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The Cultural Model of a Developmental Hierarchy of Societies

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Abstract:

Cultural models of development and of a developmental hierarchy of societies have powerfully shaped world history, providing motivation and justification for colonialism, religious evangelism, nationalism, foreign aid, and international policymaking. I analyze the level of prominence of the cultural model of a developmental hierarchy during the past three centuries. To do this, I use the largest text corpus available, the *Google Ngram Database*, to analyze the frequency at which words and phrases indicative of this cultural model appeared in books. I find that such language permeated books throughout the past three centuries, but that the level of permeation varied substantially over time. Interestingly, the level of permeation within fiction books differed significantly from that of books in general, particularly in the twentieth century. In addition, the popularity of certain developmental hierarchy terms changed during the middle of the twentieth century, as previously dominant terms (i.e. 'savages' and 'civilized societies') fell out of favor and a new set of terms (i.e. 'developing' and 'developed countries') rose in popularity. Thus, the cultural model of a developmental hierarchy was widespread among authors of books, and books were likely a key medium of diffusion for this model. However, during different historical epochs and within particular types of books the cultural model of a developmental hierarchy fluctuated in prominence. More broadly, these findings imply that certain historical periods have been particularly critical in the emergence of world culture.

Keywords:

development, developmental hierarchy, cultural models, world culture, ngram

I. Introduction

Words describe the world and words shape the world. Through the use of words, people apply categories to other people, classifying them by gender, career choice, personality type, physical characteristics, and a variety of other attributes. Words that classify, categorize, and characterize people reflect certain idea.

People use words that implicitly judge societies by their level of development; there are the ‘developed countries’ of the world and the ‘developing countries’ of the world, and in former times there were ‘savage nations’ and ‘civilized societies.’ The idea of a universally-applicable hierarchy of societal development lies behind such terminology. The implied relationship between the ‘developed’ and the ‘developing,’ and between the ‘savage’ and the ‘civilized,’ is hierarchical. The economic, political, social, and cultural values and practices of societies at the top of this hierarchy are put forward as exemplars for other societies to emulate. These “worldwide models” (Meyer et al. 1997) are integral to the emergence of world culture.

The idea of a developmental hierarchy of societies has historically exerted tremendous influence in many areas of society, including academia, public policy, international relations, and the everyday lives of individuals. This idea has provided powerful motivation and justification for religious evangelization, colonialism, the creation of nation-states and empires, the dispersal of foreign aid, and the proliferation of international organizations. Many organizations, political leaders, and scholars have promoted the values and practices of ‘developed societies’ as natural, just, progressive, rational, and desirable, and they have simultaneously denigrated the values and actions common to other societies, classifying them as backward, primitive, harmful, and undesirable. As a result, the idea of a developmental hierarchy of societies has powerfully shaped

the organization of the world, the ways in which people understand the world, and the behavior of organizations and individuals.

Several scholars, including Raewyn Connell (1997, 2007a, 2007b), Marvin Harris (1968), John Meyer (Drori and Krücken 2009), Richard Nisbet (1969, 1980, 1986), Arland Thornton (2001, 2005, 2012), Raymond Williams (1976), and many others, have written about the prevalence of developmental ideals in many public policies as well as in the writings of a number of prominent thinkers and social scientists throughout history. In their analyses of these policies and writings, these scholars make note of the terms commonly used to describe societies' positions along a developmental hierarchy of societies. They observe that many thinkers and policymakers during the eighteenth and nineteenth centuries, particular those writing in the tradition of social evolutionism, used terms such as 'savages' and 'barbarians' for societies at the bottom of such a hierarchy, and relied on terms including 'civilized peoples' and 'polished nations' for those at the top. Though social evolutionism was criticized during the first half of the twentieth century, developmental ideals were quickly incorporated into a related theoretical framework—modernization theory. With modernization theory came a new set of terms to express societies' positions along a hierarchy of societal development, including the terms 'developing countries' and 'developed countries,' as well as the terms 'First World' and 'Third World.' Modernization theory has also faced significant critiques, but developmental ideals continue to shape social theory and policy today, and many academics and policymakers frequently employ language indicative of the idea of a developmental hierarchy.

While insightful, previous scholarship on developmental ideals only makes references about the usage of terms used to describe societies' positions along an imagined developmental hierarchy in a tangential, non-systematic manner. Furthermore, the approach of this scholarship

is narrowly focused on a select number of historical policies and writings. The extent to which language indicative of the idea of a developmental hierarchy has been in use beyond these specific texts and policies has not been addressed. It is likely that the cultural values and practices of so-called ‘developed’ or ‘civilized’ societies were heavily promoted and diffused during historical periods in which language indicative of the idea of a developmental hierarchy of societies was common. In addition, the use of such language further diffused this idea.

The goal of this paper is to evaluate whether ideas about a developmental hierarchy of societies permeated books during the past three centuries. Four research questions guide the analysis. First, did terms that references societies’ positioning along a developmental hierarchy permeate books in general during the past three centuries? Second, did the level of permeation of such terms vary over time? Third, did the popularity of specific terms used to refer to societies’ positioning along a developmental hierarchy shift during the middle of the twentieth century, as previous scholarship argues? Fourth, did the level of permeation of language indicative of the idea of a developmental hierarchy vary between different types of texts, specifically between fiction books and books in general? To answer these questions, I use digitized, historical, text-based data—namely the *Google Ngram Database*¹—to analyze the level of permeation of hundreds of words and phrases indicative of the idea of a developmental hierarchy within an enormous sample of books published during the past three centuries. In addition, by assessing the level of permeation of such language in books, I simultaneously assess whether books could have served as a possible medium for the diffusion of the idea of a developmental hierarchy. Finally, I compare the level of permeation within books in general with the level of permeation within fiction books specifically, as a means of examining whether this idea has been widespread across all types of texts or focused within a particular type.

¹ Available at: <https://books.google.com/ngrams>.

This paper proceeds in the following manner. First, I discuss the history, power, and influence of developmental ideals. Second, I discuss the theoretical connection between the idea of a developmental hierarchy and language reflective of this idea. Third, I describe the way in which I construct an index of terms that reference societies' positioning along a developmental hierarchy, and then how I measure the cumulative frequency of this index in books over time. Fourth, I present my four hypotheses. Fifth, I explain my data source. Sixth, I discuss my results in relation to my hypotheses, and I outline several historical factors that likely influenced the observed outcomes. In conclusion, I summarize the empirical contributions and theoretical implications of the results of this paper, and I recommend a few areas for future research.

Cultural Models of Development and a Developmental Hierarchy

The concepts of 'development' and a 'developmental hierarchy' serve as cultural models. In general, cultural models provide actors with frameworks for interpreting the world and for action (D'Andrade 1995; Frye 2012; Harding 2010; Holland and Quinn 1987; Quinn 2005; 2011; Strauss and Quinn 1997). Important motivation and justification for behavior derives from the cultural models individuals have in their brains (Vaisey 2009). Cultural models also supply the evaluative criteria used for classifying people and societies into cultural categories, such as 'rich' and 'poor,' 'high class' and 'low class,' or 'developed' and 'developing' (Lamont 1992; 2012; Zerubavel 1993; 1996; 1997).

'Development' is a socially constructed, subjective, moldable concept; it is a product of human interaction and belief rather than a description of some physical and tangible object (Binstock et al. 2013; Escobar 1995; Esteva 1992; Ferguson 1990; Meyer et al. 1997; Nisbet 1969; Sachs 1992; Thornton 2005; Thornton et al. 2012). Cultural models of development vary,

but the underlying assumption in nearly all cultural models of development is that social change is linear and directional, as well as uniform across societies (Eisenstadt 2002; Granovetter 1979; Harris 1968; Mandelbaum 1971; Nisbet 1969; 1975; 1986; Sanderson 1990; Thornton 2001; 2005; 2012). Many criteria are hypothesized to either cause development or result from development, including low fertility, gender equality, free markets, democracy, government transparency, and human rights, to name a few (Binstock et al. 2013; Easterly 2006; Taniguchi and Babb 2009). Several other terms have been by certain authors and during particular historical epochs to express the concept of development, including the terms progress, civilization, social evolution, and modernization (Adams et al. 2005; Granovetter 1979; Nisbet 1969; 1975; 1986; Sanderson 1990; Thornton 2001; 2005; 2012).

