



Research Report

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Knowledge and Beliefs of Ordinary People
about Developmental Hierarchies

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Abstract

Scholars and policy makers have for centuries used developmental hierarchies to characterize different countries. The hypothesis motivating this paper is that such thinking has been circulated internationally and is used by ordinary people. This paper uses data from surveys in twelve diverse countries to study how developmental hierarchies are understood in everyday life. We compare how ordinary people rate countries on development with the United Nations ratings on its Human Development Index (HDI). Our research shows that most people can rate countries on development and do so very similarly to the UN. These findings suggest that developmental hierarchies are widely understood around the world and are widely available to ordinary people as they make decisions about many aspects of life.

INTRODUCTION AND MOTIVATION

This paper uses data from ordinary people in fourteen regional or national surveys in twelve diverse countries to examine the extent to which developmental hierarchies are understood in everyday life. In these surveys we asked representative samples of individuals to rate several countries on their levels of development. In this paper we summarize the ratings that respondents gave to the countries. We also compare how ordinary people rate countries on development with how the United Nations rates the same countries in its Human Development Index (HDI). This analysis shows how individuals perceive the international development hierarchy and the extent to which the perceived hierarchy matches that of international elites such as the United Nations and World Bank.

The motivation for this research comes from the understanding that scholars, policy makers, and other elites have for hundreds of years used developmental hierarchies in thinking about different countries. Some of the important manifestations of the use of hierarchical thinking in rating countries are the centuries-old models of development or modernization which assume that countries progress along the same developmental trajectory (Harris 1968; Mandelbaum 1971; Nisbet 1969/1975; Sanderson 1990; Thornton 2001, 2005). Since the rate of development is assumed to vary in such models, at any one time societies are believed to be at different developmental levels, thereby, forming a developmental hierarchy. For centuries, scholars and other elites have located Northwest Europe and its overseas migrant populations at the top of this developmental hierarchy, the indigenous peoples of America, Australia, and Africa at the bottom of the hierarchy, and other countries scattered elsewhere along the hierarchy.

The United Nations uses this model of development to divide countries into categories of developed and developing, with a least developed subgroup divided out of the developing society group (UN Statistics Division 2009). The UN also regularly publishes its HDI that numerically rates countries on a scale from low to high development (UN Development Programme 2007/2008). The World Bank categorizes countries into developing and industrial, while the International Monetary Fund uses somewhat different wording in its development categories: the advanced economies; and the emerging and developing economies (World Bank 2010; International Monetary Fund 2009).

For centuries this developmental hierarchy has not been perceived statically but as a dynamic model that describes the pathway of countries along a developmental trajectory of progress (Harris 1968; Mandelbaum 1971; Nisbet 1969/1975; Sanderson 1990). In other words, this hierarchy presents a picture of the unfolding of progress from lower to higher levels of development.

Our interest in studying the views of ordinary people concerning developmental hierarchies does not come from a belief that developmental models are useful paradigms for research or public policy. We know that developmental hierarchies and the related theories of

modernization have been strongly challenged in the social science and policy literature (Amin 1989; Baker 1998; Boas 1940; Bock 1956; Böröcz 2000, Böröcz and Sarkar 2005; Cesaire 1972; Chakrabarty 2000; Comaroff and Comaroff 1992; Hodgen 1964; Jennings 1975; Mandelbaum 1971; Nisbet 1969/1975; Szreter 1993; Tilly 1984; Wallerstein 1991). We are sympathetic to these critiques and understand that the influence of developmentalism and modernization theory has diminished in certain sectors of academia. At the same time, we recognize that developmental models and modernization theories continue to have influence in parts of academia and that they influence much public policy and the language and programs of many international organizations such as the United Nations, World Bank, and International Monetary Fund. We also expect that they are widespread in everyday life in much of the world.

Especially important is that this worldview of developmental hierarchies is more than a system for categorizing countries and the trajectory of development. We know that worldviews and systems of belief give people models for understanding how the world is organized and operates and how they should act in the world (Geertz 1973; Fricke 1997a, 1997b; D'Andrade 1984). Such models act as schema or frames in providing meaning and guidance for people to interact with their communities and lead their lives. They also provide frameworks for evaluating goals and the methods for achieving them.

The worldview associated with development and developmental hierarchies provides these kinds of models and schema for understanding the world and for dealing with the world (Ferguson 1999; Osella and Osella 2006; Pigg 1992; Thornton 2001, 2005). By locating the countries of Western Europe and North America at the apex of development, the model specifies that these societies define what it means to be modern. These societies reflect what Mannheim (1936) calls a utopia of liberal humanitarianism which gives people a model of the future to strive for and judge themselves by. Furthermore, the model often allots to societies at the top of the hierarchy a designation and aura of goodness, which gives moral authority to such countries (Böröcz 2006). In this way many of the elements of society in Western Europe and North America--including government, economies, religion, family life, and human rights--are defined as modern and good.

Such views of developmental hierarchies have played roles in international events. They frame the ways that different groups present their political identities and their strategies in a global environment. European elites have long viewed Western Europe as more developed than Eastern Europe (Böröcz 2006; Melegh 2006; Todorova 1997; Wolff 1994). Wolff (1994) has argued that this perception of Eastern Europe played an important role in the division of Europe between "east" and "west" following World War II. Böröcz (2000) has suggested that perceptions of this developmental hierarchy played a role in recent years in how countries were considered for admission into the European Union.

The developmental model and the differential placement of countries in the hierarchy of development have also affected how history has been written (Chakrabarty 2000; Mandelbaum 1971; Nisbet 1969/1975; Thornton 2005). Scholars have mistakenly assumed that the past state of

a currently developed society could be proxied by the current state of a less developed society. Scholars also have assumed that the histories of societies seen as less developed were in some way following the histories of the more developed societies or, if they deviated from that “standard” trajectory, that they were following a “distorted” line.

