

CULTURAL ZONES AND EXISTENTIAL SECURITY: A CROSS-NATIONAL EXAMINATION OF SECULARIZATION THEORY

by

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(Under the Direction of Steven R. Holloway)

ABSTRACT

Classical secularization theory holds that societies become less religious as they modernize. Responding to empirical and theoretical critiques of the theory, Norris and Inglehart (2004) promote a modified version based on the degree of existential security experienced by a population. While their empirical analysis, using measures of human development and income inequality, supports their claims, broader analysis that addresses cultural histories, which the authors consider important, and regional variations is needed. This thesis uses an extensive cross-national dataset of religious affiliation to evaluate existential security theory cartographically and statistically, explicitly incorporating regional cultural heritage. The analysis also accounts for a nation-state's historical or contemporary association with Communism, a factor often overlooked in the literature. The study finds some empirical support for the importance of existential security in non-Communist countries, but significant outliers exist, and consideration of a country's cultural context, especially Communism, helps to further explain secularization and geographic variability.

INDEX WORDS: secularization, geography of religion, cartographic visualization, Communism, cultural geography

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B.S., Clemson University, 2003

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial
Fulfillment of the Requirements for the Degree

MASTER OF SCIENCE

ATHENS, GEORGIA

2006

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ACKNOWLEDGEMENTS

I would like to thank my major professor, Dr. Holloway, for his insights, suggestions, and direction in the thesis. His assistance throughout the entire process has been rewarding intellectually, and the document would not have progressed as it has without his help. I would also like to thank my other committee members for their roles in the thesis. Specifically, I appreciate Dr. Hodler's cartographic and other edits, and Dr. Pandit's insights into conceptual issues and additional suggestions. It has been a pleasure and a privilege to work with these individuals and study at the Department of Geography at UGA.

I would also like to thank my parents for their continued support of my education throughout the years. I am always grateful for my wonderful family.

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1. Introduction

Classical secularization theory holds that societies will become less religious as they modernize (Swatos and Christiano, 1999). Ongoing debate in the literature concerns the validity of this classic theory, and critiques have emerged both empirically and theoretically. Norris and Inglehart (2004) promote a modified version of classic secularization theory based on notions of existential security: the transition from traditional/religious to modern/secular society depends on the level of material security felt by the population. While their empirical analysis, using measures of human development and income inequality, supports their claims, broader confirmatory analysis stills needs to be conducted. Moreover, the geographic validity of the existential security version of secularization theory has not been adequately explored. The current study evaluates existential security theory with an extensive cross-national dataset of religious affiliation (Barrett et al., 2006) and empirically incorporates cultural sensitivity as suggested by Norris and Inglehart (2004) but not implemented in their global models. The approach accounts for a nation-state's religious or cultural heritage, whether that is a major faith such as Catholicism or Islam, or the imposed secularization of Communism, a factor that has not received enough attention in the current literature. Cartographic visualization and statistical analysis are employed to evaluate the empirical validity of existential security theory, as well as its significant outliers.

Empirical challenges to the classic association between modernization and religion's reduced importance include counter-claims of religious resurgence across the

globe (Berger 1999). These empirical challenges include observations of the continued religiosity of places such as the United States, the upsurge in global evangelical Christianity, and the rise of fundamentalist Islamic movements (Melleuish, 2005). In addition to empirical challenges, others have challenged the traditional secularization paradigm theoretically with rational choice theory. Stark and Finke (2000) note the divergence between Europe and the United States in the vibrancy of religious adherence and claim that religious vitality is directly related to the range of religious choices offered (i.e., pluralism). According to these authors, religion will thrive in a less-regulated market, such as one with no large, state-sponsored religion. Another theoretical approach attempts to move past the debate between classic secularization and rational choice by proposing a more culturally-sensitive, case specific and global approach (Casanova, 1994, 2003). According to this approach, classic secularization theory is a Western construct, shaped by a social, political, and religious history not shared by the rest of the world. The world's various nation-states should not be expected to follow similar paths of religious change. While secularization is not dismissed totally, it cannot be applied universally.

Norris and Inglehart's (2004) existential security theory is an attempt to re-articulate classic secularization theory in order to account for some of the global variability noted by its critics. It emphasizes two main variables: human development and income inequality. The importance of religion is thought to be lower in nations where citizens have more security and confidence concerning daily survival. Thus, levels of secularization will be higher in contexts where basic indicators of human development and welfare are higher. Even though Norris & Inglehart focus their attention on notions

of existential security, they also acknowledge the importance of a country's religious culture or heritage. Their empirical analyses, however, do not test this proposition directly, instead using it to frame more regionalized analyses.

Geographers have contributed to the study of secularization but in a more limited manner. In his book summarizing the current status of the subfield, geography of religion, Park (1994, p.52) claims that:

The processes, patterns and consequences of secularization represent a largely unexplored patch, for geographers in particular, and even a modest investment of research in this area promises rich returns. It is a theme that is growing in importance, spreading in impact and emerging in its implications. It deserves more study.

With considerations of scale, the relationship between the local and the global, spatial difference, and cultural variability as well as coherence, a geographic approach is truly well-suited for contributing to the study of secularization worldwide.

Building on Norris and Inglehart's existential security theory, the current study incorporates more directly and broadly the cultural sensitivity suggested by Casanova (2003). The study adopts the scale of the nation-state, following in the footsteps of many studies of religion trends (such as McCleary and Barro, 2006) and makes use of a well-established, global empirical assessment of the adherents of the world's major faiths (Barrett *et al.* (2001). Analytical techniques of cartographic visualization and statistical analysis allow both for investigations of general relationships as well as considerations of significant outliers within a geographic perspective.

Research Questions and Expectations

The following research questions will be addressed by the current study from a cartographic and statistical perspective:

1. How are secularization, represented by the proportion of a nation's population that does not adhere to a religion, and the variables of Norris and Inglehart's (2004) existential security secularization theory (human development and inequality) distributed across the globe? How well does existential security theory account for secularization and its inherent *variation*?
2. How effective are cultural factors in explaining cross-national *variations* and *cohesions* in secularization?

Differences in human development and income inequality are expected to adequately explain the cross-national variations in secularizations, but definite outliers will exist in regards to human development and income inequality. The influence of culture is expected to be a highly significant explanatory variable in the second portion of the empirical analysis. Norris and Inglehart stress its importance but do not test it globally with empirical models. Exploring these questions above will help to answer a larger question: Is the addition of a culturally-sensitive geographic perspective, such as Casanova's, a powerful tool for conceptualizing secularization, individual deviations, and group similarities? Socio-economic measures cannot speak completely to the intricacies of religion, so the cultural context, in addition to the human development and income inequality measures, will have a great impact on religious trends.

Structure of the Thesis

The thesis is structured into 6 chapters. Chapter 2 establishes a theoretical foundation necessary to understand the basics of the secularization debate, the definition and measurement of religion, and the benefits and considerations of a geographical approach to the study of global religious trends. Chapter 3 addresses issues of data, measurement and methodologies of the study, including the variables that constitute the primary focus of attention. Results of the analysis are presented in two empirical chapters. The first, Chapter 4, focuses on the broad relationship between existential security and levels of secularization with global maps, conceptual diagrams, and statistical analysis. There is a general relationship between increased levels of existential and increased secularization, but there are various countries that do not follow the trends, and there is significant variation in levels of secularization among countries with similar levels of existential security. The empirical analysis presented in Chapter 5 incorporates cultural zones, which improve the statistical models and provides a more effective empirical framework for understanding geographic differences in secularization and national outliers to existential security theory. Specifically, Communism plays an under-appreciated role in a country's level of secularization and in many ways is the most dominant cultural influence, producing levels of secularization in countries that are much higher than those predicted by classic or modified secularization theories. Existential security theory alone lacks the ability to account for global variability and the influence of Communism on the non-religiosity of nation-states. Chapter 6 will summarize the findings of the study and bring the focus back to the broader theoretical context concerning the secularization debate as well as introduce suggestions for further study.

2. Literature Review

The following review of literature lays the sociological, religious, and geographical background for the current study of global secularization. The secularization debate has centered on two different theories: classic secularization theory and rational choice theory. Norris and Inglehart's (2004) theory of existential security is a modification of classic secularization theory and identifies human development and income inequality as main variables relating to levels of secularization. Empirical studies are explored that support classic theory, but a cultural and geographical critique of the universal application of secularization theories is also analyzed. Additionally, Communism is explored as a major cultural factor related to secularization. This cultural critique will lead into the current study that evaluates existential theory from a geographic and cultural perspective.

Secularization Debate

Ongoing debate in the Sociology of Religion concerns the validity of classic secularization theory's claim that as societies become more "advanced" and modernized, religion will eventually fade away (Swatos and Christiano, 1999). This theory has been challenged recently by counter-claims pointing to the continued religiosity of places such as the United States (Stark and Finke, 2000), the upsurge in global evangelical Christianity, the rise of fundamentalist Islamic movements, and other religious changes (Melleuish, 2005). While the basic claims of the traditional theory tend to hold in Europe with the

ongoing decline of institutionalized religion, Casanova (2003) claims that *globally* the situation is not as straightforward as suggested by the classic paradigm, and he promotes a more culturally-based approach. The following review of literature touches on the debates concerning the secularization framework.

Classic Secularization Theory

Classic secularization theorists regard the theory as “a claim that, in the face of scientific rationality, religion’s influence on all aspects of life—from personal habits to social institutions—is in dramatic decline” (Swatos and Christiano, 1999, p.214). The authors (p.214-215) continue, “Many social theorists doubted that modernity could combine religious traditions with the overpowering impersonal features of our time: scientific research, humanistic education, high-technology multinational capitalism, bureaucratic organizational life, and so on.” Classic sociological theorists, such as Durkheim and Weber, predicted secularization. Durkheim (1915) believed that science, along with civil religion and nationalism, were replacing religion. As a result, there would be a loss of social solidarity. Weber (1922) saw the influence of instrumental rationality, as expressed in structures such as governments and economies, and predicted a resulting lack of orientation, ethics, and determination as religion’s influence faded.

Berger’s (1967) expression of secularization will be used as the benchmark for the classic theory in this review of literature. He defines secularization as “the process by which sectors of society and culture are removed from the domination of religious institutions and symbols” (p.107). His secularization argument starts with consideration of the objective side of secularization (i.e., effects on social and societal structures) and then moves to subjective issues of consciousness. Regarding societal structures,

secularization begins in the rationalized economic sphere, correlating with capitalism and industrialism. There is a link, though not straightforward, between “socio-economic modernization and political secularization” (p.130). Church and state are separate, and the state serves as a mediator between religious groups and as a protector of “free enterprise” (p.131). In family life, religion still has authority and meaning, but this “privatized” religion cannot be extended to society and have any marked influence there. Pluralism is a result of the competing spheres of influence, authority, and reality in society (multiple “plausibility structures”), and this makes religion a relative construct, and it is thus “subjectivized.” As a result of this breakdown in plausibility structures, religious institutions are faced with a question of legitimation. They choose to either (a) allow for current trends of thought to permeate their theologies (“accommodation”) or (b) adopt an approach that is “maintaining or revamping” their doctrine, not being in agreement with the new trends (p.156).

Classic secularization theory has similarities with the modernization theory of development. The first similarity is theoretical. Modernization theorists believe that “development ...simply involves modernization—mechanization, rapid industrialization and the transfer of the underemployed rural population to the productive urban-industrial sector” (Hodder, 2000, p.13). Characteristics of modernization include rationality, planning, social and economic equalization, and improved institutions and attitudes to promote competition, efficiency, and productivity (Myrdal, 1971). This is similar to the rationalization argument put forth by Berger (1967) in his expression of classic secularization theory. Also, modernization not only has economic impacts but produces changes in “attitudes, institutions, and ideologies” (Todaro, 1989, p.123). These

transformations would most certainly include religion. A second similarity between classic secularization theory and modernization theory involves scale and their common usage of cross-national data. Studies concerning global theories of development and economics, as well as global theories of religion, are often conducted analyzing national-level, aggregated empirical measures.

Questioning Classic Secularization Theory

Although many theorists cite declining religious participation in Western countries, some scholars reject the theory and occurrence of secularization. Stark (1999) and Stark and Finke (2000) express the view that secularization is a myth based on several factors. First, the classic proponents have “universal agreement that modernization is the causal engine dragging the gods into retirement” and that “as industrialization, urbanization, and rationalization increase, religiousness *must* decrease” (p.59). They see modernization as a “long, gradual, relatively constant process” (p.59). Stark and Finke argue that secularization should be seen as a process with the same characteristics. Second, secularization theory is not only directed at changes in institutions, such as the separation of church and state, but also decreases in individual levels of belief. In response to these first two aspects of secularization theory, Stark and Finke argue that Christianity is said to be in decline in modern times in comparison to a past that, according to Stark, consisted of exaggerated religiosity. The ‘Age of Faith’ did not consist of high religious participation and fervor in Northern or Western Europe, contrary to popular belief, according to Stark. As a result, there have only been variations in participation and “no demonstrable long-term decline in European religious participation” (Stark and Finke, 2000, p.62).

Third, secularization should be readily apparent with the impacts of science on belief. However, data show that “scientists are about as religious as anyone else, and the presumed incompatibility between religion and science seems mythical” (p.61). Fourth, Stark and Finke claim that secularization should be an ending, unchangeable state according to the way it is conceptualized by theorists. However, increases in religiosity in places such as the former Soviet Union clearly defy those suppositions, and Stark and Finke see this as another reason secularization theory is flawed.

Finally, the secularization thesis was meant to be applied in a global context, a sociological theory for all of humanity, but Stark mentions that global religions are not dying out and some are continuing to increase, such as Eastern religions, Islam, and Asian folk religions (Stark, 1999). Stark (1999, p.270) quotes Berger (1997, p. 974):

I think what I and most other sociologists of religion wrote in the 1960's about secularization was a mistake. Our underlying argument was that secularization and modernity go hand in hand. With more modernization comes more secularization. It wasn't a crazy theory. There was some evidence for it. But I think it's basically wrong. Most of the world today is certainly not secular. It's very religious.

A resurgence of religion is documented in various countries (Berger, 1999), and scholars use these observations to question classic secularization theory. It has been argued that religion, far from being regulated to a private, uneventful place, plays a major role in politics and society (Berger, 1999). Melleuish (2005, p.16) states, “the Western fixation, particularly amongst its intelligentsia, on secularization as the inevitable fate of humanity has obscured the fact that we are living in one of the great ages of religious vitality and mission, in both the Christian and Muslim worlds.” He states that religious resurgence is especially apparent in Africa, Latin America and Asia, and is not covered in the Western media. In addition, it can be argued that, “It is between the religious and the non-

religious that the fundamental ‘clash of civilizations’ is occurring in the 21st Century” (Melleuish, 2005, p.20). Western nations are becoming more secular, according to Melleuish, while particular types of Christianity such as evangelicalism are increasing in vitality in these nations. Berger (1999, p.10) describes the situation in Europe somewhat differently, as being more of a “shift in the institutional location of religion ... rather than secularization” as “a body of data indicates strong survivals of religion, most of it generally Christian in nature, despite the widespread alienation from the organized churches.” According to Melleuish (2005), mainstream denominations are declining in many instances, often becoming more secular themselves. On the other hand, Islam is being forced to respond to Western ideals and issues, such as abortion and homosexuality, as a result of the impacts of globalization.