The ‘developmental hierarchy’ is an integral piece of all cultural models of development. Models of development promote the practices and values of societies believed to be at the top of the developmental hierarchy. Thus, when the cultural model of a developmental hierarchy is widely understood and relied upon, the practices and values of ‘developed’ societies are promoted as natural, just, rational, and desirable, whereas the practices and values associated with ‘developing’ societies are considered to be illogical, corrupt, backward, wicked, and undesirable (Brown 1993; Mbembe 2001; 2002; Thornton 2001; 2005; 2012).

Several authors have examined the prevalence of cultural models of development and a developmental hierarchy in specific public policies and in the writings of certain prominent thinkers, forming a considerable body of scholarship on developmental models (Adams et al. 2004; Aksamit 2009; Barnett 2011; Barnett and Finnemore 1999; Blaut 1993; Brick 2012; Brown 1993; Burbank and Cooper 2010; Burrow 1966; Carneiro 2003; Connell 1997; 2007; Cooper 2005; Cooper et al. 1993; Cooper and Packard 1997; Engerman et al. 2003; Engerman

and Unger 2009; Escobar 1995; Esteva 1992; Ferguson 1990; 1999; Gastil 1993; Giddens 1995; Gilman 2003; Granovetter 1979; Heyck 2012; *forthcoming*; Krücken and Drori 2009; Latham 1995; 2000; Lutz and Collins 1993; Mazlish 2004; Mbembe 2001; 2002; Mitchell 2000; 2002; Nisbet 1969; 1980; 1986; Pinheiro 2009; Preiswerk and Perrot 1978; Rist 1997; 2007; Sachs 1992; Said 1978; Sanderson 1990; Thornton 2001; 2005; 2012; Wallerstein 2005; 2006; Williams 1985). The work of sociologist Richard Nisbet (1969; 1980; 1986) on these topics is noteworthy and characteristic of much of this type of scholarship. In his 1969 book *Social Change and History: Aspects of the Western Theory of Development*, sociologist Richard Nisbet traces evidence of cultural models of development in the writings of numerous prominent thinkers and social scientists from Europe and countries populated by European diaspora. Nisbet first identifies the concept of development in Aristotle's principle of *telos* – just as a bird is meant to fly and a flower is meant to bloom, human beings have a potential to be fulfilled. Nisbet continues to trace the idea of development and its adjoining concept of a developmental hierarchy in the writings of Saint Augustine, John Locke, Jean Jacques Rousseau, Herbert Spencer, Karl Marx, Émile Durkheim, Talcott Parsons, and many others. While Nisbet recognizes some peculiarities in the cultural models of development and a developmental hierarchy that these authors rely upon, he ultimately concludes that development is “a master principle of Western philosophy” (1986:41).

Nisbet and other scholars search for and document evidence of the developmental hierarchy cultural model in certain public policies and in the writings of prominent thinkers and social scientists. These scholars note that during the eighteenth, nineteenth and twentieth centuries, a variety of indicators were used to rank various societies around the world according to their level of development, including indicators such as cranial size, tools, pottery, and

language semantics (Sanderson 1990). In more recent decades, broader social trends toward quantification (Hacking 1990; Espeland and Sauder 2007) have led social scientists to take create new statistical measures of development.² The most notable of such efforts is the United Nations' *Human Development Index*, which ranks nation-states by their level of development along a 100-point scale by combining measures of gross domestic product (GDP), educational attainment, and life expectancy (UN 1990; 2010). This index arguably represents the currently dominant cultural logic in the international sphere about what constitutes development (Stanton 2007; Thornton et al. 2012; Wherry 2004). Nisbet and others explain that all of the various hierarchical measures used throughout history to rank societies by their level of development fulfill a similar purpose of sorting, as they serve to distinguish 'savages' from 'civilized peoples,' 'primitive societies' from 'advanced nations,' and 'developing countries' from 'developed countries.'

The collective body of scholarship on the prevalence of cultural models of development and a developmental hierarchy rigorously tracks and documents appearances of these concepts in certain public policies and in select writings of prominent thinkers and social scientists. This scholarship notes and rhetorically analyzes specific instances in which prominent thinkers, social scientists, and writers of public policies relied upon developmental models, but it does not analyze the frequency at which such models appeared over time within a large collection of texts. A broader analysis of the frequency at which the cultural models of development and a

² I am referring to the various development frameworks and indices introduced by prominent social scientists and economists and institutionalized by the UN, World Bank, and other international organizations over the past forty years. Examples include the "basic needs" approach and index (Hicks and Streeten 1979; Seers 1979; Sen;), "capacity development" (UNDP 2008), the "capabilities approach" and index (Alkire 2002; Alkire and Deneulin 2009; Nussbaum 2000; Sen 1985; 1999; UN 2010), the Multidimensional Poverty Index (Alkire and Santos 2011; UN 2010), gender equitable development (UN 1995; 2010), sustainable development (UN 2008; 2011), participatory development (i.e. Chalmers 1997) and rights-based approaches to development (i.e. Häusermann 1998; Sano 2005; Sen 2005).

developmental hierarchy are used in general is imperative because these cultural models have dramatically shaped world history.

The Influence of Developmental Models

In addition to serving as a framework for interpreting the world, cultural models of development and a developmental hierarchy have served as powerful motivating forces for human action. As Geertz (1973:93) famously explained, there are “models of” and “models for” reality. Similarly, developmental models have served as both models of the world and models for shaping the world and thus are powerful. The power and influence of these models is apparent in the hypothetical example proposed by John Meyer and his colleagues (1997: 145-146). They argue that if a new, human-populated island were “discovered” today, the following would occur:

“A government would soon form, looking something like a modern state with many of the usual ministries and agencies. Official recognition by other states and admission to the United Nations would ensue. The society would be analyzed as an economy... Its people would be formally recognized as citizens with familiar rights... Standard forms of discrimination, especially ethnic and gender based, would be discovered and decried. The population would be counted and classified... Modern educational, medical, scientific, and family law institutions would be developed... Thus without knowing anything about the history, culture, practices, or traditions that obtained in this previously unknown society, we could forecast many changes that, upon ‘discovery,’ would descend on the island under the general rubric of ‘development.’”

This hypothetical situation outlines the far-reaching influence of cultural models of development—they extend into nearly every domain of social life, including the economic, political, medical, social, familial, and even individual. Further, this example shows the importance of the cultural model of developmental hierarchy—cultural practices and values from

‘developed’ societies are deemed good, appropriate, and desirable, and are thus exported to ‘developing’ societies regardless of the past histories or pre-existing cultural practices and values (Thornton 2012). Further, these models provide the framework for an emerging world culture, as the practices and values of ‘developed’ societies are promoted universally.

In actual world history, cultural models of development and a developmental hierarchy have stimulated many large-scale social changes around the world. These cultural models motivated and justified Christian evangelization efforts (Meyer et al. 1987; 1997; Woodburry 2012) and humanitarianism (Barnett 2011; Stamatov 2011) as well as ethnocentrism (Blaut 1993; Burrow 1996; Carneiro 2003; Lutz and Collins 1993; Mazlish 2004; Preiswerk and Perrot 1978; Sanderson 1990) and colonization (Burbank and Cooper 2010; Cooper 2005; Cooper et al. 1993; Mbembe 2001; 2002; Wallerstein 2005; 2006; Zerubavel 1992). And in the past century, these models have motivated the “rise of the nation-state” around the world (Meyer et al. 1997), the vast expansion of international organizations (Boli and Thomas 1997; 1999; Barnett and Finnemore 1999; Smith and Wiest 2005; 2012), the dispersal of foreign aid (Aksamit 2009; Brick 2012; Engerman et al. 2003; Engerman and Unger 2009; Escobar 1995; Ferguson 1990; Gilman 2003; Heyck 2012; *forthcoming*; Latham 2000; Mitchell 2000; 2002; Rist 1997; Sachs 1992), and the selection of the Millennium Development Goals (Easterly 2007).