The dynamic nature of the developmental model also assumes that social change is normal and expected. Development and modernization can become individual and societal goals that motivate social change, with all having the capability of progress, delegitimizing the old and legitimizing the new (Wallerstein 1991). The model also shows the direction of change—typically towards Western Europe and North America (Chakrabarty 2000; Wallerstein 1991). In this framework the only difference between countries seen as developed and countries seen as less developed is that the latter are just not developed yet.

The hierarchical model of development indicates mechanisms for people to employ to develop. It indicates that the patterns of religion, government, family life, economics, and human rights in societies viewed as developed will bring development elsewhere and that development will bring certain changes in these dimensions of human life (Thornton 2005).

This model of development and developmental hierarchies has been spread widely among the world’s elite. Many colonial administrators, revolutionary leaders, feminist advocates, leaders of family planning movements, and other social movements have relied on developmental models. We mentioned earlier the involvement of the United Nations, the World Bank, and the International Monetary Fund in promulgating country ratings of development. Similar developmental principles and models are embraced and aggressively promoted by numerous other government and nongovernmental organizations around the world (Latham 2000; Meyer et al. 1997; Nisbet 1969/1975).

We expect that knowledge of such development hierarchies and models have been disseminated widely around the world to people in everyday life through numerous mechanisms, including colonialism, education, mass media, social movements, foreign aid, and government and nongovernment programs (Thornton 2005). The acceptance or rejection of developmental hierarchies and the developmental models associated with them have great potential for influencing the behavior of ordinary people, as those who accept such developmental hierarchies and models will behave differently than those who do not. This potential for influencing behavior does not depend on whether the elements of the model, themselves, are true or false, good or bad.

Ethnographic data from Subsaharan Africa, China, Egypt, India, Nepal, and New Guinea indicate that at least some ordinary people understand developmental hierarchies and use them in their conceptualizations of the world (Abu-Lughod 1998; Ahearn 2001; Amin 1989; Blaut 1993; Caldwell et al. 1988; Dahl and Rabo 1992; Ferguson 1999; Guneratne 1998, 2001; Justice 1986; Osella and Osella 2006; Pigg 1992, 1996; Wang 1999). Although there are limited survey data from Argentina and Nepal suggesting an understanding of developmental hierarchies in certain settings in these countries (Binstock and Thornton 2007; Thornton Binstock and Ghimire 2008),

such information is very recent and limited to just two countries. This lack of survey evidence from ordinary people concerning their beliefs in developmental hierarchies is important because, as we mentioned earlier, such models are a source of beliefs, values, and motivations that can influence people's decisions and behavior. Without additional survey data, we cannot judge how widespread such worldviews are among the world's ordinary people.

The research in this paper was designed to fill this gap in understanding how ordinary people view developmental hierarchies and models. Our paper evaluates two specific hypotheses growing out of the theoretical considerations discussed above. The first hypothesis is that the ideas of developmental hierarchies have been widely disseminated internationally among ordinary people. The second is that the ideas of developmental hierarchies held by ordinary people are similar to those held by international elites such as the United Nations.

Although there are many elements of developmental models that are in need of research, this paper focuses only on developmental hierarchies and how ordinary people view them. We investigated ideas about developmental hierarchies by creating new ways of measuring people's views of such hierarchies and then administering surveys in several countries to measure these views. We focus on developmental hierarchies by examining the ratings that survey respondents give to diverse countries on their levels of development. We then compare the answers of respondents to the ratings of the same countries provided by the UN HDI. We include regional or national data from fourteen surveys in twelve countries: Albania; Argentina; Bulgaria; China; Egypt; Iran; Iraq; Lebanon; Nepal; Saudi Arabia; Taiwan; and the United States. To preview our results, the evidence suggests that developmental hierarchies are widely understood in many diverse places, and the notions that people have of developmental hierarchies are very similar to those of the UN.

Our paper proceeds in four steps. We first discuss the twelve countries where we conducted our research and describe the fourteen surveys used. We next discuss the methods used in our data collection and analysis. Third, we present our findings about how survey respondents in various places rate countries on development. The final section provides our conclusions.

RESEARCH SITES AND DATA COLLECTIONS

As we mentioned earlier, our data come from fourteen regional or national surveys conducted in twelve countries: Albania; Argentina; Bulgaria; China; Egypt (2); Iran; Iraq; Lebanon; Nepal; Saudi Arabia; Taiwan; and the United States (2). These surveys were conducted between 2004 and 2009. Summary information about these twelve countries is provided in Table 1.

The twelve countries are diverse geographically. Four of them (Egypt, Iraq, Lebanon, and Saudi Arabia) are Middle Eastern countries of North Africa or West Asia, two are from South Central Asia (Iran and Nepal), two from East Asia (China and Taiwan), two from Southeastern

Europe (Albania and Bulgaria), one from South America (Argentina), and one from North America (United States). Although Albania and Bulgaria are the only European countries represented in this paper, both Argentina and the United States have majority populations of migrants from Europe and their descendants.

The twelve countries are also diverse in religion. Albania, Egypt, Iran, Iraq, and Saudi Arabia have majority Muslim populations, although each has other religious faiths. Lebanon is very diverse religiously with substantial numbers of Muslims and Christians. Christianity has long been the majority religion in Argentina, Bulgaria, and the United States, with Argentina being primarily Catholic, Bulgaria primarily Orthodox, and the US primarily Protestant. China and Taiwan have long histories of Buddhism and Taoism mixed with reverence towards ancestors, and China has substantial populations of religious minorities, including Muslims. The majority religion in Nepal is Hindu, but with substantial numbers of Buddhists and other religions.