Berger (1999) states that religion increases in areas that are faced with challenges derived from modernity in both the Western and the non-Western world. Berger’s (1967) earlier classic secularization theory under-estimated the future power of neo-orthodox or theologically conservative revivals. Conservative, orthodox, and traditional movements are on the rise, and current movements that “conform to a perceived modernity” decline; those institutions or religions that try to become too much like the world around them lose their places of religious authority (Berger, 1999, p.6).

Rational Choice Theory

Religious resurgence is an observational challenge to classic secularization theory. Moving deeper, the rational choice paradigm is a theory that challenges the classic secularization theory on a fundamental level. Rational choice theory consists of the hypothesis that the “supply-side” of religion accounts for growing religious vitality in

regions that are marked by various religious options, a thriving religious market, where people choose the religious expression and organization that is most relevant and meaningful to them from a host of options. It holds that the ‘demand’ for religion is constant over time, unlike classic secularization theory that implies people have a diminished need for religion in stride with the march of modernization (Stark and Finke, 2000). Rational choice theorists believe that unregulated religious situations result in more competition between religious providers, more efficiency in religious institutions, and higher levels of religious participation among members of society (Stark and Finke, 2000). Older, established religious organizations and monopolies “create lethargy and indifference among consumers and suffer shrinking influence,” according to rational-choice theorists (Vasquez and Marquardt, 2003). Also, the demand-side of religion is assumed to be constant in rational choice theories, with differences in religious vitality coming from the characteristics of the supply-side of the market (Norris and Inglehart, 2004). Some scholars claim that Europe’s heavily state-sponsored religious institutions have been too rigid and unable to adapt to member’s needs. This is in contrast to “demand” theories that suggest religious vitality in a nation or society is driven by the demand for religion from individuals.

Rational choice theories describe well the religious climate and vitality in the Americas, with exemplars being the rise of Evangelicalism and Pentecostalism in the U.S. and Latin America, and religious vitality with no state sponsored religion (Vasquez and Marquardt, 2003 and Norris and Inglehart, 2004). Finke and Iannaccone (1993) note the highly plural religious options available in the United States. Even so, scholars have been critical of the rational choice theory and the new paradigm. For example, it does not

explain certain obvious outliers, such as strong religious groups in Southern Europe, a strongly Catholic area with rigid structure (Norris and Inglehart, 2004). Chaves and Gorski (2001) conducted an empirical analysis concerning the relationship between religious pluralism and religious vitality and concluded that the positive relationship, as supply-side theory suggests, did not exist except in a small number of studies. Vasquez and Marquardt (2003, p.23) critique the new paradigm as well and argue for a theory that takes into account hybrid religious structures, “the multiple overlapping religious ‘markets’ defined by the abundance and cross-fertilization of options” as the “markets are deterritorialized by globalization.”

Reaction to the Secularization Debate

In light of the above theoretical debate concerning secularization, Norris and Inglehart (2004) make use of data from the World Values Survey (WVS) to evaluate classic secularization theory, rational choice theory, and other relationships between religion, politics, and society. Details concerning their empirical study are discussed in the following section. Theoretically, they offer a theory of secularization that is an expression of classic secularization theory and the positive relationship between modernization and secularization. However, it takes a step forward and conceptualizes the relationship in a more concrete way. Their theory is “based upon two simple axioms”: the security axiom and the cultural traditions axiom (p.217). The security axiom reflects the idea that “societies around the world differ greatly in their levels of economic and human development and socioeconomic equality—and consequently, in the extent to which they provide their people with a sense of existential security” (Norris and Inglehart, 2004, p.217). Facing more illness, disease, higher child mortality rates,

political unrest, and providing less education, for example, marks these societies. The divide between rich and poor countries continues to increase. Thus, countries with less security will have more of a need for religion. The cultural traditions axiom reflects the underlying influence of a country's religious or cultural heritage on the ideological views of the citizens. This adds a qualitative entity to their secularization theory and will be discussed in more detail later in the chapter. The authors summarize their overall secularization argument: "The theory ... argues that the erosion of religious values, beliefs, and practices is shaped by long-term changes in existential security, a process linked with human development and socioeconomic equality, and with each society's cultural legacy and religious traditions" (Norris and Inglehart, 2004, p.53).

Empirical Assessments of Secularization

Considering the theoretical debate between classic secularization theory (modernization undermines the role of religion) and rational choice theory (the 'demand' for religion is constant, but there are issues with the 'supply'), and taking into account documented religious resurgence in multiple areas, it will be fruitful to examine in greater detail some broad empirical assessments of religious change. While multiple empirical studies of secularization provide basic support for classic secularization theory, they also open the door for analysis of culture and for case-specific, localized perspectives. However, before moving into research results, it is necessary to examine the concept of religion itself, its definition, measurement in regards to secularization, and the limitations of religious statistics.

Defining Religion

It is necessary to develop some type of working definition of religion for the proposed study. Scholars in various fields have struggled with this task, and there are various ways to approach it. Barrett (1982, p.841) defines religion as “a system of faith and worship, centrally concerned with the means of ultimate transformation.” This is the definition that will be adopted in this study as Barrett *et al.*'s (2006) data will be used in the analysis. Proctor (2006), in describing current trends in the geography of religion subfield, cites Tuan's (1976, p.271) claim that the subfield is “in disarray for lack of a coherent definition of the phenomenon it seeks to understand.” In his book on the geography of religion, Park (1994) explores multiple definitions of religion and different ideas towards conceptualizing spirituality. He claims that it is safe to assume that religion is deeper than superstition or folklore, but notes the difficulty in defining the boundary between them. In analyzing definitions from other scholars, Park sees common tendencies, such as “personal experience and change,” “shared experience and community,” “the supernatural ... which appears to be beyond the powers of nature, and outside of what we normally experience as human beings,” “worship,” “belief ... sometimes beyond reason,” and “some accepted notion of absolute truth.” Park (1994) says that religion is about faith, and some claim this faith can be monotheistic while others base it in spirits and magic. Park (p.33) “excludes magic and places some emphasis on God or gods” in his book. Although he believes other types of religion exist, Park (p.34) focuses on organized “conventional religion” that “emphasizes the formal or institutionalized expression of religious belief” (p.35).

Ivakhiv (2006, p.169) states that “several scholars of religion have argued, in recent years, that there is no stable and historically invariable definition of religion and that this point has serious implications for the study of religious phenomena.” Religion and the sacred are historical terms and have been developed to draw distinctions, such as that between religion and magic or secularism. With all of the various definitions and approaches, Ivakhiv suggests thinking of religion as one out of many forms of significance that include ideology, cosmology, and politics. One question for geographers would be to study how “religious sacrality (and irreligious profanity) map onto the distribution of other sacralities (and profanities)” (p.171). This could involve studying cultural or ethnic distributions, power relations, sacred places, and political or economic power.

Measuring religion

Park (1994) extensively uses religious statistics from Barrett (1982) in his exposition of the geography of religion subfield. Park (1994, p.36) claims these numbers are “widely accepted as the best available estimates.” McClymond (2002) reviews Barrett *et al.* (2001)’s data and encourages religious scholars to consider the usefulness of statistics and alleviate the ideological divide between quantitative analysis and religious theory. Detailed case studies in religion can be discouraging to global analysis and can contribute to the tendency to regard “every object of study ... as unique, unparalleled, and irreducibly individual” (McClymond, 2002, p.889)

Norris and Inglehart (2004) measure religion in multiple ways using survey questions, focusing on aspects of religious beliefs, values, and practice. Their pooled study from four waves of the World Values Surveys (WVS) includes 76 countries from

the years 1981-2001, although every country was not included in each wave. They view the concept of secularization as “multi-dimensional” and state the need to measure it in multiple ways. For example, their religious participation variable reflects both church attendance and frequency of prayer. These measures encompass both congregational religions and personal practices of prayer, such as with Islam or Buddhism. The values questions reflect the importance one places on religion and god (or a religious deity). Finally, the beliefs questions address a respondent’s views on basic aspects and doctrines of different faiths. In a similar light, Park (1994) claims that people who place significant importance on their religious beliefs should have attitudes and behaviors that reflect these beliefs.

Barrett *et al.*’s *World Christian Database* (2006) was chosen for the current study for theoretical and empirical reasons that will be discussed later. It contains updated data for 2005 from Barrett *et al.* (2001) and follows the same methodology. The 2001 data are the most commonly used in research that uses quantitative methods to study extensive questions about religion. Barrett’s data classify someone as a ‘religionist’ based on whether or not they profess to adhere to a religion (Barrett and Johnson, 2001). These data, therefore, measure personal identification with any religion. A religion is defined by Barrett *et al.* (2001, p.29) as “a grouping of persons with beliefs about God or gods and defined by its adherents’ loyalty to it, by their acceptance of it as unique and superior to all other religions, and by its relative autonomy.” The group labeled as ‘non-religionist’ “encompass[es] the two varieties of unbeliever: (a) *agnostics* or secularists or materialists, who are *non-religious* but not hostile to religion, and (b) *atheists* or anti-religious/anti-religionists militantly opposed or hostile to religion” (p.29). This thesis

study involves the analysis of ‘non-religionists’ as defined by Barrett, including both ‘non-religious’ and ‘atheists.’

Limitations of religious statistics and classifications

Barrett and Johnson (2001) acknowledge some limitations of their statistics. Country-level aggregations mask variations, revivals, and decreases within a country, hiding the dynamics of religious change. Also, the countries are displayed as homogeneous when there is obvious variation within these units. In a related way, assigning a predominant religious culture to a country (such as Protestant, Orthodox, Islamic, etc.), the approach used in this study, does not reflect the plurality of religions in a nation-state, which may be strong and have significant influence. Park (1994) mentions the problems of classifying populations into religious categories, citing Brook (1979) and his comments of over-estimation of religiosity as past believers list their old faith as their current religion when they are no longer adherents. There are also problems surrounding inconsistent methods of defining membership and other reasons for misreporting by survey participants. There are also differences in beliefs between religions and inside a religious tradition, making the magnitude of religious commitment hard to measure. The relationship between religiousness and church attendance is also problematic. Finally, there are socialization aspects to religion and questions of whether people attend out of tradition, because of family members, or other non-religious choices (Park, 1994).

Quantitative analysis cannot speak completely to the heart of human spirituality. Although salient aspects of spirituality have been quantified by a respected empirical database, the human condition is certainly more volatile than averages, aggregates and tendencies and is clearly shaped by historical socio-political developments, societal

structures, and a wide variety of personal influences. Also, religious profession does not measure the level of commitment, attendance, or passion for a particular faith. Though this study cannot speak conclusively to these issues, they are a factor in the analysis and interpretation of the results. Continued qualitative research, interviews, ethnographies, and participant observations partially can address the reasons certain countries do not follow the regression equations, describe the processes in which a person moves towards secular beliefs, or show a religion's responses to modern, relativistic values.

Results from Empirical Studies

Norris and Inglehart (2004) contribute to the secularization debate with a modified version of classic secularization theory related to levels of existential security. The need for religion will decrease as the population feels more secure in terms of material comfort and levels of development. Norris and Inglehart's (2004) analysis of secularization makes use of data from the World Values Surveys (WVS). These surveys were conducted at four different times, 1981-83, 1989-91, 1995-97, and 1999-2001, and are "the largest investigation ever made of attitudes, values, and beliefs around the world" (Inglehart and Welzel, 2005, p.48). The surveys included a total of 81 societies on all six populated continents (Inglehart and Welzel, 2005). Ronald Inglehart, the principal investigator, is a co-author of many publications that analyze cultural values, politics, and religion.

Norris and Inglehart (2004) attempt to explain secularization and global religious patterns by empirical means. Stark (1999, p.253) states, "Many scholars appear to believe that if rates of individual religious belief and participation for most nations of northern and western Europe were graphed, they would be reciprocal to the trends in

modernization.” Although European church attendance has decreased, Stark believes that this does not reflect a decrease in beliefs. Inglehart’s research sheds light on these views with empirical survey data, comparing the religiosity of different birth cohorts and the religiosity of nations classified by different levels of “advancement.” Two “apparently contradictory trends” emerge from Norris and Inglehart’s research:

- (1) The publics of virtually all advanced industrial societies have been moving toward more secular orientations during the past fifty years.
- Nevertheless, (2) The world as a whole now has more people with traditional religious views than ever before—and they constitute a growing proportion of the world’s population (Norris and Inglehart, 2004, p.235)

The results are not contradictory because secular values have a direct, decreasing effect on fertility rates (Norris and Inglehart, 2004). Thus, societies with traditional values are growing faster, and the world is becoming more religious in terms of total numbers of adherents.

Norris and Inglehart (2004) test their hypotheses in many ways throughout their study, including bivariate and multivariate correlations. Variables related to human development proved to be inversely related to religious practice, such as the human development index (HDI), which incorporates measures of life expectancy, education, and GDP, access to mass communication, and the number of doctors per 100,000 citizens, with all of these being highly significant. Situations that reflect lower levels of security, such as increased infant and child mortality rates, showed highly significant positive relationships to religious practice. In addition, their findings support arguments about the resurgence of religion, detailed in a previous section, but account only for those areas with increased fertility rates and less existential security.

Norris and Inglehart (2004) reject rational choice theory in their analyses. They test correlations between religious pluralism and religious participation in post-industrial societies and find no significant relationship. State regulation of religion and religious freedom also do not have a significant relationship with religious participation in post-industrial societies. According to rational choice theory, religious participation should be negatively related to state regulation and positively related to religious freedom. The relationship between religious freedom and religious participation was also analyzed for countries that were not post-industrial, and the same non-significant relationship was obtained. Thus, Norris and Inglehart find no substantial support for rational choice theory. Because of these findings and the available scope for the current study, only existential security theory will be tested and analyzed in the investigation that follows.

Norris and Inglehart (2004) also conduct multivariate analyses with a dependent variable of religious participation and independent variables of the human development index (HDI) and the GINI coefficient, a measure of income inequality. The authors (p.65) discuss their choices in variables: “Since many aspects of human security are closely interrelated (with greater affluence and the industrialization of the workforce often leading to improvements in healthcare and education), the other social indicators we have already examined [such as those in above paragraph] are dropped from the regression models to avoid problems of multicollinearity and to produce a reasonably parsimonious model.” In both models, over 40% of the variation in religious practice (either participation or prayer) was explained by the human development and the measure of income inequality, with the HDI having the greater impact (Norris and Inglehart, 2004). The authors do acknowledge outliers to their theory throughout their analyses but

do not view them as significant enough to challenge existential security theory. The authors do suggest, however, that these countries are worthy of further study.

Other empirical analyses also show support for the relationship between modernization and secularization, as well as documenting religious resurgence. Bruce (2001) supports the view that secularization has taken a firm hold in the Western world, and that the influence of religion will continue to fade away. He studies Britain as an example in a 2001 article and cites data on religious adherence from 1851, 1900, and 2000, marking a continued decline in religiosity. Other data on membership, religious professionals, Sunday schools, religious ceremonies for events (such as weddings), and decline of Christian beliefs all point to increased secularization.

Moghadam (2003) analyzes data from both Barrett *et al.* (2001) and the World Values Survey. In this way, he captures both the adherence data and the survey data reflecting behavior and attitudes. He concludes that religious resurgence is prevalent in many countries that make up the majority of the world's population. These include Russia, former Communist countries of Eastern Europe, Central Asia, the Caucasus, Central Asia, China, and some of Latin America and Africa. This gives more validity to "the assumption that repressive regimes (or formerly repressive regimes) further a rise in religiosity" (Moghadam, 2003, p.68). The post-industrial world as a whole, however, is not following this trend, with religion being on the decline, excluding the United States. Thus, he (p.67) concludes that secularization can be applied to current developed countries, with increases in the non-religious and atheist populations, reduced loyalty to denominations, increased "individual, experimental form[s] of religion," and other factors. This is a linkage between modernization and secularization.