Historically, cultural models of development and a developmental hierarchy have guided many efforts to change organizational structures, cultural practices, and individual-level values around the world. Tremendous global isomorphism across countries can be observed in a variety of structures and institutions, all of it related to the diffusion of cultural models of development, including environmental policies and standards (Frank, Longhofer and Schofer 2007; Frank, Hironka, and Schofer 2000; Hironka 2002; Longhofer and Schofer 2010), science and

educational structures (Baker *forthcoming*; Bromley, Meyer, and Ramirez 2009; Drori et al. 2003; Drori and Moon 2006; Frank and Gabler 2006; Frank and Meyer 2007; Ramirez and Meyer 2013; Schofer and Meyer 2005), the adoption of human rights' law (Cole 2005; Hafner-Burton and Tsutsui 2005; Koenig 2008; Koo and Ramirez 2009; Tsutsui and Wotipka 2004; Wotipka and Tsutsui 2008), and national population policies (Barrett and Frank 1999; Frank et al. 2010). Similar trends can be seen in the global diffusion of individual-level cultural values and attitudes that are associated with cultural models of development and a developmental hierarchy, though this research is focused on the past half century when global survey data has been available (Binstock et al. 2013; Boyle 2002; Dorius and Alwin 2009; Fiala and Lanford 1987; Givens and Jorgensen 2013; Pierotti 2013; Roberts *forthcoming*; Thornton and Attila 2010; Thornton et al. 2012b; Thornton et al. 2012c). Ethnographic research from many countries around the world—including Lesotho, Malawi, Nepal, and Zimbabwe—supports the general conclusion that today cultural models of development and a developmental hierarchy significantly influence individuals' values and behavior (Bornstein 2003; Ferguson 1990; 1999; Fricke 1997; Hannan *forthcoming*; Pigg 1992; Swidler 2010; 2013; Swidler and Watkins 2007).

This research suggests that cultural models of development and a developmental hierarchy have played important roles in world history and that these models continue to be an important source of motivation and justification today. Yet, there are several questions that remain unanswered. How pervasive has the developmental hierarchy cultural model been over time? Has the relevance and importance of this model been constant or varied over time in tandem with specific historical events and processes? Through what mediums has the developmental hierarchy cultural model been diffused? I answer these questions through an analysis of developmental hierarchy language in books over time.

Cultural Keyword Analysis

I have the benefit of utilizing new text corpora to systematically analyze the use of language associated with the cultural model of a developmental hierarchy. A corpus is a large body of texts with some set of common characteristics, such as a common language, genre, or authorship. Originally used by linguistics for the study of language rules and syntax, historical corpora offer insights into some of the cultural models used by certain people over time (Aiden and Michel 2013; Bail *forthcoming*; Evans and Foster 2012; Franzosi 2010; Michel et al. 2011). This is particularly true of new, digitized corpora that incorporate an immense number of historical texts.

Some cultural models, such as the developmental hierarchy, can be measured by analyzing the frequency at which certain cultural keywords appear over time within a given corpus. What are *cultural keywords* and why are they important? Strauss (2005: 205) explains that,

[c]ultural keywords should show up repeatedly and express important meanings.

A keyword isn't just any old repeated word. Articles, prepositions, conjunctions, and so on will rarely express important meanings; a cultural keyword is likely to be a noun, verb, adjective, or adverb. Furthermore, it should be a word that has some expressive importance.³

Accordingly, certain terms can be indicative of broader cultural models irrespective of their surrounding context. The existence of such terms within a text or across a corpus is evidence that an associated cultural model was in use by the writer of the text or by the community of which the corpus is representative. Thus, frequency analyses of cultural keywords can serve as a useful

³ Though not mentioned by Strauss, pronouns would also be cultural keywords in a feminist analysis.

technique for measuring the prevalence of particular cultural models (D'Andrade 2005; Ignatow and Milhalcea *forthcoming*; Quinn 2005).

This theory behind cultural keyword analysis derives from a combination of research on cultural symbols and practices (i.e. Geertz 1973; Swidler 1986) and on the relationship between thought and language (i.e. Carruthers 2002; Perlovsky 2009). Quinn (2005: 43) explains, “[the] use of key words are all in different ways governed by cultural schemas, each provided an excellent window into the shared schema on which its usage was predicated.” Similarly, Ignatow and Milhalcea (2013) state, “the frequency of use of a word by members of a group or community indicates the cognitive availability of its associated categories, schemas, perceptions, and sensations.”

Terms used to reference societies’ positioning along a developmental hierarchy fit the definitions outlined of cultural keywords. The use of developmental hierarchy language by any individual is evidence that they are, at the very least, acquainted with the cultural model of a developmental hierarchy. And it is possible that many people who use developmental hierarchy language are not only acquainted with this cultural model, but understand and believe that this model of the world accurately and even objectively depicts the real world, and thus these people may rely on them to guide their actions. Of course, not all usage of developmental hierarchy language implies a belief in this model of the world, but even critical and satirical use of developmental hierarchy language implies recognition of the model upon which the language is based.⁴ The measurement of such language captures knowledge of the cultural model of a developmental hierarchy of societies.

⁴ For a further elaboration on the connection between language and cultural models, see Bourdieu 1991, especially p. 220-225; Searle 1969; Spiro 1987:163-164.

The use of terms associated with the developmental hierarchy cultural model is particularly important to study because these terms classify the world. Words demarcate not only what something *is* but also what it *is not* (Saussure 1983), and thus any country labeled as being part of the ‘Third World’ is thereby defined as *not* being a part of the ‘First World’ or ‘Second World.’ Such a categorical division of the world exerts power on the everyday reality of individuals by providing the order of things. As Foucault (1972:49) reasoned, the analysis of language illustrates the pervasiveness of the cultural models that undergird such language because,

...in analyzing discourses themselves, one sees the loosening of the embrace apparently so tight, of words and things, and the emergence of a group of rules proper to discursive practice. These rules define not the dumb existence of a reality, nor the canonical use of a vocabulary, but the ordering of objects.

The developmental hierarchy cultural model is one such “rule proper,” shaping not only the vocabulary actors use to classify the world, but their subjective ordering of the world, which in turn may have objective impacts. Referring to developmental hierarchy terms, Wallerstein (2006:38-39) concludes, “words matter. ...[O]ur knowledge frameworks are a causal factor in the construction of unequal social and political institutions—a causal factor but not at all the *only* causal factor.”⁵ Thus, an examination of the frequency at which developmental hierarchy terms were used over time can provide insights into discourses of power.

Scholars from various disciplines are increasingly performing word frequency analyses of text-based digital data as a means to study culture (Acerbi et al. 2013; Aiden and Michel 2013; Dimaggio et al. 2013; Franzosi et al. 2012; Greenfield 2013; Ignatow 2003; 2004; 2009; Ignatow

⁵ I do not wish to give the impression that language *determines* objective reality. The relationship is multi-directional. See the debate between Riley (2008:561) and Sewell (2008:584-589) on the logics of language and construction.

and Milhalcea 2013; Kesebir and Kesebir 2012; Lin et al. 2012; Marshall 2013; Michel et al. 2011; Mohr and Bogdanov 2013; Oishi et al. 2012; Ravillion 2011; Roberts 2000; Stephens-Davidowitz 2013; Twenge et al. 2013; Van de Rijt et al. 2013). The most rigorous of these studies rely on theoretical frameworks similar to that of cultural keywords that I employ here (i.e. Ignatow and Milhalcea 2013). I also hope to add to this area of research by providing a methodology for deriving terms that are indicative of the cultural model I wish to study. In this effort I attempt to take historical changes in terminology into account, which previous research using corpus-based data to study culture has failed to do rigorously (Biernacki 2012).

Identifying Developmental Hierarchy Language

A critical question stands in the path of measuring the pervasiveness of the cultural model of a developmental hierarchy in books over time. What terms function as cultural keywords representative of the cultural model of a developmental hierarchy? There are a wide variety of developmental hierarchy terms, some of which were used during certain portions of the past three centuries but not during others, and some of which were also used to express other cultural models. Selecting which terms to measure is critical to an accurate historical measurement.