The twelve countries have different educational levels, although each country has experienced long-term increases in school enrollment and literacy. Albania, Argentina, Bulgaria, Taiwan, and the US have the highest levels of literacy, with 98 percent or more of adults being literate. Nepal and Egypt have the lowest level of adult literacy, but substantially more than half of the adults in both countries are literate. School enrollment is also high in each country, ranging from 61 percent in Iraq and Nepal to 95 percent in Taiwan.

GDP per capita also shows considerable variance, ranging from just over a thousand dollars for Nepal to more than 45 thousand for the United States. In between are the countries of Egypt, China, and Albania with relatively low income, Lebanon, Iran, Bulgaria, and Argentina with medium levels, and Saudi Arabia and Taiwan with relatively high incomes. Compared with historical levels, life expectancy is high in each of the countries. The lowest levels are for Nepal (66 years) and Iraq (68 years), and extend up to 79 years for the US.

When put in long-term historical context, fertility levels in the countries range from medium to very low. The highest total fertility rate (TFR) is 4.1 children per woman in Iraq, and three countries, Egypt, Nepal, and Saudi Arabia, have TFRs around 3. Four countries—Albania, China, Lebanon, and the US—have UN-estimated TFRs near replacement levels of 2.1 children per woman. However, some demographers estimate that China's TFR is as low as 1.5 (Guo and Chen 2007), comparable to the fertility levels observed in Bulgaria (1.4) and Taiwan (1.1), which are among the lowest in the world.

As shown in Table 2, our fourteen data collections include a variety of sample definitions and interviewing approaches. This variety was necessitated by budget limitations in each setting, the different methodological approaches required in different places, and by the evolution of the project over time. Consequently, we cannot make strict comparisons across settings, but we can examine the overall knowledge of developmental hierarchies in the various settings.

Six of the fourteen surveys were designed to be representative of the adult populations of their respective countries: Albania, Bulgaria, Iraq, Lebanon, and the two in the United States.

The US data collection was conducted in two different 15 minute supplements to the Survey of Consumer Attitudes, a monthly telephone survey. The Argentina survey was national in scope, but was limited to people living in urban agglomerates of 500,000 people or more, which includes approximately 60 percent of the country's population¹.

Six surveys were designed to be representative of certain regions, provinces, or other geographical units. The China data collection was conducted in the Province of Gansu located in West-central China and having a large Muslim minority group and relatively low income. The Iran survey was conducted in Yazd, a city of more than 400 thousand people in central Iran. Yazd has extensive industry, maintains a high socioeconomic level, and is religious and conservative (Abbasi-Shavazi and Askari-Nodoushan, forthcoming). The Egyptian adult sample was drawn from one district in Qaliubia Governorate located north of Cairo and one district in Fayoum Governorate located south of Cairo. We selected these two districts to broadly represent areas in northern and southern Egypt. The youth survey in Egypt was conducted among young adults ages 18-25 in the cities of Alexandria, Cairo, and El-Minya and their rural surroundings. The survey in the Kingdom of Saudi Arabia (KSA) was conducted among young adults ages 18-25 in the cities of Jeddah, Riyadh, and Damman-Khobar and their surrounding rural areas.

The Nepal survey was conducted in the Chitwan Valley in South-central Nepal and combines data from two samples of adults. The first sample consists of adults aged 15-59 living in the study area in 1996, plus the non-resident spouses of these adults. The data were gathered in 2008 from the 1996 sample members who had moved elsewhere in Nepal between 1996 and 2008, as well as those who stayed in the study area. The second sample includes adults 15 and over in 2008 living in the study area, plus the non-resident spouses of married residents aged 15-34 in 2008 and the non-resident parents of unmarried residents in 2008 aged 15-34.

Our Taiwan data collection was conducted with college students at National Cheng-chi University in Taipei. The students were interviewed several times during their college careers, with the data reported in this paper coming from their first year of college.

Table 3 provides background information for the survey respondents. A wide variety of attributes is reflected in the distributions shown in the table.

MEASUREMENT AND ANALYSIS

In each survey we asked respondents to rate several countries on development. We did not define what we meant by development, but let respondents use their own definitions. This approach allowed the respondents' definitions to enter into their ratings rather than being dictated by whatever definition we might have provided. Respondents rated development levels for each specified country from zero to ten or from one to ten, with ten representing the highest

¹ Except for Argentina, the samples were randomly selected at each stage. Although Argentina used a multi-stage procedure at every stage except the final selection of individual households, the households were chosen through a random walk to find whether an individual residing in the household fits a quota of gender and age previously locally established.

level of development and either zero or one defined to be the lowest. Both the number and identity of countries rated varied across the surveys. The countries rated in each survey are listed in Table 4.

To some extent the exact form of the question asked of respondents evolved over time and depended on the auspices of the data collection. The different question variants asked in the respective countries are contained in the appendix. To show the general format, we provide here the question used in Argentina, Bulgaria, China, Iran, Nepal, the US, and the adult Egypt survey: “We would like you to think about development in different countries around the world today. We’ll be talking about countries as varied as England and Mongolia. Think of a development scale that rates countries from zero to ten. The least developed places in the world are rated zero and the most developed places in the world are rated ten. You can use both of those numbers for rating countries plus all of the numbers in between. Using this development scale, where would you put [Country X]?”

Some respondents indicated that they did not know what to rate Country X. For them, we asked the following probe: “Even if you don’t know exactly, about where would you put Country X?” The original question and probe were repeated as necessary for all of the countries rated.

We analyzed the data from these country ratings in several ways. For each country rated in each survey, we calculated the average rating for all respondents who rated that country. We did so by combining ratings for respondents who answered with and without the follow-up probes, because most respondents provided ratings without a probe and the distribution of responses for those who answered without a probe was very similar to the total sample distribution. These averages are reported in Table 4.

Table 4 also reports the United Nations HDI scores for 2005 for the countries rated in the data collections. The HDI scores are created by the UN as a composite index consisting of the following four indicators: national adult literacy (% of population over age 15 who are literate); the gross school enrollment ratio in primary, secondary, and tertiary school; life expectancy at birth; and per capita GDP. Although the UN reports these scores from 0 to 1, we multiplied them by ten to make the metric more comparable to our survey ratings.

