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in Six Affluent Countries:
Australia, Canada, Japan,
New Zealand, the United Kingdom,
and the United States**

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Comments should be addressed by email to the authors.

¹ *The Measure of America: American Human Development Report 2008-2009* is the only national HDR for an affluent country.

Abstract

This paper argues that a capabilities-based approach to measuring human development, while predominantly utilized in the Global South, is pertinent to that of the Global North also. Using tools like the Human Development Index allows for a more comprehensive understanding of well-being than purely economic measurements like GDP, and better identifies areas of need within countries.

Disaggregated findings of health, access to knowledge, and a decent standard of living—the basic building blocks of human development—show vast differences between and within six affluent nations (Australia, Canada, Japan, New Zealand, the United Kingdom, and the United States) that cannot be explained by economics alone. For example, the greatest spender on health care in the group, the United States, has the lowest life expectancy, while the lowest spender, Japan, has the highest health life expectancy.

While the HDI's indicators do not capture all factors of human freedoms and capabilities, individual proxies for human development within the Index can be altered to increase its relevance and utility to affluent countries. Replacing literacy, for example, with educational attainment, and expanding the combined gross enrollment ration to include pre-school students allow for a more dynamic consideration of access to knowledge.

The HDI presents an innovative approach to measuring well-being within affluent nations, and paints a more detailed picture of human development than by just economic growth alone.

Keywords: Human Development Index, OECD, Alternatives to GDP.

JEL classification: A, B, I.

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INTRODUCTION AND COUNTRY BACKGROUND

A. Introduction

The Human Development Index (HDI) is a living, evolving, and much valued tool for assessing progress and well-being in the developing world, as evidenced by the some 600 regional, national and sub-national reports that have been produced in over 160 countries since the early 1990s. In the Global North, however, the Index and the human development approach more broadly have had little uptake as a way for affluent, developed countries to gauge progress within their own societies (though the Index is used *by* the global North to assess developing countries and, in some cases, to set bilateral aid priorities).¹

In developed countries, the primacy of Gross Domestic Product (GDP) and other economic metrics continues with few serious challengers. Some efforts have incorporated elements of the human development approach or its underlying conceptual framework, capability theory, but none espouses the HDI as a tool for measuring the expansion of freedoms and choices in an affluent-country context. For example, there have been important examples in recent years of governments in the North using capability theory as a framework for promoting human rights and equality, such as the Equality and Human Rights Commission of the United Kingdom (U.K.) Government. The Organisation for Economic Co-operation and Development's (OECD) Global Project on "Measuring the Progress of Societies" explores multidimensional ways to assess human progress, and the recent Stiglitz, Sen, and Fitoussi report (2009) initiated by French president Sarkozy brought renewed attention to the inadequacy of GDP alone as an indicator of

¹ *The Measure of America: American Human Development Report 2008-2009* is the only national HDR for an affluent country.

economic performance and social progress. Each of these initiatives has referred to the HDI, but none has embraced it.

Why has the HDI not taken hold in developed countries as it has in developing countries? First, for methodological and substantive reasons that will be explored in this paper (and which have been discussed over the years by development practitioners, academics, and others), the HDI is a less useful and precise instrument for measuring and monitoring trends in a developed-country context. Second, the United Nations Development Programme (UNDP) has been the chief driver of HDI adoption the world over by funding national human development reports (NHDRs), sponsoring workshops, holding training courses, and the like; because UNDP is not mandated to work in developed countries, these activities have all been focused there, with no comparable institutional champion existing in the North. Third, affluent countries are already relatively data-rich environments. There is extensive collection and analysis of both quantitative and qualitative data on human development dimensions in both governmental and non-governmental settings, and thus this summary tool of average achievement is less unique and often not detailed enough to add value to what is already available.

This paper will take a closer look at the relevance of the human development concept to developed countries by analyzing key human development trends and exploring policy implications in six countries. It will focus on the United States, building on the 2008-2009 American Human Development Report (AHDR), but will also include Canada, Australia, New Zealand, the United Kingdom, and Japan. This selection includes the majority of a recognized group of countries, the so-called Anglo Saxon economies.

These six countries tend to clump near the top of the international rankings based on global HDI scores. However, when we use more context-appropriate indicators (such as educational

attainment instead of literacy, earnings instead of GDP per capita) and look at enablers and inhibitors of human development beyond health, education, and income, we see significant difference among these countries in important areas, among them rates of child poverty, public spending on health, public participation in political and community life, incarceration rates, and legal recognition for same-sex partnerships. We argue that a disaggregated human development (HD) index constructed with indicators appropriate for a developed-country context is a powerful tool for showcasing inequality and disparities in human development outcomes within these societies.

What follows will be a discussion of patterns and trends in HD experience since 1990 among these six developed countries. **Section I** will address the three basic building blocks of human development measured in the HDI: health, access to knowledge, and a decent standard of living. **Section II** will investigate other dimensions of human development that are not directly measured in the HDI but which are central to the concept of human development and to capability theory: inequality; agency, empowerment, and human freedom; and environmental sustainability.

B. Country Background

Five of the six countries under analysis are typically classified as “liberal” welfare states, according to the seminal typology of the varieties of capitalism (Esping-Andersen, 1990). Liberal welfare-states, compared to conservative and social democratic variants, typically advance comparatively low volumes of social spending, strong support for the market, and minimal redistributive taxation. Unlike its Anglo-Saxon counterparts, however, Japan is characterized in this typology as a conservative welfare state. Conservative welfare states feature moderate public

service provision, income support tied to occupational status (an historical relic of formal social and occupational stratification), and traditional family structures that generally restrict the participation of married women in the labor force. Despite postwar constitutional engineering by the Americans, Japan's welfare state more closely resembles a continental European welfare regime—a phenomenon that some authors trace to central planning during the Meiji Restoration that modeled itself on German corporatism (Korpi and Palme, 1998: fn. 13). Critiques of Esping-Andersen's models have noted marked differences between North America/United Kingdom and “the Antipodes” (Australia and New Zealand), which achieve higher social protection than the other Anglo-Saxon countries, but do so through legal regulation, rather than the more easily measured social expenditure (Arts and Gelissen, 2002: 146). Others have put Japan in the same liberal category as the United States; still others have clustered Japan with predominantly southern European countries on account of “slow female mobilization” (Ibid.)

Australia is a recent economic power, posting a high rate of growth throughout the 1990s. Despite its enormous land mass, Australia's population is a relatively small 21 million. Like many Western countries, it faces a fairly low population growth rate and a fairly high rate of immigration. Asians comprise 7 percent of the otherwise predominantly European-derived population. (Approximately 92 percent of the population are white; 1 percent are of aboriginal origin.) Suffrage, at age 18, is universal and compulsory in this federal parliamentary democracy and Commonwealth realm. Climate change and environmental issues, as well as trade relations with China, figure prominently among Australian economic concerns (U.S. Central Intelligence Agency, 2010).²

² Australia country profile, *CIA World Fact Book*, last updated February 4, 2010.

Canada is also a federal parliamentary democracy and Commonwealth realm with a strong economy and a population of over 33 million. It has transformed in recent decades from a rural agricultural economy into one that is more urban and industrial, enjoying a strong relationship with the United States, which buys 80 percent of Canadian exports. Unlike the United States, Canada has pursued universal health care and allowed regional autonomy for ethnolinguistic minorities. Its population is divided among people of British (28 percent), French (23 percent), mixed (28 percent), Amerindian (2 percent), and other (6 percent) origins (Ibid.).³

Following its defeat in World War II, **Japan** set itself on a path to becoming a major economic power and global leader. Its political and legal institutions bear significant British and American influence, though it has carved out a distinct path among highly developed countries. Rapid growth in the second half of the twentieth century began to give way in the 1990s, struggling against an aging population and low birth rate. Japan has the tenth-largest population, with more than 127 million people, and the third-largest economy behind the United States and China. Two-thirds of Japan's labor force of nearly 66 million people are concentrated in the service sector, while less than one third is concentrated in industry, and less than 5 percent work in agriculture, particularly in fishing (Ibid.).⁴

New Zealand is the smallest country under consideration, with a population of only 4 million. People of European origin comprise more than two-thirds of the population, while Maori, Asians, and Pacific islanders make up the balance. Maori are granted certain measures of regional autonomy. New Zealand is a parliamentary democracy and a Commonwealth realm that enjoyed special access to British markets until economic reforms set the country on a path to

³ Canada country profile, *CIA World Fact Book*, last updated February 16, 2010.

⁴ Japan country profile, *CIA World Fact Book*, last updated February 18, 2010.

substantial and autonomous economic growth in the later twentieth century. Recent decline in the value of exports, primarily dairy products, meat, wood, fish, and machinery, has created cause for concern (Ibid.).⁵

The **United Kingdom**, which includes England, Northern Ireland, Scotland, Wales, and several overseas territories, ceded much of its global power after the world wars. Its population of 61 million is predominantly white, with small pockets of blacks and South Asians. A constitutional monarchy, the United Kingdom remains a strong European economic force, but over the past several decades it has privatized many public services and constrained the growth of social welfare programs. Its universal health care coverage, however, is well-regarded (Ibid.).

The **United States** became the dominant global power after victories in the world wars. Steady economic growth and technological innovation culminated in the 1990s before leveling off in the 2000s. The United States remains the largest economy and the third-largest population, with 307 million people. Whites comprise 80 percent of the population, and African Americans comprise 13 percent, although these two population groups contains a large Latino contingent (15 percent of the overall population self-identify as belonging to this ethnolinguistic group that cuts across racial lines). Asian Americans make up less than 5 percent. In this constitution-based federal republic, an enormous budget deficit, rising medical and pension costs, profound inequalities, a large military presence overseas, a struggle to balance growth with environmental sustainability, and the consequences of a deep economic recession pose the greatest challenges (Ibid.).⁶

⁵ New Zealand country profile, *CIA World Fact Book*, last updated February 4, 2010.

⁶ United States country profile, *CIA World Fact Book*, last updated February 4, 2010.

I. MEASUREMENT OF BASIC BUILDING BLOCKS OF HD IN DEVELOPED COUNTRIES

A. A Long and Healthy Life

The HDI proxy for “a long and healthy life” is life expectancy at birth. Over the years, some have criticized this indicator as not entirely satisfactory because while it captures the quantity of life (longevity), it is not able to capture the quality. This criticism applies to countries all along the development spectrum. The World Bank, World Health Organization (WHO), and others have, in recent years, developed new indicators in order to address this shortcoming. Such indicators as disability-adjusted life years (DALYs), disability-free life expectancy (DFLE), and potential years of life lost (PYLL) factor in years lost to disability or adjust life expectancy by giving greater weight to the years of life lived in good health. Each of these enhancements allows for monitoring physical (and in some cases, mental) functioning at a more comprehensive level than using life expectancy permits. However, we would argue that while one might expect that once countries have reached a certain level of income, life expectancy would plateau and there would be little variation in life span, our work *within* the United States has shown this to be profoundly untrue. And for this reason, a relatively simpler-to-understand indicator such as life expectancy continues to be a good measure for a composite index that is meant to be the *start* of a conversation about well-being and average achievement. In addition, few countries are collecting DALY’s at the sub-national level in any standardized way, thus further supporting the use of life expectancy as the proxy, however imperfect, for “a long and healthy life.”

Looking first at cross-country comparisons, Table 3 shows remarkable progress in each of these six countries since 1970, with steady increases of about one additional year of life span each

half-decade. From a starting point in 1970 for all six countries that spans about a two-year range (from 70.2 to 72.5 years), data from 2007 show that range has spread to over three and a half years (from 79.1 in the United States to 82.7 years in Japan). During this same time period, GDP was following a very different trajectory. These two tables open up many questions for further investigation. Why has the life expectancy range increased over this period? What might be the factors that cause Japan to pull ahead of the pack in longevity despite a considerably lower GDP? Why have U.S. life span increases not kept pace with the enormous increases in GDP during this period?

To explore some of the underlying drivers behind the surge of Japan, the relative slowdown in progress in longevity in the United States, and the delinking of GDP progress with health outcomes, we will examine several areas that can help to explain these trends: spending, diet and lifestyle, social determinants of health, and health care coverage.

1. Health Spending

While Australia, Japan and the United Kingdom have gone from spending in the range of 3 percent to 4 percent of GDP on health in 1960 to spending between 8 percent and 9 percent in 2006-07, the United States, from nearly the same starting point in 1960, had reached 16 percent of GDP by 2007 (Table 1). Canada's 2007 spending on health was 10.1 percent of GDP. Looking at the full range of OECD countries, the United States is a clear outlier in health spending. At \$7,290 per capita, the United States spent almost two and a half times more than the OECD average per capita (\$2,984) in 2007, and more than any other OECD country on a per capita basis.

Of this total expenditure, in Japan, New Zealand and the United Kingdom, about four-fifths of

health spending comes from public funding (see Table 2). In Australia and Canada, the range is lower, at 67.5 percent and 70 percent, respectively, and in the United States, less than half of health expenditure comes from public spending.

What kind of returns are these countries getting for their health care investment? Looking at longevity, the results are surprising. The highest spender (the United States) has the lowest life expectancy of the six countries, and the lowest spender (Japan) has the highest life expectancy. The good news that emerges from this rather paradoxical result is that improvements in health outcomes do not *necessarily* require higher spending. Further exploration of these outliers, the U.S. and Japan, follows below.

2. *Diet and Lifestyle*

About 70 percent of deaths in most affluent countries are attributable to chronic diseases, which can often be prevented or controlled—but not cured. In rich countries, fewer than 1 percent of deaths occur before a child's fifth birthday (Deaton, 2007), and the leading causes of death among the whole population are generally heart disease, cancer, and stroke. This is a radical departure from the past, and stands in contrast to the situation in poor countries, where infectious diseases are responsible for a larger share of mortality. In the treatment of chronic disease, both income levels and medical treatment have a less decisive impact and other factors, such as diet, lifestyle, environment, and health insurance coverage, play significant roles.

As is evident in Table 2, each of these six countries have made significant progress in reducing rates of tobacco use, which had been a major contributing factor to mortality among adults aged 50 and older, especially men. But four of the six countries are now struggling to contain runaway obesity epidemics and are grappling with high rates of diabetes. Obesity is one of the fastest-

growing underlying causes of disease and death in the United States, United Kingdom, New Zealand and Australia, and is a strong predictor of type-2 diabetes, hypertension, coronary heart disease, and some types of cancer—the leading causes of death in these countries. The proportion of obese Australians has almost tripled over the last two decades. In the United States, greater than one in three adults 15 and over is obese, and in New Zealand and the United Kingdom, the rate is one in four (OECD Health at a Glance, 2009). Beyond the human and financial cost of obesity, which hampers the ability to contribute fully to society and often affects happiness and self-esteem, the cost to health-care systems is astronomical. In the United States it is estimated to cost more than \$110 billion per year—a full 1 percent of U.S. GDP (Carmona, 2003).

While nutritional improvements in the early 20th century contributed significantly to better health and longer lives, ironically, poor nutrition is a major contributor to obesity. The price per calorie of food, particularly high-fat foods, has been steadily decreasing; changes in the nature of work have led to far more sedentary societies; and time pressures have increased in part due to the rapid evolution of two- and single-parent families, who often rely on quick, convenient food preparation or takeout. Japan, and to a lesser extent Canada, have resisted these trends.

3. *Social Determinants of Health*

New discoveries, successful public health campaigns, and individual behavior changes have paved the way for residents of rich countries and poor alike to live significantly longer and healthier lives than even one generation before. Yet these incredible assets are not creating healthy lives across the spectrum. There is compelling, though not universally accepted, evidence that more unequal societies suffer a greater disease burden and that inequality is

responsible for shortened lives and illnesses of all kinds, quite apart from the effects of poverty.

Research studies in the United Kingdom (Marmot, 2004) and the United States (Wilkinson and Pickett, 2009) among others, seem to conclude that inequality affects health outcomes because the lower a person's rank in society, the higher his or her levels of stress and insecurity, frustration and powerlessness. Low-paying jobs, crime-ridden neighborhoods, unequal relationships with government welfare workers, and the gnawing worry about the future all tend to contribute to overwhelmed families and individuals who often have a sense of helplessness about their situation, who have little autonomy to make decisions and who disproportionately suffer from lowered self-confidence and esteem. Many experience symptoms of chronic stress. And these conditions in turn are associated with worse health outcomes in life-threatening diseases such as heart disease, cancer, and diabetes, as well as other health outcomes that compromise the quality of daily life, such as mental illness and accidents. Being poor, feeling poor, and being made to feel poor all have an undeniable life-shortening effect.

4. Health Care and Coverage

Five of the six countries under study have universal or near-universal coverage for a core set of health services, and public spending is the major source for health care. The United States does not have affordable health coverage for all, and public health communication is underfunded, resulting in far less emphasis on prevention, protection, and promotion of population health. As will be discussed further below, this has a major impact on longevity and morbidity in the United States and is perhaps the single most important reason the United States finds itself an outlier in both costs and outcomes.

5. *Japan*

Japan is clearly an outlier on health in many areas. As discussed, overall longevity has reached the highest national level in the world, and spending has been kept under control despite an ageing population. Alongside some of the highest levels of medical sophistication in diagnostics, treatment, and research is the lowest spending per capita among OECD countries (OECD *Health at a Glance*, 2009). Finally, diet and lifestyle trends that have brought enormous suffering to peer nations have not been adopted in Japan.

Though no health system is perfect, the following are important factors that contribute to Japan's number one standing on both longevity and cost control.

a. *Universal health coverage coupled with tight price regulation.* Japan has a mandatory public health insurance system and centralized price controls. While health services are primarily delivered through the private sector, and there are various means of financing these services, ranging from individual and employer contributions to government subsidies, a national fee schedule standardizes prices for all procedures, drugs and other health-related costs. Through this centralized mechanism, which is reviewed every two years, the government has been highly successful in containing costs despite a rapidly aging population and at a time when health costs have soared in virtually every other affluent country (Arai and Ikegami, 1998; Fukawa, 2002).

b. *A highly educated population.* Higher educational attainment is linked to better physical and mental health and longer lives across the world. Why? Better-educated people tend to practice healthier behaviors, are more informed consumers of medical services, and are more likely to adhere to treatment regimes. More education is also

associated with more robust mental health—more stable family relationships, greater sense of self-determination, and greater ability to adjust to change. Better educated people tend to be more effective in supporting healthy outcomes for their children (Burd-Sharps et al., 2008). As will be discussed further below, Japan has the highest levels of educational attainment in this group.

c. *Good nutrition.* The Japanese diet is high in fish, a very low calorie protein, relatively lower in consumption of livestock products (East Asians consume under 40 kilograms per year per capita as opposed to the average 88 kilograms per year per capita for all industrialized countries [World Health Organization, 2003]) and very high in vegetable consumption (the annual average per capita vegetable supply is highest in Asia). While the evidence of the effect of diet on some diseases is still inconclusive or under study, it is widely accepted that this low fat, low cholesterol diet is one important contributing factor in far lower levels of obesity and that it contributes to good health. Looking at specific examples, the incidence rates of breast cancer, the most common cancer among women worldwide, are about five times higher in industrialized countries than in less developed countries and Japan. While there is still more to be understood on the causes of breast cancer, obesity is thought to increase breast cancer risk in postmenopausal women by around 50 percent (World Health Organization, 2003) and probable factors that protect against breast cancer are consumption of fruits and vegetables.

d. *Low levels of inequality.* As will be discussed further below, Japan has a far lower Gini index than any of the other countries under study (UN Human Development Report, 2009) and the share of income/expenditure of the richest 10 percent of the population in Japan is the only one in this group of six countries below 25 percent (Ibid.). While the

theory of the negative association between low levels of inequality and better health outcomes is not uncontroversial, there is increasing interest in measuring and understanding the social determinants of health and a growing literature on how low levels of inequality contributes to better health outcomes.

6. *United States*

At the other end of the spectrum is a country that faces enormous challenges both in terms of health costs and outcomes. Ironically, some in the United States enjoy some of the highest health outcomes and most sophisticated and advanced health care anywhere in the world. For example, in terms of advanced procedures and equipment, the United States has over three times as many angioplasty procedures per 100,000 population as five of the other countries under study (data not available for Japan) and leads, with Japan, in availability of MRI and CT Scanner equipment (OECD *Health at a Glance*, 2009). In terms of life expectancy, Asian Americans can expect to live, on average, to 86.6 years, and Asian Americans living in New Jersey have an average life expectancy of 90.9 years (Burd-Sharps and Lewis, 2010).

However, these assets and outcomes are not distributed evenly. Considering the United States within-country comparisons, the following are a strong testament to the value of the simple life expectancy measure for understanding health conditions and disparities in the United States today. All life expectancy figures below on geographic disparities are calculated by the American Human Development Project (AHDP) using 2005 mortality data from the U.S. Centers for Disease Control and Prevention and population figures from the U.S. Census Bureau. Those on race are AHDP calculations using 2006 mortality data from the U.S. Centers for Disease Control and Prevention:

State disparities: Hawaiians live, on average, almost eight years longer than those living in Washington, DC.