The question of word selection is a general issue for all keyword analysis research (Biernacki 2012; Franzosi 2010; Popping 2012; Reed and Alexander 2009). As Bail (*forthcoming*) states, “it requires the researcher to have an a priori sense of which terms are well suited to address the theoretical question of interest.” Thankfully, there is another means of determining which terms to include. Qualitative analysis of text, or what scholars in the humanities refer to as “close readings,” where the researcher reads a text in its entirety and then

comments about the use of particular words within the text, can provide strong theoretical foundations for deciding which terms are important.

In the case of the developmental hierarchy, a number of scholars have read and analyzed specific public policies and certain writings of prominent thinkers in their analyses of the history of developmental models, providing this crucial qualitative groundwork (Barnett 2011; Brown 1993; Burrow 1966; Carneiro 2003; Connell 1997; 2007; Cornwall and Eade 2010; Cooper and Packard 1997; Eckl and Weber 2007; Escobar 1995; Esteva 1992; Fiss and Hirsch 2005; Gluck and Tsing 2009; Granovetter 1979; Mazlish 2004; Mbembe 2001; 2002; Nisbet 1969; 1980; 1986; Pinheiro 2009; Rist 1997; 2007; Roth and Franks 1997; Sanderson 1990; Thornton 2001; 2005; 2012; Tomlinson 2003; Wallerstein 2005; 2006; Wolf-Phillips 1979; 1987). Though individually these scholars only rhetorically analyze a relatively small number of texts, they collectively have analyzed a large number of historical texts. In their analyses, these scholars make important notes and asides about the specific terms used in the texts that they analyze that describe societies' positions at either the top or bottom of a developmental hierarchy. They explain that certain terms appear to have been popular during different historical periods and they argue that important historical processes and events have influenced trends in the popularity of particular terms.

My task of identifying developmental hierarchy language begins with the terms that these scholars identify. Since the terms these scholars identify are derived from their in-depth rhetorical analyses, the selection of these terms goes beyond an "a priori sense" of what terms are important to measure. I focus in particular on the terms that they identify as being important during the past three centuries. This is the time period covered most extensively by previous

scholarship on developmental models, and this is the time period that the data allow me to accurately examine.

The History of Developmental Hierarchy Terms

Scholars studying the prevalence of cultural models of development and a developmental hierarchy note that during the eighteenth and nineteenth centuries, the theory of social evolutionism enjoyed great popularity. Under this theoretical framework, the terms ‘savages,’ ‘brutes,’ and ‘barbarians,’ were the most common terms for societies deemed to be at the bottom of the developmental hierarchy. In addition, several descriptive adjectives were common, such as ‘unpolished,’ ‘uncivilized,’ and ‘rude.’ Those at the top of the developmental hierarchy were referred to as ‘civilized peoples,’ ‘polished societies,’ and ‘enlightened nations.’ Other developmental hierarchy terms arose that were used interchangeably, including: ‘simple’ and ‘advanced societies,’ ‘primitive’ and ‘modern nations,’ and ‘backward’ and ‘progressive countries.’

Over the first half of the twentieth century, social evolutionism was increasingly rejected (Carneiro 2003; Sanderson 1990; Lienesch 2012). Led by the pioneering efforts of Frank Boas (1911), critics challenged the scientific nature of evidence used by social evolutionists and they decried the theory as ethnocentric. Consequently, the vocabulary associated with the theory slowly became taboo (Nisbet 1969; Thornton 2005). The rejection of these terms was gradual, however, as Boas and other critics of social evolutionism continued to rely upon this vocabulary themselves for many decades thereafter (Sanderson 1990).

The number of scholars and policymakers who still relied on social evolutionism in the second half of the twentieth century was few, but proponents of a new, related theoretical

framework, modernization theory, quickly increased. Modernization theorists attempted to renovate social evolutionary theories. New terms were introduced following World War II, specifically the terms ‘undeveloped,’ ‘underdeveloped’ ‘less developed,’ ‘developing,’ and ‘developed societies’ (Thornton 2005). United States President Harry S. Truman referred to “underdeveloped areas” in his second inaugural speech in 1949 (Barnett 2011; Escobar 1995; Esteva 1992; Halle 1964; Patterson 1972; Rist 1997; 2007; Sachs 1992), and at the historic Bretton Woods conference, the word ‘development’ had found its way into the official charter of the newly formed United Nations (1945). These terms were quickly popularized within academia and in public policies and remain very common today.

The terms ‘First World,’ ‘Second World,’ and ‘Third World’ originally came from a French anthropologist’s reference to the ‘third estate,’ and became prominent terms during the Cold War (Wolf-Phillips 1979; 1987). Over time, particularly following the fall of Berlin Wall, the terms ‘First World’ and ‘Third World’ became largely synonymous with the plural references to ‘developed countries’ and ‘developing countries,’ respectively (Tomlinson 2003).

Though the terms used to refer to a developmental hierarchy have changed over time, many scholars are quick to point out the similarities between all of these terms. Thornton (2005:244-245), for example, states:

“The language used in development discourse has evolved dramatically over time. In recent decades, the pejorative nature of such terms as uncivilized, savage, barbarous, rude, unpolished, and backward has been recognized, and they have largely disappeared from both ordinary and scholarly discourse. Even references to undeveloped societies have begun to disappear, with the term undeveloped being replaced by such terms as less developed, developing, least developed, and newly developed (most obviously in UN categorization schemes).”

Nisbet (1969:205) explains that not only are the terms similar, but that they are all based upon the same cultural model of a developmental hierarchy: “[w]hatever the terms we may choose today, the blunter ones of Victorian-rationalist usage or the more neutralized and bland ones of current coinage, one and all they depend for their meaning upon the [same] criteria.” Several other scholars express similar sentiments (Brown 1993; Connell 1997; 2007; Granovetter 1979; Mbembe 2001; 2002; Thornton 2001; 2005; 2012).

Most recently, there has been a growing trend to reference development at the global level (Appiah 1997; Eckl and Weber 2007; Eyben and Savage 2012; Fiss and Hirsch 2005; Tomlinson 2003). The rising prevalence of the terms ‘developing world’ and ‘developed world,’ as well as introduction of new terms ‘Global South’ and ‘Global North’ are evidence of this emerging trend. The UN and other prominent international organizations are beginning to employ these terms. The most recent *UN Human Development Report* (2013), for example, contains the term ‘Global South’ in its title. What is less clear is how prevalent these global-level terms are, and whether they are rising in popularity at the expense of terms that reference societal- or national-level development, such as ‘developing countries.’

Methodological Details for Measuring Developmental Hierarchy Language

The observations about developmental hierarchy language made by these scholars provide the foundation for my task of selecting developmental hierarchy terms to include in an index of developmental hierarchy language. However, a number of technical procedures are imperative in order to accurately measure the cultural model of a developmental hierarchy.

Many of the terms that these scholars identify as important may be used as either adjectives or nouns. Using parts of speech recognition search techniques, I specify whether I

intend to capture instances in which the noun or adjective form of these terms is used within a given corpus. For example, I include the noun form of the term ‘primitive’ as developmental hierarchy language, but I do not want to include all the instances in which the adjective form of ‘primitive.’ Rather, I only want to include the adjective form of ‘primitive’ when it modifies one of five nouns: ‘nation,’ ‘country,’ ‘society,’ ‘people,’ and ‘world.’ I include all of the instances in which identified adjectives appear in tandem with one of these five nouns. I do not capture phrases that use the adjective ‘savage’ as a descriptive for other nouns, such as ‘savage appetite’ or ‘savage battle.’ These techniques avoid capturing instances of words that extend beyond the developmental hierarchy. In addition, these techniques avoid double-counting appearances of words.