We compared the pattern of average respondent ratings of countries on development with the UN HDI ratings of the same countries. We also calculated Pearsonian correlations between the average scores reported by respondents for the countries and the UN HDI scores for the same countries. These correlations are recorded in the bottom panel of Table 4.

In addition to calculating the correlations between the UN scores and the average respondent scores we computed correlations between each individual’s ratings and the UN scores. That is, for every individual in every data set, we calculated the correlation between the UN scores and that individual’s own ratings on development. The procedures for calculating individual correlations with the UN HDI are identical to calculating the average correlations with the HDI. These individual correlations are summarized in Table 5 by listing the decile breaks for

the correlations. Table 5 also provides the percentage of correlations in each survey exceeding .50 and exceeding .70.

Several conditions must be fulfilled before the ratings of survey respondents will closely match the ratings of the UN HDI. First, respondents must have a conception of societal development that they can use in rating countries. Second, the conception of development held by respondents has to be very similar to the UN conception. Third, respondents must be able to utilize reliably our development rating scale. Finally, respondents must have at least a rudimentary understanding of the countries they are asked to rate. All four of these conditions must be met for the observed correlations to be high. To the extent that any of these four conditions are absent, the observed correlations will be driven towards zero.

RESULTS

We now turn to the average ratings given for the various countries. Although the exact ratings for specific countries vary somewhat by the country where the ratings were conducted, there are also important commonalities across all sets of ratings.

Beginning with the high average ratings, we see that Japan and the United States were universally rated highly. In all settings where they were rated, either Japan or the United States received the highest average rating, with the average ratings for the two countries often being very similar. Furthermore, with one exception, the average ratings given for Japan and the United States exceeded eight, ranging from 7.2 to 8.8 for Japan and from 8.4 to 9.5 for the United States. These are exceptionally high ratings when the maximum possible rating is 10. The only average rating for either of these countries falling below eight was registered in our Chinese sample for Japan, which probably reflects the problematic history of relations between Japan and China.

The Western European countries of Austria, France, Italy, Sweden, and the United Kingdom also received quite high average scores. The lowest average rating for any of these five countries was 6.7 for Chinese respondents rating France, and the highest was 9.4 for Saudi Arabian youth rating France. However, in all cases where these Western European countries were rated in the same survey as Japan or the United States, they received a lower average score than Japan and the United States.

Another country generally rated highly in our surveys was China. In fact, the average ratings for China were generally in the same range as the ratings for the countries of Western Europe—sometimes higher, sometimes lower, and sometimes equal. The high ratings for China were especially prevalent in most of the surveys from the Middle East. We do not have an explanation for this phenomenon, although one possibility is that the respondents in the Middle East recognized China's enormous recent economic successes, without also recognizing that China continues to have large numbers of people with low levels of education and income.

An important exception to the high ratings for China was from the college students of Taiwan who gave China an average rating of 5.1 (in contrast to 8.8 for Japan, 9.2 for the United States, and 7.0 for Taiwan itself). This low rating of China by Taiwanese students probably reflected the knowledge that Taiwanese have of the parts of China that have low incomes and educations. This low rating was also probably exacerbated by the political tensions existing between China and Taiwan, with China seen as a threat by many Taiwanese.

Another country consistently rated highly in the countries where it was rated was the United Arab Emirates—with average scores ranging from 7.2 to 8.2. Unfortunately, we asked only respondents in Middle Eastern settings to rate the Emirates. Consequently, we do not know how development in the Emirates is viewed outside the Middle East.

We now switch our attention to the countries with low ratings, where we again see substantial consistencies. The countries of Africa—including the Central African Republic, Nigeria, and Zimbabwe—were consistently rated at or near the bottom. The scores for these three African countries ranged from only 2.6 to 5.6. The three South Asian countries of India, Nepal, and Pakistan also consistently received average scores at or near the bottom. The average ratings for India ranged from 3.4 to 5.8 and the averages for Pakistan ranged from 2.9 to 5.6. Nepal was only rated in Nepal and Taiwan, with average scores between 3.3 and 3.4. Other countries that received very low average ratings were Albania (from both Albanians and Bulgarians), Bulgaria (from Bulgarians and Americans), Cambodia (from Taiwanese), Kyrgyzstan (from Bulgarians), and Yemen (from three Middle Eastern surveys). Most of these countries were rated in only 1-3 surveys, giving us little insight into their ratings in the larger world community.

These data provide substantial evidence of developmental hierarchies in the minds of ordinary people around the world. On average, they rated some countries high on development and some countries low on development. Furthermore, the mental maps of the developmental hierarchy were similar across the 14 surveys. Such consistency suggests that, although we did not define development for our respondents, there must be substantial similarities in the ways development is viewed in different places, at least as indicated by the ways they rate countries on a development scale.

Table 4 also provides evidence that the maps of developmental hierarchies in the minds of ordinary people around the world were similar to the developmental maps among the elites of the United Nations. We noted earlier that, on average, Japan and the United States were rated at the tops of the developmental hierarchies in our surveys and that China and the United Arab Emirates were rated highly but not at the top of hierarchies. The UN HDI scores also were very high for Japan and the US and moderately high for China and the United Arab Emirates. We also noted that our survey respondents rated quite low the three African countries of the Central African Republic, Nigeria, and Zimbabwe, the three South Asian countries of India, Nepal, and Pakistan, and Cambodia and Yemen. Here we note that the UN experts also rated these latter

countries in the lower part of the distribution. This high correspondence corroborates the idea that ordinary people and the UN used similar concepts and criteria in their ratings.