Duke and Johnson (1989) develop a cyclical model of religious change and propose a modified version of secularization theory in their analysis, and this theory is very close to classic secularization theory. Using data from Barrett (1982), they demonstrate their cyclical model and the majority religion's stages of decline, dominance, growth, and transition. After the transition phase ends, the cycle starts again with decline of the major religious tradition to be replaced with a new religious tradition. The decline stage is not linear, but exponential. Park (1994, p.51) cites Perrin (1989) and the idea that secularization is over-generalizing when it speaks of "irreversible wholesale religious decline." Religious reforms exist when there are problems in one religious expression, and new religions emerge. Regarding secularization, Duke and Johnson (1989, p.22) believe "there is evidence of an overall decline in the strength of religion worldwide, as established religions are replaced by both new religions and non-religious value orientations." They find that the largest declines in major religious tradition "are pre-modern nations which have relatively rapid rates of social and economic change but which are still far behind in economic development" (Duke and Johnson 1989, p.216). This is in contrast to Norris and Inglehart's (2004) findings of increased religiosity in less-developed countries. Duke and Johnson (1989, p.216) propose that "it is the process of social change itself, including the process of modernization, which causes religious change, not the condition of modernization (or having achieved modernization) per se. Secularization is a process which occurs in the least developed societies as well as in modern societies, and is due not to an achieved level of scientific thought or materialistic comfort, but rather to fundamental processes of change." The authors' argument here

seems to be only a nuanced version of classic secularization theory, and a correlation between modernization and secularization seems to still be implied by their comments.

Considerations of Culture

These studies give support to classic secularization theory and the relationship between modernization and secularization. However, they also recognize that other factors such as culture are also at work when attempting to explain secularization. Duke and Johnson (1989) stress the impacts of political and social change on secularization, along with modernization. They state that some of the least industrialized nations, where Communism had taken hold, have the greatest number of atheists. This refutes classic secularization theory but makes sense when considering the political and social variable of Communism. Moghadam (2003) also speaks of the impacts of Marxism on increased levels of secularization. An issue such as Communism will not be apparent in a strictly economic analysis.

Norris and Inglehart (2004) recognize the value of culture and include a second axiom of their existential security theory that focused on cultural/religious classifications. This axiom concerns the cultural aspects of the society and “the premise that the predominant religious beliefs, values, and practices in any society are rooted in long-standing cultural traditions and histories” (Norris and Inglehart, 2004, p.218). Sociologist of religion Berger states, “in most of the world culture is virtually synonymous with religion” (2001, p.451). Huntington (1996) uses the term ‘civilizations’ to classify the world, and Norris and Inglehart build upon these in their analyses. Huntington claims that there are several characteristics of civilizations that scholars generally agree on. There is, first, a difference between the term ‘civilization’

and the plural ‘civilizations,’ which are the focus of his work. Second, a particular civilization of the world is a “cultural entity.” This involves the “overall way of life of a people” (p.41). For Huntington (p.42), “the crucial distinctions among human groups concern their values, beliefs, institutions, and social structures.” And, the most important aspect that marks a civilization “usually is religion” (p.42). Third, Huntington claims that no individual can be completely analyzed without considering that individual’s membership in a particular civilization. Fourth, civilizations can die out, but usually carry on for a long time and adapt to change. Fifth, civilizations themselves are not political entities and may encompass more than one political unit. Finally, Huntington states that scholars of history and current affairs are in general agreement about the classifications of civilizations.

Norris and Inglehart (2004) do not implement cultural zone variables in their broad OLS regression analysis of the global applicability of their theory of secularization. They instead use them in more regionalized studies. Analyzing religious participation in post-Communist Europe, they use a respondent’s religious faith as a variable in a multivariate regression predicting religious participation. The authors also test political, moral, and social values, as well as work ethics and voting behavior as related to the major religious culture. Another significant use of cultural factors is found in Inglehart and Welzel’s (2005) study of modernization and democracy. The authors developed two dimensions of cultural variation by using principal components factor analysis on the WVS survey results. A traditional/secular-rational dimension and survival/self-expression dimension were identified. The traditional/secular-rational dimension was highly correlated with religious variables, and the authors developed several multivariate

regression models that predicted a society's location on the traditional/secular-rational axis. The following variables were used and proved significant in almost all of the models: real GDP per capita, the percentage of the population working in industrial sectors of the economy, years of Communist rule, and a cultural zone factor. The years of Communist rule and the cultural zone factor (related to Huntington's cultural zones) were highly influential in the models.

Communism and Secularization

The empirical studies outlined above recognize the value of cultural analysis, although it is not the major focus. The cultural, political, and ideological influences of Communism play a major role in secularization, and a brief discussion of its relationship with religion is needed as background for the current study. The tenets of Communism are naturally opposed to religion. Communist states' ideology considered religion to be reflective of past power structures and stressed freedom from its inhibitive influence. Communism could be a replacement for religion, and atheism in its militant form could provide the population with certainty and freedom from doubt. The ideologies of Marxism and Leninism sought a breakage from religion and urged the population to look at the world scientifically. The dissolution of classes would also lead to the elimination of religion (Radic, 1999). In Communist thought, "religion was thought to be the result of social inequality and an opiate of the oppressed masses" (Froese, 2004, p.40). Though it does not meet requirements some call essential for religion, such as faith and engagement with "the inner life of man" (Boiter, 1980, p.21-22), Communism had ways of promoting its ideology similar to a religion (Radic, 1999) as well as rites, rituals,

ethics, holy days, and saints (Boiter, 1980). It was not promoted as a religion but as an alternative to religion. The imposition of a political structure that suppressed religion and provided an alternative plausibility structure is an obvious condition for increased secularization. The Communist regime provided their own version of personal security in their socialist ideologies of equality and the empowerment of workers.

To spread the ideology, the government used three main techniques: the education system, recognition of historical events, and the Communist party's general authority over society (Radic 1999). Governments' messages were fed through various media outlets, and there was promotion of patriotism, the desire to work, and the global connectedness of the proletarians, among other messages. Froese (2004, p.35) describes the Soviet Union's Communist party's actions as "a 70-year war on religious belief," destroying religious buildings, executing church leaders, and, as mentioned before, spreading "anti-religious propaganda" in the education and media. He (p.40) characterizes this as "forced secularization." Herbert (2003), in his work on religion and civil society, describes the impacts of Communism in Central and Eastern Europe. First, it provided an organizational framework in which opposition to the governing party could be established. Second, religious symbols and memories had their power, as the Communist ideologies did. Third, the religious institutions were connected internationally, within and beyond the Communist world. Finally, religion served as "an intellectual force from which opposition thinking and identities could be self-consciously constructed" (Herbert, 2003, p.70).

Scientific atheism is the belief system associated with Communism (Froese, 2004). This system was not without its flaws, and it was not received blindly by the

population. As it was associated closely with Communist ideology, any failings of the state's politics and economics hurt the credibility of the adoption of scientific atheism over religion. Moreover, while the Soviet Union was very successful militarily and technologically, political and economic failings hurt the population's perception of the strengths of scientific atheism. The government assumed that science was the antithesis of religion, "a strong albeit naïve version of secularization theory. The naïvete in scientific atheism comes from a completely materialistic or literal understanding of religious concepts" (Froese, 2003, p.46). All technological advances were promoted as evidence of humans' ability to work great feats without a god or religious deity, although citizens did not always agree. The promoters of scientific atheism did not understand the complexities of religion and only critiqued it in a rational manner. By giving only logical arguments and "[demanding] an unquestioning faith in atheism without any real evidence for atheism," many citizens retained their religious beliefs (Froese, 2004, p.47). The ideology of scientific atheism and the Communist structure also had to respond when the population as a whole was not moving as quickly towards non-religiosity as the government had planned (see empirical description below). Because religion still existed, it may have appeared the Marxist agenda was not working. Conceptually, the government "made a tactical move of proclaiming religion as a cause and not merely the symptom of social problems" (Pospelovsky, 1987, p.26). A final challenge to the solidity of the government's alternative ideological system came as a result of the government's own actions. The brutal campaign against religious leaders and symbols made it "difficult to generate confidence in a government and doctrine that was so outwardly heartless in its hatred for religion" (Froese, 2004, p.42).

Empirical assessments of religion in Communist countries are limited as governments did not want information on religion, except statistics and analysis that would help eliminate it (Norris and Inglehart, 2004). However, some significant studies do exist. Barrett *et al.* (2001) estimate that 52% of the population of Russia was non-religious or atheist in 1970. This estimate includes people who would not profess a belief in a religion (non-religious) and who would be strictly opposed to religion (atheism) and is obtained from various sources, such as government censuses and Communist party memberships. This is a large increase from Russia's estimated 0.3% non-religious or atheist population in 1900 (Barrett *et al.*, 2001). A census conducted by the Soviet government in 1937 reported that approximately 56% of the population believed in some type of religion. The results, even when considering the probability of high estimates for non-believers, were not considered a success for Communist leaders (Pospelovsky, 1987). They wanted all of the population to eventually give up religion (Froese, 2004). Another indicator of religiosity, church attendance, decreased dramatically in Russia during Communist rule, especially between the mid-1920's and the mid-1950's (Iannaccone, 2002).

Analysis has also been conducted on the countries after the fall of Communism. Norris and Inglehart (2004, p.131) found a "long-term decline of religiosity across succeeding generations in post-Communist Europe, and [they] found no convincing evidence of a curvilinear pattern from the generational comparisons, suggesting that the younger generation has not experienced a significant revival of religious values, beliefs, or behaviors." Religious resurgence in former Communist countries has been cited by various scholars (such as Froese, 2004, Swatos, 1994), and the increase in religiosity after

Communism can be representative of the level of religious belief maintained by citizens under an atheistic regime (Kuran, 1995). The secularization resulting from Marxism has not eliminated religion in Communist societies, and the argument can be made for revitalization, but it is still an “ambiguous phenomenon” (Opocensky, 2004, p.9). Barrett *et al.* (2006) report that 31% of Russia’s population is non-religious or atheist, as compared to 52% in 1970. Although this cannot be taken to be indicative of all post-Communist countries, it does give support to the religious resurgence reports. But, Norris and Inglehart (2004) reject the overall religious resurgence thesis with their analysis, though citing limited resurgence after the fall of Communism in countries such as Russia, Belarus, and Ukraine (Borowik, 2002). Borowik (2002) also shows that religious participation and practice have since decreased in these countries to levels of most Western European countries, however. Norris and Inglehart (2004) ultimately show associations between the level of religiosity in post-Communist countries and the level of existential security, reporting a negative relationship between the importance of god and a country’s HDI value ($R^2 = 0.43$). The authors (p.132) state: “human security encourages secularization, together with the political rights and civil liberties associated with religious freedom in transitional and consolidating democracies.” Along with development and modernization come democratic tendencies, according to the authors.

Secularization debate in a cultural perspective

The adoption of a more culturally-sensitive lens through which to view secularization is apparent in the theoretical as well as the empirical studies of global religion. A major contributing factor to secularization such as Communism is not taken

into account by classic secularization theory and is not fully developed in Norris and Inglehart's (2004) testing of their theory of secularization. A framework that takes into account cultural variability will be adopted in the current study.

Scholars critiquing secularization theory have promoted a global outlook that does not have a 'normal' trajectory of religious change in mind or a base society in which to compare others. José Casanova promotes a global perspective in his chapter, "Beyond European and American Exceptionalisms: towards a Global perspective":

We have reached an impasse in the secularization debate between European and American sociologists of religion (Swatos, 1999). The traditional European theory of secularization, the 'inherited' (Wilson, 1985) or 'orthodox' (Bruce, 2000) model [classic theory], offers a relatively plausible account of European developments, but is unable or unwilling to take seriously, much less explain, the surprising vitality and extreme pluralism of denominational forms of salvation religion in America [rational choice theory] ... The orthodox model works relatively well for Europe but not for America, the American paradigm works for USA but not for Europe ... we need to refocus our attention beyond Europe and the West, historicize and contextualize our categories, and adopt a more global perspective (Casanova, 2003, p.17)

The specific social, historical, and religious contexts of individual countries is not taken into account by the broad classic secularization theory or rational choice theory. This study will specifically focus on global variation in religiosity and the deviations from theoretical expectations.

Martin (2003) suggests that comparisons back to a certain society as being representative of the normal path of religion (such as Europe or the U.S.) are not productive. Casanova (2003, p.22) continues:

It is time to abandon the universal general claims of both theories and accept the fact that from a global perspective both the European and the American experiences are exceptional and unique, and neither serves as a model of development for other parts of the world which also follow their own exceptional and unique paths.

There are multiple reports of the resurgence of religion around the world, and this is used in the literature to challenge secularization theory. These cannot all be classed as exceptions to secularization theory. Casanova (2003) shows deviations from secularization theory all over the globe, such as Islam, Hinduism, and Japanese religions. He states, “Indeed, when faced with such a proliferation of exceptionalisms not much is left of the rule of secularization” (Casanova, 2003, p.23). Martin (2003, p.37) states, “one might go on to suggest that the sheer multiplicity of cultural modes opening on to modernity in global society throws the whole idea of a lead society into doubt and, in addition, maybe the whole notion of ‘exceptionalism.’” Martin states that Europe may be considered the exception, as well as Berger (2001, p.446) who suggests viewing “secularization, not as the modern norm, but as a curious case of deviance that requires explanation.” Herbert (2003, p.11) reviews quantitative analyses concerning religious trends in Europe and states that “consensus on decline in vitality ... is far from complete.” There are different trends within Europe—‘exceptions to the rule’ even within a region classified by many as increasing secularized. Interestingly, however, Casanova (2003) sees a use in secularization theories as “an analytical framework” to explore changes in religions over time in relation to modernization, only if one does not assume that each country will have the same outcome, and that other results are not classified as fundamentalism or outliers to a major secularization thesis. He believes that the assertion that religion is dead may be proved to be out of context with reality.

In a previous work, Casanova (1994) argues for the analysis of three different aspects of secularization theory, independent of each other. A first aspect of secularization, the separation of religious and secular institutions, is considered the “valid

core” of secularization theory (p.212). The second aspect of secularization concerns the decline of religious belief, and this is the most debatable aspect of in terms of both theory and data. One can look more deeply into societal structure in analyzing religion. For example, the argument can be made that the Enlightenment’s challenge to religion was “usually adopted by social movements and political parties, becoming in the process a self-fulfilling prophecy” (p.214). In addition, some structures that resist secularization and differentiation (sacred from the scientific, political, or artistic) may suffer decline, such as those in America. However, in a different cultural context in Poland, resistance to a somewhat illegitimate governmental authority can give more validity to religious organizations. (It is interesting to note that this analysis by Casanova implies that the increase or decline of religious beliefs would be measured by the affiliation with these major religious institutions. This is similar to the methodology used in the current study.)

The third aspect of secularization theory noted by Casanova is the privatization of religion. Casanova (1994, p.215) sees privatization as being related to rationalization and claims it is “a modern ‘preferred option,’ but it is an option nonetheless.” He also sees it as a result of the differentiation of sacred and secular, and, more abstractly, as “mandated ideologically by liberal categories of thought” that influence political and even general, overall Western modes of thinking. He claims that modern religions are experiencing “deprivatization” and are becoming more visible and active in the public sphere.

However, this deprivatization does not mean that secularization has necessarily stopped in that culture.