Congressional district disparities: Residents of Virginia's Eighth Congressional District (Northern Virginia, suburb of Washington, DC) lead congressional districts in life expectancy at 82.9 years. At the other end of the continuum, residents of Kentucky's rural southeastern Fifth Congressional District have average life expectancy of 72.6 years, over a decade of difference.

Racial disparities (Burd-Sharps and Lewis, 2010):

- Average life span for Asian Americans (2006 data), at 86.6 years, is 13 years longer, on average, than that of African Americans.
- Latinos in the United States outlive whites, on average, by more than four years.⁷
- Native Americans in South Dakota who live, on average, to 67.4 years, have shorter life spans than the average American in the 1950s, more than half a century ago. At the other end of the spectrum, Asian Americans in New Jersey have a life expectancy of 90.9 years.

What accounts for these enormous disparities on such a basic dimension of human development?

Our research for the American HDR 2008-2009 explored the following major issues, which need to be considered in the U.S. context for any discussion of health disparities and policy:

- a. *Health insurance.* Every other affluent nation has found a way to provide health coverage to virtually every citizen, and in the process, to spend less money per capita on health care (public and private combined) than the United States. And most achieve better

⁷ Comments from staff of the Human Development Report Office questioned the accuracy of this comparison in particular in light of systematic undercounting of certain minority populations in mortality records. The Methodological Notes to Burd-Sharps and Lewis (2010), http://www.measureofamerica.org/file/A_Century_Apart_-_Methodological_Notes.pdf, explain how AHDP calculations address this issue.

overall health results as well. Lack of health insurance in the United States directly influences age at death. In the lower forty-eight states, 43 percent of the variations in age at death can be explained by the percentage of a state's population without health insurance (AHDP calculations). In addition, studies confirm that the uninsured also face agonizing choices between paying for health care and paying for other basic needs, such as food, heat, and even housing, are more likely to postpone treatment, which often results in more severe illness, and frequently do not fill prescriptions for medicine that, if taken, would reduce future health-care needs.

b. *Prevention and cure.* The United States spends about 95 percent of its health-care resources on medical research and treatment for existing conditions (Institute of Medicine, 2002). Yet disease prevention and early detection cost far less both in dollars and in terms of human suffering. Despite overwhelming evidence of its efficacy, preventive medicine continues to be shortchanged in a system that provides far greater incentives for treatment and research.

c. *Technology.* Innovative technologies have revolutionized the way health information is stored, shared, and used in many different industries. The U.S. health-care industry has been a notable laggard. Better use of information technologies, including digitized medical records, can improve safety and quality of care while reducing costs. In addition, improved technology can help patients gain more control over their medical decisions.

d. *Firearms.* As will be discussed in the agency and empowerment section below, firearms contribute significantly to homicide and suicide, which are both among the top fifteen causes of death in the United States. today overall and higher for some racial/ethnic groups (U.S. Centers for Disease Control and Prevention, 2010). Homicide

is the fourth leading cause of death among African Americans and fifth among Latinos. Approximately out of every three homicides are committed with guns (U.S. Department of Justice, 2006), and the U.S. has the highest civilian-owned gun rate in the world (Small Arms Survey, 2007). For children aged five to fourteen, the homicide rate from firearms is seventeen times higher in the United States than in any other industrialized nation (Miller, 2002).

e. *Additional issues related to race and racial discrimination.* Physiological responses to perceived discrimination are seen as important factors in elevated cardiovascular disorder and diabetes among African Americans; language barriers exist for many Latinos in finding medical professionals.

7. *Conclusion*

This section has presented variations in life expectancy among the six countries under study and has also reviewed some of the major differences among them in factors that influence health outcomes, such as health expenditure and the structure of health financing, diet and lifestyle, the social determinants of health, and policy arrangements for healthcare coverage. The United States and Japan provide a useful contrast in health outcomes and in underlying factors influencing these outcomes. This comparison highlights the importance of adopting policies conducive to expanding access to affordable care, reducing greater societal inequalities, and making more effective use of new technologies for data management and existing procedures for preventative care for realizing better health outcomes.

B. Access to Knowledge

1. *Introduction*

This section surveys trends in expanding access to knowledge among the countries in question. It begins by noting the limitations of the standard HDI for making meaningful comparisons among developed countries. It then attempts to apply a methodology developed by the American Human Development Project to measure access to knowledge in the United States to the other countries under analysis. This extension replaces the literacy component of the Education Index of UNDP's HDI with degree attainment, and broadens the definition of the standard gross enrollment ratio. Applying the American HD Index methodology to the countries under analysis results in notable shifts in composite rankings compared to the standard HDI, and wide disparities in access to knowledge among highly developed countries.

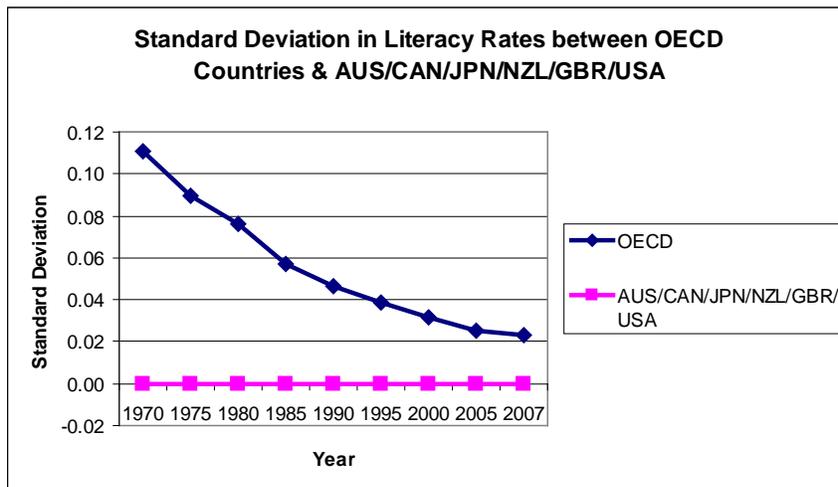
The section then explores whether the central contribution of the American HD Index in access to knowledge—replacing adult literacy with adult attainment—maximizes validity and reliability compared to other alternatives. In addition to enrollment and attainment, measuring educational *achievement*, namely through Programme for International Student Assessment (PISA) test scores and functional literacy surveys, shows both promises and limitations. The section cautions, however, that the demands of access to education in the human development framework to some extent conflict with the values implied by achievement measures. The section turns from measures of aggregate performance to examine the distribution of access to knowledge in the countries in question. It compares trends in gender equality and social mobility. The section concludes with some policy implications.

2. *Replacing Literacy with Attainment*

Figure 1 shows the standard deviation of literacy rates of OECD countries plotted against the

standard deviation of literacy rates of Australia, Canada, Japan, New Zealand, the United Kingdom, and the United States, from 1970 to 2007. While variance in literacy rates persisted among OECD countries overall in 1970, that gap has closed in the intervening years, and the countries under consideration in this paper had already reached near-universal literacy by 1970.

Figure 1: Standard Deviation in Literacy Rates between OECD Countries and Subjects of Analysis

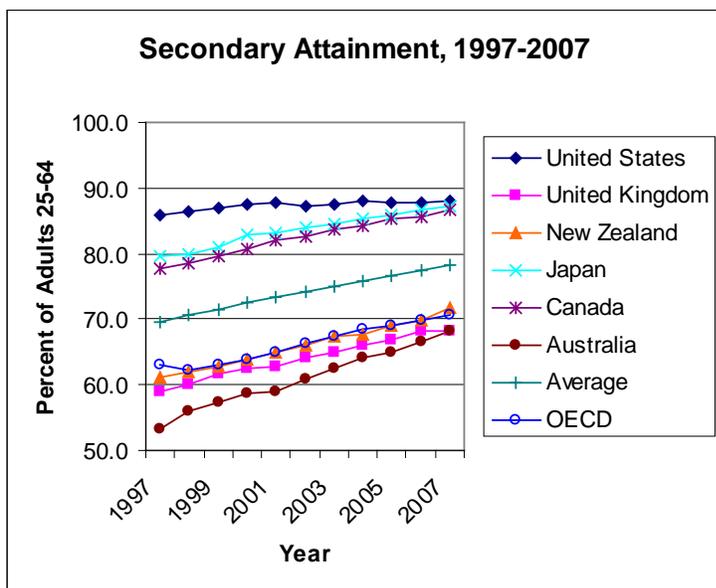


Source: Gray-Purser HDI Trends Dataset v1.0 Nov. 2009; Table "1970 - 2005 GP" used for data 1970-2005, Table "2007 GP" used for 2007 data. *Note: Gray-Purser uses Czechoslovakia instead of the Czech Republic and Slovakia, even after the separation.

In light of the relative lack of variance in literacy rates within and among developed countries, the American Human Development Project sought to replace the literacy component of the HDI with a more demanding indicator focusing on adult educational attainment. Educational attainment within the United States varies widely, and an examination of attainment trends among OECD countries shows significant disparities in the distribution of educational degrees.

Figure 2 plots the percent of adults aged 25 to 64 with at least a secondary education for the six countries in question against the OECD average, for the years 1997-2007.

Figure 2: Secondary Attainment, 1997-2007



Source: OECD (2009), *Education at Glance 2009: OECD Indicators*, Table A1.4, “Trends in educational attainment: 25-64 year-old population (1997-2007),” updated 29 Sept. 2009. *Note: Data collection methods changed in Japan in 2001, resulting in severe over-reporting of secondary attainment. Secondary attainment has been estimated using the growth rate for the years 1997-2001.

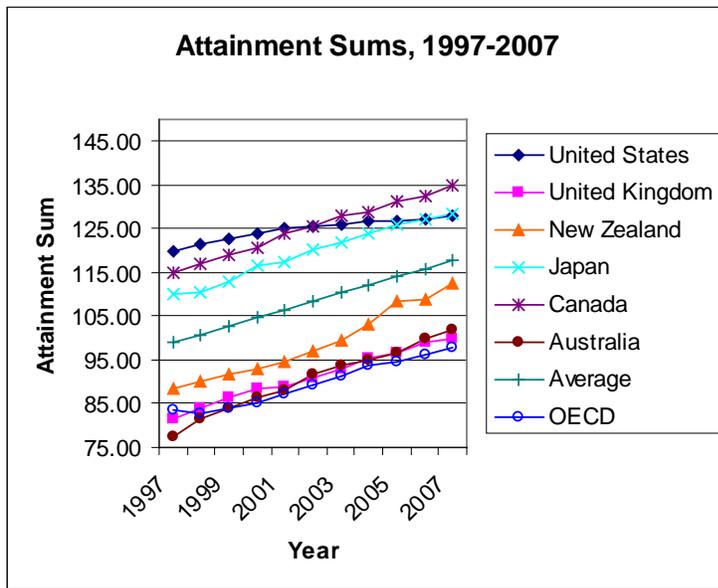
From a policy perspective, arguably what matters most in educational attainment is not current rankings but growth rate. If the attainment levels of adults rises from year to year, it means that each successive cohort is attaining a higher level of education than the one before it. Indeed, Australian officials have taken pains to point out that despite a low starting point and poor relative rankings in overall attainment, attainment among Australia’s younger cohorts outpaces the United Kingdom and the OECD average (Tunny, 2006). Over the course of a decade, the data show that most countries experienced a gain of around 10 percentage points, or a growth rate of one percent per year. This suggests comparable *policy performance* in attainment, though the horizon for comparable attainment *outcomes* lies at least a decade out, if current trends continue. The major exception to the growth trend is the United States, whose secondary attainment has remained relatively static, despite occupying the first ranking. The coming years will show whether Canada and Japan can displace the United States at the top, or whether the United States’ apparent leveling off under 90 percent represents an upper bound for attainment in a developed country.

3. *Tertiary Educational Attainment*

The attainment of secondary education in a developed country is arguably the most crucial benchmark for access to knowledge and the possibility of a decent standard of living. In most cases it is the basis of a career for any occupation beyond menial labor and thus an important building block for expanding capabilities (OECD *Education Today*, 2009). But secondary education alone fails to show the entire picture in a developed country, where people seek to further expand their capabilities with advanced learning. That the accumulation of educational degrees corresponds to marked increases in productivity and earning power in the labor market is well-established (Ashenfelter and Rose, 2000; OECD *Education at a Glance*, 2009: Indicator 7), and recent research demonstrates that increased educational attainment correlates powerfully with increases in life span as well (Meara, Richards, and Culter, 2008).

The American HD Index therefore includes not only secondary school attainment, but also bachelors and advanced/professional degrees. It creates a composite “attainment sum” that combines the percent of an adult population with secondary school degrees with the percent having attained university and advanced degrees. The sums mean little on their own, but they can be useful for the sake of comparison. Despite historically rising rates of tertiary achievement, the distribution of tertiary achievement in the United States continues to vary widely. The trajectory of higher education across the OECD tells a similar story: meteoric rises in tertiary enrollment in the past decades have run up against disparities in growth rates among countries (OECD *Education Today*, 2009: 40). Figure 3 plots educational attainment sums for the selected countries and the OECD overall.

Figure 3: Attainment Sums, 1997-2007



Source: OECD (2009a), *Education at Glance 2009: OECD Indicators*, Table A1.4, "Trends in educational attainment: 25-64 year-old population (1997-2007)," updated 29 Sept. 2009. *Note: Data collection methods changed in Japan in 2001, resulting in severe over-reporting of secondary attainment. Secondary attainment has been estimated using the growth rate for the years 1997-2001.

Graphical analysis shows that the addition of tertiary attainment bolsters the standings of the United Kingdom, Australia, and New Zealand relative to the OECD average, which they either track or fall below in secondary attainment. Canada exceeds the United States based on the strength of its tertiary educational attainment, and Japan may not be far behind.⁸ One potential driver of higher tertiary attainment may be national expenditure. The United States and Canada spend a higher percentage of GDP on tertiary education than all other OECD countries (2.9 percent and 2.7 percent, respectively), while the United Kingdom spends the lowest proportion (1.1 percent) among its peers here. Australia and New Zealand spend just above the OECD average, but Japan achieves high attainment while constraining spending at similar levels (1.5 percent) (OECD *Education at a Glance*, 2009: Table B2.1). Private investment in the United States and Japan accounts for twice as much spending on tertiary education as public investment does, while the opposite is true in Canada, the United Kingdom, and New Zealand, and Australia splits the difference (OECD *Education at a Glance*, 2009: Table B2.4). Thus, while some cross-

⁸ Due to the indeterminacy of the extrapolations.

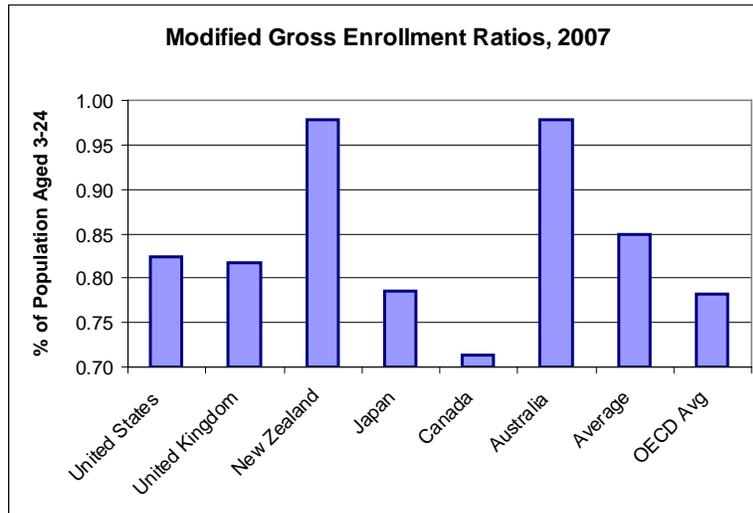
national variation in tertiary attainment can surely be explained by differential spending patterns, other differences, from population composition to labor market demands to institutional differences, may play strong roles.

4. *Including Pre-primary Education in Gross Enrollment Ratios (GER)*

The standard HDI constrains the gross enrollment ratio to primary through tertiary education. Yet free and compulsory primary and secondary education in developed countries means that the vast majority of children ages six to 16 are in school. The American HD Index moves to include pre-primary education in the mix. The importance of pre-primary education for expanding capabilities is well-established (see, e.g., Young, 1996). Among other things, pre-primary education is associated with higher gains in secondary achievement, and can help mitigate intergenerational effects of parental educational attainment (OECD *Economic Policy Reforms*, 2010: 183). Conversely, lack of accessible pre-primary education accentuates family resource disparities, puts strains on parents' participation in the labor market (particularly women), and sets children back from their peers once they reach primary school (OECD, *Education Today*, 2009: 69). Among developed countries, disparities in enrollment in pre-primary education are more pronounced than in primary and secondary education. Indeed, while free pre-primary education enjoys strong legal support throughout Europe, that is not the case among most non-European OECD countries (OECD *Education Today*, 2009: 11). In 2007, the percent of the population aged three to four enrolled in the countries in question ranged from 32.2 percent in Australia and 49.8 percent in the United States to 84.4 percent in Japan, 89.9 percent in the United Kingdom, and 90.1 percent in New Zealand (OECD *Education at a Glance*, 2009: Table C1.1).

Figure 4 presents modified gross enrollment ratios—taking pre-primary enrollment into account—for 2007, using data from OECD.⁹

Figure 4: Modified Gross Enrollment Ratios, 1997



Source: OECD Stat Extracts, "Total population by sex and age" ages 3-24, and "Students enrolled by age" (all ages), 2007, extracted 22 January 2010. *Note: 2004 used as reference year for Canada (missing data).

The rankings of the countries in question on gross enrollment more or less flip compared to attainment: while Australia, New Zealand, and the United Kingdom occupy the three bottom ranks on attainment sums, they fare much better on enrollment, and handily displace Japan, which falls towards the bottom of the pack. Nevertheless, the steady overall growth in access to knowledge among the countries in question during this period as measured by attainment (see Figure 3) is not bolstered by progress in enrollment. OECD countries overall saw a net reduction in gross enrollment during this period, inaugurated by a large fall between 2002 and 2003.¹⁰ Data reliability and availability prohibit drawing conclusions about enrollment trends in the United Kingdom and Canada. Since 2002, Japan and New Zealand have seen steady but moderate gains

⁹ An apparent drop in upper secondary enrollment numbers in the United Kingdom between 2005 and 2006 is the result of new reporting methods (personal email communication with OECD, 18 February 2010). Along with the lack of available data on enrollment for Canada, this revelation scuttled the attempts of a previous draft of this paper to detail trends in gross enrollment over time.

¹⁰ Cf. OECD Stat Extracts, "Total population by sex and age" ages 3-24, and "Students enrolled by age" (all ages), 2002-2007.

in enrollment while the United States remained static and Australia declined.

Why do the data on enrollment seem to tell such a different story from the data on attainment? The lack of comparable historical data prevents definitive analysis. However, the disparity suggests at least two possible hypotheses. First, an inverse relationship between attainment and enrollment is possible if a country's focus on one aspect of access to knowledge (whether through education policy or through political or civic culture) results in less attention paid to the other. A second and more likely possibility suggests a natural time-lag between these two variables. That is, since attainment measures the status of adults, many of whom will have received their degrees far in the past, and enrollment focuses more on children and young adults, the two measurements may have little to say to each other directly. In this sense, the modified Education Index within the American HD Index is intended to balance the present success or failure of policy to provide access to knowledge, as captured by present gross enrollment of the school-aged population, against the cumulative historical effects of previous policies and trends, as captured by the attainment of adults.

Figure 5 plots the modified Education Index, which replaces literacy with attainment and modifies the definition of gross enrollment, for 2007.¹¹ Figure 6 plots the standard Education

¹¹ The American HD Index calculates a modified Education Index using attainment sums and modified gross enrollment ratios. The Attainment Index is calculated as follows:

$$\text{Educational Attainment Index}_i = ((EAS_i - EAS_{min}) / (EAS_{max} - EAS_{min}))$$

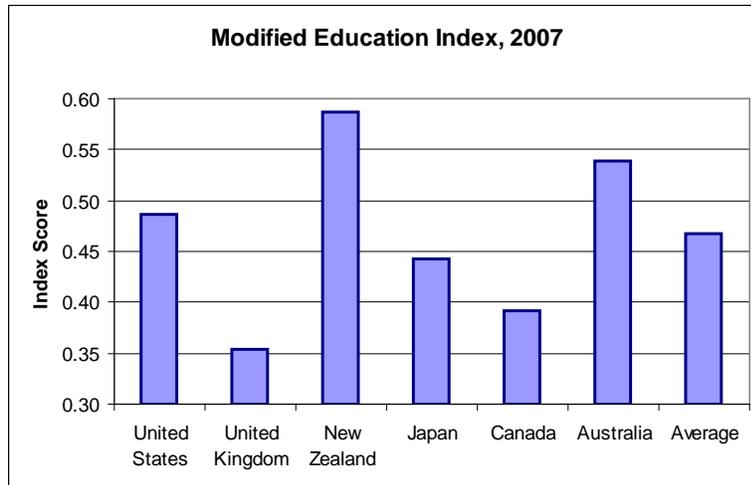
where EAS_i is the Education Attainment Sum for unit i and EAS_{min} and EAS_{max} are the goalposts. These have been set at .5 and 2.0.