Despite this close correlation between UN and survey ratings, there are some interesting discrepancies. Austria, France, Italy, Sweden, and the United Kingdom were rated between 9.4 and 9.6 by the United Nations, almost exactly to the UN scores of 9.5 for Japan and the US, whereas, as noted earlier, survey respondents rated these European countries a bit lower than Japan and the US. It is not clear why these Western European countries are generally rated lower than Japan and the United States by ordinary people when their HDI scores are very similar to those of Japan and the United States.

Other countries with substantial discrepancies between respondent and UN ratings include the five countries of Southeast Europe and Central Asia, Albania, Bulgaria, Croatia, Georgia, and Kyrgyzstan, which were rated from 7.0 to 8.5 by the UN, but 5.0 or less in our survey ratings. India and Nepal, two countries in South Asia, were also consistently underrated by survey respondents relative to the UN. So were the two Latin American countries of Argentina and Brazil and two Middle Eastern countries, Lebanon and Syria. The discrepancies between the survey and UN ratings could reflect several factors: the survey respondents may have used slightly different criteria than the UN in their ratings of these countries; respondents underweighted the scores of these particular countries on certain criteria; or respondents lacked sufficient knowledge of these countries.

Interestingly, many of the survey ratings for countries that were underrated relative to the UN scores came from people living in those countries. For example, Albanians gave Albania an average score of 3.1 (UN gave 8.0), Bulgarians gave Bulgaria a score of 3.6 (UN gave 8.2), Nepalis gave Nepal a score of 3.2 (UN gave 5.3), and Argentinians gave Argentina a score of 5.6 (UN gave 8.7). Clearly, the relatively low ratings given to these countries were not only the result of people in other countries being ignorant of these countries, but were also provided by the residents of these countries themselves.

With these discrepancies in mind, we turn to the Pearson correlations between the average survey ratings and the UN scores reported in the bottom row of Table 4. These correlations provide an overall summary of the extent to which the average scores of country ratings match the UN scores. All of the correlations are very high, ranging from a low of .75 in Bulgaria and Lebanon to a high of .97 in Iran. This indicates that, on average, survey participants provided ratings of countries that are very similar to the UN HDI ratings.

As documented by Melegh, Thornton, and Philipov (2010), the correlations are low in Bulgaria because several Eastern European and Central Asian countries were rated in the Bulgarian survey, and Bulgarians tended to rate such countries substantially lower than did the United Nations. Similarly, Lebanese respondents rated several Middle Eastern countries, and they consistently rated these countries lower than did the UN. Thus, in these two countries, the tendency to rate countries in their own regions low, as compared to the UN, results in the correlations being lower. It is likely that if Bulgarians and Lebanese had been asked to rate a

more internationally representative set of countries, such as in other countries, their correlations with the UN HDI would have been higher. Of course, a correlation of .75 between UN HDI scores and the average scores of ordinary people still is very high.

Further evidence that the correlations of respondent average scores with the UN depend on the countries rated comes from the United States where we did two surveys, with somewhat different countries rated in the two surveys. The correlation for the 2006 survey is .95, while the correlation for the 2007 survey is .84. However, when we calculated the correlations for the two surveys using only a common set of countries, the two correlations were very similar. This is true because the US average ratings for Egypt, Russia, and Saudi Arabia were substantially below the UN scores for these countries, thus lowering the overall correlation in the 2007 survey that included ratings for these countries.

We now shift to the correlations of individual scores with the HDI. The procedure at the individual level was identical with the procedure at the aggregate or average level, with the only difference being that n correlations were calculated for each n individuals in a survey. These correlations provide an overall summary of the extent that individual respondent scores matched those of the HDI. The results are summarized by decile in Table 5, where we also list the percentage of respondents with correlations above .50 and above .70.

The great bulk of individual correlations were positive and substantial. This can be seen by looking at the correlation that divided the various samples in half—the fiftieth percentile. We see from Table 5, that the fiftieth percentile ranged from .58 to .92. This means that for these fourteen distributions, at least half of the sample had correlations of .58 or higher and for many of the distributions the median correlation was much higher—reaching .92 among college students in Taiwan. Among surveys with more general sampling universes, the 2006 US survey had the highest median correlation, which was .84.

Another way of describing the distributions of individual correlations is the percentage of respondents producing correlations at .50 or higher. Table 5 indicates that the percentages having correlations of this magnitude is quite high, ranging from 59 to 98 percent. Using an even higher standard, we see that between 30 and 96 percent had correlations of .70 or higher. Again, the highest scores came from the college students of Taiwan, but over 80 percent of the general population of young adults in Saudi Arabia had correlations of .70 or greater.

Furthermore, a substantial fraction of respondents had very high correlations. For example, twenty percent or more (the 80th percentile and above) have correlations that range from .74 in Bulgaria to .93 in the US to .95 among the college students in Taiwan.

This pattern suggests that a substantial percentage of individual respondents viewed developmental hierarchies very similarly to the United Nations. At the same time, a substantial number of individuals had low correlations of their scores with the UN HDI, as evidenced by the fact that ten percent or more had correlations below .30 in the five following surveys: China, Egypt (both surveys), Lebanon, and Nepal. However, there was no survey in which ten percent or more had correlations below .10.

CONCLUSIONS

We began this paper by noting that developmental hierarchies have been important for centuries in the writings and actions of scholars and other elites. We hypothesized that these ideas of developmental hierarchies have been disseminated widely around the world and have permeated the worldviews of ordinary people. We also hypothesized that the views of ordinary people about developmental hierarchies would generally be consistent with those of international elites, such as the United Nations. The empirical data summarized in this paper were collected to investigate these hypotheses.