Geographical Perspective

The Study of Secularization

Geographers have contributed to the study of secularization, although in a much smaller degree than sociologists or religious studies scholars. But geography's focus on places, regionalization, and differentiation, as well as the integration of theoretical viewpoints from other disciplines, gives it clear advantages as a base for analysis of secularization. Proctor (2006), in his article concerning the state of the subfield of the geography of religion, outlines current sociological work in the secularization debate, such as Berger's *Desecularization of the World* (1999) documenting religious resurgence, Bruce (2001)'s exposition of his view of the decline of religion in the Western world, and Norris and Inglehart's (2004) theory of existential security. Proctor (2006, p.167) also mentions Asad's (2003) work which conceptualizes 'secular' as "an epistemic category assumed in analyses of secularist political formations in Europe, Islamic societies, and elsewhere." There is a conceptual debate as well as arguments over empirical measurements, with some scholars taking "substantive" views of religion related to the decline or increase of particular beliefs or behavior (church attendance), or a "functional" approach that acknowledges the rise of new forms of religion and spirituality that are different from previous religious organizations (Proctor, 2006, p.167). Given these various views, definitions, and trends, Proctor (2006, p.167) makes the following statement concerning secularization:

The implications for geography are significant. It is likely that secularization and sacralization are highly place-dependent, given country-specific and regional differences concerning institutional religion and other salient factors (Dogon 1995; Verveij, Ester, and Nauta 1997). And, as suggested above, scholarly analysis of these contradictory trends in contemporary religion must necessarily attend to both empirical and

conceptual complexities. In both of these respects, geographers are eminently qualified to contribute: we revel in place-based comparison, and we enjoy a healthy discussion over the interplay of theory and method.

Park (1994) discusses the theory and empirics of secularization from a geographic perspective. In introducing the topic, he states that “secular society ... places much greater emphasis on personal autonomy and rationality than on religious wisdom, customs and ethics” (p.48). He states there are “no simple answers” regarding the causes of secularization, but suggests religion’s failing ability to adapt to current needs of the population and increased emphasis on “materialism, consumerism and the pursuit of personal goals and happiness.” Park (1994, p.50) states that “the rise of secularism has not been uniform across space or time.” He cites examples of the fastest decline of religiosity in urban and industrial places (Jordan and Rowntree 1990) and Christian countries (de Blij and Muller, 1986). (However, other scholars agree that the United States is a relative outlier to secularization theory with its high levels of religious participation as compared with other post-industrial nations.) Park (1994, p.50) also states that secularization cannot be reduced to a single process and that it is not linear but is “incremental” (p.50).

Berger (2001) bridges the gap between the theoretical debate in sociology and a geographic empirical framework. Once a major proponent of classic secularization theory, he has now abandoned its universal application and sees religious resurgence throughout the world as undermining the classic theory. Though the degree of religious resurgence or simply constant religiosity in the modernized world can be argued and challenged empirically, Berger’s (2001, p.445) comments concerning secularization worldwide fit with the current study’s cultural critique:

As I see the evidence, the world, with some notable exceptions ...is as religious as it has ever been, and in some places is more religious than ever. This, however, does not mean that there is no such thing as secularization; it only means that this phenomenon is by no means the direct and inevitable result of modernity. It thus becomes an important task for the sociology of religion *to map the phenomenon of secularization* – both geographically and sociologically – not as *the* paradigmatic situation of religion in the contemporary world, but as one situation among others.

Spatial coherence and variability

Secularization shows much variability across space. Duke and Johnson (1989) also stress the inherent variability in levels of secularization between countries that are close to one another in terms of geographical space and levels of development. Casanova (2003) mentions the differences in levels of secularization across Europe. Jordan *et al.* (1997) displays a map of secularization in Europe, exhibiting the high spatial variability of the region and of cultural landscapes. They (p.209) state:

Typically, secularization displays a vivid regionalization on a variety of scales. Areas of surviving religious vitality lie alongside secularized districts, in a disorderly jumble. Such patterns once again reveal the inherent spatial variety of mankind and invite analysis by the cultural geographer.

There are also trends in religiosity across space and general cohesion across space, continents, and cultures, even though there is variability within these groupings. Duke and Johnson (1989), in their analysis of Barrett's (1982) data, show that greater than 90% of the nations in North America, South Africa, Central America, and Oceania have seen a decrease in the majority religions, and greater than 80% of the nations have experienced a decline in Western Europe and the Caribbean. The geographic zones most resistant to change are South Asia and North Africa, and areas showing medium levels of resistance are Southeast Asia, South America, and the Middle East. The authors also

analyze the percentage of a country's population that is either non-religious or atheist according to data from Barrett (1982) and aggregate these countries by geographic area. The areas with the greatest percentage of non-religious people (more than 10%) are most likely to be Western industrialized or a Marxist nation.

The cultural zone approach employed by Norris and Inglehart (2004) will be adopted in this study and is an inherently geographic and place-dependent classification as cultures are highly place-dependent. Park (1994, p.42) gives support to the influence of past cultural traditions on society: "even many recently secularized societies preserve features of past religious traditions, and it is often rather difficult to determine where religious factors end and secular ones begin." This implies that the cultural zones are not only significant in accounting for the current religion climate, but they are also fluid conceptualizations in and of themselves.

Mapping Religion: Examples and Considerations

Cartography is used often by geographers to study religion. Several studies lay pertinent groundwork for the current study, and certain considerations when using cartographic visualization in the study of religion must be acknowledged. Pacione (2005) completed a geographic study of religious affiliation in Scotland in which he analyzed religious distributions cartographically and statistically. He includes solid introductory material on the geography of religion and studies that have mapped religion. He references the Berkeley School and its work on religious landscapes, and the history of mapping religion in the United States by individuals such as Zelinsky, Pillsbury, Gaustad, Shortridge, Halvorson, Newman, and Barlow (Pacione, 2005). Pacione's study included analyses of Scotland's council areas in terms of ten religious categories, one of which

being no religion. He refers to the non-religious numbers as representing degrees of secularization and found spatial differences in the distribution of non-religious citizens and found higher percentages in urban areas. He mapped the religious categories at the district and post code levels, and performed single-variable mapping as well as the mapping of components from a multivariate analysis (Pacione, 2005). Gaustad and Barlow (2001) produced an incredibly detailed atlas of American religion, with over 400 pages of maps and text. All of the major denominations in the United States are covered, along with other trends and regional analyses. The authors present a short section on secularization, analyzing its status according to church membership levels and providing thoughts on mapping unbelief.

Ley (2002), in his analysis of the mapping of religion, warns that mapping religion is not an exact science, and the user should be aware of the distortion involved in mapping a social and cultural entity such as religion. For example, different religious groups count membership in different ways, certain groups are not effective record-keepers, and the mapping of membership, a primary method in these atlases, does not necessarily indicate the vitality of the religion and the way it is practiced. Also, the classification of denominations and religious groups invokes likeness and difference, when many groups may have similar values, or the same denomination may have churches within it that are solidly different. In analyzing the use of map in cultural studies, Ley (2002, p.144) states, "Maps are now regarded as the first step, not the last word, in cultural geographical research; they represent regularities whose interpretation and implications require contextual knowledge and process studies."

Geography of Human Development

As a main component of existential security theory is human development, it would be useful to briefly explore its spatial patterns as assessed by geographers. Murray (2006, p.270) presents “empirical evidence to back up the claims of considerable and growing spatial inequalities of well-being at the global level.” In part of his analysis, he explores classifications of human development and income by the United Nations and World Bank, respectively. Nation-states were classed as having high, medium, or low human development according to their HDI values calculated by the UN. The World Bank classification analyzed by Murray is its division of countries into high, middle, and low income. Regions of affluence include North America, Western Europe, portions of East Asia, and Australia. Latin America, the Middle East, Eastern Europe, South and Southeast Asia, Africa, and the Pacific region are “relatively deprived” and nearly 80% of the world’s population is located in these areas (Murray, 2006, p.271). (Countries in Central and Eastern Europe and the Commonwealth of Independent States have a GDP per capita (PPP, \$US) of \$7,192 as compared to a value of \$24, 904 for the countries of the Organization for Economic Cooperation and Development (OECD). This figure will bring into account initial differences between a former Communist region and more developed economies; these differences in human development will be expounded upon in the empirical studies that follow in this thesis.)

Moving Towards the Current Study

Secularization theory has been expressed in different ways over time, and scholars have both supported the theory and dismissed it. A global theory seems to be questionable

with the many contradictions present within and between the populations of various nation-states. Secularization theory has been tested less in an empirical manner than it has been debated theoretically. Norris and Inglehart's (2004) theory of secularization involving increased human development, decreased economic inequality, and cultural zones is supported by their analysis. They reject rational choice theory, and this paradigm will not be investigated in the current study. Existential security theory will be analyzed with a larger dataset and more focus will be given to geographic contingency related to the major cultural and religious environments of the countries in the analysis. A country's religious heritage has both apparent and underlying effects on the views and ideologies of the society as a whole. Especially important and less prevalent in secularization studies is the role of Communism and its speeding up of the secularization process. A geographic approach that takes into account both spatial and societal *variability* as well as cultural *trends and cohesion* can be very useful in analyzing the current status of global secularization. The data and methodology that will be needed to explore secularization globally and evaluate existential security theory will be outlined in the following chapter.

3. Data and Methodology

The essence of the current project is to evaluate the global distribution of secularization, operationalized as the lack of religious adherence, and its relationship with existential security from a geographical, culturally-based framework. To achieve these goals, a large, data set of the world's religions is needed, in addition to the socio-economic measures of existential security theory. A methodology focusing on (a) cartographic visualization of all observations and (b) socio-economic and cultural statistical analyses will allow for analysis of general trends as well as notable outliers, thus evaluating the appropriateness of a global religious theory. Paying close attention to deviant cases and cultural divisions introduces a significant qualitative critique to existential security theory.

Data

Religious

Religious data were obtained from the website for the *World Christian Database* (WCD), an updated version of Barrett *et al.*'s *World Christian Encyclopedia* (2001). The database includes entries for 238 countries for the year 2005. The *World Christian Encyclopedia* (WCE) is cited throughout the literature concerning the empirical study of religion. Data from the WCE are calculated for all of the countries of the world with a common, aggregate methodological perspective that covers all of the world's major religions. To examine a broad global theory, such as secularization, a broad, uniform

data set is needed. This data set contains more countries than the World Values Survey (WVS), analyzed by Norris and Inglehart (2004), which covers 76 countries.

Since results from the WVS studies form the basis for existential security secularization theory, it will be useful to explore in greater detail the WVS methodology. In the documentation for the 1999-2002 wave of the survey, the authors speak about their methodology, which included face-to-face interviews for all countries except remote areas of Iceland where phone interviews were used. In the majority of the countries, a form of stratified random sampling was used to reach a representative sample of the country's population distribution. In other cases, a different sampling procedure was used, such as cluster or quota sampling. The response rates varied from 25% to 95%, and over 118,000 cases were analyzed in the 1999-2002 wave. A total of 76 societies were surveyed, and areas with significant gaps in coverage include Africa, the Middle East, Central and Southeast Asia, and, to a lesser degree, Latin America.

The data of interest in the WCD for the current study include the number of non-religious and atheist citizens for all countries of the world. The database makes use of many sources of information. It uses data from the annual Christian megacensus that includes the results from thousands of questionnaires/surveys. The church leaders and other workers of churches and agencies answer questions concerning their institution each year. Data is also collected from interviews, surveys in the field, correspondence, unpublished documentation, published documents that had limited circulation, Christian directories, thousands of printed church descriptions, official government censuses concerning religion, unpublished government surveys, university library searches, and in-depth interviews with church leaders. Barrett and his colleagues have analyzed this data

and reported it in the WCE, and while it has the most detailed data on Christianity, the data covers all of the world's major religions.

According to the WCE, a 'non-religionist' is either an atheist (against religion) or agnostic (non-religious), and the sum of these two percentages will be used for the dependent variable representing secularization in the current study. The variable will be termed 'non-religious' and will refer to both non-religious and atheist percentages of country populations. The WCE uses the concept of professing and self-identification in measuring religious adherence. Most government censuses have not made a distinction between atheists and agnostics, but many opinion polls have differentiated between the categories. In countries where statistics such as these are not available, Barrett estimated the number of atheists, in part, by examining membership in Communist Parties and other atheistic organizations. The size of the non-religious population was estimated in similar ways. First, censuses or polls with questions asking about religion and responses such as 'None' or 'No religion' or 'I don't know' were used. The fact that some of the atheist percentages, making up part of the dependent variable, were calculated from Communist party membership can be problematic in that the cultural zone of Communism is used as an independent variable. This must be considered when interpreting results. Second, in other situations, the residual share of the population left over after all other religions were taken as the non-religious percentage.

Socio-economic measures

The quantitative measure of human development and modernization used in this study are the 2003 values of the Human Development Index, published by the United Nations. The HDI takes into account three axes of development: (1) life expectancy, (2)

education, calculated with literacy rates and enrollment statistics, (3) and income, measured by GDP per capita, PPP \$US (United Nations, 2005). The HDI index is reported on a scale of 0 to 1 but will be re-scaled in the current study to values between 0 and 100. The GINI coefficient was chosen as a quantitative measure of a country's income inequality and was obtained from the same UN report, which obtained this number from the World Bank. The latest available GINI values are used; in most instances there was a value for at least one year after 2000 or during the 1990's.

According to the World Bank (2003), the GINI index "measures the extent to which the distribution of income (or consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution." A value of 100 indicates perfect *inequality*, and a value of 0 indicates perfect *equality*. A Lorenz curve is drawn indicating on one axis the cumulative percentage of the total income of a society received against an axis representing the cumulative number of income recipients. Next, a line is plotted representing perfect equality. The GINI index measures the area that is located between these two curves, expressed as the percent of the maximum area that falls underneath the line of income inequality (The World Bank, 2006). Again, both of these measures were used in Norris and Inglehart's (2004) OLS regression in their existential security model of secularization.

Correlation of WCD data to Norris and Inglehart's

Norris and Inglehart (2004) computed correlations between their religious variables and HDI and GINI. Both the HDI and GINI were moderately correlated with religious participation with coefficient values of -0.530 and 0.426, respectively. Using the WCD data that will constitute the foundation of this thesis research, HDI and GINI

are moderately correlated with the non-religious percentage with coefficient values of 0.449 and -0.414, respectively, suggesting that the WCD and WVS data measure overlapping constructs. Note that the two data sets produce coefficient values with opposite signs because the WCD measures non-religiosity as opposed to religiosity in the WVS.

Methods

The empirical analysis is divided into two parts. The first part replicates Norris and Inglehart's (2004) analysis using the WCD's measure of non-religiosity for a larger set of countries. The second part extends Norris and Inglehart's analysis by including explicit attention to cultural regions. Both parts of the analysis include the methods of cartographic visualization and exploratory statistical modeling.

Cultural classifications

The cultural classifications for the second part of the study were based on the delineations from Huntington (1996) and Norris and Inglehart (2004), with slight modifications. As detailed previously, Norris and Inglehart (2004) stress the influence of the predominant religious culture and histories in a nation-state, even if the particular citizen is not a member of that faith. This concept fits into Norris and Inglehart's overall theory of secularization, and they build upon Huntington's classifications. Huntington (1996) uses the terms civilizations to indicate cultural groupings and has divided the world along these lines. He claims that the most important factor in these delineations is religion. The current study uses the classifications from Norris and Inglehart and Huntington, where available, evaluating them by the majority religion as identified by the

WCD. Countries not included in the literature were classed by major religion and/or discretion by the author. The 12 cultural classes used in this study are as follows: Buddhist, Catholic, Communist (current or former), Confucian, Hindu, Islamic, Japanese, Jewish, Latin American, Orthodox, Protestant, and Sub-Saharan African (Scheme A). A second classification scheme will also be analyzed that omits the Communist category and classes countries only by the majority religion (Scheme B). This scheme will allow for the analysis of the affects of the majority religious/cultural environment and the imposition of Communism as a secondary, interacting factor. Thus, it is assumed in general that the current majority religion reflects the cultural/religious heritage of that country. Exceptions will be described in the detailed discussion below.