When searching corpora for instances of a particular word or phrase, it is important to consider that search queries are exact—specifications must be made to capture singular, plural, capitalized, and minuscule forms of desired terms.⁶ For my list, or index, of developmental hierarchy terms, it is generally necessary to include all such forms of the terms that I analyze. For the identified phrase “developing countries,” for example, I include six unique terms: ‘developing country,’ ‘developing countries,’ ‘Developing country,’ ‘Developing countries,’ ‘Developing Country,’ and ‘Developing Countries.’ I repeat this process for all the terms that I identify as cultural keywords that reflect a developmental hierarchy. For a few cases, however,

⁶ Capitalization is particularly important in keyword analyses that are historical. In earlier centuries, most nouns were capitalized in English, a remnant of the language’s German heritage. In one of the first empirical studies using the *Google Ngram Database*, Ravallion (2011) analyzes the relative frequency of the 1-gram “poverty” from 1700-2000. He reports that there were two dramatic rises in usage, one in the second half of the eighteenth century and one toward the end of the twentieth century. This data provides the foundation for his historical analysis of the two “poverty enlightenments.” The trouble is that if one combines the relative frequencies of “poverty” and “Poverty,” or in other words, “Poverty + poverty,” the first of the two “enlightenments” that Ravallion identifies is greatly diminished. Stepping away from this example and speaking more broadly again, the practice of always including the upper and lower-case of keywords is also problematic. There are instances where capitalization is an important cultural indicator, such as the move from “negro” to “Negro” in American history (McNatt 2013).

capitalization is critical, such as ‘Third World,’ for example. In such cases, I include only the capitalized form of the term.

Combined, these processes allow me to construct a list of 650 unique developmental hierarchy terms. Yet, this list of terms still captures more than I intend to measure, as some of these terms have multiple meanings that extend beyond references to the developmental hierarchy. The phrase ‘rude people,’ for example, was commonly used during the eighteenth century as a synonym to ‘savages’ (e.g. ‘the rude people of Africa’), whereas today this phrase may more likely be used to refer to a group of people who displays a lack of courtesy and politeness.

To uncover such potential problems, I rely on the *Historical Thesaurus of the Oxford English Dictionary* (hereafter HT-OED). The HT-OED provides a short report of definitions, synonyms, and word families for any particular term ever listed in the dictionary. The reports highlight the years when certain definitions became popular. Using these reports, I evaluate each term I identified and make an informed decision about whether to include the term in my index or not. I rest on the conservative side and include only the terms that I feel most confident about based on the information gleaned from the HT-OED.

The HT-OED was additionally helpful for identifying alternative spellings of certain terms, such as ‘civilized’ and ‘civilised.’ I include both spellings of particular terms into my analysis.

This double-checking procedure narrows my original list of 650 unique terms to 447 (see Table 1 for the full list of terms).

[TABLE 1]

Once again drawing on the work of previous scholars, I also classify the 447 terms in my list of developmental hierarchy terms into two smaller lists of what I term ‘First Wave’ developmental hierarchy language and ‘Second Wave’ developmental hierarchy language. These waves largely correspond with the distinct rhetoric of social evolutionism and of modernization theory. There are 201 and 246 terms for each wave respectively (see Table 1 for a list of terms in each category).

Four Hypotheses

My first hypothesis is that developmental hierarchy language was widespread in books throughout the past three centuries. This expectation is based on the historically powerful influence of cultural models of development in academia, public policy, international relations, and the everyday lives of individual people.

My second hypothesis is that the level of permeation of developmental hierarchy language in books varied over time. I expect the level of permeation increased during the second half of the eighteenth century, during which time the scope and intensity of the European Enlightenment expanded. I also expect that the level of permeation declined during the first half of the twentieth century. A number of historical factors could have contributed to such a decline, including the rejection of social evolutionary theory in academia, social movements against the teaching of evolutionism—both biological and social—in public schools, independence movements in colonial territories, and changing attitudes among Europeans and European diaspora populations toward people of other races. I also expect that the level of permeation of developmental hierarchy language in books increased in the second half of the twentieth century.

Modernization theory rose to prominence during this period, and was institutionalized in the practices and discourse of new international organizations and national foreign aid agencies.

This leads to my third hypothesis, that the actual terms used in books to reference societies positions' along the developmental hierarchy changed during the middle of the twentieth century. Previous scholarship on the history of developmental models (i.e. Connell 2007; Nisbet 1969; Thornton 2005; Williams 1976) makes reference to changes in the popularity of certain developmental hierarchy terms, at least within the public policies and writings of prominent thinkers that they analyzed. I expect that these same changes occurred within books in general as a result of the same historical factors outlined in the explanation of my second hypothesis.

My fourth hypothesis is that the level of permeation of developmental hierarchy language was greater within books in general than it was within fiction books specifically. Authors of non-fiction books were likely to discuss with international relations and current events, as these topics lend themselves to non-fiction writing, and thus were more likely to use developmental hierarchy language than authors of fiction books.

Data Source

To measure the level of permeation of developmental hierarchy language, I rely on the largest English-language text corpora available: the *Google Ngram Database*. The *Google Ngram Database* was released originally in 2006 and version 2.0 was released in 2012.⁷ The database “contains 6% of all books ever published” and “the English corpus alone comprises close to half a trillion words” (Lin et al. 2012). A ‘N-gram’ is a common term in linguistics

⁷ See the public announcement for the release of the *Google Ngram Database*, version 1, on the Google Research blog on August 3, 2006. Retrieved July 30, 2013 (<http://googleresearch.blogspot.com/2006/08/all-our-n-gram-are-belong-to-you.html>).

research that stands for the number of unique words included in a particular search query; for example, ‘savage’ is a 1-gram, and ‘savage nation’ is a 2-gram. Google scientists published two academic articles with detailed explanations of the process of acquiring the data, the methods used to clean the data, and how the corpus can be searched (Lin et al. 2012; Michel et al. 2011, see the Supporting Online Material for details on their methodology). I explain aspects of the database that are particularly relevant for my research aims.⁸

These data are compiled from Google’s own *Google Books* searchable database. Books are added through agreements made between Google and publishing companies and between Google and public libraries. Over thirty libraries have currently partnered with Google to scan at least some portion of the books in their catalogues, the vast majority of which are libraries at American universities. Each library agreed to scan different portions of their collections, with some, such as the University of Michigan, agreeing to scan their entire collections from all their libraries. These efforts are still ongoing, thus there will likely be continually updates to the *Google Ngram Database* with time.

What can be said about the generalizability of the English language corpus? Who does the corpus represent? The most significant bias introduced by the data is literacy. Statistical data for the eighteenth and nineteenth centuries is hard to come by. Literacy statistics were first introduced into the United States census in 1880, in which 20% of the population self-reported as illiterate (the validity of this type of self-reporting is debatable, see Stedman and Kraestle 1987). While such statistics are not known for Britain, the history of their public educational system mirrors that of the United States in many ways (Street 1995). Another way of capturing what proportion of the population was likely to read books is to consider high school graduation rates.

⁸ For the history of the Google Books project, formerly known as the Google Print project, see the official website at: <http://books.google.com/googlebooks/about/history.html>.

In 1900, the high school graduation rate was about 25% in the United States whereas today it hovers at around 75% (Heckman and LaFontaine 2010). Other sources argue that the graduation rate was a meager 2% in 1870 and only 6.4% in 1900 (Swanson 2010). In either case, the proportion of literate adults in English-speaking countries has been historically quite small. These data, therefore, cannot provide evidence about whether the terms searched were common beyond the literate populations in English-speaking nations, though most scholarship using these data has made such claims.