The American HD Index Enrollment Index is based on a gross enrollment calculation which takes into account the total number of students enrolled in school (of any age at any level) divided by the total school-aged population of 3 to 24 year-olds. Therefore:

$$\text{Gross Enrollment Ratio}_i = ENR_i / P_{3to24i}$$

Index for the same year.

Figure 5: Modified Education Index, 2007



Source: Calculated from OECD Education at Glance 2009, Table A1.4, "Trends in educational attainment: 25-64 year-old population (1997-2007)," updated 29 Sept. 2009, and OECD Stat Extracts, "Total population by sex and age" ages 3-24, and "Students enrolled by age" (all ages), extracted 22 January 2010. *Note: 2004 used as reference year for Canada enrollment data; secondary attainment has been estimated for Japan using the growth rate for the years 1997-2001.

where ENR_i is the population of any age enrolled in school at any level and P_{to24i} is the population between the ages of 3 and 24. The Enrollment Index is then calculated:

$$\text{Enrollment Index}_i = ((GER_i - GER_{min}) / (GER_{max} - GER_{min}))$$

where GER_i is the Education Enrollment Ratio for unit i and GER_{max} and GER_{min} are the goalposts.

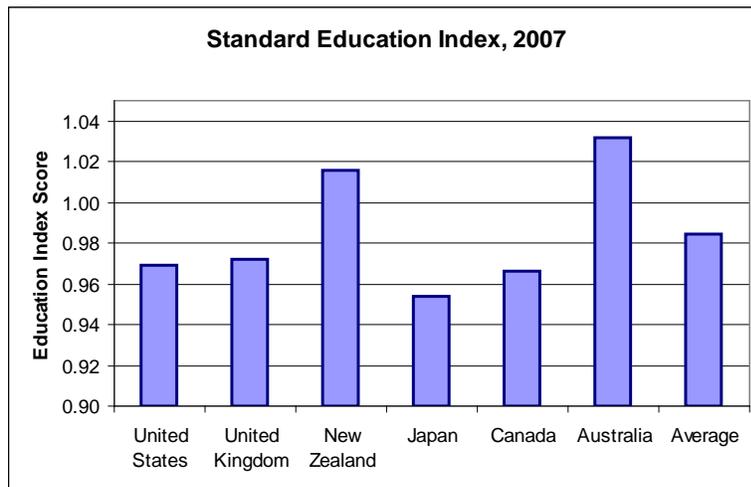
These have been set at 70% and 100%. If and when Gross Enrollment Ratios exceed 100%, as can happen especially when large numbers of older students enroll, enrollment is top-coded, or capped, at 100% for the purposes of calculating the Enrollment Index.

Finally, these two components are combined into an Education Index. In order to reflect the relative ease of enrolling students in school compared to getting students through a meaningful course of education (signified by the attainment of degrees), we apply a two-thirds weight to the Attainment Index and a one-third weight to the Enrollment Index when calculating the final Education Index:

$$\text{Education Index}_i = (2/3)(EAI_i) + (1/3)(EI_i)$$

where EAI_i is the Educational Attainment Index and EI_i is the Enrollment Index.

Figure 6: Standard Education Index, 2007



Source: Gray-Purser HDI Trends Dataset v1.0 Nov. 2009, Table "2007 GP."

The clearest benefit of a modified Education Index is the possibility of a wider range among scores. Generally speaking, the wider the range of comparison, the more depth and detail analysis may plumb. And indeed, among the countries surveyed here the range is about three times as wide as for the standard Education Index. More interesting, perhaps, is the difference and variation in rankings that result from the modified Education Index. In the standard Education Index, Australia and New Zealand have enjoyed unrivaled dominance over the past few years, while in the modified Education Index the space at the top appears more crowded. The United States moves into third place, while Japan pushes ahead of Canada, and the United Kingdom falls to the bottom.

It goes without saying that replacing the standard Education Index with the modified Education Index would result in shifts in overall HDI scores for the countries in question. For the reasons presented here, new scores that take alternative variables into account would more accurately reflect the range of progress in educational development in these countries. A shift to include attainment and pre-primary enrollment would move beyond literacy to put more emphasis on a substantive and life-long education, as well as the development of non-cognitive social skills,

clear catalysts for expanding capabilities in developed countries.

5. *The Possibility of an Achievement Index*

One potential shortcoming of the modified Education Index compared to the standard Education Index stems from the fact that despite being tied to a local language, literacy is based on firm, impartial standard, whereas attainment is not only dependent on the structures of diverse national (and regional) educational systems, but the standards for graduation vary widely and change frequently. The International Standard Classification of Education classifies education programs broadly according to certain dimensions they share in common, but it does not create guidelines for curriculum or achievement. Countries intent on competing on the modified Education Index could, in theory, relax local standards for curriculum mastery in order to score higher on the Attainment Index. (In theory, countries could also influence their enrollment scores by turning schools into amusement parks.) As much as they expand the parameters of the access to knowledge component of human development, therefore, the modifications to the Education Index proposed by the American Human Development Project seem to value the quantity of education to the exclusion of its quality.

In the absence of firm international education standards, a potential correction to this shortcoming would be the introduction of a measure of educational achievement. Beginning in 2000 and every three years since, the Programme for International Student Assessment (PISA) has conducted standardized tests in a growing number of participating countries. The 2006 PISA results show little variation among the countries under analysis (with the United States excepted). Thirteen percent of students in each country qualify as top performers in science, and the country average score ranges from 515 to 532 points. This is true for all except the United

States, which is home to nine percent of top performers in science (the OECD average), and achieves a country average score of 489 points, below the OECD average of 500 points and just above the Slovak Republic and Lithuania. (The United States also performed below Azerbaijan on the mathematics portion of the test [OECD Education at a Glance, 2009: Table A4.1]). Canada has the lowest percentage of students scoring below proficiency (9.9 percent); followed by Japan (12.1 percent), Australia (12.8 percent), New Zealand (13.7 percent), and the United Kingdom (16.7 percent).¹² A full 24.4 percent of United States test takers could not demonstrate proficiency on the PISA science exam. Despite achievements in secondary enrollment and tertiary attainment, the quality of primary and secondary education in the United States has been under fire for the last three decades.¹³

In addition to the relatively low levels of variation in achievement scores among the countries in question (the United States excepted), testing different random samples of students in each country during each testing cycle creates margin of errors too large to be able to develop a reliable composite score and rank.¹⁴ Further complicating matters, at present there are no two years for which data exist for all of the six countries in the three areas that PISA tests. Still, one could envision an “Achievement Index” as a further component of the Education Index that was comprised of mean scores of achievement in reading, mathematics, and science, if not further disaggregated to reward countries for progress among each achievement percentile.

Functional literacy could provide a simpler alternative component of an Achievement Index. As

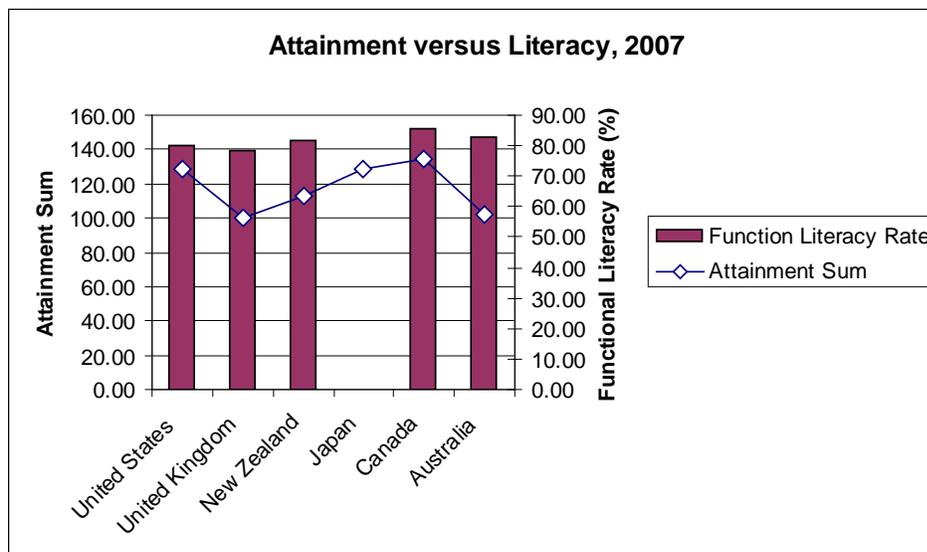
¹² OECD, PISA2006, Fig. 2.11a.

¹³ “A Nation at Risk: The Imperative for Educational Reform,” a 1983 report by a national commission, is widely credited with inaugurating spirited debate and experimentation in U.S. education quality. The report is available at <http://www2.ed.gov/pubs/NatAtRisk/index.html>.

¹⁴ “FAQ: OECD PISA,” OECD Programme for International Student Assessment, <http://www.pisa.oecd.org/dataoecd/10/60/38248407.pdf>.

an objective standards-based measurement, like PISA scores, functional literacy is a better proxy for mastery of knowledge than educational attainment. Figure 7 shows, in addition, that functional literacy and educational attainment are not interchangeable: some countries appear to do a better job at providing their citizens the concrete skills necessary to function in a literate environment, even while others provide for more opportunities in advancing along the attainment track.

Figure 7: Attainment versus Literacy, 2007



Source: Figure 3, above, and Human Development Report 2009, Table I-2: “Human and income poverty: OECD countries”: http://hdr.undp.org/en/media/HDR_2009_Tables_rev.xls

Functional literacy shares the same drawback as PISA scores in the low levels of variation among the countries under analysis. Like PISA, functional literacy also requires large-scale national surveys and complex evaluative procedures that make it difficult to calculate data on a yearly basis. The Adult Literacy and Life Skills Survey (ALLS) reports results only every three years, and country coverage varies (OECD and Statistics Canada, 2005).

In spite of the limitations of educational attainment as a proxy for access to knowledge, it is recalled that the theoretical underpinnings of human development call for *access to* knowledge rather than simply *knowledge*. Access to knowledge sidesteps the debate over nature versus

nurture (a preoccupation of education and social science research in the 1990s),¹⁵ to which achievement measures are inherently susceptible. For this reason, measurements of “access,” such as attainment, may ultimately serve as more valid proxies for the education index in developed countries.

6. *Disparities within Countries*

One measure of equality in access to knowledge is educational mobility, the extent to which students’ socioeconomic background determines their educational outcomes. Unfortunately, analysis of educational mobility for the countries in question has only been performed using PISA scores, rather than attainment, as the dependent variable. As previously mentioned, models of educational achievement typically cannot separate out the influence of confounders like innate ability. Nevertheless, Table 12 shows that the socioeconomic background of a student’s parents account for a large part of student performance on the PISA science test.

When cross-country variations in socioeconomic backgrounds are taken into account, an improvement of one standard deviation on PISA’s socioeconomic background index for a student from the United States results in a 63-point increase. New Zealand and Great Britain show similar levels of influence, while the effect is more moderate in Australia and significantly less in Canada.

Despite the large influence of parental background on student achievement throughout OECD countries, the resources available to the student’s school appear to matter less among English-speaking countries than among countries of continental Europe. An improvement of one standard

¹⁵ The point being that access to education is less susceptible to endogenous factors than educational achievement might be. Access arguably refers to the state’s provision of resources, while achievement also incorporates the individual’s socioeconomic background and innate abilities. For background on the bell curve debates of the 1990s, see, e.g., Jacoby and Glaberman (1995).

deviation on PISA's socioeconomic background index for the school—rather than the individual—results in extremely high shifts in PISA science scores for the OECD countries of continental Europe, topped by Germany at 77.1 points (OECD *Economic Policy Reforms*, 2010: Fig. 5.4). The average for English-speaking countries (including Ireland), however, is only 27.3 points (8.2 points for Nordic countries). One explanation for the regional differences in the “school effect” is regional differences in the structure of the educational system. While continental European countries feature a highly stratified educational system (i.e., widespread use of “tracking” students into different tiers), English-speaking countries make less use of tracking instruments (Pfeffer, 2007).

Another way to examine the distribution of access to education is to look at gender disparities. Overall OECD trends that show women attaining higher education than men, but this picture is somewhat mixed among the countries in question. Canada, New Zealand, and the United States reflect the general OECD trend—women show higher rates of attainment at all levels. In Australia and the United Kingdom, higher attainment rates for women in tertiary education are more or less offset by the number of women who have not graduated from secondary education. Gender disparities continue to permeate higher education in Japan. More than twice as many men as women have attained a tertiary Type A education (four-year undergraduate diploma), while twice as many women as men have attained a tertiary Type B education in one of Japan's junior colleges (OECD *Education at a Glance*, 2009: Tables A1.1b, A1.1c). While current enrollment and graduation rates in Australia and the United Kingdom suggest that these countries will soon overcome the attainment gap, gender-based disparities persist today in enrollment and graduation patterns in Japan (OECD *Education at a Glance*, 2009: Table A2.4, chart A3.1).

Across the OECD, men performed significantly better on the science and math components of the 2006 PISA exam. Among the countries in question, the gender gap is widest in Japan, smallest in the United States, and within the margin of error in New Zealand. On the reading component of the test, however, women perform significantly better than men in each country that participated (reading data for the United States is not available). Women's advantage in reading was strongest in New Zealand and weakest in Japan (OECD, *Education at a Glance*, 2009: Table A4.1b).

7. *Conclusions*

In order for the developed countries under analysis here to improve on the access to knowledge, one clear avenue for policy includes universalizing pre-primary education in the countries that do not already have it—namely, Australia and the United States. Other clear avenues include efforts to reduce drop-out rates in secondary education and broaden access to tertiary education. Each country could benefit from efforts to decouple educational access from parental background. The United States has the furthest to go on educational achievement—time will tell whether its current experiments toward this end will register in the data. Japan has the furthest to go on closing the gender gap. The disparities in female enrollment suggest a persistent failure in providing equal opportunities to half of the country's population.

C. A Decent Standard of Living

GDP has merits—it's the most widely-used measure of economic activity and thus a reliable, frequently updated, standardized indicator that can be very useful to compare market activity from one country to the next. In the HDI, it serves as a proxy for a decent standard of living (although users are often reminded that there is no direct link between GDP and the real

freedoms people enjoy—it is a means to an end). However, as has been widely explored, most recently in the “Report by the Commission on the Measurement of Economic Performance and Social Progress,” commissioned by French President Sarkozy, GDP has certain weaknesses when used alone as a gauge for human progress. The experience of the recent recession, during which, in the United States, GDP started growing again while home foreclosure rates were also still growing and unemployment was at an all-time high, has helped to illustrate this further. Other weaknesses of GDP as a measure of broader well-being are that it does not consider other critical factors that affect standard of living, such as assessments of sustainability or services households produce for themselves and arguably for society at large such as raising children and caring for elderly relatives.

In order to better understand the kind of resources ordinary people have to work with in these six countries and to assess the distribution of resources, economic status, and material well-being, we will explore a set of complementary measures in three areas: income, looking at earnings, wages, and employment; wealth, looking at net worth and wealth inequality; and the question of absolute versus relative deprivation.

1. Income

Reliable cross-country trend data on personal or household income are difficult to find. Using OECDStat’s income distribution inequality dataset, we were able to calculate trend data since 1990 in median personal income in purchasing power parity dollars (see Table 13). New Zealand is one of few OECD countries that experienced a decline in incomes in the late ‘80s into the mid ‘90s. A paper about income stagnation by Reddy and Minoiu (2005) found that New Zealand was one of only four OECD countries to experience periods of real income stagnation in the

period 1960-2001 (the other countries were Greece, Iceland, and Switzerland). They attribute this largely to their dependence on primary commodities; indeed the paper, which focuses largely on developing countries, found that countries that had stagnation are heavily represented among countries dependent on primary commodities and that this dependence tended to make stagnation spells longer and more intense.

In the United States, income grew slowly but steadily during the first part of this period, but began to stagnate in the period 2000 to the mid-2000's. While personal income stagnation can of course come from a complex variety of factors, the stagnation of wages is surely one important factor. As will be discussed further below, the United States is the only one of these six countries where the real minimum wage declined in the period 2000 to 2008.

Japan also experienced a decline in median personal incomes. Available data (Table 13) show this decline over the decade starting from the mid 1990s, but it likely began earlier as economic activity began to stagnate in Japan in the early 1990s due in part to the collapse of stock prices, and according to some measures, has never quite fully recovered. Employment insecurity, weak consumer confidence and collapsing asset values have characterized the 1990s in Japan, and these trends were exacerbated by the slowing of the global economy in 2000-2001. Median incomes have been a casualty of these shifts, with stagnant and deteriorating wages and increases in non-regular employment (Fukawa, 2005).

Looking at income measures today, as Table 14 illustrates, using the most recent data available, the United States has the highest earned income in this set of countries, with males earning about US\$57,000 and females earning \$35,000 in 2007. New Zealand is at the bottom, with comparable annual earnings of about \$32,000 for males and \$22,000 for females (in U.S. purchasing power parity dollars). The remaining four countries fall in the region of low to mid

\$40,000 for males and \$28,000 for females, except for Japan, where male earnings are comparable to the others but female earnings are less than half those of Japanese males. These data, taken from U.N. Human Development Report 2009, are based on a combination of nonagricultural wages in these countries and earnings of the economically active population.

Several areas deserve special review for understanding the causes and effects of variations in income: gender, employment, employment protection, and child poverty.

Gender and Economic Opportunity: While the category “female” is of course not one monolithic group, and one would need to undertake deeper analysis among women of different ethnic and racial groups, different age groups, among native-born and foreign-born women and other groups to really understand the different economic opportunities by gender in these countries, Table 14 does contain some data that help to explore the status of women overall. In terms of civilian participation in the labor force, Japan has the lowest rate at 62 percent, and the remaining countries are all in the 69-to-74 percent range. In Canada, the highest, nearly three out of four women are in the labor force (74.4 percent). In terms of a gender earnings gap, among women age 30-44, the gap is lowest in the United States but the five countries for which data are available all fall within a relatively narrow range, with women earning from 61 to 66 percent of male earnings. The earnings gap for women is higher in all five countries for women in the 55 to 64 year range than among younger women—ranging from women earning just over half of male earnings in Canada to 62 percent in the United Kingdom.

Employment: Research shows that labor force participation is important for reasons that go well beyond earning a paycheck; employment matters for social inclusion, physical health, and psychological well-being. Losing a job undermines overall well-being as it represents not just a loss of income, but often also a loss of identity, status, structure, and social support.

The countries in this study, while all being part of the group of advanced industrialized nations, have very different characteristics in the labor market, different levels of employment protection and of different degrees of tolerance for long-term hardship. As is evident in Table 14, unemployment rates in 2007 in all six countries were relatively low, from 3.7 percent of all workers in 2007 in New Zealand to 6 percent in Canada, as compared with the OECD average of 5.8 percent. Unemployment rose slightly in 2008 in four of the six countries (and fell a bit in Australia), but rose significantly in the United States, to 5.8 percent, as the economic downturn began to have a chilling effect on unemployment. 2009 saw the full effects of the downturn in all six countries, with a dramatic rise in the United States to nearly 10 percent by the end of 2009.

One aspect of unemployment that has a very strong bearing on inclusion in society is long-term unemployment. Unemployment for one year or longer is particularly important because relatively longer periods of unemployment are seen as contributors, in many cases, to increasing isolation and loss of professional standing and qualifications. It leaves individuals and families increasingly vulnerable to other social and economic problems. As is evident in Table 14, rates range from a low of .2 percent of the labor force experiencing over 12 months of unemployment in a 12 month period in New Zealand, to 1.2 percent in Japan and 1.3 percent in the United Kingdom.

For youth unemployment, we use the indicator of 15-19 year olds who were neither in school nor employed, from OECD's *Education at a Glance 2009*. The range here varies from the United States and Canada, where about 6 percent of youth were "unattached" to either school or jobs in 2005, to a rate that is two-thirds greater in the United Kingdom. While more recent figures on youth unemployment are not yet available for all countries, anecdotal evidence shows that youth have been particularly hard hit by the current recession. Some of the factors that affect youth

employment include the ability of the education system to provide a productive transition to the world of work, labor policies such as unemployment benefits, and demographic factors such as the relative size of the youth population (though this third factor is not straightforward in interpretation).