Norris and Inglehart (2004) included a Central European category that reflects countries with a Christian heritage that are non-Orthodox and have experienced Communist rule. The Orthodox countries may or may not have experienced Communist rule. This is a confusing classification scheme, in part because formerly Communist countries were divided across two categories. For this thesis analysis, all current and former Communist countries were combined into a single category, and the Central European category was eliminated. This follows the practice adopted in a portion of Inglehart and Baker's (2000) analysis and allows some comparability with Inglehart and Welzel's (2005) regression models that include years of Communist rule as a significant variable. Communism is expected to have a substantial impact on non-religiosity. Park (1994, p.31) states that, "The great architect of Communism [Karl Marx] would have us believe that people seek an escape from reality via religion, which offers a social anesthetic from the ills and evils of life." As previously discussed, scholars have noted

that Communist countries have large non-religious populations. Empirical studies also revealed that the ideology imposed by the government had significant negative effects on both religious participation and beliefs.

Norris and Inglehart (2004) also divide Huntington's Western category into Protestant and Catholic, and this strategy will be employed in the current study. Thus, Christianity is divided into three categories in this study, all with precedence in either Norris and Inglehart or Huntington: Protestant, Catholic, and Orthodox. Barrett *et al.* (2006) divides Christians into seven categories: Roman Catholics, Protestants, Orthodox, Anglicans, Independents, Marginals, and Unaffiliated Christians (those who are not affiliated with a church). If the Roman Catholic or Orthodox percentages were greatest, a country was classified as such. If any other percentage was greatest, a country was classified as Protestant.

Huntington and others did not see justification for adding a Jewish category as a separate civilization. However, according to the WCD, Israel has a Jewish population of 71%. This is a highly unique case, similar in theory to the separate one-country Japanese sub-culture that Huntington identifies. Thus, the Jewish civilization was added in the current study for the nation-state of Israel.

The Confucian, Latin America, and Sub-Saharan Africa classes for this study are more generalized categories. The Sinic/Confucian category, according to Huntington, refers to China and Chinese communities that are located outside of China, and additionally Vietnam, Korea, and the Philippines. Singapore and Taiwan were also classed as Confucian for this study. The Latin American zone as established by Huntington reflects largely Catholic and Protestant nations. As most other countries in

the Catholic or Protestant category are in Europe, North America, or the Pacific, this category was considered appropriate and reproduced in the current study. All Caribbean nations are included in the Latin America category as according to Huntington. Chile is a member of the Latin American zone but experienced a Marxist government for three years in the early 1970's. However, for the purposes of this study, it was decided that this amount of time under Marxist rule was not sufficient enough to classify the country in the current or former Communist category. The Sub-Saharan Africa category includes countries with mainly Christian and ethnic religions as the majority religions. However, as with Latin America, due to its colonial and political history and marked cultural differences from countries in other Christian categories, the Sub-Saharan zone is necessary.

Division of Data into Subsets

The complete data set is divided into subsets depending on the nature of the analysis, shown in Table 3.1 below.

Table 3.1: Properties of Data Subsets

Data group	No. of Countries	Non-religious values	HDI	GINI	Cultural Zones	Percentage of world pop.
All	238	Yes	No	No	Yes	100
Subset 1	176	Yes	Yes	No	Yes	98
Subset 2	123	Yes	Yes	Yes	Yes	93

Subset 1 consists of 176 countries from the complete 238 country data set for which HDI values are available. Analysis relating only to human development and modernization uses this data set. Subset 2 consists of countries for which both HDI and

GINI values are available, and is used for most of the analysis. The complete data set is used when human development or inequality variables are not need. Subsets 1 and 2 make up 98% and 93% of the world's population, respectively.

Cartographic Visualization

Most of the cartographic visualizations are produced using Golden Software's MapViewer™ program. Univariate and bivariate maps, as well as a multivariate map, will be produced. Univariate maps concerning the distribution of non-religious percentages and of cultural zones will be produced. Bivariate maps will be produced by coloring the countries by their cultural zones and representing the countries as prisms whose heights are proportional to their non-religious percentage. The multivariate map will employ both a bivariate color scheme to represent the two quantitative variables of HDI and GINI and will include prisms to represent countries and their non-religious percentages. Also, the analysis will use conceptual space in which countries are plotted along axes of two independent variables of HDI and GINI. Proportional circles will represent the percentage non-religious. Adobe Illustrator will be used for additional editing.

Statistical Analysis

Basic descriptive statistics will be analyzed concerning the independent variables (HDI, GINI, and cultural zones) and the dependent variable (percentage non-religious). Ordinary least squares regression (OLS) models will also be generated. The STATA software package was chosen for the analysis. In the first part of the empirical analysis, a model will be constructed to test Norris and Inglehart's (2004) model that includes countries' human development (HDI) and income inequality (GINI) values as

independent variables and the countries' percentages of their populations that are non-religious or atheist from the WCD as the dependent variable. This will be conducted for 123 countries in Subset 2. In the second part of the empirical analysis, expanded OLS models will be developed that include the cultural zones as dummy variables. Analysis will be conducted on both classification schemes described previously.

The next chapter will apply the above methodology to determine the strength of the relationship between the indicators of existential security and levels of secularization, paying attention to geographic distribution, variation, and the presence of outliers to the theory. The power of cultural analysis will be introduced later in Chapter 5.

4. The Impact of Human Development and Inequality on Secularization

Norris and Inglehart's (2004) existential security theory of secularization, developed in part on the basis of their extensive empirical study of the WVS, claims that increased human development (HDI) and decreased income inequality (GINI coefficient) are related to increased secularization. This version of secularization theory is tested in the current study with an expanded nation-state dataset and with an outside data source on religion, the *World Christian Database*. A geographic perspective is adopted with cartographic visualizations that highlight all of the observations and provide a global framework for analyzing the inherent *variation* of secularization across the world. Statistical analyses were implemented as well to compare the results from this larger data set to Norris and Inglehart's findings.

Descriptive Statistics

Table 4.1 displays correlations between the percentage of a country's population that is non-religious and levels of human development (HDI) and income inequality (GINI). For Subsets 1 and 2, there is a moderate, positive relationship between the percentage of a country's population that is non-religious and the level of human development. For Subset 2, there is a moderate, negative correlation between non-religiosity and the level of income inequality. Thus, there is a relationship with lower levels of income inequality (more equality, security) and increased levels of non-religiosity. These correlations match existential security theory in regards to

secularization. In the Norris and Inglehart data set, the dependent variable was religious participation, a measure that reflects increased religiosity. Thus, to compare with percentage non-religious of the current study, a measure of non-religiosity, one can reverse the signs of Norris and Inglehart's results. The strength of the relationships in Subsets 1 and 2 are similar to those in Norris and Inglehart's data.

Table 4.1: Correlations between Non-religiosity (or religiosity) and HDI and GINI

	Subset 1 % Non-religious	Subset 2 % Non-religious	Norris, Inglehart (2004) Religious participation
HDI	0.393	0.449	-0.530
GINI	N/A	-0.414	0.426
N (# of countries)	176	123	73 (HDI), 59 (GINI)

Non-religious Map

To visualize the general distribution of non-religiosity around the world, a map was produced that classifies each country by the percentage of its population that is non-religious. Figure 4.1 depicts the percentage of a country's population that is non-religious. The highest non-religious areas are Asia and Eastern Europe, with North Korea (71.3%) and China (48.1%) having the top two global values. In addition, Sweden in Northern Europe and Uruguay in South America have high values outside of the Asia and Eastern European region. Moderately high shares of non-religious populations are found in many European countries, the United States, Canada, Australia, New Zealand, and Chile. Europe as a whole is on the upper end of the non-religious distribution, although levels of non-religiosity vary from country to country, even those located next to each other. For example, Poland has a low non-religious population as compared to the Czech Republic and Belarus on either side. Countries of Africa and South Asia have

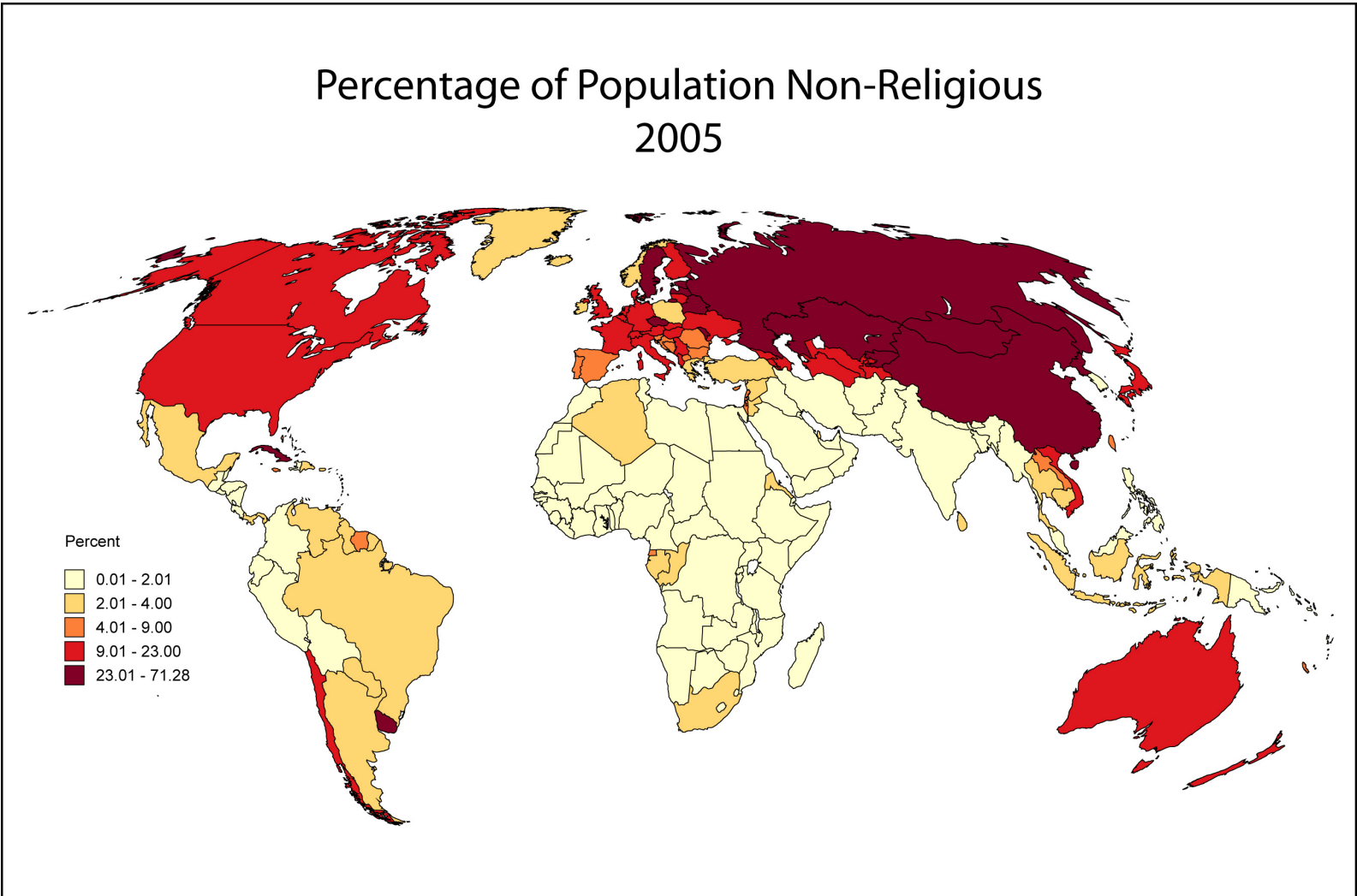


Figure 4.1: Countries of the world classed by percentage non-religious, 2005

low non-religiosity, as well as most countries of South America. So, a general trend is present with high levels of non-religiosity across former Soviet Asia, Europe, and, to a lesser degree, North America, Australia, and New Zealand. Africa, South America, and South Asia have low levels of non-religiosity. There are exceptions within each group and sometimes striking differences among adjacent counties.

HDI, GINI, and Non-religious Populations

To examine the two primary indicators of existential security, HDI and GINI, a map of the world was produced with a bivariate color scheme. In addition, the height of each prism that represents a country corresponds to the percentage of the country's population that is non-religious (Figure 4.2). The expectation is that countries with higher levels of human development (HDI) and lower levels of economic inequality (GINI) will have the lowest levels of religious adherence. Thus, countries colored with the shade of red in the upper left of legend have the highest levels of existential security; in terms of the current analysis, they should have higher non-religious percentages and, thus, taller prisms. The height of the prisms should decrease when moving down or across to the right in the legend.