Finally, though there are a great number of countries today where English is an official language, this has not historically been the case. England, the United States, Australia, and to some extent Canada, are the countries where English has been the dominant language of text for the past three centuries. Furthermore, many countries where English is recognized as an official language have much lower literacy rates and smaller publishing industries than England, the United States, Australia, and Canada. In addition, the libraries who have partnered with Google are nearly all American or European. These libraries likely contain books written in English from countries that were formerly European colonies, but the number of such books is probably an extremely small percentage of their entire collections. In addition, the literature of countries that were formerly colonized by European empires has unfortunately been heavily influenced by the goals of European publishing companies (Griswold 1986). Thus, the data from the *Google Ngram Database* is heavily biased toward the publishing industries of England and the United States, and, perhaps to some extent, Australia and Canada. These biases and the literacy statistics cited imply that these data are most reflective of the language of two populations that has

historically played major roles in world politics: the elite, literate populations of England and the United States.⁹

Measurement Methods

I use English language corpus from version 2.0 of the *Google Ngram Database*. To extract n-gram data from *Google Books*, I used the “getngrams.exe” Python application made available by Google researchers on the *Culturomics* website maintained by the Google researchers and their collaborators at the Harvard Cultural Observatory who created the *Ngram Viewer*.¹⁰ I specified the term I wish to search, as well as the time period, and the application then downloaded into a text file the relative frequencies of the term searched by year. For example, a search of the phrase ‘primitive societies’ uses the following formula:

$$\frac{[\text{Number of times 'primitive societies' appears}] /}{[\text{Total number of 2-grams in English language-corpus}]}$$

I use this same formula repeatedly in order to download relative frequency data for each of the 447 unique terms in my index of developmental hierarchy language for every year between 1700 and 2008. Relative frequencies are necessary because the number of books published per year and the diversity of the English lexicon has been increasing over time (Michel et al. 2011). For example, if I search for ‘developing country,’ as well as its plural, capitalized, and minuscule forms, and then combine their relative frequency counts together, I get a cumulative frequency count for the year 1970 of $5.309 * e^{-06}$. This means that out of one hundred thousand randomly selected 2-grams existing in the corpus for the year 1970, about five of them will match my search query.

⁹ Another study worth pursuing, however, would be to investigate the level of permeation of developmental hierarchy language in books and newspapers in other languages.

¹⁰ <http://www.culturomics.org/Resources/get-ngrams>

I limit my analysis to 1700-2008 for a number of reasons. First, the database only contains data until 2008. Second, the data available for books published before 1700 contains more noise—there are fewer words per year in the database and thus fluctuations in term frequencies can be very great. Google researchers express some qualms about the data from 1700-1800 because there are less than a million words per year in the English language corpus for this time period, but they encourage researchers to use the pre-1800 data when appropriate. In my own analyses, it is apparent that there is more noise in the data from 1700-1800, but not an unreasonable amount for my goal of analyzing the collective level of permeation over time of developmental hierarchy terms. Third, the majority of previous research on the history of developmental models is focused on the past three centuries.

In all of my analysis I smooth the data over a 31-year period—fifteen years before and fifteen years after the data in question. Smoothing is justified in this case because my goal in this analysis is to identify broad, longitudinal trends in the level of permeation of developmental hierarchy language over a 308-year span. The unsmoothed results vary more year to year than the smoothed results, but the general trends do not differ.¹¹

While I have taken many careful steps to measure the cultural model of a developmental hierarchy, using such a large, text corpus is a relatively messy endeavor, particularly for historical analysis. Attempting to approach causal inference is particularly challenging with text-based data (Ignatow and Milhalcea 2013). Text-based, longitudinal keyword analyses are best at mapping general trends over time, providing a “big picture” view, and they are most useful when utilized in conjunction with research on historical events and processes. They reaffirm the complexity of history and the need to ground such quantitative analyses with accounts of historical events and processes. I attempt to do this by grounding my theory with the historical

¹¹ Unsmoothed results are available upon request.

narrative of the cultural model of developmental hierarchy that previous authors (i.e. Connell 2007; Nisbet 1969; Thornton 2005; Williams 1984) have constructed, and by discussing my results in conjunction with additional historical processes and events that previous scholarship on the history of cultural models of development has failed to recognize.

Results and Discussion

In this section of the paper, I present frequency analyses of developmental hierarchy language in books during the past three centuries that relate to my four hypotheses. I also discuss additional historical events and processes that may have influenced the observed outcomes, focusing in particular on historical factors that previous scholarship on developmental models has yet to recognize.

Did Developmental Hierarchy Language Permeate Books?

I address my first hypothesis – whether development hierarchy language permeated books throughout the past three centuries – with the results presented in Figures 1 and 2. Figure 1 displays the individual frequencies of the terms contained in my index of developmental hierarchy language, using the data from the *Google Ngram Database*. For visualization purposes, I combine frequencies of the singular, plural, capitalized, and lower case versions of each of the 447 terms in my index, and then graph these combined frequencies as 81 unique lines. Figure 2, on the other hand, is simpler; it displays the total cumulative frequency of all 447 unique terms in my index.

[FIGURE 1]

[FIGURE 2]

Both figures confirm my first hypothesis that developmental hierarchy language permeated books throughout the past three centuries. As documented in the first figure, there were popular developmental hierarchy terms throughout the time period measured. Though certain terms obviously rose and fell in popularity over time, there were always at least a few terms that were popular at any given time. I also observe that during the eighteenth and nineteenth centuries there were a few terms that were proportionately much more popular than others. During the twentieth century, there were a number of terms that rose in popularity beginning in the middle of the century. Though the frequency levels of these terms did not climb to the same frequency levels of the most popular terms during the eighteenth and nineteenth centuries, there were a greater number of terms that were popular during the second half of the twentieth century. In other words, there was a wider array of developmental hierarchy terms that maintained a moderate level of popularity during the second half of the twentieth century, whereas previously there were only a few terms that were extremely popular.¹²

Figure 2 is additionally helpful in visualizing the permeation of developmental hierarchy language in books. The cumulative frequency of all 447 developmental hierarchy terms in my index was relatively high throughout the time period measured. The two highest frequencies during the time period measured, around 1800 and 1980, exceeded .00008. Even the two lowest frequencies, which occurred around 1700 and then again in the first half of the twentieth century, reached a level of .00004, or .004 percent. Thus, the cumulative frequency was quite high, confirming my first hypothesis that developmental hierarchy language permeated books throughout the time period measured. This implies that the cultural model of a developmental hierarchy has been prevalent at least among the authors of books for the past three centuries.

¹² These results fit with the broader trend in the English language of an increasing lexicon over time (Michel et al. 2011).

One way of understanding that these frequencies were relatively high is to compare them to the frequency levels of other words. For example, when compared to the frequency levels of a combination of the common terms “American” and “Americans,” my index of developmental hierarchy language fared well. Up until the twentieth century, the combined frequency levels of the terms “American” and “Americans” were smaller than the cumulative frequency of my index of developmental hierarchy language, and during the twentieth century, the frequency levels were nevertheless still comparable in numeric value.¹³

Developmental Hierarchy Language in the 18th and 19th Centuries

My second hypothesis is that the level of permeation of developmental hierarchy language varied over time. As shown in Figures 1 and 2, the level of permeation of developmental hierarchy language was not consistent over time, but varied considerably. The observed temporal trends in permeation matched much of what I expected to see, but had a few additional variations that I did not expect. Thus, these data confirmed my second hypothesis in principle, but provided a more complex story than I expected.

According to Figure 2, the frequency level of developmental hierarchy language rose considerably during the second half of the seventeenth century. This rise corresponds with the expansion of the European Enlightenment during this time period. Following this rise, there was also a significant yet short-lived decline at the beginning of the nineteenth century. This decline may have been a reaction or backlash to a period of extreme hype and interest in developmental models that accompanied the rise of developmental hierarchy language at the end of the eighteenth century.

¹³ Graphs based on this analysis are available upon request.

Figure 2 further shows that the level of permeation of developmental hierarchy language was not relatively constant throughout the nineteenth century, as I expected it to be, but rather subtly declined during this entire period. This trend suggests that the developmental hierarchy continued to be a relevant cultural model, but that it lost some of its importance and interest. One possible reason for this gradual decline may be that opposition to ethnocentrism and the maltreatment of ‘natives’ in colonial territories slowly became a more prominent political stance during the nineteenth century (Barnett 2011; Stamatov 2010; 2013). Accompanying opposition to ethnocentrism was a slowly growing belief among Europeans and European diaspora populations in the capability of ‘natives’ to learn and ‘become civilized.’ Such changes to developmental models “proceeded hesitantly” (Meyer et al. 1997:173) during this time period.