The data are generally consistent with our hypotheses. At the aggregate level, different countries receive differential development ratings, and the distribution of the country ratings closely follows the ratings of the UN HDI. Japan and the United States are consistently rated very high, dominating the ratings. Also rated high are China and the countries of Western Europe, countries also rated highly by the UN, although the UN rates China lower and Western European countries higher than most of our average ratings for these countries. At the other end of the distribution, the countries of Subsaharan Africa and South Asia, as well as Cambodia and Yemen, are, on average, rated very low by the survey respondents—as they are by the UN. This correspondence of UN HDI scores with the average respondent scores is also reflected in the Pearsonian correlations summarizing this correspondence.

As one would expect, at the individual level, the correlations between country ratings and the HDI tend to be lower than the average correlations. However, there are also numerous individuals who provided ratings with very high correspondence with the UN HDI scores. These data are, thus, generally consistent with the two hypotheses motivating our surveys. The ideas of developmental hierarchies have been widely disseminated internationally as large fractions of people have understandings of development that are quite similar across settings. In addition, the developmental hierarchies held by people closely match the frameworks used in the UN HDI. And, at the aggregate level, there is remarkable correspondence between respondent and UN views of development hierarchies.

Of course, there are nontrivial fractions of people in each survey who gave ratings of countries that do not correspond closely with the UN HDI. There are multiple possible explanations for such low correlations. Individuals with low scores may not have concepts of development or the concepts they have may not match that of the UN. Other possibilities are that these individuals reject the idea of developmental hierarchies, do not know the countries, do not understand the questions, or cannot properly use the 10 or 11 point rating scales. However, the fact that so many people had scores that fairly closely match those of the UN indicates that most people understand and accept the ideas of developmental hierarchies, do so similarly to the experts at the UN, have some knowledge of the countries they rated, and can use our rating scales.

Although our twelve countries are not a random sample of countries or a representative sample of the world's population, the settings surveyed are diverse and widely distributed around the world. The existence of the ideas of developmental hierarchies in these settings suggests that the ideas have been widely disseminated. Of course, we cannot know if this knowledge of developmental hierarchies is widely understood in other settings. However, we expect that it is and advocate for additional research in other settings to evaluate this expectation.

Our data also do not indicate how individuals have gained their knowledge of development and developmental hierarchies. As we posited earlier, there are many ways in which such ideas can be disseminated. In addition, these ideas have a foundation in the real world, as the perceived developmental hierarchies are, at least to some extent, supported by actual international hierarchies of wealth and influence. More research is needed to establish those dissemination mechanisms and the factors supporting beliefs in the hierarchy. We also argue that it is important to begin to understand the consequences of such ideas for family, demographic, political, religious, economic, education, and health beliefs and outcomes.

Although there is widespread understanding and endorsement of a general developmental hierarchy as promulgated by the UN, ideas of this hierarchy are also affected by local circumstances. This is, for example, apparent in the low ratings of Japan by Chinese respondents and in the low ratings of China by Taiwanese respondents. We believe that each of these anomalies can be explained by the history of tensions and threats in East Asia. Such local variations probably exist in other places. We advocate for further research into how such anomalies arise and are perpetuated.

There are also several more general deviations of respondent ratings from the UN development ratings. Among these deviations is the tendency of respondents to report the countries of Europe and the Middle East lower than does the UN. Also relevant is the tendency for ordinary people to over-rate China relative to the ratings of the UN. More research is needed to understand the reasons underlying the departure of UN ratings and the ratings of ordinary people.

We close with the observation that our research has been successful in two general respects. The first is that we have documented that many ordinary people in twelve countries understand developmental hierarchies and do so in ways that are consistent with the UN. This widespread understanding of developmental hierarchies, along with other ideas associated with development, can have substantial influence on people's aspirations and behavior. The second is that our research has identified additional fruitful paths of inquiry about people's views of development and the causes and consequences of those views.

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APPENDIX

Question Wording

The question used in Argentina, Bulgaria, China, Iran, Nepal, the US, and the adult Egypt survey reads as follows:

“We would like you to think about development in different countries around the world today. We’ll be talking about countries as varied as England and Mongolia. Think of a development scale that rates countries from zero to ten. The least developed places in the world are rated zero and the most developed places in the world are rated ten. You can use both of those numbers for rating countries plus all of the numbers in between. Using this development scale, where would you put [Country X]?”

Some respondents indicated that they did not know where to rate Country X. For them, we asked the following probe: “Even if you don’t know exactly, about where would you put Country X?” The original question and probe were repeated as necessary for all of the countries rated².

We used the same approach in Albania, but with somewhat different wording, without example countries, and without specific probes being indicated:

“Now we would like you to consider how developed different places in the world are. Here is a scale of development—with the least developed place in the world being here (at number 0) and the most developed place in the world being (at number 10). And, moderately developed places here in the middle (at number 5).”

The same approach was used in Iraq, Lebanon, and the youth surveys in Egypt and Saudi Arabia, but with somewhat different wording (and without probes specified). The wording in these surveys was as follows:

“Now we would like you to consider how developed different places in the world are. Here is a scale of development—with the least developed places in the world marked 1 at the left and the most developed places in the world marked ten at the right. And, moderately developed places marked 5 in the middle. I will read to you a list of countries that includes Saudi Arabia, China, Yemen, and the United States and ask you to rate the level of development in each country.”³

The students in Taiwan provided information about the ratings of countries through self-administered questionnaires. The wording of the question is as follows:

² The introduction in the first US survey mentioned “France and Mongolia” rather than “England and Mongolia”. The Bulgaria survey mentioned “Japan and Mongolia”. In Argentina the sentence “We’ll be talking about countries as varied as England and Mongolia” was excluded from the introduction. In the Nepal study, the sentence telling respondents that they could use both zero and ten and all numbers in between was omitted.

³ In the Iraq survey the country of Iraq was inserted as the first country listed in the introduction. We have not listed Iraq in Table 4 as a country asked about because we have no UN HDI score for it.