Examining Figure 4.2 suggests broad, though not universal, support for the expectations of existential security theory. Many of the countries with the greatest existential security (high levels of human development and low income inequality) also have high levels of non-religiosity. Most of these are located in Europe and include countries such as the Czech Republic, Sweden, and Latvia. However, other countries in this class, such as Norway, Finland, and Spain, have noticeably lower levels of non-

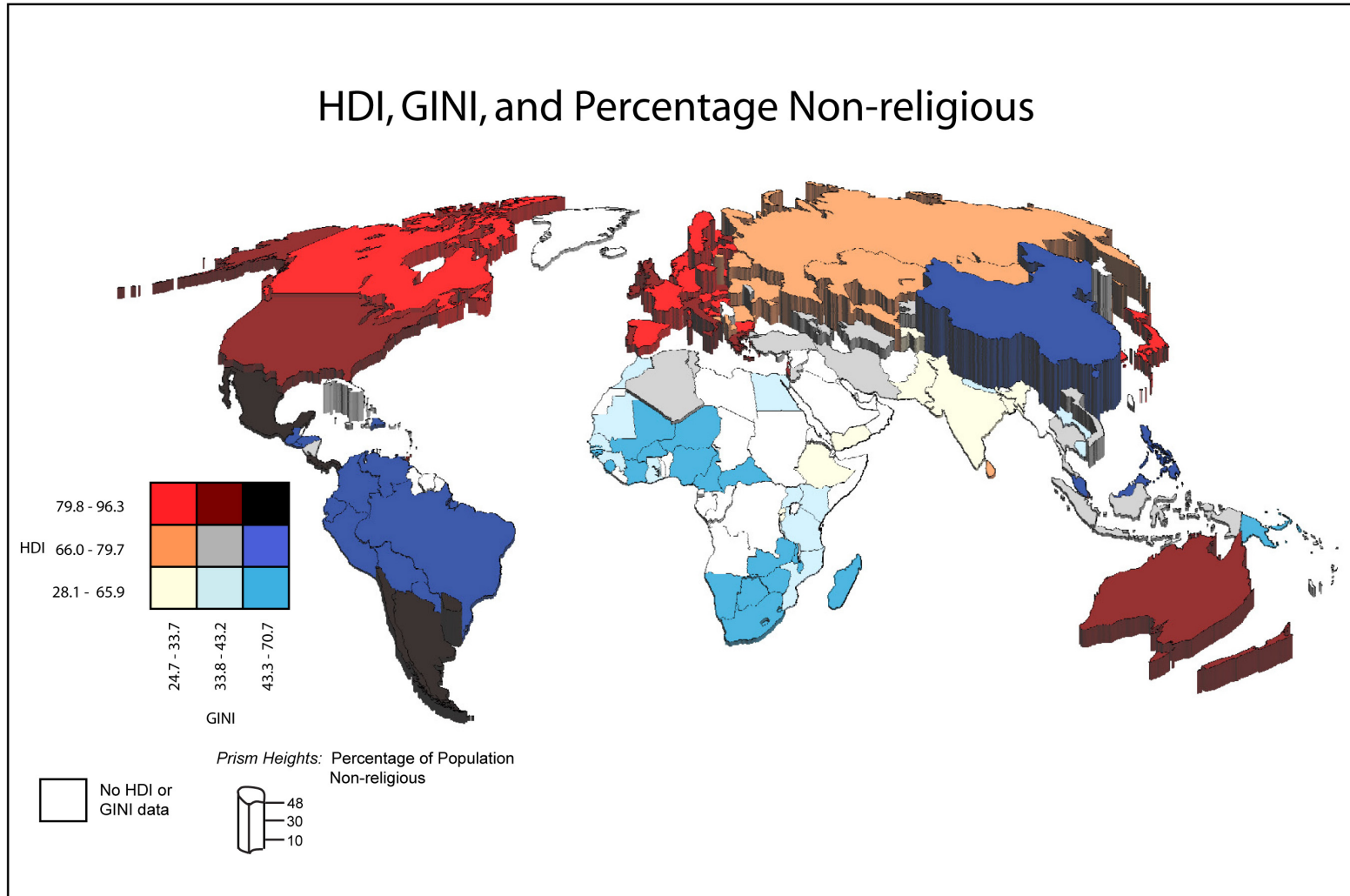


Figure 4.2: HDI (2003), GINI (latest available), and Percentage Non-religious (2005); Subset 2

religiosity. The country with the highest level of non-religiosity is China (North Korea is not included in Subset 2 as it lacks a recent GINI value), and it falls in the class representing the highest level of income inequality and a relatively medium level of human development (dark blue category). Many countries in Latin America are located in this same bivariate class and uniformly have significantly lower levels of non-religiosity. Countries in the class with the second highest level of human development and the lowest levels of income inequality have high levels of non-religiosity also. Most of these countries are in Asia or Eastern Europe, with the exception of Sri Lanka.

Countries with the highest level of human development category but in the second tier of income inequality (maroon category and located on the top row, middle position of the legend) should have lower levels of existential security and lower levels of non-religiosity. This is apparent when comparing the United States to Canada. The United States has more income inequality than Canada and also has a lower non-religious value. This same trend is apparent when comparing Italy to other European countries with less income inequality, such as France, Germany, and Czech Republic. Note, however, that Italy has higher non-religious values than Spain and Bulgaria, two countries in its vicinity with lower levels of income inequality and a trend that is opposite to theory.

In analyzing the Americas, if one follows a path from Mexico to the United States to Canada, income inequality clearly decreases while non-religiosity increases, thus supporting the theory. The majority of Latin American countries are in the highest income inequality class and either in the middle or upper HDI class. Chile and especially Uruguay are visibly different from the rest of the region, having the greatest non-religious percentage in Latin America while both belong to the highest HDI class.

The countries of Africa are located mostly in the lowest category of human development and mostly in the two highest classes of income inequality (bottom row of legend and colored light blue and a slightly darker blue). All of the African countries have low non-religious percentages. Algeria, located in the middle human development class has a slightly higher non-religious percentage than the rest of the continent. The only African countries in the dataset that fall in the lowest income inequality class are Ethiopia, Rwanda, and Burundi, and these are also located in the lowest human development class. Likewise, there are countries in South Asia with the same classification, and all of these have low non-religious percentages with the exception of Tajikistan. Although these countries have less income inequality, more security, and greater expected levels of non-religiosity, the level of human development is low and this would result in lower expected levels of non-religiosity. As these countries do have low levels of non-religiosity, the level of human development appears to be a stronger factor than the level of income inequality in predicting non-religiosity for these countries. Japan has the highest non-religiosity in the dataset in Southeast Asia besides China and Vietnam (North Korea, again, is not included in the subset), and this coincides with theory as it is located in the lowest GINI class and highest HDI class. But, the fact that China and Vietnam, with lower human development levels, have higher non-religious values than Japan raises questions about the theory.

This visualization broadly supports the expectations of existential security theory. Many countries with low levels of human development and higher income inequality have low non-religious percentages, while countries with the highest non-religious percentages have higher human development and lower income inequality. But this trend

is hardly universal. For example, countries across Asia with lower human development have very large non-religious values. Note also that there is a great deal of cross-national variability in the level of non-religiosity, such as in Europe, that cannot be explained by the two factors related to existential security.

Conceptual Space

In order to better visualize the quantitative relationships between HDI, GINI and non-religiosity, a conceptual diagram was constructed that used the GINI coefficient as the X-axis and the HDI as the Y-axis (Figure 4.3 below).

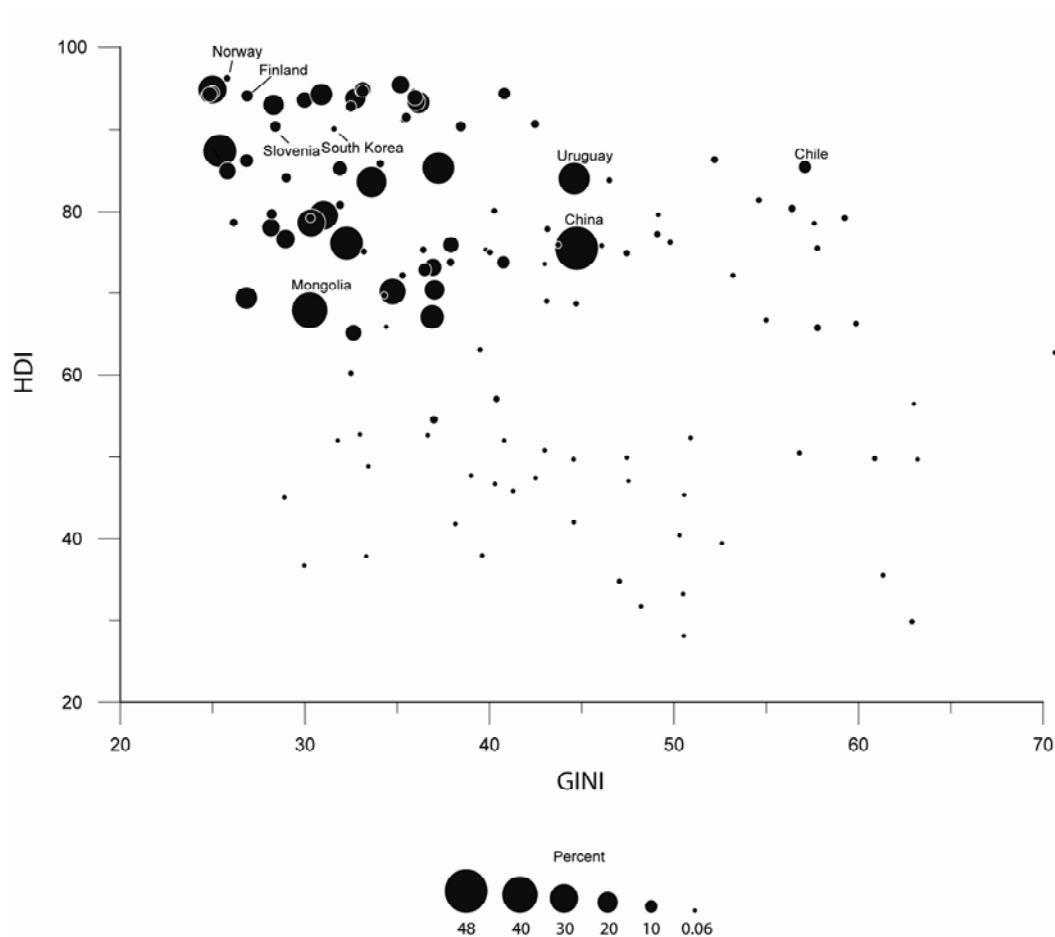


Figure 4.3: Conceptual space with GINI and HDI dimensions; proportional circles according to percentage non-religious

Countries were plotted and represented by circles with area proportional to the percentage non-religious. It was expected that countries with larger non-religious percentages would be located in the upper left of the diagram—higher human development and lower income inequality. Figure 4.3 displays this visualization and, indeed, the countries with the largest non-religious percentages are located in the upper left corner. Countries with lower human development and greater income inequality tend to have lower levels of non-religiosity and smaller circles.

While the diagram broadly supports existential security theory, there are some important discrepancies. Due to the closeness of the dots, only select circles were labeled. Most all of the largest circles are located in this area, but many smaller circles exist as well. Examples include the low levels of non-religiosity in Finland, Norway, Slovenia, and South Korea, all countries with high levels of human development. Also, the rather large percentages in China, Uruguay, and Mongolia stand out, as they are located towards the middle of the X-axis. Chile, located in the upper right of the diagram, has a larger percentage non-religious than other countries with similar HDI and GINI levels.

Human development seems to play a very significant role in non-religiosity levels according to this visualization, as all countries with an HDI below approximately 60 have minimal non-religious percentages. Countries in an HDI range of approximately 65 to 80 vary in non-religiosity, but this can be partially accounted for by income inequality. All of the countries in this HDI range with GINI values greater than 45 have low non-religious values, with the exception of Chile.

In general, the visualization confirms the idea that high levels of non-religiosity are related to high levels of human development and low levels of income inequality. This is very clear from the location of most all larger circles in the upper-left corner of the diagram. But, this visualization also clearly displays the outliers to this theory, mainly the very small circles in close proximity to larger circles in the upper-left portion of the map. There is also a great deal of variability in the levels of non-religiosity, represented by the size of the circles.

Statistical Analysis

To provide even greater precision in understanding the statistical relationships between existential security and non-religiosity, an OLS regression model was estimated that used HDI and GINI as independent variables and the non-religious as the dependent variable. This model is based on Norris and Inglehart's (2004) model that included the same independent variables, but was estimated with a smaller dataset and a different dependent variant than the current study. Table 4.2 displays the results from the 123-country analysis in this study. A model, not reported here, was estimated using case weights equal to the logarithm of the country's populations in order to explore the impacts of heteroskedasticity associated with the large range of population sizes. No substantial differences occurred in the results. Additional models, not reported here, explored the possibility of non-linear functional forms using transformed versions of HDI and GINI. Again, no substantial differences were noted, and the simpler OLS model is presented here.

Table 4.2: OLS Model of Percentage Non-religious, HDI, GINI

Percent Non-religious	Coeff.	P>t	Beta
HDI	0.186	0.000	0.333
GINI	-0.270	0.002	-0.271
y-intercept	5.663	0.338	
R ²	0.262		
Adjusted R ²	0.249		

The regression again broadly supports the expectations drawn from existential security theory. HDI and GINI together explain 24.9% of the variation in the percentage of countries populations that are non-religious. Both variables are highly significant. The HDI value is positively related to the percentage non-religious and the GINI coefficient is negatively related, as expected. A ten-unit increase in HDI, a very substantial increase (see Figure 4.3), will result in an increase of 1.8 percentage points in the percentage of a country's population that is non-religious. An increase of 1 on the GINI index of income inequality (scaled 0 to 100) will result in a decrease of -0.27 percentage points in the percentage of a country's population that is non-religious. The beta value for HDI (0.333) has a greater absolute value than that for GINI (-0.271); this indicates that HDI has more of an impact in explaining the variation of countries' non-religiosity values than GINI. This is verified in the conceptual space model (see Figure 4.3). For example, there is some variation in the percentage non-religious along the GINI axis with countries such as China, Uruguay, and Chile, but there are no countries with high non-religious values below an HDI value of approximately 60.

Norris and Inglehart (2004) estimated the same regression with HDI and GINI with a 56-country data set and a different dependent variable. They performed the analysis twice, once with a religious participation and a second time with a frequency of

prayer variable. These were self-reported by respondents to the survey questions. The adjusted R^2 for the model was 0.464 for religious participation and 0.420 for frequency of prayer. The adjusted R^2 value of the current study's model is considerably lower. This is most likely due to the increased size of the dataset as well as the use of a dataset that accounts for religious profession and identification on a country-wide level rather than individual's assessment of their religious participation and prayer. However, increasing the size of dataset should move the results toward the parameters of the actual, unknown population and in the direction of the tenets of the theory that is being tested. The opposite occurs in this study and brings into question the universal application of secularization theory.

Discussion

The variables of human development (HDI) and income inequality (GINI) provide a useful framework for analyzing secularization as measured by non-religious percentages on a cross-national basis. General trends are apparent in the visualization in world space of HDI, GINI, and percentage non-religious. In conceptual space, a pattern of increased religiosity is apparent when moving towards higher human development and lower income inequality. And, the OLS model shows that HDI and GINI are significant predictors of non-religiosity. However, significant outliers exist in all of these analyses that raise questions concerning the global application of the existential security theory. All countries with higher levels of human development do not always have relatively high non-religious percentages.

Although the two quantitative variables do an adequate job in explaining cross-national variation, a country's cultural heritage, however, serves as another factor in explaining deviating cases, such as the large non-religious percentage of the population of China, a country with a medium level of human development. Its Communist ideology certainly plays the major factor in the high non-religiosity. The same is true in Vietnam, as it is significantly higher in non-religiosity than its neighbor Indonesia that shares the same levels of human development and income inequality. Uruguay is a huge outlier in Latin America with a non-religious percentage greater than 30%, and this could be attributed to its leftist political challenges in the 20th Century. Other cultural factors include the fact that Uruguay's population is mostly from European descent, mainly Spain, Italy, and France, and immigrants brought values to the country such as "anti-clericalism" and "opposition to state-related Catholicism" (Barrett *et al.*, 2001, p.791). The influence of the Catholic church was also reduced by a high literacy rate, a large middle class in urban areas, and the separation of church and state (Barrett *et al.*, 2001).

Geo-political, social, and cultural heritage plays an obvious role in the varied religious climates of the world. Cultural classifications do have promise in making a significant step in taking into account the varied social and historical contexts of the world's nation-states in regards to secularization. Quantitative measures of socio-economic inequality, though they are powerful, do not tell the entire story. It is towards these cultural factors that the current study now turns.

5. Communism, Cultural Regions and Existential Security Theory

Casanova (2003) and others have called for a global yet regionally contingent outlook on the secularization debate that recognizes that not all countries will follow the European or American paths of religious development. The previous chapter examined the basic contours of existential security theory using a broad cross-national data set that includes the levels of non-religiosity among nation-states. While the two theoretically important measures of existential security, human development and income inequality, performed much as expected, the analysis in this chapter of variables that capture broad regions of cultural heritage will greatly enhance the analysis by powerfully demonstrating regional differences in non-religiosity. While Norris and Inglehart (2004) discuss the importance of religious and ideological histories, their analysis does not effectively incorporate these considerations. The analysis reported in this chapter demonstrates the empirical importance of cultural zones beyond the measures of existential security. Moreover, this analysis demonstrates the importance of considering Communism as a historical and contemporary ideological force that greatly affects the level of religiosity.