Developmental Hierarchy Language in the First Half of the 20th Century

The next observable change in Figure 2 is an amplified rate of decline in developmental hierarchy language during the first half of the twentieth century. The rate of decline, though noticeable during the nineteenth century, picked up considerably at the beginning of the twentieth century, eventually reaching a low point of about .00004, the same frequency level that also occurred around 1700. I expected this strong decline in developmental hierarchy language during the first half of the twentieth century, as previous scholarship noted that criticism of developmental models within academia grew tremendously during this period (Harris 1968; Mandelbaum 1971; Nisbet 1969; Sanderson 1990; Thornton 2005).

However, there were likely other historical processes that contributed to this strong rate of decline during the twentieth century. One important process, which has yet to be addressed in previous scholarship on the cultural model of a developmental hierarchy, was the demand for

linguistic changes in school textbooks and of anti-evolutionism social movements (Larsen 1985; Lienesch 2007; Shapiro 2013). During the 1920s and 1930s, there were massive debates in Europe and especially in the United States regarding the teaching of evolutionism – both social and biological – in public schools. Stemming from the famous Scopes’ trial, the anti-evolution movement “initiated a period of unprecedented protest” (Lienesch 2007:173). Activists introduced twenty-four bills around the United States calling for the banning of evolutionary rhetoric from textbooks used in public schools. In addition to introducing legislation, they also lobbied state governors directly. In 1926 in Texas, for example, they successfully convinced the governor to order the state’s Textbook Commission “to remove references to evolution from all high school science books used in the state” (Lienesch 2007:177). This political order then led the Textbook Commission to approach publishing companies directly about making such changes. Historian Michael Lienesch (2007:177) notes,

...state education officials used the state’s formidable purchasing power to arrange contracts with national publishers Henry Holt, Macmillan, and others that required changes and deletions in their science textbooks, including the elimination of references to evolutionary theory, the substitution of terms such as ‘change over time’ or ‘development’ for evolution, and the removal of charts and diagrams that showed humans as part of an evolutionary process.

Other textbook publishers did the same in order to avoid trouble, and some published one version “covering evolution” and another “omitting it.” Many text-related changes were similarly made in textbooks used in other states in response to anti-evolutionist sentiments.

Two additional historical factors that could have contributed to the decline in developmental hierarchy language during the first half of the twentieth century are the rise of independence movements in colonial territories around the world and changing attitudes among Europeans and European diasporas toward people of other races and ethnicities. Colonizers

viewed the ‘natives’ they conquered and ruled in unique ways, and their views were influenced in part by the reactions of the ‘natives’ toward colonial power (Go 2000; Steinmetz 2008). As ‘natives’ in colonial territories mobilized, it is possible that European colonizers slowly began to respect their capacity, agency, and freedom, and the increasing success of colonial opposition movements may have induced such views. Such ideational changes among colonizers would be manifest in linguistic shifts, including the fall of developmental hierarchy terms, particularly of terms associated with social evolutionism.

Related to these ideational changes toward colonized ‘natives’ were domestic political concerns in the United States, England, Canada, and Australia regarding the treatment of people from non-European descent. The political climate slowly shifted toward a more hospitable climate for those of non-European descent, resulting in voting rights, the overthrow of racial segregation policies, and some protection against discrimination. Since those of non-European descent were seen as ethnically similar to those in ‘savage nations,’ it seems logical that changes in domestic views toward those of non-European descent would impact the rhetoric and terminology used to refer to those of non-European descent both within and outside the U.S., England, Canada, and Australia (Blaut 1993:54-58; Omi and Winant 1994:181-213).

Developmental Hierarchy Language in the Second Half of the 20th Century

Figure 2 also documents that there was a dramatic increase in developmental hierarchy language during the second half of the twentieth century. This was expected due to the institutionalization of modernization theory and its related vocabulary in many international and national policies, as well as in academia. Scholars writing about the rise in new terminology for the developmental hierarchy consistently point to the second inaugural speech of United States’

President Harry S. Truman in 1949 as a key turning point, in which Truman made the first reference to aiding “underdeveloped areas” of the world (Barnett 2011; Escobar 1995; Esteva 1992; Halle 1964; Patterson 1972; Rist 1997; 2007; Sachs 1992). It is noteworthy that terms such as ‘developing countries’ began their rise following 1949.

Interestingly, the level of permeation in books rose in the 1980s to about the same frequency at which it had previously peaked during the end of the eighteenth century. The nearly equivalent frequency levels imply that authors of books equally relied upon the cultural model of a developmental hierarchy during the second half of the eighteenth century as authors of books did during the second half of the twentieth century. This result also provides some modest support to claims that newer developmental hierarchy language, such as the terms ‘developing’ and ‘developed countries,’ fills the same cultural space as did older developmental hierarchy language, such as ‘savages’ and ‘barbarians’ (i.e. Nisbet 1969:205; Thornton 2005: 244-245; 2012; Williams 1975: 103-104).

This result also highlights these two time periods as critical periods in the emergence of world culture. Alongside the rise of developmental hierarchy language during the second halves of both the eighteenth and twentieth centuries was likely a broader expansion in the diffusion of developmental models. These models are increasingly applied universally, and thus contribute to the realization of world cultural practices, beliefs, values, and lifestyles.

Surprisingly, however, figures 1 and 2 show that the level of permeation of developmental hierarchy language in books has begun to decline in the past few decades. I did not expect this decline, as developmental hierarchy language is seemingly very prevalent in public discourse today.

There are a couple of possible explanations for this recent decline. The first is that just as there was a short-lived decline in developmental hierarchy language at the beginning of the nineteenth century following the dramatic rise in such language during the second half of the eighteenth century, a similar phenomenon occurred at the end of the twentieth century and into today, as developmental hierarchy language rose dramatically during the second half of the twentieth century and may now be experiencing a short-lived decline. Some cultural models often suffer short-lived declines after periods of extended cultural hype. According to this explanation, the recent decline in developmental hierarchy language could be a quick response to a crazed period of heightened interest, such as the introduction of foreign aid and the global war on poverty, but that frequency levels of developmental hierarchy language will likely stabilize soon and then continue to be common for decades to come.

Another possibility is that criticism of modernization theory has had significant impacts on developmental hierarchy language, chipping away at the usage of developmental hierarchy language. Such criticism has not been limited to academia, but has bled into public policies. Books such as William Easterly's (2007) *The White Man's Burden* and Dambisa Moyo's (2009) *Dead Aid* decry national and international foreign aid and development assistance programs, claiming that they cause problems for recipient countries. These books have extended their reach beyond academia and into the public sphere, and other books and newspaper opinion articles in this vein may have contributed to a lack of public support for aid and development programs in general in recent decades (Bauhr et al. 2013; Van Heerde and Hudson 2010).¹⁴ A subsequent decline in developmental hierarchy language could be another result of such trends in public attitudes.

¹⁴ The legitimacy of surveys regarding public support for aid is contested. See Kenny 2011.

A third possibility for the decline in developmental hierarchy language since the 1980s could be the beginnings of a gradual shift away from the hierarchical classification of societies as a means of understanding the world. Tolerance of social differences is being preached more so than ever before, and individuals are increasingly seen as actors within a globally shared culture (Meyer 2010). As such, comparisons of societies or nation-states by their level of development may make less sense. Instead, there could be a shift toward an emphasis of global development as well as individual advancement. Former President of the World Bank, Robert Zoellick (2010), stated so much when he was in office:

If 1989 saw the end of the “Second World” with Communism’s demise, then 2009 saw the end of what was known as the “Third World”: We are now in a new, fast-evolving multipolar world economy. ...The outdated categorizations of First and Third Worlds, donor and supplicant, leader and led, no longer fit. ...We cannot predict the future with assurance. But we can anticipate directions –and one is that the age of a multipolar global economy is coming into view.