Employment Protection: Structures and regulations for employment protection are critical to enable individuals, both alone and collectively, to prevent unjust treatment and to act to protect their livelihoods. The OECD has developed a synthetic indicator in order to assess the legal structure in place for the establishment of fair dispute resolution procedures and rules for dismissal. In terms of employment protection regulations, on a scale from 0 (least stringent) to 6 (most restrictive), all six countries have extremely lax rules regarding the strictness of regulation on dismissals and the use of temporary contracts. The United States has the least stringent regulations, with the countries at the more restrictive end of the spectrum, Japan and New Zealand, only at 1.4 out of 6 on the scale. However, caution must be used in interpreting international labor indicators in light of a culture that can moderate their effect. For example, the Japanese business culture provides workers with employment for life and, despite low unionization rates, employment protection is enforced by a traditional “guild” structure that is not captured in most international labor indicators (Rueda and Pontusson, 2000; Gottschalk and Smeeding, 1997).

Wages: To what extent do wage laws and the ratio of minimum wage to average wages affect incomes and income inequality in this set of countries? The two countries with the highest incomes, the United States and Japan, also have the lowest real minimum wage. In the period from 2000 to 2008 (Table 14, Columns 8 and 9), the real value of the minimum wage grew in every country but the United States. In the United Kingdom and New Zealand, it grew

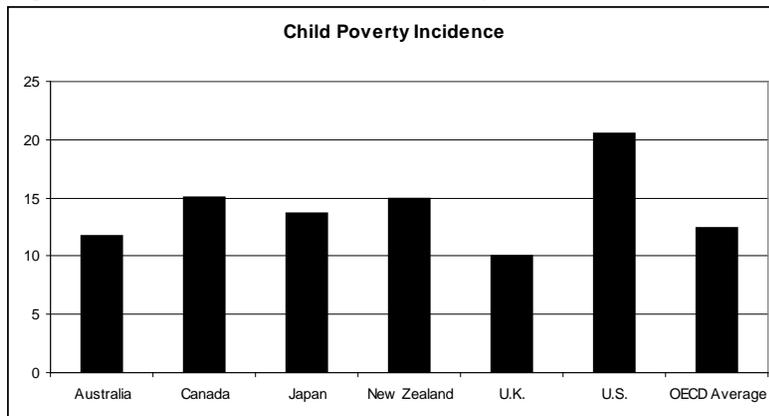
considerably. In the United States, the real value of the minimum wage has decreased by approximately 40 percent in the past four decades (Burd-Sharps et al., 2008), and today the minimum wage is one-quarter of mean wages of all full-time workers (see Table 14) . Even with the 2007 increase in the minimum wage set by the U.S. Congress, full-time minimum wage work is not sufficient to lift a family of four above the federal poverty threshold if only one member of the family is working. In Japan, the minimum wage is less than one-third of mean wages, whereas in New Zealand it is half. This finding contrasts somewhat with the commonly-held belief that Japan has relatively high levels of horizontal wage equality. One interesting aspect of Japanese wages as it relates to an aging population is that elderly Japanese often live with their children and work until a very advanced age, thus reducing poverty among the elderly and inequality among different age groups (Fukawa, 2005).

Child poverty: The six countries featured in this study are fortunate enough to be spared absolute deprivation on any widespread level. But this does not mean that these problems do not exist in these countries in some form. Indeed levels of well-being comparable to parts of the developing world can exist for some groups in these countries alongside groups that are among the best-off on the planet. In developed countries, poverty, hunger, homelessness, insufficient safety nets, and threats to personal security are all problems that hinder the achievement of higher levels of human development.

These deprivations can take many forms. Child poverty, measured here as the percentage of children ages birth to 17 who live in households with incomes below 50 percent of the median, is an especially relevant indicator as it measures the extent to which the material needs of the next generation are being met during childhood—a critical period in their development. As Figure 8 shows, there is a wide range in child poverty rates among the six countries in this study, although

all but Australia and the United Kingdom are above the average for all 30 OECD countries. Child poverty in the United States, at over 20 percent of all children and adolescents, is particularly alarming.

Figure 8: Incidence of Child Poverty, 2005



Source: OECD StatsExtract (2010) Data are for 2005

Hunger and homelessness are also persistent issues in affluent countries, even if their incidence may be considerably less than in other parts of the world. Comparative international statistics for developed countries on hunger and homelessness are difficult to come by, but data from the United States provide some interesting insights. According to the U.S. Department of Agriculture, over 14% of American households were food insecure for some part of the year in 2008, meaning that they experienced challenges in acquiring or accessing safe and nutritious foods in sufficient quantities (Nord et al., 2009). According to the National Alliance to End Homelessness, there were 671,859 homeless individuals in the United States in 2007. The concentration of the homeless ranged from about 5 per 10,000 people in Mississippi to 90 per 10,000 in Washington, D.C. (National Alliance to End Homelessness, 2010).

2. *Wealth*

While income is critical for life's necessities, wealth, also called net worth, provides financial security and opportunity. Wealth, technically defined as the value of physical and financial assets less liabilities, serves different functions than income. It can allow families to keep their homes and maintain their standards of living in the event of job loss, natural disaster, divorce, death, or other unexpected events. It can be critical to the intergenerational transfer of advantage (or disadvantage) as it can enable parents to invest in the next generation—to contribute to a home, education or a new business venture. And finally, it can buy autonomy, influence, and power. On the other hand, asset poverty can mean that individuals or families are less able to face life's unpredictable challenges and to have the basic elements in place for economic security in the future.

Data on wealth, both nationally and across countries, have traditionally been harder to obtain than data on income, though that is gradually changing. The ability to take wealth into consideration when analyzing standard of living and human development is very important in high-income OECD countries because wealth in these countries is much more unequally distributed than income (Davies et al., 2006). As an indication of the concentration of the world's wealth in the richest countries, the 24 high-income OECD countries have 14.8 percent of the world's population, 53.6 percent of world GDP and 63.7 percent of world household wealth (Ibid.).

According to Table 7 taken from a paper on distribution of household wealth from UNU-WIDER (Davies et. al., 2006), the United States is the richest county among the high-income OECD countries included in the study, as compared with New Zealand, with the lowest net worth per

capita at \$56,000. The ratio of net worth per capita in these countries to personal disposable income per capita (based on 2000 household data) is as follows:

- Australia: 5 to 1
- Canada: 5 to 1
- Japan: 8 to 1
- New Zealand: 4.6 to 1
- UK: 7.6 to 1
- U.S.: 6 to 1

Using the same source, while the United States and United Kingdom have the highest overall net worth per capita in this group of countries, Japan has the most unequal ratio of wealth to disposable income, with the United Kingdom just behind. Looking at the distribution of this wealth within the population, we find (using 2000 data, which may have shifted somewhat in view of recent events), the wealth Ginis are as follows:

- US: .80
- Japan: .54
- UK: .70
- Canada: .66
- Australia: .62

A few other countries as a basis for comparison:

- China: .55
- India: .67
- Switzerland: .80

The United States has wealth inequality at the highest levels, whereas Japan has a relatively lower wealth Gini among developed countries. However, looking at national wealth is of limited use in any efforts to address asset building, as wealth disparities run strongly along gender and racial lines in most of these countries, as well as, in some cases, geographic lines. What sorts of policies can contribute to building assets? There are a number of strategies and levers for building assets: tax policy, removing barriers such as racism and discrimination, incentives for saving, financial literacy education, and others.

It is interesting at this point to consider the issue of social mobility in light of these wealth data. Using recent data from OECD (Table 14, Column 11), which look at intergenerational earnings elasticity scores, the most hospitable countries for social mobility in the OECD are the Nordic countries, Australia, and Canada, while the least socially mobile citizens are living in the United Kingdom, United States, and southern European countries. On this measure, we find that, for example, in Australia, 17 percent of the earnings advantage of high-earning fathers over low-earning fathers is passed on to their sons., whereas in the United Kingdom there is a far stronger link between sons' earning and those of their father—at 50 percent, and 47 percent in the United States. The United Kingdom has the highest level of social immobility among OECD countries, with Italy and the United States just below. While there is not space to discuss the findings further, this recent OECD research is very valuable in terms of understanding both the influence of parental background on wage persistence and student achievement as well as for looking at social and tax policies and how they shape the effect of parental background on the opportunities of the next generation.

3. *Absolute and Relative Deprivation*

In recent years, the concepts of positional goods and relative deprivation have begun to gain traction in the social sciences. A positional good is a commodity whose value depends upon its ranking. While a normal good is a commodity one desires more of as one's income grows, a positional good is a commodity one desires depending on its relationship to other goods and its distribution among one's peers. In this regard, healthcare could be considered a normal good: the more of it we can afford, the better. Those who lack a certain level of health care can be said to be experiencing absolute deprivation. Clothing, on the other hand, bears some elements of a positional good. In a society where everybody has some sort of clothing, many people strive to distinguish themselves by the type, quality, material, price, or brand of the clothes that they wear. Those unable to access the type of clothing deemed appropriate for their particular situation experience relative deprivation in comparison to those people who can dress themselves accordingly.

It can be difficult to separate "legitimate" relative deprivation from conspicuous consumption guided by little else than vanity, envy, or unrealistically expensive tastes. However, American behavioral economist Robert Frank has demonstrated that exogenous factors and rational choices can result in clear-cut cases of relative deprivation that do not hinge on status-seeking (Frank, 2007). One important example of how this works in the United States relates to education and home size. In the United States, local property taxes finance virtually all public primary and secondary education, and the quality of education depends in large part on the financial resources available to it. The rational choice for parents who desire to provide their children an above-average education (i.e., virtually all parents), is therefore to locate their family in a wealthy area. In most cases this requires purchasing a large, expensive house. This individually rational

decision leads to enormous social costs when large numbers of parents follow the same reasoning. It creates a bidding war among house sizes and prices, resulting in superfluous and unsustainable spending levels on housing, and widening gaps between those who can afford to make these investments in their children's education and those who cannot (Frank, 2007: 43-5).

Frank suggests that rising incomes—and their attendant consumption patterns—among the most well-off Americans create ripple effects upon those in the middle quartiles. Even as incomes for the middle class in the United States have stagnated for the past three decades, consumption has risen concertedly, and Frank proposes that this trend results from the exponential income gains enjoyed at the top of the ladder (Ibid.: 6-14). As a result of the rising consumption bar set by their affluent peers, Americans fight to keep up by working substantially longer hours, commuting further distances to work, and making an increasing amount of stressful sacrifices that erode not only subjective well-being, but even human security, as evidenced by low savings rates, for example (Ibid: 78-86). Moreover, these trends result from rational individual choices rather than envy of the neighbors or gratuitous conspicuousness (Ibid.: 87-94).

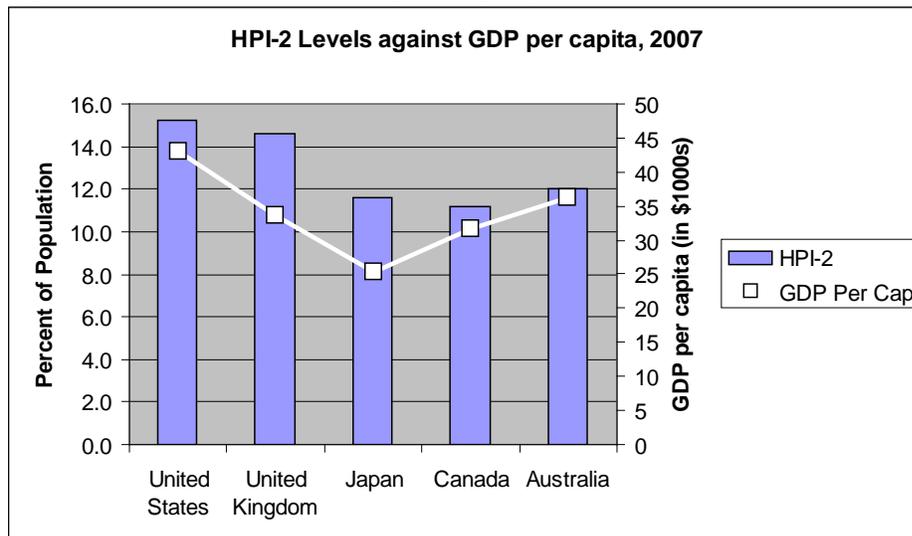
The economic principles of positional goods and relative deprivation apply in developing and developed countries alike. By definition, the intensity of the effect of relative deprivation depends more on factors like the breadth of the gap between the individual and the reference position, and the predominance of reference position, than the wealth of the country. This suggests the possibility that certain cases of relative deprivation in developed countries can cause the same losses in subjective well-being that those who suffer from absolute deprivation experience. Living on \$2 a day in a developing country where all of one's social group live on \$2 a day might be less distressing than earning the minimum wage in a country where all of one's social group work at investment banks. The Easterlin Paradox, named for the economist Richard

Easterlin, observes that rich residents of one country report higher subjective well-being than poor residents of the same country, but not necessarily higher than poor residents of another country. Among the robust findings in the research on subjective well-being, living in a developed nation increases well-being, but gains in income within developed nations do not necessarily increase perceived well-being (Diener and Biswas-Diener, 2002). One leading explanation is that income increases subjective well-being only to the extent that it allows people to meet their basic needs (Ibid.).

The implications for these observations are two-fold. First, absolute deprivation in a developed country may strike twice: it not only deprives a person of basic access to improving his or her condition, but also in a land of plenty, where one's putative neighbors indulge in unspeakable luxuries, absolute deprivation levels a more crushing psychological burden on those who experience it. Secondly, formidable aggregate scores on standard human development indices may mask tremendous inequalities, not only between the extremes, but also between the extremes and the means. These inequalities erode subjective well-being and restrain the equitable expansion of capabilities.

As a starting point for exploring these observations in context, consider Figure 6, which plots Human Poverty Index-2 rates available against GDP per capita for 2007.

Figure 9: HPI-2 versus GDP per capita, 2007



Sources: Human Development Report 2009, Table I-2: “Human and income poverty: OECD countries”; http://hdr.undp.org/en/media/HDR_2009_Tables_rev.xls; Gray-Purser HDI Trends Dataset v1.0 Nov. 2009, Table “2007 GP.”

While the United States continually demonstrates the highest GDP per capita within this group of countries, it also carries the highest percent of human poverty. This would suggest that the effects of relative deprivation on the bottom 15 percent of the population would be stronger in the United States than in a country with lower levels of income, such as Canada.

Inter-subjective evaluations of well-being are notoriously tricky, but one method that shows some promise takes consumption patterns, rather than income or reported levels of happiness, as the point of departure. A recent study by Björd Halleröd and colleagues (2006) analyzed consumption patterns in the United Kingdom, Finland, and Sweden to determine the extent of relative deprivation in each. They found that while the United Kingdom reports twice as much income poverty (and, for that matter, human poverty) as Finland and Sweden, Britons, Finns, and Swedes express comparable levels of relative deprivation in desiring to consume locally-valued commodities that they cannot afford. This research suggests that broader analyses of consumption patterns could yield valuable information about comparative rates of relative deprivation, bringing us closer to an understanding of the relationship between objective and

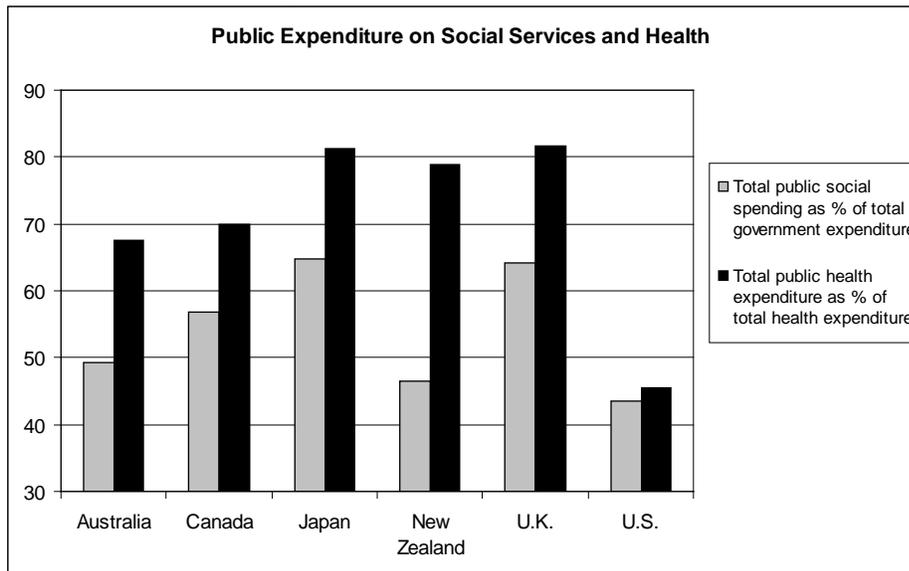
subjective measures of well-being and human development.

Previous HDRs have made attempts to incorporate proxies of absolute deprivation, such as the Human Poverty Index-2, and relative deprivation, such as the Gini coefficient. What follows is further exploration of the role of relative as well as absolute deprivation in an affluent-country context.

4. *Conclusion*

Social safety nets and social programs can provide or facilitate access to health services, child care, income support for low-income households, unemployment assistance, job training and employment opportunities, housing, and pensions among other goods. They can also aid in wealth creation. State involvement in these areas and the policy mechanisms implemented to address them vary widely among the six countries in this study. However, public spending on social services in general, and health services in particular, offer two useful proxies for the level of prioritization of safety nets and social services in these countries. As the figure below shows, social spending as a percentage of total government expenditure ranges from about 65 percent in the U.K. and Japan to 44 percent in the United States. Public health expenditure accounts for at least two-thirds of total health expenditures in every country except the United States, where private insurance and individuals shoulder the majority of the financial burden of health spending.

Figure 10: Public Expenditure on Social Services and Health



Sources: Social spending figures from OECD Stat Extracts (2010), data are for 2005; Health expenditure figures are from OECD Health Data (2009). Data are for 2007 except Japan (2006).

Getting a sense of whether or not a country or population is enjoying an adequate standard of living is difficult to achieve with just one indicator. GDP per capita is a popular proxy with the benefits of being both standardized and regularly updated. However, GDP is a measure of economic quantity and activity, not a measure of life quality nor of individual economic well-being, and it suffers from many logical inconsistencies as a proxy indicator for an adequate standard of living. Looking at other indicators, such as personal earnings, incomes, and wealth, especially when disaggregated by gender and by race and ethnicity, all give us a much more accurate picture of the kinds of economic resources that individuals have to expand their own capabilities and to mitigate the impacts of shocks such as natural disasters, unemployment, or chronic illness. Similarly, consideration of an adequate standard of living also necessitates a look at indicators of employment, unemployment, work-place protections and minimum wages as well as targeted deprivation indicators to help us understand the temporal aspects of unemployment and the age-specific structure of poverty.

II. KEY DIMENSIONS OF HUMAN DEVELOPMENT OUTSIDE THE HDI

A. Inequality

Since the early 1990s, various researchers have proposed approaches to better capturing inequality within the HDI. HDRO is furthering this conversation by commissioning additional work in this area for its 20th edition. From simpler inequality adjustments to more sophisticated association-sensitive inequality measures and other work, these innovations are helping find better ways to study and understand the impact of inequality on human development.

However, the experience of NHDRs that look at sub-national and group inequalities by creating disaggregated HDIs as well as our experience with the American HDR shows that this approach, coupled with careful interpretation and analysis, is also a powerful and efficient way to communicate information about inequalities in human development. A disaggregated HDI is conceptually straightforward and understandable to researchers, policy-makers, and the public. And the decomposability of the index permits easy unpacking of its three dimensions.

What follows are some examples of how disaggregated HDIs have been used in the global North to explore geographical, horizontal, and vertical inequalities. The HDI disaggregated by region is perhaps the best-known use of the HDI to address inequalities within a country. Kusago (2006), for example, has calculated HDI values for each of Japan's prefectures as part of a wider analysis into regional disparities in economic well-being, human development and life satisfaction in Japan and the correlations among these three measures. Basu and Basu (2005) have done similar analysis in Australia, calculating scores for each of Australia's eight states and territories for both the HDI and the Gender Development Index and exposing small but significant regional disparities in both measures among regions.

The HDI has also been used to some degree in the global North to illuminate horizontal inequalities among specific populations within countries. AHDP reports have made use of disaggregated federal and state-level data to calculate group-specific HDI scores that permit comparisons of disparities in HDI scores by gender, by race and ethnicity, and by both gender and race/ethnicity, at the national level and at the state level when sufficient data exist. This type of analysis lays bare major gaps in human development outcomes.

The work of the AHDP has drawn attention to some glaring inequalities within the United States. Examples include:

- **In race/ethnicity** at the national level, 50 years of human development progress separate Asian Americans, who as a group have the highest score on our modified HDI, from African Americans, who score the lowest (Burd-Sharps et al., 2008).
- **Looking at race-by-state comparisons**, a whole century of human development progress separates the worst-off from the best-off groups within the United States. Asian Americans in New Jersey, the group that scores the highest on the American HD Index, stand where the country as a whole will be fifty years from now if present trends continue. At the other end of the spectrum, Native Americans in South Dakota lag more than a half-century behind the country as a whole in terms of human development, as measured on this Index. New Jersey Asian Americans live, on average, over 23 years longer, are eleven times more likely to have a Master's degree, and earn \$35,610 more than South Dakota Native Americans, an earnings gap greater than the median earnings of the typical American worker (Burd-Sharps and Lewis, 2010).
- **Mississippi** has the lowest overall score out of all fifty states and Washington D.C.