The analysis below will make use of the same techniques from Chapter 4: descriptive statistics, world space mapping, conceptual space mapping, and OLS models. In order to examine the impact of Communism, two classification schemes will be used. The first scheme includes a category for current or former Communist nations. The second scheme omits the Communist category and assigns the affected countries to their

major religious/cultural group, such as Orthodox for Ukraine and Sinic/Confucian for China.

Descriptive Analysis

Non-religiosity by Cultural Zones

The measures of non-religiosity and existential security show marked variability across regional cultural zones. Countries are classified by their major cultural heritage listed in Table 5.1 below. While these categories primarily reflect the main religious tradition of the countries, exceptions include the Communist, Latin American, and Sub-Saharan African categories, for the reasons outlined in Chapter 4. The table displays the 12 cultural/religious heritage classifications used in the first cultural analysis and percentage non-religious figures for each zone. The first two numerical columns represent data for all 238 countries in the WCD, and the aggregate non-religious percentage was computed by dividing the total number of non-religious persons in that zone by the zone's total population. The next set of columns refers to Subset 1, the group of 176 countries that have data for HDI but not GINI. These countries constitute 98% of the world's population. The aggregate non-religious percentage of the population was obtained in the same way as the 238-country dataset and is a population-weighted measure. The simple cross-national mean was calculated by summing the non-religious percentage of all of the countries in a particular zone and dividing by the number of countries in that zone – a procedure that produces an unweighted measure of each region's non-religious percentage. Countries with relatively small or large non-religious percentages will thus have substantial effects on the resulting mean. These cross-national

means give more insight to the variations within the data set that are hidden by the aggregate non-religious figure. The final column of Table 5.1 displays the HDI value for each cultural zone weighted by the country's populations.

Table 5.1: Cultural classes with Communist zone; All countries and Subset 1 countries

Cultural Class	All Countries		Subset 1*			
	No. of Countries	Non-rel. % of pop.	No. of countries	Agg. Non-rel. % of pop.	Cross-national mean, non-rel. %	HDI (weighted by pop.)
Buddhist	4	1.5	4	1.5	1.3	69.6
Catholic	30	14.1	14	14.2	7.3	93.1
Communist (current or former)	35	40.0	32	40.3	18.4	75.8
Confucian	5	1.7	3	1.3	2.4	81.4
Hindu	4	1.4	3	1.4	1.5	60.0
Islamic	44	1.0	37	1.0	1.1	62.0
Japanese	1	13.1	1	13.1	13.1	94.3
Jewish	1	5.8	1	5.8	5.8	91.5
Latin American	44	2.9	32	2.9	3.3	78.5
Orthodox	2	2.5	2	2.5	3.7	91.1
Protestant	38	12.8	18	12.9	9.8	93.7
Sub-Saharan Africa	30	0.7	29	0.7	0.9	45.4
ALL	238	14.3	176	14.2	6.21	

* Subset 1 consists of 176 countries with HDI values; makes up 98% of the world's population

According to the results above, 14.3% of the world's population is non-religious. Current or former Communist countries have the highest percentage non-religious (40.0%). The second highest groups of countries are the Catholic (14.1%), Japanese (13.1%), and Protestant (13.8%) zones. The Jewish, Latin American, and Orthodox zones make up a third tier, with non-religious percentages between 2.5% and 5.8%. The region with the smallest percentage non-religious is Sub-Saharan Africa at 0.7%, with the Islamic, Hindu, Buddhist, and Confucian classes all below 2.0%. Non-religious percentages from the 176-country subset are nearly identical to the percentages from the

global dataset, suggesting that reducing the sample in order to conduct multi-variate statistical analysis should not greatly bias the results.

Cross-national means, calculations not effected by population, follow the same trend as the aggregate percentages, with the most notable change occurring in the current or former Communist category. The Communist zone decreased greatly, changing from 40.4% to 18.1%. China is pushing the non-religious percentage very high in the aggregate population number. Also, some Catholic and Protestant countries with relatively small populations and small non-religiosity percentages bring down the cross-national means.

Exploring Non-religiosity and HDI Among Cultural Zones

Human development has a clear positive relationship with non-religiosity in regards to cultural zones. Table 5.2 sorts the cultural zones in regards to human development (HDI), weighted by the country populations, and displays the accompanying percentage non-religious values. The Communist zone has an extremely large non-religiosity figure (40.3%) compared to any of the other cultural zones. However, it has a lower level of human development than other regions with relatively high non-religious values. The strong ideological influence of Communism appears to have had more of an effect than human development upon levels of non-religiosity. Previous studies, such as Norris and Inglehart (2004) and McCleary and Barro (2006), have linked Communism with decreases in both religious practice and beliefs on the basis of survey evidence and generational analyses. The present analysis supports the conclusions of these previous studies.

Cultural zones with high levels of human development have high levels of non-religiosity (not considering Communism). The Japanese, Protestant, and Catholic zones have the highest levels of human development and have the highest levels of non-religiosity. The populations of the Protestant and Catholic zone are mainly all European, North America, or from the South Pacific, and have experienced similar histories, social changes, and economic trends. Examples would be the rise of the Industrial Revolution, participation in colonialism and imperialism, and the experiences of various regional wars and accompanying recovery and unity efforts.

Table 5.2: Percentage Non-religious (2005) and HDI, by Cultural Class, Subset 1

Cultural Class	Agg. Non-rel. % of pop.*	HDI (weighted by pop.)
Japanese	13.1	94.3
Protestant	12.9	93.7
Catholic	14.2	93.1
Jewish	5.8	91.5
Orthodox	2.5	91.1
Confucian	1.3	81.4
Latin American	2.9	78.5
Communist (current or former)	40.3	75.8
Buddhist	1.5	69.6
Islamic	1.0	62.0
Hindu	1.4	60.0
Sub-Saharan Africa	0.7	45.4
ALL	14.2	

The second-tier of cultural zones in terms of non-religiosity (Japanese, Protestant, and Catholic) have HDI values of 93 or greater. There is a sharp drop in non-religiosity (more religionists) that takes place in relation to very small change in human development following the Catholic class in Table 5.2. Comparing the Catholic and

Jewish class, a change of 1.6 in HDI has resulted in a decrease in non-religiosity by 8.4 percentage points. Another small decrease in human development from the Jewish class to the Orthodox class resulted in more than a 50% reduction in non-religiosity. The relationship between human development and non-religiosity is not linear, and there is a natural divide between the Japanese, Protestant, and Catholic zones and the rest of the world. The differences in Protestant and Catholic countries could again be contributed to their economic development in Europe and North America and their unique Christian heritage. Scholars have argued that secularization theory is conceptually built from a Christian framework in regards the decline of state-sponsored churches found in Europe, and this would make sense in both the Protestant and Catholic categories. Thus, the data can be interpreted in both common *economic* contexts (higher human development, higher non-religiosity) and common *cultural* contexts (religious and societal history). The two are obviously related in more subtle ways and are not mutually exclusive influences.

The decrease in non-religiosity with decreased human development is clear from Table 5.2. Countries with HDI values below 70 have non-religious percentages of 1.5 or less, with the lowest non-religious value (0.7%) occurring in the Sub-Saharan African zone, the class with the lowest weighted HDI (45.4). Cultural zones not in complete conformity to this decrease include the Confucian zone with a non-religious value of 1.3% and a relatively high HDI value, and clearly the Communist class as discussed above. Again, the positive relationship between HDI and non-religiosity is not perfect, but the general trend is clear. The following section explores the actual results from formal statistical correlations.

Correlations of Non-religiosity and HDI among Cultural Zones

There are two significant observations from the analysis of correlations between non-religiosity and human development. First, the correlation between non-religiosity and human development is much higher when current or former Communist states are excluded. These countries have experienced a form of ‘forced’ secularization through government ideology, propaganda, and regulations. The correlation of the percent non-religious and HDI for the countries of Subset 1, excluding Communist countries (resulting in a sample with $n=144$), is 0.53 compared with a value of 0.39 using the entire subset ($n=176$). Second, the correlation between the non-religiosity and human development variables, excluding the current or former Communist countries, is significantly higher when the units of analysis are cultural zones instead of individual countries. The correlation between the non-religiosity variable and human development using cultural classifications ($n=11$) is 0.72. The aggregation of countries along cultural lines results in relationships that are more in line with classic secularization theory, with the exception of current and former Communist countries. Non-religiosity has a positive relationship with modernization in regards to cultures, and clear divisions of religion and human development exist among cultural zones.

Cultural Zones and Non-religious Populations

Several cartographic visualizations were implemented to display the geographic extent of the cultural zones and the non-religious values of the countries that make up these zones. These maps will portray the geographic clustering of the cultural zones and group the countries into more manageable zones for analysis. Trends in non-religiosity

and modernization discovered in the previous section will be visible, especially the conformity of the cultural zones to classic secularization theory, disregarding the effects of the Communism. However, each country's non-religious percentage is retained in the visualizations, thus displaying which cultural zones are heterogeneous and the inherent *variability* of a phenomenon such as secularization on a country-to-country basis.

Figure 5.1 displays the countries of the world classed by the 12 cultural zones of Table 5.1. The regional logic of the classification scheme is apparent in the figure. The Communist class stretches from its previous hub in the former U.S.S.R. into Southern Asia and Eastern Europe, in addition to Cuba in the Caribbean. The Islamic zone is concentrated in the Middle East and Northern Africa. The Sub-Saharan classification makes up the bottom half of the African continent. Again, this class is both a cultural class and a geographical area, with varied significant religious traditions including Christianity and ethnic religions mainly, and common colonial histories. The Latin American zone is similar in that it is both cultural and continental. Catholic and Protestant traditions prevail, and this zone stretches from Mexico to all of South America, including the Caribbean. The Protestant zone includes the United States, Canada and much of Northern Europe, Australia, New Zealand, and Papua New Guinea. The Catholic zone consists of countries mainly in Central and Southern Europe. (Although many Latin American countries, for example, are Catholic, the Latin American zone as defined by Huntington is still more beneficial for analysis as these countries cannot be fruitfully placed in the same category as European Catholic countries. The historical and colonial factors are significantly different.)

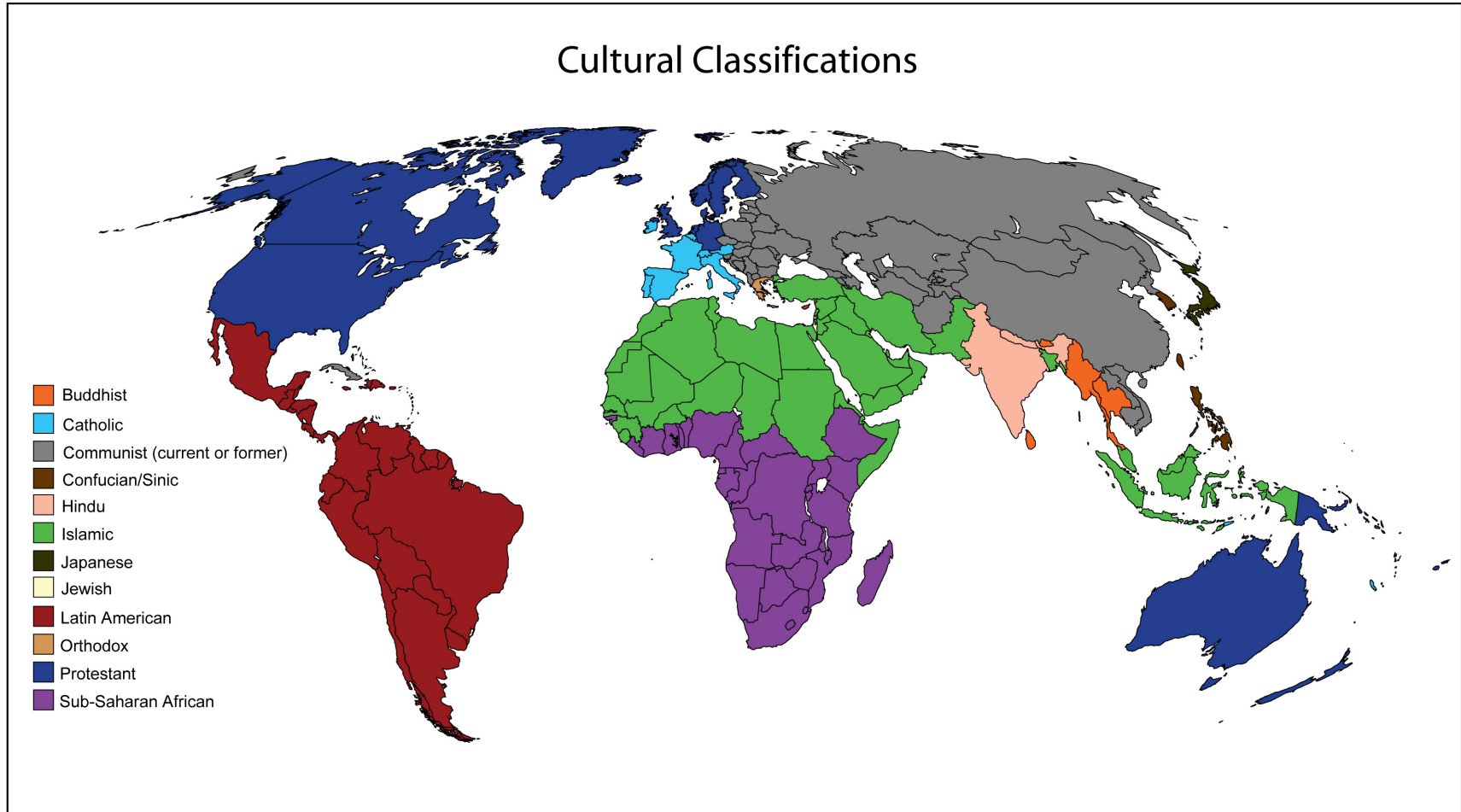


Figure 5.1: Cultural classifications with Communist class

In an initial examination of the relationship between the cultural zones and non-religiosity, countries were merged according to their cultural zones, and the aggregate percentage non-religious (from Table 5.1) was assigned to each group. The resulting visualization is displayed in Figure 5.2, and the non-religious percentages are represented by prism heights. The Communist zone stands out with its large non-religious percentage, followed by the Catholic, Japanese, and Protestant zones. All of the other cultural zones have relatively low non-religious percentages. Central Asia, Europe, North America, and Australia stand in vivid contrast to Latin America, Africa, and South Asia.

To visualize the individual countries' non-religious percentages and to explore trends as well as variability within cultural zones themselves, a height dimension was added to each country in the cultural zone map from Figure 5.1. The resulting visualization is shown in Figure 5.3. The map displays a sharp contrast between countries of Asia and Europe as compared to the rest of the globe. Those who profess no religion are concentrated in current or former Communist areas and most of Europe. The country with the greatest degree of non-religiosity, and the highest prism on the map, is North Korea (71.3%), followed by China (48.1%). Protestant countries in North America and the South Pacific (Australia and New Zealand) also have substantial non-religious percentages of their populations. The contrast between the low non-religious heights in the contiguous region of Africa, the Middle East, and South Asia, compared with the rest of Asia and Europe is visually striking. Of a smaller magnitude, but still significantly apparent, is the contrast between the United States/Canada and Latin America.