“Now we want to know your view about the developmental levels in some of the areas in the world, including Taiwan, Japan, India, China, Nigeria, Cambodia, the United States, and Nepal. If we rate the developmental levels from 0 to 10, 0 representing the lowest development, 10 representing the highest development, and 5 representing the development of moderate level (as shown in the figure below), what do you think the developmental scores of these countries are? (If you do not know this country, you can write down the answer based on any information you currently have.)”

Table 1. Basic Characteristics of Countries Surveyed

Countries surveyed	Region	Total population (millions)	GDP per capita (PPP US\$)	Total fertility rate (births per woman)	Life expectancy at birth (years)	Adult literacy rate (% aged 15 and above)	Combined gross enrolment ratio in education (%)
Albania	Southern Europe	3	7,041	1.9	76.5	99.0	67.8
Argentina	South America	40	13,238	2.3	75.2	97.6	88.6
Bulgaria	Eastern Europe	8	11,222	1.4	73.1	98.3	82.4
China	Eastern Asia	1,329	5,383	1.8	72.9	93.3	68.7
Egypt	Northern Africa	80	5,349	2.9	69.9	66.4	76.4
Iran	South-Central Asia	72	10,955	1.8	71.2	82.3	73.2
Iraq	Western Asia	30	n.a.	4.1	67.8	74.1	60.5
Lebanon	Western Asia	4	10,109	1.9	71.9	89.6	78.0
Nepal	South-central Asia	28	1,049	2.9	66.3	56.5	60.8
Saudi Arabia	Western Asia	25	22,935	3.2	72.7	85.0	78.5
Taiwan	East Asia	23	30,352	1.1	77.9	97.8	95.0
United States	Northern America	309	45,592	2.1	79.1	99.0	92.4

Sources:

Human Development Reports. United Nations Development Programme, 2009. Web. 3 Feb 2010, data from 2007.

Data source for Taiwan: 2008 Social Indicators (2007 statistics), published by Directorate General of Budget, Accounting and Statistics Executive Yuan, Republic of China

Table 2. Characteristics of Sample Surveys

Countries surveyed	Study Location	Respondent Ages	Respondent Sex	Interview Mode	Study Dates	Sample Size
Albania	National	15 and older	Both	Face-to-face	2005	3,384
Argentina	Urban Agglomerates \geq 500,000	Adults	Both	Face-to-face	2008	1,003
Bulgaria	National	Adults	Both	Face-to-face	2009	336
China	Gansu Province	Adults	Both	Face-to-face	2007	633
Egypt	One District each in Fayoum and Qaliubia Provinces	Women 18-54 and their husbands	Both	Face-to-face	2007-2008	1,500
Egypt Youth	Cities and rural surroundings of Alexandria, Cairo, and El-Minya	18-25	Both	Face-to-face	2005	928
Iran	Yazd City	Married: 15-54 Unmarried: 15-29	Women	Face-to-face	2007	703
Iraq	National	Adults	Both	Face-to-face	2006	2,701
KSA	Cities and rural surroundings of Jeddah, Riyadh, and Damman-Khobar	18-25	Both	Face-to-face	2005	954
Lebanon	National	Adults	Both	Face-to-face	2008	3,039
Nepal	Chitwan Valley	15 and older	Both	Face-to-face	2008-2009	7,640
Taiwan	National Cheng-chi University.	17-29	Both	Self-administered with interviewer present	2004	1,369
USA	National	Adults	Both	Telephone	2006 2007	486 494

Table 3. Respondents' Demographic Characteristics

Respondents' characteristics	Albania	Argentina	Bulgaria	China	Egypt	Egypt Youth	Iran	Iraq	KSA	Lebanon	Nepal	Taiwan	US
Sex (% Female)	51.9	52.6	48.8	51.3	58.3	46.4	100.0	51.6	40.6	44.2	57.0	63.6	55.5
Age													
Mean	38.8	41.6		41.5	36.0	21.1	34.9	37.1	21.5	32.8	36.6	18.5	52.3
(Std. Dev.)	(15.6)	(16.7)		(14.1)	(11.6)	(2.6)	(12.4)	(13.8)	(2.4)	(13.0)	(14.5)	(0.8)	(17.2)
Marital status													
Single	21.0	31.5		8.7	11.3		22.0	21.2		53.5	17.7	100.0	14.2
Married or cohabiting	73.2	51.9		86.3	85.7		74.8	72.1		41.7	76.8		59.6
Separated/Divorced	0.6	10.4		0.9	1.1		0.1	1.3		3.2	1.6		14.3
Widowed	5.2	6.1		4.1	1.8		3.0	5.4		1.7	3.9		11.8
Education *													
Never attended to school	1.9				26.4	2.3	3.1	16.7	0.2	2.6	31.2		
Below elementary	8.3	6.2	2.1	21.4	13.5	1.7	17.8	12.7	0.2	4.4	10.4		
Complete elementary	36.2	16.0	22.6	23.0	3.5	6.2	8.8	21.2	2.5	8.4	6.3		1.1
Incomplete high school	7.4	17.8		32.7	11.3	14.9	21.1	16.8	24.0	8.9	25.5		4.1
Complete high school	35.5	27.3	51.8	12.0	29.1	39.4	31.6	16.4	45.5	16.7	5.8		23.9
Superior	10.7	32.7		10.6	16.2		17.6						
Some College - No degree						16.2		5.3	19.5	25.6	17.4	100.0	22.8
College/Post Graduate Degree			23.5			19.3		10.9	8.0	33.3	3.5		48.0
Religion Affiliation													
Buddhism		0.1		9.1							11.5		1.0
Catholic	6.8	74.9						0.1		4.9			24.4
Christian - Not further specified		0.3		1.4	1.5			0.7		30.9	1.6		4.8
Muslim	81.1			9.3	98.5			99.1		62.7	0.6		0.6
Protestant		8.4											54.6
Hinduism											83.0		
Other	11.9	0.4		0.8						1.6	1.5		3.8
None/Atheist/Agnostic	0.2	15.2		79.5							1.9		10.7
Importance of Religion													
Very important		33.0		12.7	99.1			96.1			56.1		63.2
Somewhat important		47.5		13.1	0.8			3.7			40.6		23.0
Not important at all		19.6		74.2	0.1			0.2			3.4		13.8
Importance of God in your life (1-10 scale)													
Mean						9.9			9.7	5.5	7.9		
(Std. Dev.)						(0.6)			(1.4)	(2.8)	2.5		
Unweighted N	3,390	1,003	336	633	1,500	928	703	2,701	954	3,039	7,456	1,369	980

* In Bulgaria and in China, education was registered as the highest level completed, therefore it may be underestimating the actual highest level achieved (e.g., those attending Junior High School has been registered as Complete Elementary, College dropouts have been counted as Complete High School).

