i>HDI ANOVA Results</i>					
	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	7.498	2	3.749	792.85	.000
Within Groups	.809	171	.004		
Total	8.307	173			

41. $P < .05$ or smaller suggests significant differences.

Results for the second part of study objective one also reveal significant differences among the high, medium, and low HDI groups in the area of environmental degradation as determined by the EDI (ANOVA with $F = 25.30$, $P < .000$) (see Table 2). Thus, inequities were evidenced regarding carbon dioxide emissions released into the atmosphere, with the high HDI group emitting significantly more emissions, followed by the medium and low groups. Post-hoc evaluation noted that the differences between groups for all three combinations are statistically significant.

The GEM, which assesses a woman's opportunity to hold political, professional or technical jobs (the authority dimension of study objective two), was found to produce significant differences across the three categories (ANOVA with $F = 43.91$, $P < .000$). Bonferroni post-hoc analysis again shows that each of the groups is significantly different from the others at the .01 level, with empowerment increasing from the low to medium to high groups (see Table 3). The GDI (the wealth dimension of study objective two) also was found to contain significant differences among the various groups (ANOVA with $F = 557.26$, $P < .000$) (Table 3). Once again, Bonferroni post-hoc analysis reveals that the means, which increase from the low to medium to high groups as well, are significantly different from one another.

Significant differences were found across the three development categories when GDI was subtracted from HDI (ANOVA with $F = 15.43$, $P < .000$). Post-hoc analysis revealed that differences between means in all three cases are significant. However, the mean values increased from low to medium to high categories, suggesting that women fair less well (relatively) as overall development rises (see Table 3).

The third study question examines whether inequities worldwide are compensated for by improved quality of life for the poor. Results indicate

TABLE 2
Environmental Degradation Results

<i>EDI Summary Statistics</i>					
<i>HDI Group</i>	<i>N</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
High	57	71.55	1.26	1.908	
Medium	64	27.22	.43	.349	
Low	42	.63	.01	.002	
<i>EDI ANOVA Results</i>					
	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	40.784	2	20.392	25.30	.000
Within Groups	128.962	160	.806		
Total	169.746	162			

TABLE 3
Gender Empowerment Measure (GEM), Gender Development Index (GDI), and
Human Development Index minus Gender Development Index Results

<i>GEM Summary Statistics</i>					
<i>HDI Group</i>	<i>N</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
High	50	27.0	.54	.018	
Medium	34	13.1	.39	.007	
Low	18	4.9	.27	.008	
<i>GEM ANOVA Results</i>					
	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	1.113	2	.556	43.91	.000
Within Groups	1.254	99	.012		
Total	2.367	101			
<i>GDI Summary Statistics</i>					
<i>HDI Group</i>	<i>N</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
High	57	47.99	.84	.005	
Medium	63	40.27	.64	.006	
Low	43	14.64	.34	.006	
<i>GDI ANOVA Results</i>					
	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	6.167	2	3.08	557.26	.000
Within Groups	.88	160	.005		
Total	7.05	162			
<i>HDI minus GDI Summary Statistics</i>					
<i>HDI Group</i>	<i>N</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
High	57	3.08	.052	.001	
Medium	63	2.28	.036	.001	
Low	43	.63	.014	.000	
<i>HDI minus GDI ANOVA Results</i>					
	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	.036	2	.017	15.43	.000
Within Groups	.185	160	.001		
Total	.220	162			

that inequities in relative affluence are not compensated for by lower poverty, as determined by Human Poverty Index values across development categories (ANOVA with $F = 186.51$, $P < .000$) (see Table 4). Mean values of HPI decrease from the low to medium to high categories, and the differences between the means are statistically significant for each comparison using post-hoc evaluations, suggesting that poverty is more widespread in less affluent nations.