However, at the county-level, whites in Hinds County have a level of human development comparable to that of top-ranked Connecticut today, while African Americans living in the Pike-Adams county group have a level of well-being comparable to the nation as a whole in 1960 (Burd-Sharps et al., 2009a).

- **In Louisiana**, another state with a low score on our HD Index, white residents of that state have an HD Index score comparable the nation as a whole in the late 1990s, while African Americans have a level of well-being comparable to that of the nation in the early 1970s. At the parish (county) level, median personal earnings for the worst-off whites were comparable to the median personal earnings of the best-off African Americans.

Another application of the HDI to gauge horizontal inequality has been pioneered by the Canadian agency of Indian and Northern Affairs. Using census data, Indian and Northern Affairs Canada has created a modified HDI that it uses to compare well-being between Native Canadians and the general population, further disaggregated by gender, in Canada's ten provinces. Like the AHDP HD Index, this analysis used indicators better suited to a developed-country context; these indicators differ from those used by UNDP in global HDI calculations. For example, upper-secondary completion was substituted for adult literacy, and adjusted average personal income data from the Census was used in place of GDP per capita. Using time-series data from the early 1980s to the early 2000s, this analysis revealed that wide disparities in well-being persist between the First Nations peoples of Canada and the rest of the population, although there is evidence that this gap is slowly narrowing over time (Indian and Northern Affairs Canada, 2004). Background research for this project showed that although HDI scores between women and men in the general population became more similar between 1981 and 2001, the gap

separating Native Canadian women and men widened over this period. This change was mostly attributable to quicker and larger gains in the realms of education and health among Native women, a situation that closely resembles that of Native Americans and Alaska Natives in the U.S. (Cooke et al., 2004).

Some of the same researchers from the Indian and Northern Affairs Canada study have also used their methodology to study gaps between Indigenous and non-Indigenous populations in Australia, Canada, New Zealand, and the United States between 1990 and 2000 (Cooke et al. 2007). They found that although gaps in HDI scores between Indigenous and non-Indigenous populations narrowed at least somewhat during the 1990s in North America and New Zealand, the HDI-gap in Australia actually grew. Comparing their results with the global HDI rankings published in the 2001 Human Development Report, the authors juxtaposed the rankings of the four countries in the study with where their Indigenous populations would place if they were included in the global rankings on their own. Australia, Canada, New Zealand and the United States all placed within the top 20 in the HDI rankings in 2001. Native Americans and Alaska Natives would have placed 30th, Native Canadians 32nd, New Zealand Maori 74th and Australian Aboriginal and Torres Straight Islanders 104th in the same rankings.

An intriguing application of the HDI to studying vertical inequalities in human development can be found in the work of Grimm et al. (2009), who have calculated HDI values for each quintile of the income distribution in eleven developed countries and twenty-one low- and middle-income countries. The authors concluded that substantial inequality in human development exists in all the countries they surveyed, particularly in the low- and middle-income countries, in which large disparities in health, education and income exist across the quintiles of the income distribution. However, even in the United States, the HDI score of the lowest income quintile

was comparable to the national HDI score of Mexico in the early 2000s, while the HDI score of the top quintile was higher than the national scores of top-ranked countries, such as Australia, Iceland, and Norway.¹⁶ The authors found similar disparities between the top and bottom quintiles in Canada and Australia, which were also included in the study although the HDI gap between top and bottom was less wide in both of those countries.

B. Agency, Empowerment, and Personal Freedom

Since the construction of the Human Development Index in the late 1980s and the publication of the first Human Development Report in 1990, tremendous progress has been made in understanding and assessing the comparatively amorphous concepts of agency, empowerment, inclusion, freedom, and participation. This progress offers new opportunities to consider these critical but difficult-to-measure components of human development. In addition to extensive exploration of these concepts and new surveys and data available, there has also been a growing realization over the past twenty years that people who experience low levels of human development are as likely to talk about lack of autonomy and feelings of exclusion, resignation, or humiliation as they are to raise their lack of material goods or money. This phenomenon has been observed in affluent nations as well as the developing world. In the United States, authors such as David Shipler, Jonathan Kozol, Barbara Ehrenreich, and others have been important voices for documenting the pain of social and economic exclusion in America.

This section will explore a set of measures available to assess agency, empowerment, social and political participation, and rights in the six countries of this study. It will examine levels of agency and participation, drawing on both objective and subjective data, in several major areas:

¹⁶ Grimm et al. utilized data from a variety of sources dating from 2000 for their HDI-by-quintile analysis.

life satisfaction and happiness; political and civic participation; access to justice and freedom from violence; access to information; marginalization and social inclusion; and freedom to choose a partner. Integral to issues of agency and participation is economic empowerment, which has been addressed above in the section on standard of living. While this list is by no means exhaustive, it includes a set of important areas that contribute to the process of human empowerment, and encompasses areas for which reliable cross-country measures are available. One set of issues important for people controlling their own destiny and being empowered—but where the cross-country data seemed most lacking—is in the arena of justice and fair treatment. Ideally, it would have been very important to have cross-country information on such issues as enforcement of legislation on fair treatment, time between submission and conclusion of criminal and civil cases, complaints about police force, hate crimes, racial profiling, etc. But despite efforts to identify such data, this information did not seem to be available in reliable cross-country studies.

What do the data tell us on life satisfaction and happiness in these countries?

1. Life Satisfaction/Happiness

The World Values Survey has done five waves of representative national surveys since 1981 on a range of topics related to values concerning religion, gender roles, work motivations, social capital, political participation, subjective wellbeing and other areas. For the purposes of exploring issues in these countries for people to have the ability to act on behalf of what they value and to shape their own destiny, we have extracted three areas: happiness, life satisfaction, and freedom of choice and control.

Life satisfaction was assessed by asking respondents to indicate how satisfied they were with their life as a whole, using a scale that ranged from 1 (not at all satisfied) to 10 (very satisfied). From the table one can observe different patterns over time depending on the country. While Australia started at a very high level in 1981 (7.88), it has declined over the period. Japan, on the other hand, started lower (6.59) and has climbed to nearly 7, while Canada and the United Kingdom have fluctuated over this period but remained within a narrow band, and the United States has remained nearly unchanged, dipping only very slightly in the 2005-06 survey.

Happiness was assessed by asking respondents to indicate how happy they were, using four categories: very happy (1), rather happy (2), not very happy (3), and not at all happy (4). All six countries fall within the very happy to rather happy range throughout the time period, and all the countries, with the slight exception of Australia, moved slightly in the direction of greater happiness when looking at the entire period 1981-82 to 2005-06, with some fluctuation in the interim period.

Freedom of choice and control was assessed by one question from the World Values Survey and another from the Gallup World Poll. WVS asked respondents if they felt they had a great deal of freedom of choice and control over the way their life turns out (10), none at all (1), or assessments in between. In 2005, nearly one in four Australians and New Zealanders surveyed felt they had a great deal of freedom of choice and control. On the other hand, fewer than 3 percent of Japanese felt they had a great deal of control, with the other three countries in the 14-17 percent range. The mean rating for Japan was 6.1, while it ranged between 7.3 and 7.9 for the others. While the number of respondents in other countries who gave ratings between 0 and 5 ranged from 11.6 percent in New Zealand to 16.9 percent in the United Kingdom, more than one-third of Japanese said that they had between no control and a moderate amount of control in

the way their lives turn out.

The Gallup Poll asked about workplace autonomy. There is no pattern in terms of gender—in some countries, females responded they have an opportunity to do what they do best every day in their workplace at higher rates than men; in others the reverse was the case or it was equal. The United Kingdom is the country with the largest gender gap, with 4 out of 5 women responding they have this level of workplace agency but only 72 percent of men. Despite the gap between New Zealand and Japan on surveys of freedom of choice and control, these two countries exhibit similar levels of workplace autonomy—and it is low end of the scale. Workplace autonomy falls at three-fifths for both countries, while the remaining countries all stand in the three-fourths to four-fifths range.

2. *Political and Civic Participation and Voice*

Democratic participation in decision-making is a central dimension of human development. Each of these six countries have many vibrant structures in place for people to express their democratic voice in political and civic life—whether in workplaces, on school boards, in political campaigns and voting, in contact with the media, elected officials or the marketplace, and in vibrant neighborhood and community associations. This participation, whether collective or individual, enriches us and enables us to take active roles in shaping our lives and those of our families and communities. These forms of participation are also necessary for building a just and efficient democracy. Citizen involvement in decision-making can help to improve the quality and acceptance of those decisions and can bring greater transparency and trust to the process. It can contribute to developing community pride and help to create shared values and norms. Both through its expansion of our individual capabilities, helping us to have the competence and

confidence to participate effectively, and through its impact on building a better society, peoples' participation in the decisions that involve them contributes to human development progress.

Participation is not directly measured in the Human Development Index. While some very useful indicators are available on political and civic participation and voice, it is extremely difficult to identify just one or several indicators that can capture such a complex set of issues. Voting rates are one important measure, but what happens between elections is at least as important. And it is even more difficult to measure *the influence and impact* of this participation on actual decisions made. What follows are some indicators in an affluent country context that help to understand levels of political and civic participation in this set of countries.

For a snapshot on voting at the national level, International IDEA tracks voting rates of registered voters and voting-age population. The observed ranges in Table 21, column 1 are enormous, from fewer than half of registered Americans voting in Congressional elections to nearly all registered Australians and four out of five New Zealanders voting in the latest Parliamentary election. Rates in the remaining countries are at 60-65 percent.

The explanation for low voter rates in the United States is relatively straightforward. The United States has more obstacles to voting than many other nations. Some nations require voting or have sanctions or consequences for not voting (such as Australia and Belgium), and in many, the government automatically registers all citizens. In the United States, Election Day is not an official holiday. In fact, for parents, the situation is doubly challenging because often children are home from school because schools are used for voting, yet for parents, it is a workday. Furthermore, registration to vote in the United States must be done in advance of Election Day (though a few states have recently instituted Election Day Registration) and does not follow you if you move. One state currently has online voter registration, Arizona, and other states are

experimenting with this option (Pew Center on the States, 2006). While not within the scope of this paper, rates of voter participation by class and race/ethnicity are particularly instructive and help to paint a more complete picture of whom in these societies is expressing their voices through political participation.

The perception of honesty in elections, based on a recent question in the Gallup World Survey (see Column 5) in these countries ranges from a striking 56 percent in Japan to 70 percent in Canada. These numbers are surprisingly low and probably are a contributing factor to the quite low voting rates in this set of countries, except for in Australia (with the second highest proportion of people believing elections are honest), where voting is mandatory.

An important sub-group that faces particularly high obstacles to participation in political life is convicted felons. In the United States, nearly every state disenfranchises felons in prison, over half disenfranchise those on parole and probation, and over 10 states disenfranchise ex-offenders. Where restrictions are strict, a significant proportion of the voting age population may be excluded. For example, in 2000 6.3 percent of the total population in Georgia, 4.9 percent in Delaware, and 4.8 percent in Texas could not vote due to felon disenfranchisement (McDonald and Popkin, 2001). The other countries under consideration range from Canada, which, in 2003, allowed prisoners to vote, to Japan and New Zealand which had some restrictions and time limits but did not entirely disenfranchise felons, to the United Kingdom which does not allow prisoners to vote but in some cases allows voting by parolees and ex-offenders (Rottinhaus, 2003).

One critical area of political empowerment has to do with gender equality and bringing women's voices into economic, political and social debates and processes. Experience has shown that democracy will not automatically bring gender equality and women's empowerment. The focus of women's organizing worldwide has brought enormous progress in many countries in shaping

public policy, leveraging political power and making progress on issues of particular salience to women.

In terms of female political representation public leadership in this set of countries, rates overall are surprisingly low, as compared with other developed countries. According to UNIFEM's recent data, New Zealand, with the highest rate of female participation in Parliament and Ministerial positions, is at one in three. Japan has the lowest rates, with a share of women in Parliament that is under 10 percent and only slightly higher in Ministerial positions. Rates in the remaining four countries hover around one in five. The regional average of women in ministerial positions for developed countries is 28 percent (UNIFEM, 2008/2009). Only New Zealand surpasses this average.

The numerical presence of women in public leadership positions is seen as one very effective way, though not the only, to promote gender equality and empower women. Because of this, there is a trend towards quotas for women in public office and in public parties. None of the six countries examined in this paper have instituted such quotas, though many peer nations have. The following developed countries have instituted various forms of quotas in order to increase representation of women in both political parties and in public office: Austria, Belgium, Germany, Iceland, Netherlands, Norway, Spain and Sweden (UNIFEM, 2008/2009: 24).¹⁷

Voting is one important form of political participation, but not the only one. There are other important ways for people to come together for collective expressions of political voice, information sharing, or education. Government response is more likely when voices are gathered together, and for the relatively disadvantaged, joining voices may be the most effective way to

¹⁷ For full details on the terms of these quotas, see UNIFEM, Progress of the World's Women 2008/2009, ch. 2, available at http://www.unifem.org/progress/2008/media/POWW08_chap02_politics.pdf, p. 24.

have concerns heard.

While internationally comparable indicators on these deeper forms of democracy are not plentiful, one can glean some information from Gallup World Poll's survey questions on volunteerism, voicing opinions to public officials, and donating money. In terms of donating money or volunteering time, Japan is an outlier at the low end for both while rates of volunteerism seems to be quite high in New Zealand. In terms of voicing opinions to public officials, the United States is relatively higher than each of the other countries.

3. *Violence*

Any consideration of agency and empowerment must consider issues of personal and community safety more broadly, looking at our bodily integrity, the safety we experience in our homes and communities, and the policy responses to those threats. Violence and the fear of violence check the ability of individuals to grow and thrive, to participate fully in society and to be truly free. In addition to the physical harm caused, violence has a high likelihood of resulting in psychological harm, mal-development, or deprivation. And in many cases, violence can be prevented.

Table 22 presents a small group of statistics related to violence that are not comprehensive but rather target some of the most extreme areas in which advanced economies face particular challenges, with some focus on violence against women and youth.

Homicide: Murder rates span an enormous range, from .5 murders per 100,000 population in Japan to eleven times that rate in the United States. The rest of the countries under study are in the range of about 3 to 4 times Japan's murder rate, and about a third that of the United States. If the U.S. rate were the same as Japan's, the number of murders recorded in 2003 would have been more on the order of fifteen hundred than fifteen thousand (Burd-Sharps, et al., 2008: 60).

Factors associated with high levels of violent crime in this set of countries range from urbanization and the proportion of adolescents in the population, to substance abuse (alcohol, drugs, etc.) and, for the United States in particular, as was introduced above, firearm availability. Table 22 illustrates that while fewer than eight people per 100 own a firearm in England and Wales, New Zealand and Japan, in the United States the rate is in the range of 83 to 97 people per 100. Canada's rate is also relatively high, in the range of 25 to 38 per 100 population, and Canada's murder rate is the second highest, second below the United States, among this group of countries.

The U.S. Department of Justice has documented that firearms account for about two out every three homicides. For 2006, this figure was 68 percent of homicides committed with a firearm (U.S. Dept. of Justice, 2006). There is an extensive literature on this issue that would seem to support the view that policymaking to reduce the availability of firearms in the civilian population could significantly reduce the tragic toll of homicide on these societies.

Violence against Women: Violence against women (VAW) in any form is a gross violation of human rights and a particularly disempowering form of violence because it often occurs in precisely the place where one should feel safest: the home. Rape, domestic violence and other forms of violence against women have devastating psychological, physical, and economic consequences on the women who experience it—and on the children who far too often witness it. It also exacts a high cost to society—medical costs, justice system costs, reduced workforce productivity, and reduced capabilities of future generations (Burd-Sharps et al., 2008: 21).

The last twenty years have seen unprecedented progress in the political attention paid to violence against women. Grassroots women's organizations and international coalitions have upended the notion that violence against women is a private matter, an aberrant individual act, or an

inevitable fact of life. Yet despite the progress at the policy and political levels, violence against women persists, unabated, in all parts of the world.

Among the challenges in addressing violence against women is the challenge of measuring it. Because of the sensitive nature of the topic and the risks to survey respondents participating in data collection, solid, comparable data are hard to come by. In addition, comparability is particularly challenging due to the differences in the types of behavior perceived by women/girls to constitute an offense across different cultures. Working with UNIFEM, we were able to locate a number of surveys that consider one or two of the countries considered in this paper, but no source that included all. The WHO Multi-country Study on Women's Health and Domestic Violence Against Women of 2006 includes Japan and New Zealand. The International Violence Against Women Surveys of 2004 (Victorian Health Promotion Foundation, 2008) include Australia, the International Crime Victimization Survey of 2005 has data for four of the countries on the prevalence of sexual assault against women, and the WHO World Report on Violence and Health includes the U.S.

Thus one important policy recommendation would be to intensify efforts to develop and collect comparable measures on this critical issue. UNIFEM's call for increased accountability on this issue is that "reliable data on VAW must be collected and made public. Information is central to informed policy and program development and monitoring. This includes population-based surveys on the multiple manifestations of violence against women and girls, their prevalence, causes, consequences, and the impact of interventions over the medium to longer-term; service-level data to assess sector performance (health, judicial, and security); and surveys on attitudes and behaviors. The task of building data on VAW is made more challenging by the fact that "VAW is one of the least reported crimes and . . . charges are pressed in only a fraction of cases"

(UNIFEM, 2008/2009: 10).

Some (relatively) comparable findings for four of the countries include:

Australia:¹⁸

- About 50 percent who have ever had a partner report experiencing physical violence during their lifetime from an intimate male partner.
- About 33 percent who have ever had a partner report experiencing sexual violence during their lifetime from an intimate male partner.
- 29 percent have experienced physical assault since age 15.
- 17 percent have experienced sexual assault since age 15.

Japan:¹⁹

- 13 percent of women have experienced physical violence at some time in their life at hands of intimate partner.
- 6 percent have experienced sexual violence at some time in their life at the hands of intimate partner.
- 5 percent have experienced physical violence at the hands of a non-partner. 52 percent of non-partners were fathers.
- 4 percent of Japanese women have experienced some form of sexual violence from strangers, male friends, or people from work.

¹⁸ International Violence Against Women Surveys, 2004 (Victorian Health Promotion Foundation, 2008).

¹⁹ 1,400 women, aged 18-49 in Yokohama. Available at http://www.who.int/gender/violence/who_multicountry_study/fact_sheets/Japan2.pdf.

New Zealand:²⁰

- 38 percent of women have experienced physical violence at some time in their life at hands of intimate partner.
- 22 percent (north Waikato) have experienced sexual violence at some time in their life at hands of intimate partner.
- 17 percent have experienced physical violence at the hands of a non-partner. Fathers most commonly identified.
- 12 percent of women have experienced sexual violence of a non-partner. Strangers were most commonly identified as the perpetrator.

United States:²¹

- 14.8 percent of women over 17 reported having been raped in their lifetime (U.S. Centers for Disease Control, 2008).
- 7.7 percent report having been sexually assaulted (including sexual assaults) by an intimate partner in their lifetime (n=8,000, 1995-96) (World Health Organization, 2002: Ch. 6).

What can be observed from the above data? While the reported rate of sexual violence in Japan from an intimate partner is about 6 percent, and in the United States is 7.7 percent, the rate in New Zealand is 22 percent and in Australia is the highest, at about 33 percent. In terms of physical violence, in Japan the rate is 13 percent from an intimate partner and 5 percent from a non-partner (of which 52 percent were fathers); in Australia, it is 29 percent or just under one in

²⁰ 1,400 women ages 18-64 in Waikato. Available at http://www.who.int/gender/violence/who_multicountry_study/fact_sheets/New%20Zealand2.pdf.

²¹ World Health Organization, 2002; U.S. Centers for Disease Control, 2008

three Australian women having experienced physical assault from anyone and in New Zealand, it is 38 percent from an intimate partner and 17 percent from others, again with fathers most commonly identified.

Crime and Punishment: A second important issue in looking at freedom and community safety is crime and the effectiveness of the criminal justice system in reducing crime. The issue of neighborhood safety has broad relevance today not just to enable people to have the freedom to go where we want and do what we want, but for a whole host of other human development issues that are affected by our ability to move about freely in safety as well. Take, for example, one aspect of community safety—the ability of children to play safely in their neighborhood—relative to the skyrocketing obesity epidemic in the United States. A U.S. Census Bureau survey “A Child’s Day,” in 2004, found that nearly 40 percent of Latino families keep their children indoors because they fear danger on the streets outside. Although the U.S. epidemic of overweight and obese adults is widespread, this finding is one factor in explaining why rates of obesity are rising faster for Latinos than for non-Latino white youths, and why girls and boys of Mexican origin are nearly twice as likely as non-Latino white children to be overweight (Burd-Sharps et al., 2008: 64).