A Shift in Developmental Hierarchy Terms

My third hypothesis was that the actual terms used in books to reference societies’ positions’ along the developmental hierarchy changed during the middle of the twentieth century. Given the criticism of developmental models in academic by anthropologist Frank Boas (1911), his followers, and others, as well as criticism of social evolutionism in the public sphere and other relevant historical processes, I expected that the frequency levels of developmental hierarchy terms popular during previous centuries would decline during the first half of the twentieth century. I separated these terms into what I call an index of First Wave developmental hierarchy terms. I further expected that newer developmental hierarchy terms, introduced alongside modernization theory during the middle of the twentieth century, would quickly

increase in frequency during the second half of the twentieth century, as such language was institutionalized in new international organizations and national foreign aid policies. I placed this newer set of terms into what I refer to as an index of Second Wave developmental hierarchy terms.

[FIGURE 3]

Figure 3 displays the cumulative levels of permeation of both First Wave and Second Wave developmental hierarchy language, respectively, during the past three centuries using data from the *Google Ngram Database*. First Wave of terms enjoyed high levels of frequency during the eighteenth and nineteenth centuries. Looking at the entire twentieth century, one notices that the gradual decline in First Wave terms mirrors the gradual incline in Second Wave terms, with the two indices crisscrossing in popularity around the middle of the twentieth century. The crisscrossing might lead observers to conclude that First Wave terms for the developmental hierarchy effectively replaced Second Wave terms. By looking back the overall frequency of developmental hierarchy terms in Figure 2, however, it is apparent that the cumulative frequency of developmental hierarchy language in general experienced a significant drop during the middle of the twentieth century. Had the overall level of permeation stayed constant, then perhaps one could argue that modernization theory terms replaced social evolutionary terms. Given the actual observations, however, the actual case is that developmental hierarchy language as a whole declined during the first half of the twentieth century and then increased during the second half of the century. Thus, the lag in the introduction and subsequent rise in the frequency of Second Wave terms until the frequency of First Wave terms had substantially declined suggests that modernization theory and the international organizations that adopted such language in fact

saved the cultural model of a developmental hierarchy from oblivion and effectively catapulted it back to its previous levels of prominence.

The utility of this keyword frequency analysis for capturing the historical transition between First Wave and Second Wave developmental hierarchy language is noteworthy. Whereas some previous research makes vague references about the shifts in such language during the twentieth century, these data from the *Google Ngram Database* clearly display when First Wave terms dropped and Second Wave terms increased across books in general, thus highlighting the historical periods in which this trend occurred. Keyword frequency analysis of this sort is thus useful for historical research in general, allowing researchers to identify the starting and ending points of certain trends as well as the after effects of particular historical events (Landmann and Zuell 2008; Ophir 2010).

Developmental Hierarchy Language in Fiction Books

My fourth hypothesis was that the level of permeation of developmental hierarchy language would be greater within books in general than within fiction books. Figure 4 displays the frequency of such language in fiction books. The results for fiction books, in comparison to the results of all books, differ tremendously.

[FIGURE 4]

Though developmental hierarchy language permeated fiction books at very high rates, the historical trends in the level of permeation were unique from that of books in general. Developmental hierarchy language was highest in fiction books during the first half of the eighteenth century, hitting frequency levels around .00008, during which period such language was not nearly as common in books in general. During the middle of the eighteenth century, the

frequency dropped significantly, but then quickly rebounded to hit high levels again toward the end of the eighteenth century. Since that time period, the level of permeation of developmental hierarchy language in fiction books has steadily, though not rapidly, declined to its current level just below .00003.

Interestingly, there is no increase in the level of permeation of developmental hierarchy language during the second half of the twentieth century, during which period a major increase is observed in the level of permeation within books in general. In fact, if I analyze the level of permeation within fiction books of First Wave developmental hierarchy terms and Second Wave developmental hierarchy terms (see figure 5), it is apparent that First Wave terms have very little permeation in fiction books.

*****[FIGURE 5]*****

Why the difference between in the level of permeation of developmental hierarchy language in fiction books from books in general? It is likely that authors of non-fiction books were likely more concerned with international relations and current events, and thus more likely to use developmental hierarchy language than authors of fiction books. This would be a reasonable explanation except that developmental hierarchy language did permeate fiction books throughout the time period measured, and particularly so during the eighteenth century. Even the lowest frequency levels around .00003 are still significant.

One explanation is that during the eighteenth century there may have been a number of fiction books about the ‘adventures’ of Europeans and those of European ancestry interacting with ‘savages’ that they encountered in foreign lands around the world. With time, such tales may have become less popular, and authors may have preferred to refer to the ‘natives’ by particular names ascribed to certain tribes, ethnic groups, or colonies. Developmental hierarchy

language is particularly common and heuristically useful when one is engaging in comparisons of societies. It may be that fictional stories began to focus on the social makeup of societies and communities themselves as opposed to comparing such characteristics to that of European societies, which may have been left to non-fiction ethnographic accounts.

The lack of permeation of Second Wave developmental hierarchy language is particularly noteworthy. This finding suggests that authors of fiction books may be less constrained by the vocabulary and associated cultural models promoted by international organizations and national governments. In order to understand the reasons for the difference between mediums in the level of permeation of developmental hierarchy language, however, more research is needed, particularly in-depth rhetorical analyses that can identify possible reasons for the distinction. Regardless of the reasons for the distinction in the levels of permeation between fiction books and books in general, a critical takeaway is that the cultural model of a developmental hierarchy, while enjoying a high level of frequency in general, is not diffused evenly across all types of books.

Conclusion

This paper is motivated by the incredibly powerful impact cultural models of development and a developmental hierarchy have had on the organization of the world and on individuals' conceptualizations of the world. European colonizers and Christian evangelists promoted certain cultural practices and values among the 'native' peoples with whom they interacted, based on a belief in social superiority. Developmental models have all similarly motivated foreign aid projects, international development programs, and humanitarian efforts. While views about what constitutes development, how to achieve development, and who is capable of developing have varied tremendously over time, the concept of that there is such a

thing as a developmental hierarchy upon which all societies can be ranked has persisted. The cultural model of a developmental hierarchy has been expressed through particular terms for societies at the bottom and top of the hierarchy, such as ‘savages’ and ‘polished societies,’ ‘primitive’ and ‘advanced nations,’ and ‘developing’ and ‘developed countries.’ The use of these terms can reinforce beliefs that the cultural model of a developmental hierarchy exists, and this model has become taken-for-granted by many people around the world (Thornton et al. 2012).

The goal of this paper is to examine the level of permeation of the cultural model of a developmental hierarchy in books during the past three centuries. Previous scholarship was limited to the analyses of the diffusion of the cultural model of a developmental hierarchy within the writings of prominent thinkers and in certain public policies. Using the *Google Ngram Database*, I analyzed the level of permeation of developmental hierarchy language in books generally. I found that such language permeated books throughout the time period, and that the level of permeation varied over time.

I also analyzed whether the terms used in books to express societies’ positioning along a developmental hierarchy changed during the middle of the twentieth century. This change did occur; terms for the developmental hierarchy fell during the first half of the twentieth century and a new set of terms was introduced during the middle of the twentieth century that rose in popularity dramatically, reaching a peak during the 1980s, after which it has declined somewhat.

My final question of analysis was whether the level of permeation of developmental hierarchy language differed between books in general and specifically fiction books. While the levels of permeation were high in each case, the trends in the levels of permeation were different. Second Wave developmental hierarchy language in particular failed to permeate fiction books.

These empirical findings have theoretical implications for future research on developmental models as well as for research on the history of cultural models more broadly. With respect to future research on cultural models of development, the results of this paper imply that certain types of media contain developmental models more than others and that developmental models have permeated such media at varying levels throughout history. Future research on the diffusion of developmental models should take into account this historical and material dynamism. The same can be said for future research on cultural models in general. In addition, these findings imply that the renovation of cultural models can save dying or stigmatized cultural models (Bail 2008; Jansen 2007). Two ways such renovations may be successful are through the introduction of new vocabularies and updated theoretical frameworks. A final theoretical observation gleaned from these findings is that historical processes create cultural and political opportunities, or temporal windows, when cultural models can be successfully renovated or resurrected. Given the vast amount of social upheaval during and between World Wars I and II, many cultural models either lost ground or gained footing, such as the divergent outcomes of social evolutionism and modernization theory. These findings provide evidence that unsettled cultural and political time periods are ripe territory for the renovation or resurrected of previously popular cultural models.

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