TABLE 4
Human Poverty Index (HPI) Results

<i>HPI Summary Statistics</i>					
<i>HDI Group</i>	<i>N</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
High	29	318.7	10.99	12.68	
Medium	30	709.3	23.64	46.33	
Low	35	1525.5	43.58	74.86	
<i>HPI ANOVA Results</i>					
	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	17397.07	2	8698.54	186.51	.000
Within Groups	4244.10	91	46.64		
Total	21641.17	93			

V. DISCUSSION AND IMPLICATIONS

A. Summary of Findings

Findings indicate that there are significant differences across countries of the world in the consumption quality of life of its citizens. Using the HDI, which is composed of longevity, knowledge, and standard of living, data reveal that lives worsen from west to east, with the worst conditions in South Asia and Sub-Saharan Africa. Additionally, environmental damage estimates, as determined by the EDI composite developed specifically for this investigation, demonstrate that wealthier nations create environmental degradation that is consistent with their higher consumption patterns rather than their absolute numbers.

With regard to gender equity, the GEM, which examines the ability of women to occupy positions of authority within society, shows that females fare better in wealthier countries in terms of job opportunities in government and industry. The same pattern holds true for women's consumption quality of life, as measured by the GDI, since females' lives improve as overall wealth advances. However, when the GDI is compared to the HDI within countries of the world, results reveal that women fare relatively less well as prosperity increases.

These results depict a world in which citizens of less wealthy nations have fewer opportunities to actualize their consumption needs. Yet they must endure more than their fair share of global environmental damage (e.g., to the ozone layer of the atmosphere) that increasingly reduces the quality of their lives as well as those of future generations. Furthermore, women in these countries fare poorly when compared to their counterparts in wealthier nations, due to lower consumption and fewer decent paying

job prospects. Overall, from a Rawlsian perspective these inequities are not compensated for since poverty is greater in such countries, suggesting a relative deficit in the quality of life of the poorest citizens.

B. Consumption Issues and Future Research Opportunities

The research presented in this paper provides a new paradigm within which the consumption process across countries can be assessed from a macro perspective. Additionally, this evaluative framework is based upon data collection regarding a bundle of goods and services that intimate current and future opportunities to partake in and enjoy the benefits of societal wealth and position. Judgments of the distribution system on a global level are a matter of fairness as determined by the difference principle (i.e., if inequities exist among nations, are they to the benefit of the world's most vulnerable citizens?). This approach defines the most vulnerable as the poorest individuals, and it posits that their misfortune is due to circumstances beyond their direct control, a decidedly different mindset than the one guiding welfare policy within the United States.

Rawls' Justice as Fairness allows for redress of the kinds of inequities noted in this paper, a position strongly supported by Sen (1999) as a necessary ingredient of foreign policy by wealthy nations.⁴² The United Nations estimates that compensation for the lack of distributive justice revealed in this research would require \$80 billion annually in order to ensure adequate health care, education, and other basic social services worldwide as well as to provide monetary transfers that would abolish income poverty.⁴³ In a global economy of \$25 trillion, and with current levels of aid between developed and developing countries already in the hundreds-of-billions of dollars range, justice can be achieved if political hurdles are overcome.

Additional research opportunities abound within this area of investigation. For instance, the topic of distributive justice can be explored within regions and counties of the world across a number of dimensions. Consider the finding in this study that women fare relatively less well in terms of development in wealthier countries when compared to poorer nations. Does this finding hold across all nations or does it vary according to cultural norms, religion, or ethnicity? What role does opportunity play from the perspective of education (i.e., future opportunities) as well as job prospects (both private and public sector)?

42. See SEN (1999), *supra* note 20.

43. See Ronald Paul Hill & Bahram Adrangi, *Poverty and the United Nations*, 18 J. OF PUB. POL'Y & MARKETING 135-46 (Fall 1999).

Researchers who examine consumption issues also should weigh in on the composition of the bundle of primary goods. As defined by the United Nations, current measures of development and poverty are combinations of input and outcome variables associated with current and future consumption. These composites are based on an explicit portrait of higher-order consumer quality of life (QOL), suggesting a topic of discussion that members of the human rights field could influence. For example, is consumption QOL more dimensionalized than the approaches advanced by the United Nations? Data from their annual Human Development Report series allow for multiple individual indicators within broad categories of products that have received considerable attention by scholars, including health, nutrition, shelter, education, and employment. How might various input (e.g., enrollment in school) and outcome (e.g., literacy level) variables associated with these dimensions be employed to advance our understanding of distributive justice?