On the question asked recently in the Gallup World Poll with regard to safety walking alone at night, interestingly, the United States, Canada and Japan had the highest rates of people responding in the positive—in the range of three to four. New Zealand had the lowest rate, with 57 percent of respondents saying they do not feel safe walking alone at night in their communities. This issue would require further research to understand the dissonance between comparative perceptions of safety and actual violent crime rates.

Looking further into understanding this phenomenon, there does not seem to be a strong consensus on theories of why people perceive crime risk differently. One 2009 study of European countries finds a fairly strong *inverse* relationship between crime rate and fear of crime. In the 30 countries surveyed, fear of crime systematically goes down as crime rate goes up. The hypothesis is that people become desensitized to crime in high-crime areas. This could explain the apparent anomaly in the United States being relatively crime-ridden but less fearful (Reese, 2009).

Another theme that would seem to potentially yield some interesting conclusions is with regard to perceptions of crime and degree of residential segregation by group. Do the relatively higher violent crime rates in urban inner city neighborhoods not affect the perceptions of safety in neighborhoods on “the other side of town”? Residential segregation (mostly by racial and ethnic groups, though segregation by age groups is also common in some places in this set of countries) varies widely between locales of the same country, and the literature continues to debate the best way to measure residential segregation in a single geographic area, let alone an entire country or a group of countries. Because of these challenges, studies of cross-national residential segregation are rare. Ron Johnston, Michael Poulsen, and James Forrest (2007) performed the only cross-national study of residential segregation for most of the countries of interest. They find a clear divide in residential segregation between English-speaking countries in the North—the United States, United Kingdom, and Canada—and residential segregation in Australia and New Zealand. The first set of countries exhibit far higher degrees of residential segregation than Australia and New Zealand. The authors posit that despite “significant blemishes in the treatment of their ‘first nations,’” Australia and New Zealand have allowed minority groups to enjoy strong economic success and spatial assimilation (Johnson, Poulsen, and Forrest, 2007: 733). The

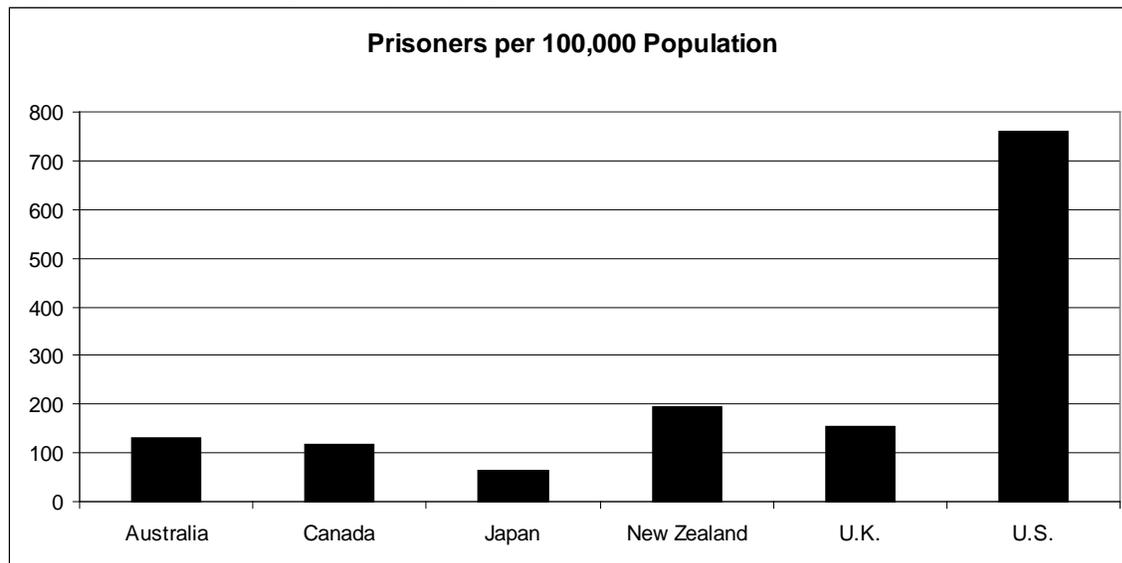
authors suggest (but offer little evidence) that historical attitudes toward immigration and immigration policies play a strong role in accounting for the difference.

Having discussed one example of the importance of neighborhood safety for agency, freedom and participation, what do data on these six countries show on one central measure of criminal justice: incarceration rates? There is a huge variation, from Japan with 58 prisoners per 100,000 population to the United States with 725. The remaining four countries all fall in the range of 107 (Canada) to 168 (New Zealand).

From the mid-1920s to the mid-1970s, the U.S. incarceration rate was stable at about 110 per 100,000 population—roughly the same as in our peer nations today. But rates since then have soared, driven not by increases in violent crime but rather by changes in criminal justice and sentencing policies, especially those related to drug offenses (Wacquant, 2005). African American men and their communities bear the brunt of skyrocketing incarceration rates. If current incarceration rates continue, nearly one-third of African American males will spend some portion of their lives in state or federal prison.

As Figure 11 shows, incarceration rates per 100,000 people in the United States are much higher than in the other countries in this study and nearly four times higher than in New Zealand, the country with the next-highest rate of incarceration.

Figure 11: Prisoners per 100,000 population



Source: OECD Society at a Glance, 2009 (data are for 2009 or most recent year available)

Youth Violence: We were able to find reliable data for two important indicators for this set of countries: youth suicide and bullying. Suicide rates for youth 15-19 range from 3 per 100,000 population in the United Kingdom to considerably higher in New Zealand, at 15.9 per 100,000. Australia, Japan and the United States fall in the middle with rate ranging from 8.5 in Australia to 7.7 in both Japan and the United States. Canada has a relatively higher rate of 10. Bullying figures come from UNICEF and represent the percent of young people who were bullied at least once in the last two months. Data are available only for three of the six countries, and in each country, over one in three had experienced bullying in the recent past.

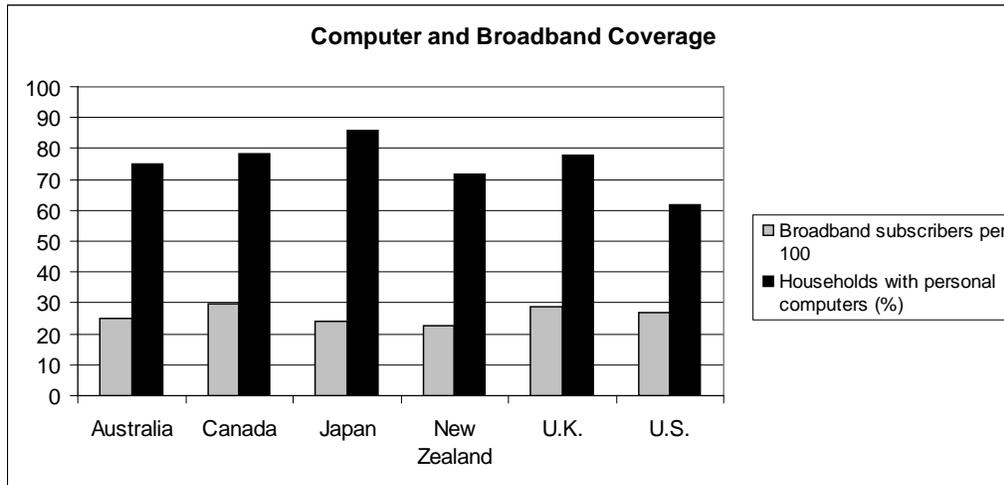
4. Access to Information

Access to information in today's world is increasingly crucial for both instrumental as well as intrinsic reasons: learning new skills and pursuing educational opportunities, finding a new job or home, and participating in one's community or in the political sphere. In developing countries,

monitoring newspaper readership, mobile phone penetration, or even the availability of radio and television technology may be appropriate metrics. However, in more affluent societies, although press freedom, levels of functional literacy, and other educational skills to utilize information are all still important, access to digital telecommunications is perhaps the most relevant gauge of access to information. Increasingly in these societies, accessing web-based resources through home computers, laptops, and mobile handsets is becoming an indispensable part of getting the day's news, purchasing necessities, making business decisions, organizing socially and politically, and keeping in touch with friends, family, and colleagues. Those without access are increasingly excluded on many levels.

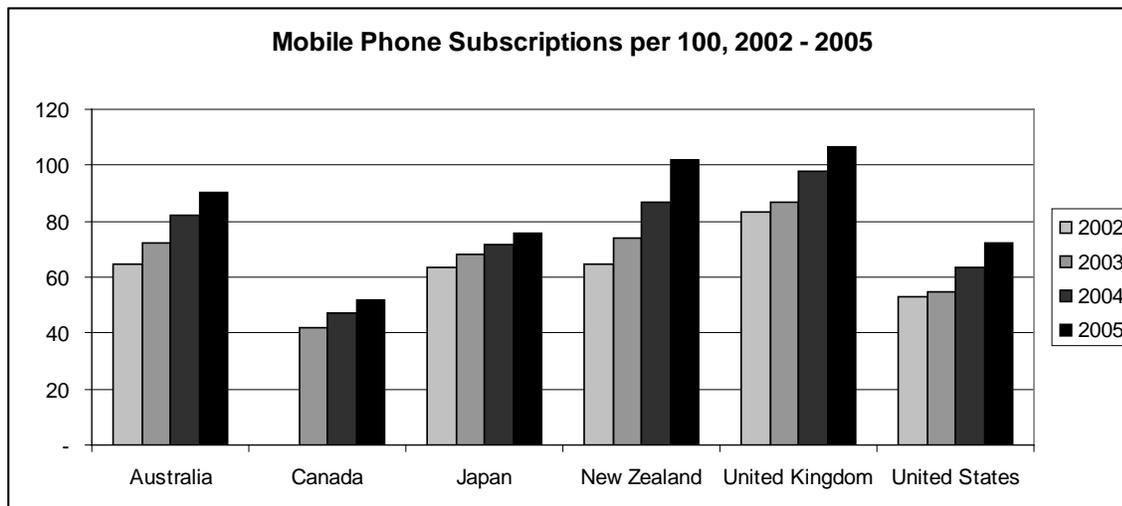
As shown in Table 24, the percentage of households with a personal computer ranges from just under two-thirds of the population in the United States to 86 percent in Japan. Additionally, between a quarter and a third of the population in each country studied has a subscription for broadband access. As the table following shows, mobile subscriptions have proliferated in recent years, reaching more than one subscription per resident by 2005 in New Zealand and the United Kingdom and at least three in five residents in Australia, Japan and the United States. These statistics only scratch the surface of the extent to which people in these six countries enjoy sufficient access to information. Print, radio and especially television media remain important sources of information, and laptops and internet-enabled handsets offer new access points to the internet. However, these numbers do give us an indication of the penetration of newer innovations in telecommunication technology in these six countries.

Figure 12: Computer and Broadband Coverage, 2009 (or most recent year)



Source: OECD Broadband Portal (2010), data are for 2009 or most recent year available.

Figure 13: Mobile Phone Subscriptions per 100 population, 2002-2005



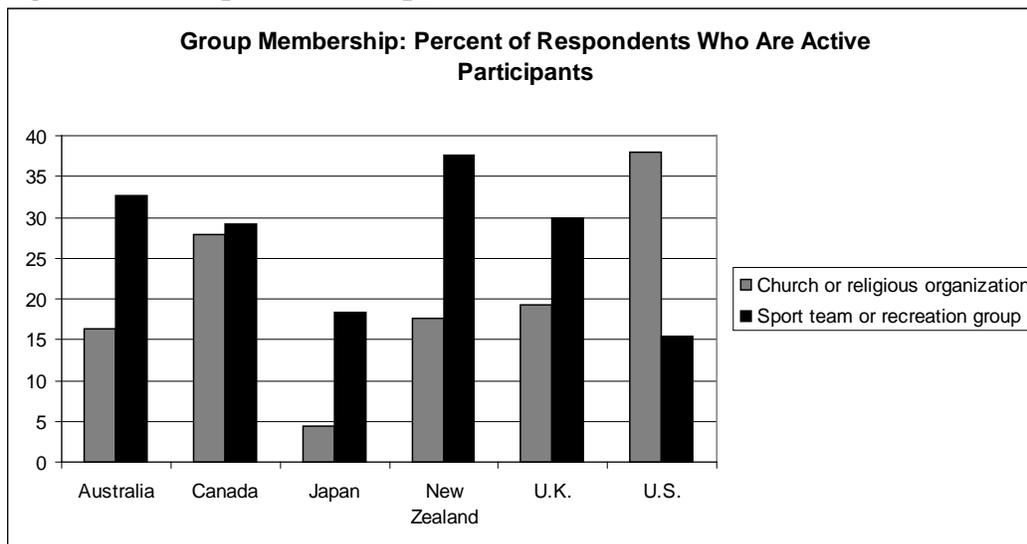
Source: OECD Stat Extracts (2010).

5. *Social Inclusion and Marginalization*

Participating in social networks of our peers outside of work, either socially or in the context of sport or religious observance, is an important way to counter the stresses of work and life and to connect with the greater community. These venues also serve as an important place to build and sustain social capital, which is often necessary for entry into or advancement in the workplace and a means for improving one's standing in his or her community, besides contributing to

personal and community well-being in many less immediately tangible ways (Putnam, 2000). There are wide variations in the extent to which residents of these six countries participate in social networks, such as religious organizations or sport teams. As the figure below shows, the United States leads this group of countries in membership in religious organizations, whereas membership in such groups in Japan is almost negligible. New Zealand and Australia register the highest levels of membership in sports or other recreational organizations, Japan and the United States the lowest.

Figure 14: Group Membership, 2009



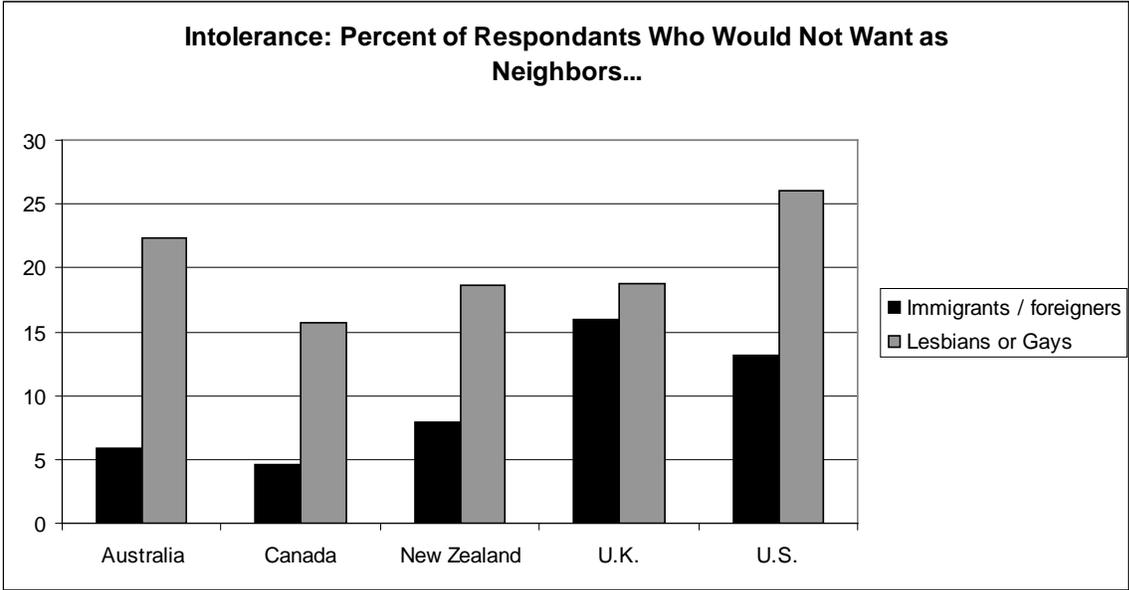
Source: World Values Survey (2009), data are for most recent year available

Social marginalization and cohesion influence human development outcomes in these six countries. As discussed above in the section on inequality, different population groups living right next to one another within one country can experience levels of well-being that are worlds apart. Marginalization and discrimination can play a cyclical role in perpetuating these disparities, keeping members of some groups stuck in situations of poverty and deprivation, without opportunities and basic freedoms.

Prejudice, bias, and discrimination are relevant to human development insofar as they keep

members of marginalized groups from accessing the full range of freedoms and opportunities that should be available to them. As the figure below shows, over 15 percent of U.K. residents would not want immigrants as neighbors, and 22 percent of Australians and over a quarter of Americans would not want gay or lesbian neighbors.

Figure 15: Intolerance



Source: World Values Survey (2009), data are for most recent year available

6. *Freedom to Choose a Partner*

One manifestation of this variance among countries in attitudes on lesbian, gay, bisexual and transgender (LGBT) people is differing forms of legal recognition for same-sex marriages and relationships. Freedom in personal relationships, whatever an individual’s sexual orientation or gender identity, lies at the heart of a life of choice and value. If human development focuses on expanding individual freedoms and creating opportunities for people to make decisions about their own lives, then restrictions on freedoms as fundamental as choosing one’s partner in life are entirely at odds with the freedom-maximizing principles of human development.

Around the world, LGBT people face a wide range of obstacles to realizing their basic human

rights, ranging from harshly punitive laws against same-sex relationships in some countries to more subtle forms of discrimination and exclusion in others. In the six countries in this study, the legal struggle for LGBT equality has many fronts, including but by no means limited to according sexual orientation and gendered identities protected status under antidiscrimination laws, repealing bans on adoption for same-sex parents, and achieving legal recognition of same-sex marriages.

The freedom of same-sex couples to choose their own life partners and to have that commitment recognized by the state, with all the obligations, benefits, and protections that come with it, is perhaps the most high-profile of these struggles. Legal recognition of same-sex marriage is not only a symbolic acknowledgement of legal equality; it also has a bearing on ensuring equal access to the rights and privileges of married couples, including the functioning of pensions, health insurance, hospital visitation rights, adoption rights and more.

As Table 28 shows, the six countries in our study present a varied legal landscape for same-sex couples. Canada is one of only seven countries in the world to offer legal recognition to same-sex marriages nationwide, a distinction it shares with Belgium, the Netherlands, Norway, South Africa, Spain, and Sweden. New Zealand and the United Kingdom both offer more limited legal registration for same-sex partnerships. Australia and the United States both present interesting cases in which some form of legal recognition for same-sex partnerships exists in some but not all of their states. Three Australian states recognize same-sex partnerships, and in the United States, same-sex marriage is recognized in five states, and civil unions or domestic partnerships in eleven. However, in the majority of states in both Australia and the United States, no form of legal recognition for same-sex partnerships exists. In the United States, even though some states do offer some form of recognition to same-sex partnerships, immigration policy is still set by the

federal government. Under the so-called Defense of Marriage Act, the federal government refuses to recognize any same-sex partnerships meaning that bi-national same-sex couples have no access to residency or immigration proceedings in the United States. Of the six countries included in this study, only Japan offers no form of legal recognition for same-sex partnerships.

7. *Conclusion*

This section has examined agency and empowerment in the countries under examination through the lens of subjective measures, surveys of political and civic participation, and rates of violence.

In general, all countries perform strongly with regard to overall measures of happiness and subjective well-being, with disparities evening out over time. More pointed subjective measures tell a different story, however. Japanese respondents voice significantly less freedom of choice in the course of life than respondents from other countries, especially New Zealanders. But New Zealanders join with Japanese in expressing lower levels of workplace autonomy than respondents from other countries.

Rates of political and civic participation in every country have a long way to climb. While Australia's compulsory voting and United States' barriers to election represent polar opposite public policy approaches and explain differences in voter turnout, the two countries fare similarly on measures of volunteerism. While monetary donation rates for all countries except Japan hover around two-thirds of the population, across the board far less than half of the population in each country donates time to a cause. Participation of women in politics is strongest in New Zealand and weakest in Japan, but no country has come close to achieving a state in which the proportion of female representatives mirrors the composition of the electorate.

Crime and incarceration remains above and away highest in the United States and lowest in

Japan, but Japanese and Americans report similar feelings of high safety. Australians and New Zealanders appear to experience the highest rates of violence against women, and they are also least likely to report feeling safe walking alone at night. The lack of comparable statistics on violence against women hinders attempts to further understand agency and empowerment in these countries, and the strongest and most feasible recommendation of this section is to develop coordinated data collection methods in this area.

C. Environmental Sustainability

1. Why the environment matters to human development

The environment matters deeply to people's ability to develop and exercise their capabilities, to realize their full potential, and to lead lives of dignity and value. A safe, sustainable living environment is fundamental to human flourishing, and a degraded, highly stressed environment imperils human well-being and security. All people, those alive today and those from generations yet to come, have an equal right to clean air and clean water; all need protection from the known and unknown hazards of environmental pollution, the uncertainty of changing climatic patterns, and the risks of environmental catastrophes; and all deserve access to green spaces and to the rejuvenating qualities of the natural world.