Table 4. Respondents' Mean Country Scores on Development and United Nations HDI

Countries rated	Countries Surveyed														UN HDI 2005	
	Albania	Argentina	Bulgaria	China	Egypt	Egypt Youth	Iran	Iraq	KSA	Lebanon	Nepal	Taiwan	US '06	US '07		
Albania	3.1		3.1													8.0
Argentina		5.6														8.7
Austria			8.0													9.5
Brazil		6.5		5.6	5.9		6.5				6.6		6.1	5.6		8.0
Bulgaria			3.6												4.5	8.2
Cambodia												2.8				6.0
Central African Rep.	3.1	3.4	3.3	4.7	4.4		3.1				5.6		3.4	3.5		3.8
China	7.1	7.7		6.9	8.1	8.6	7.8	8.9	8.6	8.1	7.4	5.1	7.5	6.9		7.8
Croatia			5.0													8.5
Egypt					6.6	5.3		6.5	7.1						5.5	7.1
France		7.7		6.7	7.6	8.6	7.9	9.2	9.4	8.4					7.3	9.5
Georgia			3.9													7.5
India	3.4	3.6	4.4	5.1	5.8		4.6				5.8	4.4	5.3	5.0		6.2
Iran						5.4	7.0	6.9	6.8	6.6						7.6
Italy	7.7		7.5													9.4
Japan		8.8		7.2	8.2		8.7				8.2	8.8	8.8	8.6		9.5
Kuwait								7.1								8.9
Kyrgyzstan			3.1													7.0
Lebanon										4.9						7.7
Nepal											3.3	3.4				5.3
Nigeria	2.6	3.5	3.0	4.4	5.2		3.4				5.6	2.8	3.3			4.7
Pakistan	2.9	3.8		5.0	5.6		4.4				5.1		4.1	4.0		5.5
Poland			6.0													8.7
Russia			6.9												5.9	8.0
Saudi Arabia						6.4		7.3	7.3	5.0					5.6	8.1
Sweden			8.4										7.4			9.6
Syria										4.5						7.2
Taiwan												7.0				9.3
United Arab Emirates						7.2		8.2	8.1							8.7
United Kingdom			8.5								7.5					9.5
United States	9.5	8.4		8.4	8.6	9.2	8.6	9.3	9.5	8.9	9.1	9.2	8.8	8.7		9.5
Yemen						4.8		4.1	4.2							5.1
Zimbabwe													2.9			5.1
Corr. between each country respondents' score and UN HDI	0.82	0.91	0.75	0.89	0.91	0.81	0.97	0.88	0.95	0.75	0.83	0.95	0.95	0.84	--	

Note: all correlations are significant at least at the .05 level, except for Lebanon which is significant at .06 level assuming that the countries represent a simple random sample.

Table 5. Bivariate correlations between Individual respondents' ratings of Development and the United Nation's Human Development Index

	Albania	Argentina	Bulgaria	China	Egypt	Egypt Youth	Iran	Iraq	KSA	Lebanon	Nepal	Taiwan	US '06	US '07
Deciles														
10th	0.48	0.53	0.30	0.15	0.21	0.17	0.43	0.33	0.57	0.23	0.13	0.79	0.56	0.36
20th	0.59	0.65	0.44	0.33	0.42	0.37	0.62	0.54	0.70	0.42	0.29	0.85	0.70	0.49
30th	0.66	0.72	0.51	0.48	0.54	0.50	0.71	0.62	0.76	0.50	0.40	0.88	0.76	0.56
40th	0.71	0.78	0.57	0.58	0.63	0.58	0.77	0.68	0.79	0.55	0.49	0.90	0.81	0.62
50th	0.75	0.81	0.62	0.68	0.69	0.65	0.80	0.73	0.81	0.60	0.58	0.92	0.84	0.67
60th	0.79	0.84	0.66	0.74	0.74	0.70	0.84	0.78	0.84	0.66	0.65	0.93	0.87	0.71
70th	0.82	0.86	0.70	0.79	0.79	0.75	0.87	0.80	0.86	0.71	0.72	0.94	0.90	0.75
80th	0.86	0.89	0.74	0.85	0.84	0.79	0.90	0.84	0.88	0.75	0.79	0.95	0.93	0.79
90th	0.89	0.92	0.79	0.90	0.88	0.85	0.92	0.88	0.91	0.83	0.86	0.96	0.94	0.85
% with corr .5 or higher	88.7	92.3	73.0	68.7	74.1	70.7	88.3	82.6	92.1	70.6	58.7	98.4	92.7	79.3
% with corr .7 or higher	63.4	73.1	30.3	46.6	48.5	40.5	71.1	57.9	81.2	32.1	32.8	95.9	80.2	42.4
N	2,884	933	204	627	1,335	767	660	1,617	856	2,801	7,380	1,355	468	476



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Currently PSC is one of five centers within the University of Michigan's Institute for Social Research. The Center receives core funding from both the Eunice Kennedy Shriver National Institute of Child Health and Human Development (R24) and the National Institute on Aging (P30).

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