While such basic issues represent fertile research terrain for additional study, results are likely to demonstrate that vast inequities exist within the global society. At some point attention needs to be placed on methods of persuasion of political decision makers and modes of distribution of essential goods and services. The development of persuasive communications that can influence international policy debates toward greater fairness across consumption categories is one possible topic. Furthermore, the determination and dissemination of a just distribution strategy for primary goods within and across nations also is a logical part of the human rights domain.

APPENDIX: ADDITIONAL INFORMATION ON COMPOSITE INDICES

Human Development Index*

Fixed minimum and maximum values have been set for the three indicators used in the construction of this index:

1. Life expectancy—25 years and 85 years
2. Literacy—0 percent and 100 percent
3. Combined enrollment ratio—0 percent and 100 percent
4. Real GDP per capita—\$100 and \$40,000.

* Abstracted from UNDP 1998, at 107.

$$\text{Individual index value} = \frac{\text{Actual value} - \text{minimum value}}{\text{Maximum value} - \text{minimum value}}$$

The HDI is a simple average of the life expectancy, educational attainment, and GDP per capita indices.

Human Poverty Index**

Construction of the HPI-1 requires the calculation of the overall economic provisioning variable which is a simple average of three determinants: percentage of people without access to safe water, percentage without access to health services, and percentage of children under the age of five who are underweight. Two variables (deprivation in longevity [P₁] and illiteracy [P₂]) and this composite [P₃] are combined in the following fashion:

$$\text{HPI-1} = [1/3 (P_1^3 + P_2^3 + P_3^3)]^{1/3}$$

Construction of the HPI-2 involves combining deprivation in longevity (P₁), functional illiteracy (P₂), deprivation in disposable income (P₃), and rate of long-term unemployment (P₄) in the following fashion:

$$\text{HPI-2} = [1/4 (P_1^3 + P_2^3 + P_3^3 + P_4^3)]^{1/3}$$

Gender Related Development Index***

The GDI adjusts the HDI to reflect differences in life expectancy, educational attainment, and income between women and men. For example, minimum and maximum values for the life expectancy variable are adjusted to account for the greater longevity of women. The minimum and maximum values for women are 27.5 years and 87.5 years, respectively, and 22.5 years and 82.5 years, respectively, for men. Thus, the life expectancy index is computed as follows:

Step one

$$\begin{aligned} \text{Female life expectancy index} &= (\text{Actual value} - 27.5)/60 \\ \text{Male life expectancy index} &= (\text{Actual value} - 22.5)/60 \end{aligned}$$

** Abstracted from UNDP 1998, at 110.

*** Abstracted from UNDP 1998, at 108.

Step two

$$\text{Life expectancy index} = \{[\text{female population share} \times (\text{female life expectancy index})^{-1}] + [\text{male population share} \times (\text{male life expectancy index})^{-1}]\}^{-1}$$

The GDI is the simple average of the three resulting indices.

Gender Empowerment Index****

The GEM is designed to measure empowerment of women and men in political and economic life. Variables include: women's and men's percentage shares of administrative and managerial positions, their percentage shares of professional and technical jobs, their percentage shares of parliamentary seats, and their percentage shares of earned income. The method used to index these data is identical to that employed for the GDI.

After indexing, the first two variables are combined (i.e., simple average) to form a single value, and the mean of the remaining three indices form the GEM.

Environmental Damage Index

The EDI is designed to measure environmental damage in terms of emissions. The variables used to derive this index are the total carbon dioxide emissions as the share of the world and the estimated population in 1995.

Step one

$$\text{Population Ratio (per country)} = \frac{\text{Estimated Population (1995)}}{\text{Total worlds' estimated population (1995)}}$$

Step two

$$\text{Per Capita Emissions} = \frac{\text{CO2 emissions share of the world total (\%)}}{\text{1995/Population Ratio (per country)}}$$

Step three

$$\text{Weighted Per Capita Emissions} = \frac{\text{Per Capita Emissions/}}{\text{Total Per Capita Emissions}}$$

Step four

$$\text{Weighted Per Capita Emissions (Percentage)} = \text{Weighted Per Capita Emissions} * 100$$

**** Abstracted from UNDP 1998, at 109.