The gravest environmental issue of the day, climate change, is already impeding human development and increasing human insecurity among many of the world's poorest peoples in the poorest countries; looking ahead, it poses the risk of ecological catastrophes that "will transform patterns of human settlement and undermine the viability of national economies" (UN Human Development Report, 2007-2008) in rich and poor countries alike. Large-scale environmental disasters of the type that climate change could make more frequent and severe present serious

and long-ranging threats to human development. As Hurricane Katrina and Rita in the U.S. Gulf States made abundantly clear, sudden environmental shocks can, in days or even minutes, wipe out capabilities that people and communities have developed over lifetimes and generations of lifetimes. California wildfires in October 2007, for instance, caused \$1 billion in damage, consumed half a million acres, burned down 1,800 buildings and killed seventeen people (*New York Times*, Oct. 28, 2007; *Newshour* online, Oct. 28, 2007). All human capabilities are put at risk during large-scale environmental disasters, regardless of their cause: health suffers, schooling is disrupted, the local economy collapses, family homes are washed away or reduced to ash or rubble, community members scatter to the four winds, people feel helpless, and the comforting landscape of the familiar vanishes. States have the responsibility to reduce people's vulnerabilities to potential environmental perils as well as to invest in their capabilities, building resilience so that individuals and communities can enjoy the benefits of environmental sustainability as well as mitigate and adapt to an uncertain future.

2. *Domestic environmental progress over the last two decades*

In broad strokes, the six countries in this study have all made significant progress over the last 20 years in recognizing the importance of the environment to human development. Though the environmental movement began in these countries in the 1960s and 1970s, it is important to remember that it was only with the 1987 release of the Bruntland Report that the now-accepted definition of sustainable development—meeting the needs of the present without compromising the ability of future generations to meet their own needs—entered into the mainstream international development discourse, and the definition did not achieve wider currency until the 1992 Rio Conference. Prior to this, environmental issues were comparatively marginalized, the

concern of some scientists, conservationists, and activists, but largely dismissed by the power structure.

The six countries in this study have all sought to ensure—at least rhetorically and, increasingly, in more concrete ways—that the development efforts they support through bilateral and multilateral aid are environmentally sustainable, with Canada and the United Kingdom playing particularly strong roles. In addition, a review of the reports generated by the first and second cycles of the OECD Environmental Performance Programme, which conducts peer reviews of environmental conditions and progress in each OECD member country, shows that, since Rio, they have all taken legal, legislative, scientific, and policy steps of all sorts to manage natural resources more sustainably, to protect human and environmental health from air, water, and land pollutants, and to protect biodiversity within their own countries. In fact, this review shows that domestic environmental issues that directly affect people within a country have generated a more comprehensive policy response from governments as well as more impassioned support from communities than have environmental issues that affect the whole world—global commons issues like climate change and the health of the oceans—a point to which we will return at the end of this section.

In terms of the social-environmental interface, trends are generally positive in terms of public awareness of environmental issues, environmental education in schools, the availability of public information, transparency, community awareness, public participation in natural resources management, the use of science in support of environmental protection, and sustainability reporting by industry. Environmentalism enjoys strong political support within major political parties (though the “greens” typically reside in more left-leaning than right-leaning parties). Even social groups not aligned with traditional conservation movements have picked up the

banner of sustainable development, adding to it, in the United States, for example, the issue of environmental justice. More needs to be done in Australia, Canada, New Zealand, and the United States to foster participation by indigenous people in the management of natural resources as well as to ensure that they benefit from environmental goods and do not suffer disproportionate harm from environmental “bads.” The United States and the United Kingdom both need to do a better job of ensuring that racial minorities and the poor do not disproportionately bear the brunt of environmental toxins, poor urban planning, and weaknesses in the built environment. Environmental activism is strong in the United Kingdom, whereas Japan needs to improve its NGO involvement in environment as well as its environmental education. In the United States, a more litigious society than the others in this group, environmental disputes are resolved often through lawsuits, whereas Canada has a more consensus-based system of dispute resolution.

With public opinion increasingly supporting environmental sustainability, many firms use the environmental friendliness of their products and services as a selling point (sometimes even when they are not, in fact, taking real steps toward environmental protection, a phenomenon known as “green washing”). By switching to environmentally sound practices and products, large firms can make significant contributions toward environmental goals; Wal-Mart’s embrace of more energy efficient compact fluorescent light bulbs, for instance, has been heralded by many as a promising development in terms of energy consumption.

Of course, no country is doing all it can in all areas, and differences among the countries in areas such as demographic profile, natural resource and biodiversity abundance, history, and the vibrancy of civil society, contribute to different outcomes in certain areas. Pollution, natural resource depletion, dealing with wastes, and invasive species are challenges for all six countries. Consumption patterns and energy-intensive lifestyles drive these environmental problems;

indeed, the everyday choices of the hundreds of millions of people living in these nations remain the most significant impediment to both domestic and global progress.

Water resources: Water quality has improved, though too many surface water bodies are still affected by agricultural run-off, high nutrient loads, and hazardous chemicals. A surprisingly high proportion of drinking water resources are unsafe in New Zealand (15 percent), and evidence is emerging that lax enforcement and the weakening of regulatory agencies in the United States in the last eight years has dealt a serious blow to drinking water quality in many U.S. communities. Wastewater management is a particular challenge in Japan and the United Kingdom. Water scarcity affects Australia and parts of the United States, but water use is nonetheless very high in the United States, even in the most arid states. These six affluent countries have had great difficulties in implementing integrated water resources management, underscoring how difficult it is for poor countries, with less institutional capacity and scientific knowledge and fewer financial resources, to make progress in this area.

Air: The six countries have all seen air quality improve in the last 20 years, though air pollution remains a problem in urban hot-spots in many countries, and none has been able to make significant dents in automobile use, though stricter emission standards and removing lead from gasoline have had positive effects on air quality. (Carbon emissions and climate change are discussed separately below.) There has been a strong decoupling of GDP growth and emission of major air pollutants in the United States and, even more so, in the United Kingdom, but a weak decoupling in New Zealand and Australia. In Japan, GDP and the rate of carbon emissions are growing at about the same rate.

Land and biodiversity: Australia and New Zealand, with unique ecosystems, are particularly concerned about the risks of invasive species. The United States, Canada, and Australia are all

mega-biodiverse, and have taken positive steps to protect that biodiversity, with some notable successes, though much remains to be done, and federalist systems pose some challenges. In terms of protected land, 32 percent of New Zealand, 25 percent of Japan, and 10 percent of Australia have protected status. Australia is working to address its legacy of over-grazing and unsustainable farming practices. Forty percent of the world's softwood lumber is from Canada, and the country is improving its sustainable forestry practices. None of the countries is fully recognizing the tourism potential of its natural resources nor making investments in biodiversity protection commensurate with the likely financial return in tourism dollars.

3. *Common weaknesses*

Where less progress has been made is in monitoring, inspection, and enforcement efforts related to existing environmental laws and regulations, integrating environmental concerns into economic decision-making, and in changing consumption and lifestyle patterns. Though some countries are doing better than others, none is doing enough to in terms of greenhouse gas emissions.

- **Enforcement of laws and regulations.** All of these countries have a variety of strong environmental laws on the books, and these laws have, in many cases, yielded impressive results. In the United States, for example, as a direct result of the 1970 Clean Air Act, which phased out the use of lead in gasoline, the percentage of children with elevated blood-lead levels dropped from 88.2 percent in the 1970s to 4.4 percent in the mid 1990s, according to data compiled by the Centers for Disease Control and Prevention. But all these countries are falling short in terms of enforcing these laws. In some cases, reliance on voluntary agreements takes the teeth out of enforcement. In others, use of the subsidiary principle,

which calls for local management of natural resources, has created capacity bottlenecks at the level of local government as well as accountability problems. In others, such as the United States in recent years, shifting budgetary priorities and ideological perspectives have led to a massive disinvestment in the formerly robust regulatory apparatus.

- **Integrating environmental concerns into economic decision-making.** Though each country is different, none is doing enough to integrate environmental concerns through market-based instruments. Perverse incentives persist, for instance agricultural subsidies in the United States (as opposed to Australia and New Zealand). Incentives for the development of environmentally beneficial technologies, such as renewable energy, have not yet led to substantial changes in energy production or consumption. In the areas of wastewater, energy, water resources, and transport, user and pollution charges (the “polluter pays” and “user pays” principles) and environmental taxes (such as a carbon tax) are available, but not used sufficiently to internalize environmental costs. Sometimes these market distortions send users the wrong price signals and undermine energy efficiency and environmental protection goals. Not enough is being done to assign value to ecosystem services and price their use accordingly, nor is the potential value of biodiversity and open space for tourism sufficiently recognized. Australia may be an exception to the general trend—its 2010 *Intergenerational Report* attempts to blend environmental sustainability into economic and social policymaking (Swan, 2010). But it remains to be seen whether elegant frameworks will lead to concrete legislation and measurable improvements.
- **Consumption and lifestyle patterns.** People in these six countries use energy and water and produce wastes at rates orders of magnitude above the global average. Meaningful changes in natural resource use, in waste production, and in CO₂ emissions will require huge shifts in

the consumption patterns of people in affluent countries. There is little evidence that this is occurring. The global recession is dampening the public's appetite for huge houses, for instance, but there is little evidence that a significant change in consumption patterns is underway. Certain issues come to the fore—plastic water bottles in the United States, for instance—and discrete problems are solved, but the big problems created by car-dependent lifestyles and settlement patterns and residential use of water and energy remain. In the United States, there is no great clamoring for improved public transportation outside a few urban metro areas, and the “new urbanism” beloved by planners has not been embraced by the suburb-loving populace. Driving decreases when gas prices go up, but very few people actually drive less for environmental reasons; the same is true of heating or cooling one's home, using electricity, or the like.

4. *Conclusion*

Reviewing the list of progress and lack-of-progress leads one to the conclusion that in areas where the citizens of the country themselves see (or smell, or feel) an environmental problem and benefit from its mitigation (polluted waterways being made safe for fishing, smog alerts becoming fewer and farther between, a beloved vista or vacation spot protected from development), action is likely or at least possible; but in areas that require a personal sacrifice (reducing consumption significantly), that benefit unknown others (people living in the future, people in far-away countries), or where the cause-and-effect is not very to understand, action becomes much less likely (for an interesting discussion of the ethical and moral questions associated with addressing climate change, see Gardiner, 2006).

The six countries in this study have, in broad strokes, made a great deal of progress in ensuring

that the water they drink and use for recreation is clean and available in sufficient quantities; the air they breathe is safe; the open spaces and natural habitats they cherish are conserved; and the flora and fauna they value continue to exist. These environmental questions directly affect them, and increasingly over the last two decades they have acted—not always fast enough, not always to a sufficient degree to ensure an ideal result from a strictly environmental point of view, but nonetheless such that many harmful trends have slowed, stopped or even reversed. More needs to be done to ensure that environmental laws on the books are enforced on the ground, and evidence shows that voluntary compliance systems are less effective than a vigorous regulatory framework, but nonetheless, a critical mass of political will has coalesced in some countries, and with the rise of a far more environmentally conscious and engaged generation, this political will is likely to continue to grow.

Where progress has been far less visible is in areas that require personal sacrifice and where the “pay-off” is not immediate or easily grasped (see Stoll-Kleemann et al., 2001, for a discussion of the psychological processes in which people’s understanding of and behaviors related to climate change are embedded). The Montreal Protocol, the international agreement on the elimination of ozone-depleting substances, worked to a large degree because the “fix” required—eliminating certain fairly-easily-replaced chemicals, such as those used to cool refrigerators and propel aerosol sprays, with other chemicals—did not require a vast remaking of society. In fact, the modifications required were fairly invisible to the end users, who don’t care how their refrigerator works as long as it keeps things cold, or at least required only minor fixes, such as switching to pump spray bottles. This problem of the global commons—the ozone layer—has been tackled successfully without the need for personal sacrifice or even, for most people, conscious effort.

One area of research in public policy that offers promise is the emerging concept of “choice architecture.” Choice architecture refers to activity aimed at restructuring the range of choices open to a person. “Choice architects,” the social engineers who operate in this field, strive to restructure choices in a given domain such that the most beneficial choice for a person to make is also the default choice (Thaler and Sunstein, 2008). In the area of retirement savings, for instance, choice architects seeking to encourage participation in the company retirement scheme should not require employees to affirmatively sign up for the plan but rather have “opt-in” be the default choice. In terms of environment, choice architects already take action toward minimizing barriers to beneficial activity, such as when whether a light is turned on or off depends on motion sensors that detect the presence of a person. More can certainly be done in this area. Technological innovation to create more energy efficient everyday products is required. But all of these steps are less important than significant public investment in the development of renewable energy technologies that bring the price of renewable energy below the price of conventional energy. As long as oil, gas, and coal are cheap, people will continue to use them, regardless of the long-term consequences.

CONCLUSION

In this paper, we have argued that the human development approach is very relevant to understanding the capabilities and freedoms that people are able to take advantage of in developed-country contexts. In the global rankings based on the traditional HDI, the six countries in this study tend to clump together near the top. However, when we consider alternative inputs to the index which are more appropriate for affluent countries, such as replacing literacy with educational attainment and expanding the combined gross enrollment ratio to include pre-school students, we see that these new measures inject new dynamism into

the rankings. Furthermore, a wide range of other factors that have a bearing on human freedom and capabilities are currently not taken into account in the HDI. These factors include economic well-being beyond income, especially wealth and relative and absolute deprivation, but also inequality, agency, empowerment, freedom in interpersonal relationships, and environmental sustainability. This paper has given a brief survey of what some proxy indicators for these factors can tell us about differences in human development among the six countries under study. The HDI as it is currently structured does not pick up these major differences among the six countries that we see in indicators like net worth per capita, political participation, or rates of violent crime. When we go beyond the HDI however, we see that the human development framework helps inform the selection of additional indicators that can help us paint a more detailed picture of human development in affluent countries.

We have also argued that national-level analysis is of limited value for understanding human development in any country, affluent or not. In the case of the United States, national averages pave over tremendous variations in well-being between the best- and worst-off groups within our society. Our adapted HD Index, disaggregated by geography, gender, and by race and ethnicity, helps expose these disparities in stark contrast. Attempts at similar disaggregation by region or by race and ethnicity in some of the countries studied have shown similar variations in well-being between places (Basu and Basu, 2005; Kusago, 2006) and between racial and ethnic groups in some of these six countries (Cooke et al., 2004 & 2006). More efforts of this type are needed and should be encouraged.

Fortunately, new advances in data collection, especially in affluent countries, are increasing the data resources available to researchers on factors such as wealth, subjective well-being, political participation and empowerment, and the incidence of gender-based violence. The onus is thus on

researchers to make the best possible use of these new sources of data to tell as richly detailed a story as possible about the state of human development within and among affluent countries.

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APPENDIX

Table 1: Total Health Expenditure as Percentage of GDP

	1960	1970	1980	1990	2000	2007
Australia	3.8		6.3	6.9	8.3	8.9
Canada	5.4	6.9	7	8.9	8.8	10.1
Japan	3	4.6	6.5	6	7.7	8.1 (2006)
New Zealand		5.2	5.9	6.9	7.7	9
United Kingdom	3.9	4.5	5.6	5.9	7	8.4
United States	5.2	7.1	9	12.2	13.6	16

Source: OECD Health Data 2009, Frequently Requested Data. Internet Update Version, November 2009.

Table 2: Selected Health Indicators

	Public health spending (% of total health spending)	Out-of-Pocket spending (% of total health spending)	Out-of-Pocket spending by households (per capita PPP \$)	MRI Units (per one million people)	CT Scanners (per one million people)	Infant Mortality (per 1,000 live births)	Diabetes as cause of death (per 100,000 people)	Tobacco Use (% of population 15 and over who smoke daily)	Obese Population (% of total population aged 15 and over)
AUS	67.5	18	605	5.1	56 (2006)	4.2	13.4 (2004)	16.6	21.7 (1999)
CAN	70	14.9	580	6.7	12.7	5	18.4 (2004)	18.4	15.4
JPN	81.3 (2006)	15.1 (2006)	391 (2006)	40.1 (2005)	92.6 (2002)	2.6	5.4	26	3.4 (2006)
NZL	78.9	15.1	371	8.8	12.3	4.8	17.0 (2005)	18.1	26.5
GBR	81.7	11.4	343	8.2	7.6 (2006)	4.8	6.2	21	24
USA	45.4	12.2	890	25.9	34.3	6.7 (2006)	20.3 (2005)	15.4	34.3 (2006)

Source: OECD Health Data 2009, Frequently Requested Data. Internet Update Version, November 2009. Reference year is 2007 unless noted.

Table 3: Life Expectancy at Birth

	1970	1975	1980	1985	1990	1995	2000	2005	2007
United States	70.8	72.4	73.9	74.7	75.2	76.6	78.0	78.7	79.1
United Kingdom	71.7	72.3	73.4	74.5	75.7	76.8	77.8	79.0	79.3
New Zealand	71.4	72.0	73.1	74.1	75.3	76.9	78.5	79.8	80.2
Japan	72.2	74.2	76.2	77.8	79.0	80.0	81.4	82.4	82.7
Canada	72.5	73.6	75.1	76.5	77.5	78.3	79.3	80.3	80.6
Australia	71.1	72.5	74.3	75.7	76.9	78.3	79.8	81.1	81.4

Source: Gray-Purser HDI Trends Dataset v1.0 Nov. 2009; Table "1970—2005 GP" used for data 1970-2005, Table "2007 GP" used for 2007 data.

Table 4: GDP per capita trends (in 2005 PPP dollars)

	1970	1975	1980	1985	1990	1995	2000	2005	2007
United States	20,528	22,407	25,506	28,553	31,942	33,839	39,111	41,873	43,102
United Kingdom	15,500	17,102	18,482	20,319	23,599	25,276	29,172	32,207	33,717
New Zealand	16,161	17,913	17,011	18,941	18,499	20,235	21,975	24,718	25,282
Japan	13,732	15,822	18,652	21,009	25,953	27,562	28,613	30,310	31,689
Canada	17,358	20,456	23,092	25,066	26,966	27,804	32,477	35,065	36,260
Australia	16,209	17,322	19,568	20,946	23,449	24,791	28,926	31,702	32,735

Source: Gray-Purser HDI Trends Dataset v1.0 Nov. 2009; Table "1970 - 2005 GP" used for data 1970-2005, Table "2007 GP" used for 2007 data.

Table 5: Standard Deviation in Literacy Rates

	1970	1975	1980	1985	1990	1995	2000	2005	2007
OECD (n=29)*	0.11	0.09	0.08	0.06	0.05	0.04	0.03	0.02	0.02
AUS, CAN, JAP, NZL, GBR, USA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: Gray-Purser HDI Trends Dataset v1.0 Nov. 2009; Table "1970 - 2005 GP" used for data 1970-2005, Table "2007 GP" used for 2007 data. *Note: Gray-Purser uses Czechoslovakia instead of the Czech Republic and Slovakia, even after the separation.

Table 6: Secondary Attainment, 1997-2007

	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	Growth Rate
United States	85.9	86.5	86.9	87.4	87.7	87.3	87.5	87.9	87.8	87.8	87.9	0.18
United Kingdom	59.1	60.1	61.6	62.6	62.8	64.3	65.1	66.2	66.8	68.2	68.3	0.84
New Zealand	61.0	62.0	62.7	63.8	65.1	66.1	67.3	67.7	69.1	69.7	71.6	0.96
Japan	79.7	80.0	81.0	82.8	83.2	83.9	84.6	85.2	85.9	86.6	87.3	0.69*
Canada	77.7	78.6	79.5	80.6	82.0	82.7	83.8	84.3	85.2	85.6	86.6	0.80
Australia	53.3	56.0	57.4	58.8	58.9	60.9	62.5	64.1	65.0	66.7	68.2	1.35
Average	69.5	70.5	71.5	72.7	73.3	76.9	77.7	78.4	79.0	79.7	80.4	1.00
OECD 30 average	63.0	62.2	62.9	63.7	65.0	66.2	67.3	68.3	68.9	69.7	70.6	0.69

Source: OECD (2009), *Education at Glance 2009: OECD Indicators*, Table A1.4, "Trends in educational attainment: 25-64 year-old population (1997-2007)," updated 29 Sept. 2009. *Note: Data collection methods changed in Japan in 2001, resulting in severe over-reporting of secondary attainment. Secondary attainment has been estimated using the growth rate for the years 1997-2001.

Table 7: Attainment Sums, 1997-2007

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
USA	119.98	121.33	122.68	123.94	124.97	125.48	125.95	126.96	126.80	127.28	128.18
GBR	81.63	83.89	86.46	88.29	88.98	91.09	93.07	95.50	96.55	98.95	100.04
NZL	88.48	90.07	91.71	92.94	94.40	96.85	99.54	103.30	108.47	108.69	112.61
JPN	110.24	110.65	112.84	116.46	117.30	120.42	121.97	123.92	125.86	127.11	128.36
CAN	115.14	116.89	118.87	120.68	123.87	125.53	127.93	128.96	131.30	132.61	134.86
AUS	77.61	81.46	84.08	86.26	87.90	91.71	93.79	94.94	96.72	99.73	101.92
Avg.	98.85	100.72	102.77	104.76	106.24	108.51	110.38	112.27	114.28	115.73	117.66
OECD 30 Avg.	83.40	82.67	83.91	85.22	87.32	119.56	120.42	121.68	122.92	123.48	124.03

Source: OECD (2009a), *Education at Glance 2009: OECD Indicators*, Table A1.4, "Trends in educational attainment: 25-64 year-old population (1997-2007)," updated 29 Sept. 2009. *Note: Data collection methods changed in Japan in 2001, resulting in severe over-reporting of secondary attainment. Secondary attainment has been estimated using the growth rate for the years 1997-2001.

Table 8: Modified Gross Enrollment Ratios, 2007

	2007	Source: OECD Stat Extracts, "Total population by sex and age" ages 3-24, and "Students enrolled by age" (all ages), 2007, extracted 22 January 2010. *Note: 2004 used as reference year for Canada (missing data).
United States	0.82	
United Kingdom	0.82	
New Zealand	0.98	
Japan	0.79	
Canada	0.71*	
Australia	0.98	
Average	0.85	
OECD 30 average	0.78	

Table 9: Modified Education Index, 2007

	2007	Source: Calculated from OECD Education at Glance 2009, Table A1.4, "Trends in educational attainment: 25-64 year-old population (1997-2007)," updated 29 Sept. 2009, and OECD Stat Extracts, "Total population by sex and age" ages 3-24, and "Students enrolled by age" (all ages), extracted 22 January 2010. *Note: 2004 used as reference year for Canada enrollment data; secondary attainment has been estimated for Japan using the growth rate for the years 1997-2001.
United States	0.486	
United Kingdom	0.354	
New Zealand	0.587	
Japan	0.443	
Canada	0.392*	
Australia	0.539	
Average	0.467	

Table 10: Standard Education Index, 2007

	2007	Source: Gray-Purser HDI Trends Dataset v1.0 Nov. 2009, Table "2007 GP".
United States	0.97	
United Kingdom	0.97	
New Zealand	1.02	
Japan	0.95	
Canada	0.97	
Australia	1.03	
Average	0.98	

Table 11: Attainment versus Literacy, 2007

	Attainment Sum	Functional Literacy Rate (%)
United States	128.18	80.00
United Kingdom	100.04	78.20
New Zealand	112.61	81.60
Japan	128.36	...
Canada	134.86	85.40
Australia	101.92	83.00

Source: Figure 3, above, and Human Development Report 2009, Table I-2: "Human and income poverty: OECD countries":

http://hdr.undp.org/en/media/HDR_2009_Tables_rev.xls

Table 12: Influence of Parental Background on PISA (2006) Science Scores

	Socioeconomic gradient (point increase in PISA science score)	Weighted socioeconomic gradient (point increase in PISA science score)
USA	49	63
NZL	52	60
GBR	48	54
AUS	43	48
JPN	38	40
CAN	33	38
OECD 30	40	50

Source: Data from Figure 5.3, OECD, *Economic Policy Reforms 2010: Going for Growth*, 2010, available at

<http://dx.doi.org/10.1787/784787325068>.²²

The socioeconomic gradient is defined as the point increase in PISA score that can be attributed to an improvement of one standard deviation on PISA's socioeconomic background index. The weighted socioeconomic gradient accounts for transnational differences in socioeconomic composition.

Table 13: Median Personal Income Since 1990

	Median Personal Incomes, around 1990 (US\$PPP '08)	Median Personal Incomes, mid-90's (US\$PPP '08)	Median Personal Incomes, around 2000 (US\$PPP '08)	Median Personal Incomes, around mid 2000's (US\$PPP '08)
Australia	N/A	18,828	20,353	22,835
Canada	N/A	24,570	26,617	27,431
Japan	N/A	24,598	23,173	22,464
NZ	16,254	15,529	17,560	18,576
UK	19,981	19,815	22,623	24,389
US	27,898	28,470	29,264	29,767

Source: AHDP calculations (converting from local currently to PPP) using stats.oecd.org data.

²² Originally produced by Causa and Chapuis (2009).

Table 14: Income, Earnings, Wages and Unemployment using most recent data available (all dollars in PPP US\$)

	Earned Income, Female, '07	Earned Income, Male, '07	Long-term Unemployment, '07 (%) ²³	Female earnings as % of males, 05-07 ²⁴	Female earnings as % of males, 05-07 ²⁵	Female Labor Force Participation rate, '08 ²⁶ (%)	Youth 15-19 not in ed. and unemployed, '05 (%)	Real Min. Wage (per hour), '00	Real Minimum Wage (per hour), '08	Min. wage relative to mean wages, 08 ²⁷	Intergenerational earnings elasticity scores	Strictness of Employment Protection, 2008*
AUS	28,759	41,153	.7	62	59	69.9	7.4	8.27	8.59	.45	.17	1.15
CAN	28,315	43,456	.4	65	52	74.4	6.1	6.16	6.43	.37	.19	.75
JPN	21,143	46,706	1.2	N/A	N/A	62.2	8.4	4.92	5.22	.30	N/A	.75
NZL	22,456	32,375	.2	63	58	72	8.5	5.49	6.99	.50		1.43
GBR	28,421	42,133	1.3	61	62	70.2	9.3	6.15	8.06	.38	.50	1.40
USA	34,996	56,536	.5	66	58	69.3	6.1	5.84	5.59	.25	.47	.21

Sources: Columns 1-3: U.N. Human Development Report, 2009. Columns 4-5: OECD *Education at a Glance*, 2009: Table A7.1b, "Differences in earnings between females and males." Australia data are 2005; Canadian data are from 2006; New Zealand, U.K. and U.S. data are from 2007. Column 6: OECD Stat Extracts. Column 7: OECD *Education at a Glance*, 2009. Column 8-10: OECD Stat Extracts. Column 11: OECD, *Economic Policy Reforms 2010: Going for Growth*, 2010: Fig. 5.1. The higher the number, the stronger the link between sons' earnings levels and those of their fathers (i.e., in Australia, 17 percent of the earnings advantage of high-earning fathers over low-earning fathers is passed on to their sons). Column 12: OECD Stat Extracts. *Employment protection (EP) is a synthetic indicator of the strictness of regulation on dismissals and the use of temporary contracts, scaled from 0 (least stringent) to 6 (most restrictive). For more information, see OECD Indicators of Employment Protection (<http://www.oecd.org/employment/protection>).

Table 15: Harmonised (internationally comparable) Unemployment Rate of All Persons

Frequency	Annual			Quarterly				Source: Labour Force Statistics (MEI) from stats.oecd.org
	2007	2008	2009	Q2-2009	Q3-2009	Q4-2009	Dec-2009	
Time	2007	2008	2009	Q2-2009	Q3-2009	Q4-2009	Dec-2009	
Country								
Australia	4.4	4.2	5.6	5.7	5.5	5.3	5.3	
Canada	6	6.1	8.3	8.4	8.5	7.8	7.8	
Japan	3.9	4	5.1	5.2	5.4	5	4.8	
New Zealand	3.7	4.2	6.1	5.8	6.3	6.8	..	
United Kingdom	5.3	5.7	..	7.6	8	
United States	4.6	5.8	9.3	9.1	9.6	9.5	9.7	
OECD (30)	5.8	6.1	8.3	8.2	8.4	8.5	8.6	

²³ Out of work for 12 or more months, expressed as percentage of the population.

²⁴ Average annual earnings of females, as a percentage of the average annual earnings of males, ages 30 to 44.

²⁵ Average annual earnings of females, as a percentage of the average annual earnings of males, ages 55 to 64.

²⁶ Percent of females ages 15-64.

²⁷ Full-time workers only.

Table 16: Incidence of Child Poverty, 2005

Australia	Canada	Japan	New Zealand	U.K.	U.S.	OECD Average
11.8 %	15.1 %	13.7 %	15.0 %	10.1 %	20.6 %	12.4 %

OECD StatsExtract (2010) Data are for 2005

Table 17: Net Worth per Capita, 2000

Appendix IV Table 1: Net worth per capita from household balance sheet and survey data, 2000

Country	Net worth per capita ^a	Real GDP per capita ^c	Personal disposable		Net worth per capita ^a	Real GDP per capita ^c	Personal disposable		Real cons. per capita ^e
			Income per capita ^d	Real cons. per capita ^e			Income per capita ^d	Real cons. per capita ^e	
PPP									
Household balance sheet data					Survey data				
Australia	90,906	27,193	15,983	18,913	101,597	27,193	15,983	18,913	
Canada	89,252	28,731	17,661	15,994	72,384	28,731	17,661	15,994	
China					11,267	5,796	3,849	3,937	
China, Taiwan	100,009	19,714	na	12,603					
Czech Republic	32,431	14,844	8,557	10,008					
Denmark	66,191	28,539	12,348	17,951					
Finland					38,754	24,416	11,285	15,197	
France	93,729	23,614	14,732	15,672					
Germany	89,871	23,917	15,486	16,603	52,794	23,917	15,486	16,603	
India					6,513	2,684	1,916	1,406	
Indonesia					7,973	4,035	2,603	2,614	
Italy	119,704	22,876	15,169	14,195	74,217	22,876	15,169	14,195	
Japan	124,858	25,924	15,496	15,975	91,856	25,924	15,496	15,975	
Netherlands	120,086	25,759	12,798	16,159	43,434	25,759	12,798	16,159	
New Zealand	55,823	20,008	12,034	13,534	61,872	20,008	12,034	13,534	
Poland	24,654	9,661	7,190	6,493					
Portugal	53,357	17,089	11,700	10,380					
Singapore	113,631	28,644	14,885	9,965					
South Africa	16,266	8,017	4,691	5,210					
Spain	92,253	19,037	12,544	13,160	60,614	19,037	12,544	13,160	
UK	128,959	24,252	17,102	18,238					
USA	143,727	35,619	25,480	24,313	143,857	35,619	25,480	24,313	

Source: Davies, James B. et. al. "The World Distribution of Household Wealth," UNU-WIDER, 2006.

Table 18: HPI-2 versus GDP per capita, 2007

	GDP Per Capita (\$)	HPI-2 (%)
United States	43,102	15.2
United Kingdom	33,717	14.6
Japan	25,282	11.6
Canada	31,689	11.2
Australia	36,260	12.0
Average	32,735	12.9

Sources: Human Development Report 2009, Table I-2: "Human and income poverty: OECD countries": http://hdr.undp.org/en/media/HDR_2009_Tables_rev.xls; Gray-Purser HDI Trends Dataset v1.0 Nov. 2009, Table "2007 GP."

Table 19: Public Expenditure on Social Services and Health

	Australia	Canada	Japan	New Zealand	U.K.	U.S.
Total public social spending as % of total government expenditure (2005)	49.2	56.8	64.7	46.4	64.2	43.6
Total public health expenditure as % of total health expenditure (2007 except Japan)	67.5	70.0	81.3 (2006)	78.9	81.7	45.4

Social spending figures from OECD Stat Extracts (2010), data are for 205; Health expenditure figures are from OECD Health Data (2009), data are for 2007 except Japan (2006)

Table 20: Life Satisfaction/Happiness

	SWB Index, ²⁸ 1981-'82	SWB '92-'95	SWB '05-'06	Happiness '81-'82	Happiness '95	Happiness '05-'06	Life satisf'n '81	Life satisf'n '95	Life satisf'n '05-'06	Fdm of choice and control, '05 ²⁹	Work Opportunities ³⁰
AUS	3.65	3.47	2.95	1.7	1.63	1.73	7.88	7.55	7.28	23.3	M: 82% F: 80%
CAN	3.63	3.01 ('90)	3.74	1.69	1.96 ('90)	1.59	7.84	7.88 '90	7.72	16.9	M: 81% F: 82%
GBR	3.51	3.17 ('90)	3.68	1.67	1.72 ('90)	1.57	7.66	7.47 ('90)	7.60	14.1	M: 72% F: 80%
JPN	1.62	2.37	2.46	2.02	1.75	1.82	6.59	6.72	6.99	2.6	M&F: 63%
NZL		3.39 ('98)	3.8 ('04)	N/A	1.72 ('98)	1.64 (04)	N/A	7.7 ('09)	7.89 (04)	23.3	M&F: 63%
USA	3.24	3.68	3.52	1.78	1.60	1.62	7.67	7.67	7.57	16.8	M: 83% F: 78%

Columns 1-9: Ingelhart, Ronald et al. "Development, Freedom, and Rising Happiness: A Global Perspective (1981-2007). *Perspectives on Psychological Science*, World Values Survey, Vol 3 No. 4. Column 10: World Values Survey Databank, 2005 Wave, Variable 46, www.worldvaluessurvey.org. Column 11: Source: Gallup World Poll, 2009. <https://worldview.gallup.com/default.aspx>

²⁸ Subjective well-being index, composed of happiness and life satisfaction.

²⁹ Percent who answered 10 on scale of 1-10.

³⁰ "In your work, do you have opportunity to do what you do best every day?"

Table 21: Civic and Political Participation

	Voting Rate, 2007 (% registered voters) ³¹	Voting Rate, 2007 (% voting age pop.) ³²	Women's share of Parl. seats, (%), 2008	Women in Ministerial Positions (%) '08	Honest elections (% saying Yes), '08-'09	Donations (%) ³³	Volunteerism, 2009 (%) ³⁴	Contact public official, 2008 (%) ³⁵	Disaffected youth, 2003 (%) ³⁶
AUS	94.8	81.7	26.7	24.1	66	M: 65 F: 75	M: 38 F: 37	23	7.7
CAN	64.9	54.6	21.3	16	70	M: 63 F: 68	M: 33 F: 37	20	8.9
GBR	61.4	57.6	19.5	22.7	63	M: 70 F: 74	M&F: 29	24	6.8
JPN	58.6	59.0	9.4	11.8	56	M: 21 F: 28	M: 24 F: 21	22	5.9
NZL	81.0	72.5	33.1	32.1	63	M: 63 F: 72	M: 43 F: 40	23	7.7
USA	47.5	46.6	16.8	23.8	59	M: 65 F: 68	M: 37 F: 40	32	N/A

Column 1-2 International Institute for Democracy and Electoral Assistance (IDEA) 2007. "Voter Turnout, A Global Survey." Stockholm. Reprinted by permission of International IDEA. Columns 3-4 UNIFEM Progress of the World's Women 2008/2009. Columns 5-8 Gallup World Poll, 2008-2009. Column 9 UNICEF Well-Being Report Card7, 2007.

Table 22: Violence

	Youth (15-19) suicide per 100,000, (3 yr avgs), 2008	Murder per 100,000 population, 2003	Prisoners per 100,000 population, 2004	Firearms per 100 people (low-hi estimate), 2007	Do you feel safe walking alone at night in your community?, '08-'09 (%)	Bullying, % of young people who were bullied ≥once in last 2 months, '01 (ages 11, 13 and 15)
Australia	8.5	1.5	120	15-16	63	N/A
Canada	10	2.1	107	25-38	76	37.3
Japan	7.7	.5	58	Not in top 30	73	N/A
New Zealand	15.9	1.3	168	Not in top 30	57	N/A
United Kingdom	3.0	2.0	139	3.3-7.8 (England and Wales only)	64	35.8
USA	7.7	5.6	725	83-97	75	33.9

Column 1: World Health Organization Mortality Database, 2008. Column 2: United Nations, Office on Drugs and Crime. Ninth United Nations Survey on Crime Trends and the Operations of Criminal Justice Systems, 2003-2004. Number of murders reported to police per 100,000. Column 3: OECD Stat Extracts. Column 4: Small Arms Survey, 2007: ch. 2. Column 5: Gallup World Poll. Column 6: UNICEF Well-Being Report Card7, 2007.

³¹ Voted in last parliamentary election.

³² Voted in last parliamentary election.

³³ Donated money to an organization in the past month.

³⁴ Volunteered time to an organization in the past month.

³⁵ Voiced opinion to a public official in the past month.

³⁶ Young people (15) who agree with the statement, "I feel left out of things."

Table 23: Prisoners per 100,000 population, 2009

Australia	Canada	Japan	New Zealand	U.K.	U.S.	Source: OECD Society at a Glance, 2009 (data are for 2009 or most recent year available)
129 (2007)	116 (2007)	63 (2008)	195 (2009)	153 (2009)	760 (2008)	

Table 24: Computer and Broadband Coverage, 2009 (or most recent year)

	Australia	Canada	Japan	New Zealand	U.K.	U.S.
Broadband subscribers (2009)	24.9	29.7	24.2	22.8	28.9	26.7
Households with personal computers (2008 except U.S.)	75.0 (2007)	78.4 (2007)	85.9 (2008)	71.6 (2006)	78.0 (2008)	61.8 (2003)

OECD Broadband Portal (2010), data are for 2009 or most recent year available

Table 25: Mobile Phone Subscriptions per 100 Population, 2002-2005

Source: OECD Stat Extracts (2010).

	2002	2003	2004	2005
Australia	64.51	71.96	82.00	90.56
Canada	..	42.18	47.46	52.09
Japan	63.73	68.00	71.68	75.56
New Zealand	64.46	73.81	86.89	101.94
United Kingdom	83.15	86.97	97.80	106.54
United States	53.30	54.96	63.51	72.34

Table 26: Group Membership, 2009

	Australia	Canada	Japan	New Zealand	U.K.	U.S.
Church or religious organization	16.3 (2005)	27.9 (2006)	4.4 (2005)	17.7 (2004)	19.2 (2006)	37.9 (2006)
Sport team or recreational group	32.7 (2005)	29.1 (2006)	18.3 (2005)	37.7 (2004)	30.0 (2006)	15.4 (2006)

Source: World Values Survey (2009), data are for most recent year available

Table 27: Intolerance, 2009

	Australia (2005)	Canada (2006)	New Zealand (2004)	U.K. (2006)	U.S. (2006)
Immigrants / foreigners	5.9	4.6	7.9	15.9	13.2
Lesbians or gays	22.4	15.7	18.6	18.8	26.0

Source: World Values Survey (2009), data are for most recent year available

Table 28: Legal Recognition of Same-Sex Partnerships

	Same-Sex Marriage	Civil Unions / Domestic Partnerships
Australia	No	Yes (three states)
Canada	Legal nationwide	N/A
Japan	No	No
New Zealand	No	Yes
United Kingdom	No	Yes
United States	Yes (five states)	Yes (eleven states)

Source: Pew Forum on Religion & Public Life (2010); Human Rights Campaign (2010)

Table 29: Urban Wastewater Collection and Treatment

	Population Connected to wastewater collection system	Population connected to urban wastewater treatment	Latest Year
Australia	87	..	2004
Canada	74.3	71.7	1999
Japan	67	67	2003
New Zealand	80	80	1999
United Kingdom	97.7	97.5	2002
United States	71.4	..	1996

Source: United Nations Statistics Division <http://unstats.un.org/unsd/ENVIRONMENT/wastewater.htm>
(UNSD/UNEP/OECD/EUROSTAT data)

Table 30: CO₂ Emissions (metric tons per capita)

	1960	1970	1980	1990	2000	2001	2002	2003	2004	2005
Australia	8.6	11.4	14.8	17.2	17.1	16.6	17.1	17.0	16.9	18.1
Canada	10.8	15.3	17.3	15.4	16.8	16.3	16.0	16.8	16.6	16.6
Japan	2.5	7.1	7.9	8.7	9.5	9.3	9.4	9.6	9.8	9.6
New Zealand	4.9	5.0	5.5	6.5	8.0	8.3	8.0	7.7	7.5	7.2
United Kingdom	11.1	11.5	10.3	9.9	9.3	9.4	9.1	9.2	9.3	9.1
United States	16.2	20.6	20.3	19.2	20.0	19.6	19.6	19.4	19.6	19.5

Source: World Bank WDI

Table 31: Percent of Terrestrial Territory Protected*

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
AUS	6.5	6.9	7.1	7.1	7.2	7.2	7.2	7.2	7.4	7.5	7.9	8	9.2	9.2	9.2	9.2	9.3	9.3	9.3
CAN	4.6	4.6	4.7	5.4	5.4	5.5	5.7	5.7	5.9	6.3	6.3	6.4	6.4	6.5	6.5	6.5	6.5	6.5	6.5
JPN	5.1	5.2	5.3	5.5	5.9	6.2	6.2	6.3	6.3	6.4	6.4	6.4	6.6	6.7	6.7	6.7	6.7	6.7	6.7
NZL	16	16	16	16	16	16	17.4	17.5	17.5	17.5	17.5	17.5	17.5	17.7	17.7	17.7	17.7	17.7	17.7
GBR	12.3	12.4	12.6	12.6	12.8	12.9	12.9	12.9	13	13	13	13	13	13	13	13.2	13.2	13.2	13.2
USA	12.8	12.8	12.8	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9

*Definition: % of total land area which is a nationally designated "protected areas" conforming with definition adopted by the International Union for Conservation of Nature. Source: U.N. States Millennium Indicators, <http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=784&crd=>