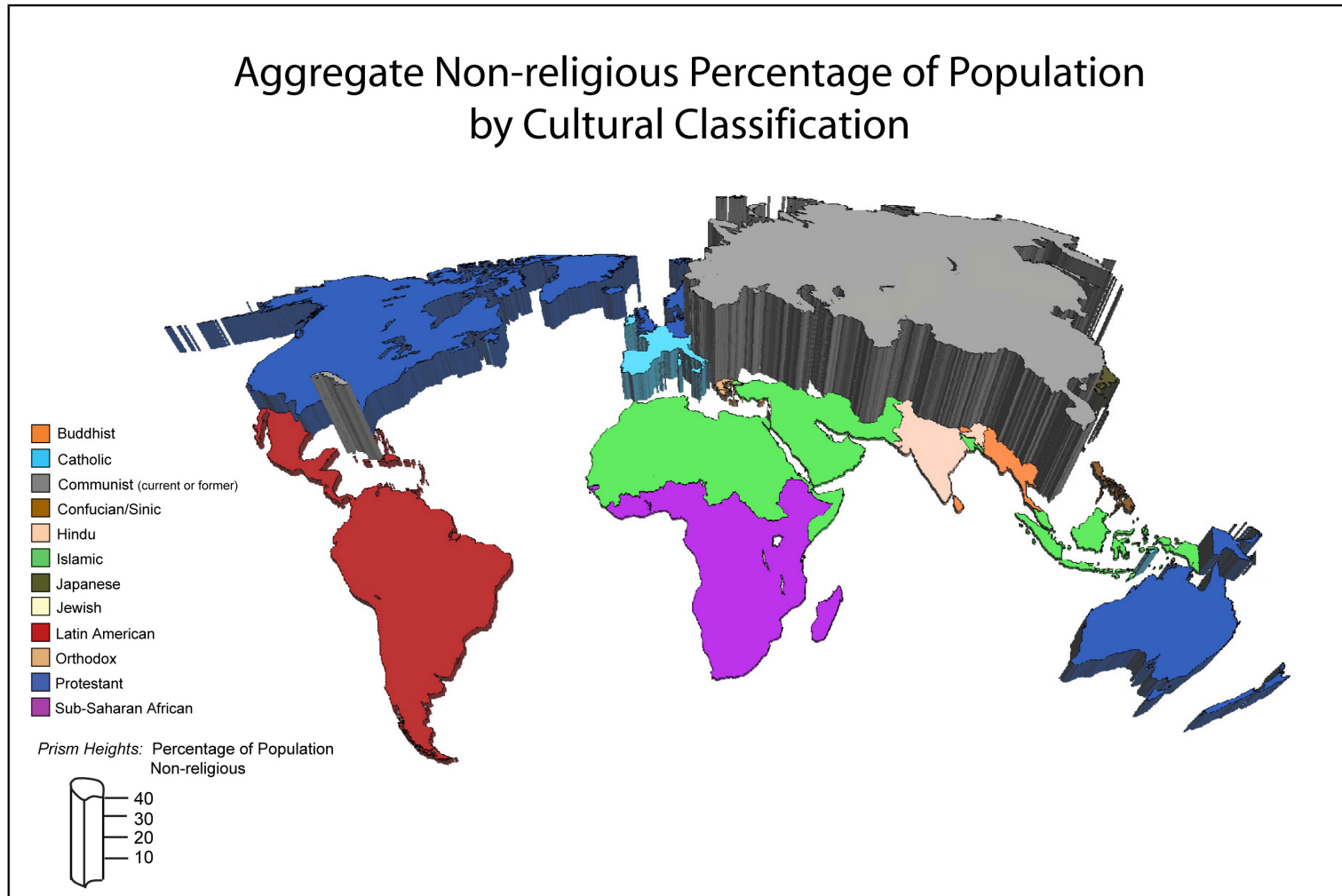


Figure 5.2: Aggregate non-religious percentage of population (2005) by cultural classification

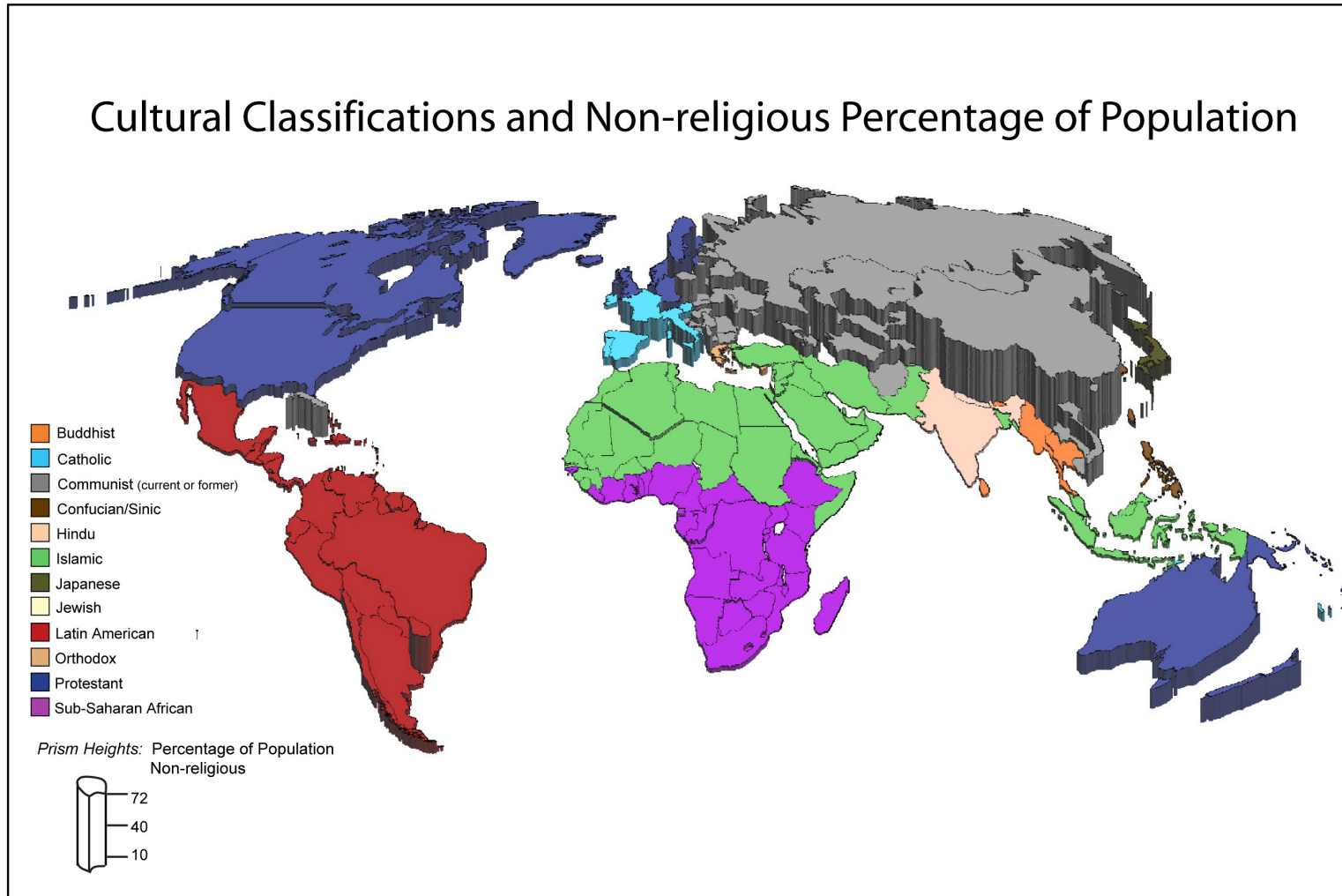


Figure 5.3: Cultural classifications and percentage non-religious (2005)

In terms of cultural zones, the highest non-religious percentages again are visible in the Communist zone, followed by Catholic and Protestant countries in Europe, North America, and Australia and New Zealand. Not only do these zones possess the greatest non-religiosity percentages, but they include high degrees of variability. The Islamic zone has very low non-religious heights, with Lebanon, Algeria, Jordan, and Syria standing out as slightly higher than others in the zone. However, Islamic countries that have experienced Communist rule are significantly higher in non-religiosity and will be discussed below. The Hindu, Buddhist, and Confucian zones in Asia have low heights, while the Japanese zone has a sizable increase in height as compared to its neighbors. The Sub-Saharan Africa zone is the most uniform zone with all countries having very small non-religious percentages of their populations. No single country stands out in this area.

The Latin American zone is very uniform, although there are visible increases in non-religious heights in Uruguay and Chile. Uruguay has a non-religious value of 33.8% compared to the Latin American cultural zone value of 2.9%. Its turbulent political history and leftist challenges to the government probably play a significant role in this high percentage, but a detailed case study would be appropriate to provide more information. Chile has a non-religious value of 9.8% and has experienced Communist rule in the past, even though it was classed in the Latin American zone. The influence of Communist ideologies in its history may play the major factor in this increase in percentage, and, again, further study is warranted. Cuba, classed as a Communist country, is a second large outlier in the Americas with a non-religious height significantly higher than any surrounding nation. In general, however, the Latin American zone is

uniform with low non-religiosity, i.e., more professing religionists. Europe and Asia again include countries with very high non-religious values as well as incredible variation between these countries.

Figure 5.4 displays a close-up view of Europe from Figure 5.3. The greatest non-religious heights are in the former and current Communist zone, with the Czech Republic, Estonia, Latvia, and Russia having the highest prisms. There is noticeable variation within the Communist zone, such as the low prisms of Lithuania and Poland surrounded by much higher neighbors. One can make the argument for a gradual decrease in non-religiosity as one moves away from the major Communist center of Russia. In the European map, there is a gradual, though imperfect, decrease from Russia outwards, such as the path from Russia to Ukraine to Romania to Bulgaria, or from Ukraine to Hungary, Slovenia, Croatia, and Bosnia. Glitches in the downward staircase effect are present, such as increased non-religiosity in Serbia and Montenegro, Albania, and the Czech Republic, all a long geographic distance from Russia. However, the pattern is still visible and will also be shown in the magnified map of Asia in relation to China.

Catholic countries in Europe show considerable variability in the levels of non-religiosity, with France having the highest value (20.0%) and Ireland having the lowest (2.9%). Spain and Portugal decrease to nearly half of France's non-religious height, while Italy remains relatively high. Switzerland, Belgium, and Luxembourg drop significantly from France's height, and Luxembourg is not even visible in the map view in Figure 5.4, with a value of 5.9%. Protestant countries in Europe also exhibit considerable variability, noticeable in comparisons such as Sweden (30.2%) to its closest

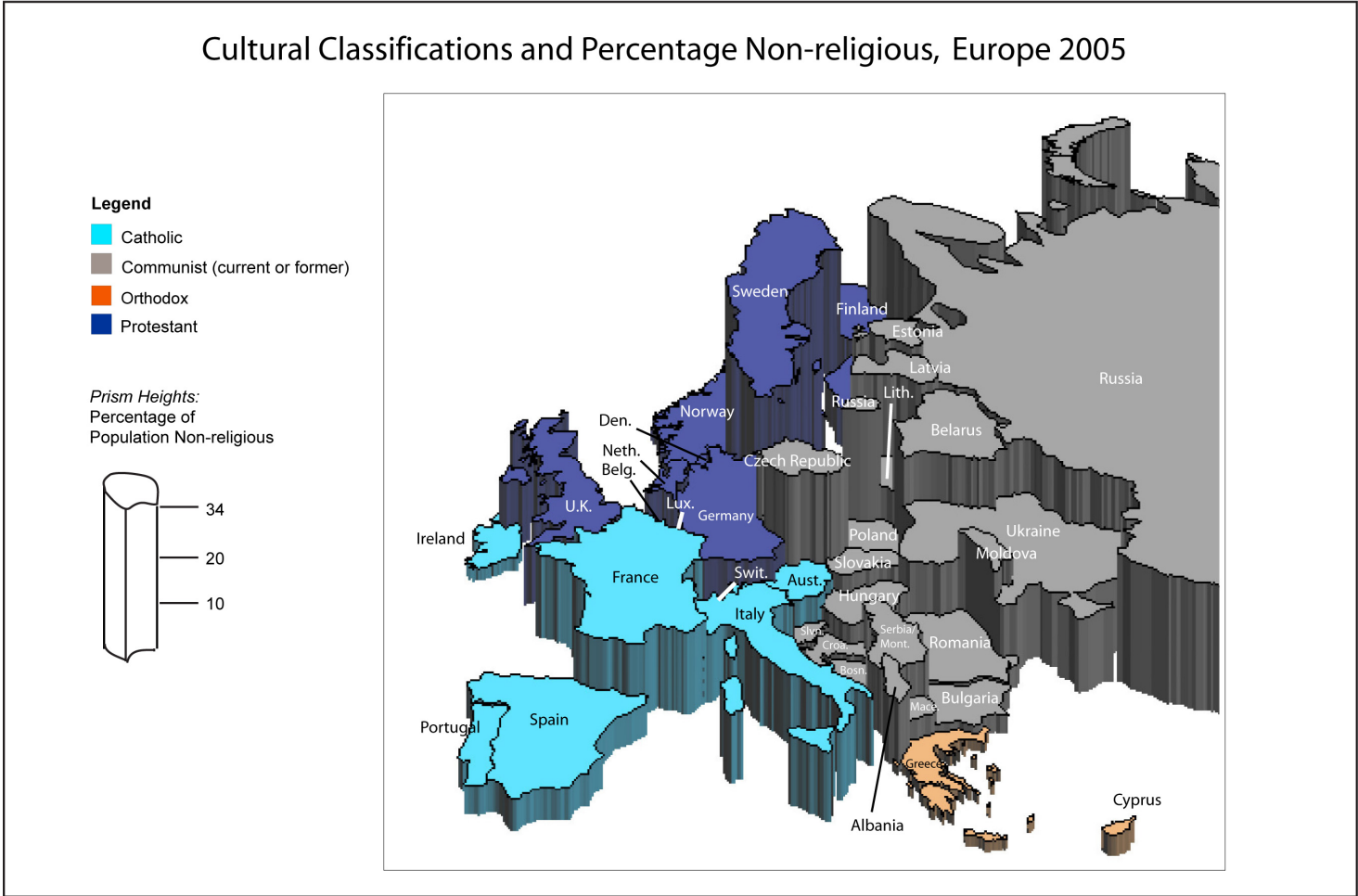


Figure 5.4: Cultural classifications and percentage non-religious (2005), Europe

Protestant neighbors of Norway, Finland, and Denmark. The United Kingdom is considerably higher than its Catholic neighbor Ireland. Finally, the Orthodox countries of Greece and Cyprus show low levels of non-religiosity.

The detailed map of Asia with the Communist cultural class is displayed in Figure 5.5. The gradual decrease or staircase effect when moving from Russia or China is apparent in this visualization as well. Although Kazakhstan has a higher non-religious percentage than Russia, there is a marked decrease in non-religiosity when traveling along this path: Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan or Turkmenistan, Afghanistan. All of these countries are Islamic-majority countries with Communist histories. The level of secularization as measured by percentage non-religious seems to decrease when moving towards the Middle East with regards to these Islamic countries. One can see this decreasing effect also when moving from China to Vietnam and Laos. North Korea stands in sharp contrast to other countries on the map, even China and Russia, as it towers above with 71.3% of its population classified as non-religious. Its contiguous neighbor South Korea, however, has non-religious value of 1.6%, classified as a Confucian country. Other Confucian states have low non-religious percentages.

This visualization of non-religiosity and culture results in several major observations. First, there are vast differences in non-religiosity between the Communist, Catholic, and Protestant cultures on the one hand, and the rest of the world on the other. These zones have obvious geographic implications, with Europe, North America, Australia, and most of Asia being much more non-religious compared with South America, Africa, and Southern Asia. Thus, the current level of secularization in the world is visibly related in a strong manner to cultural heritage. Second, the Communist,

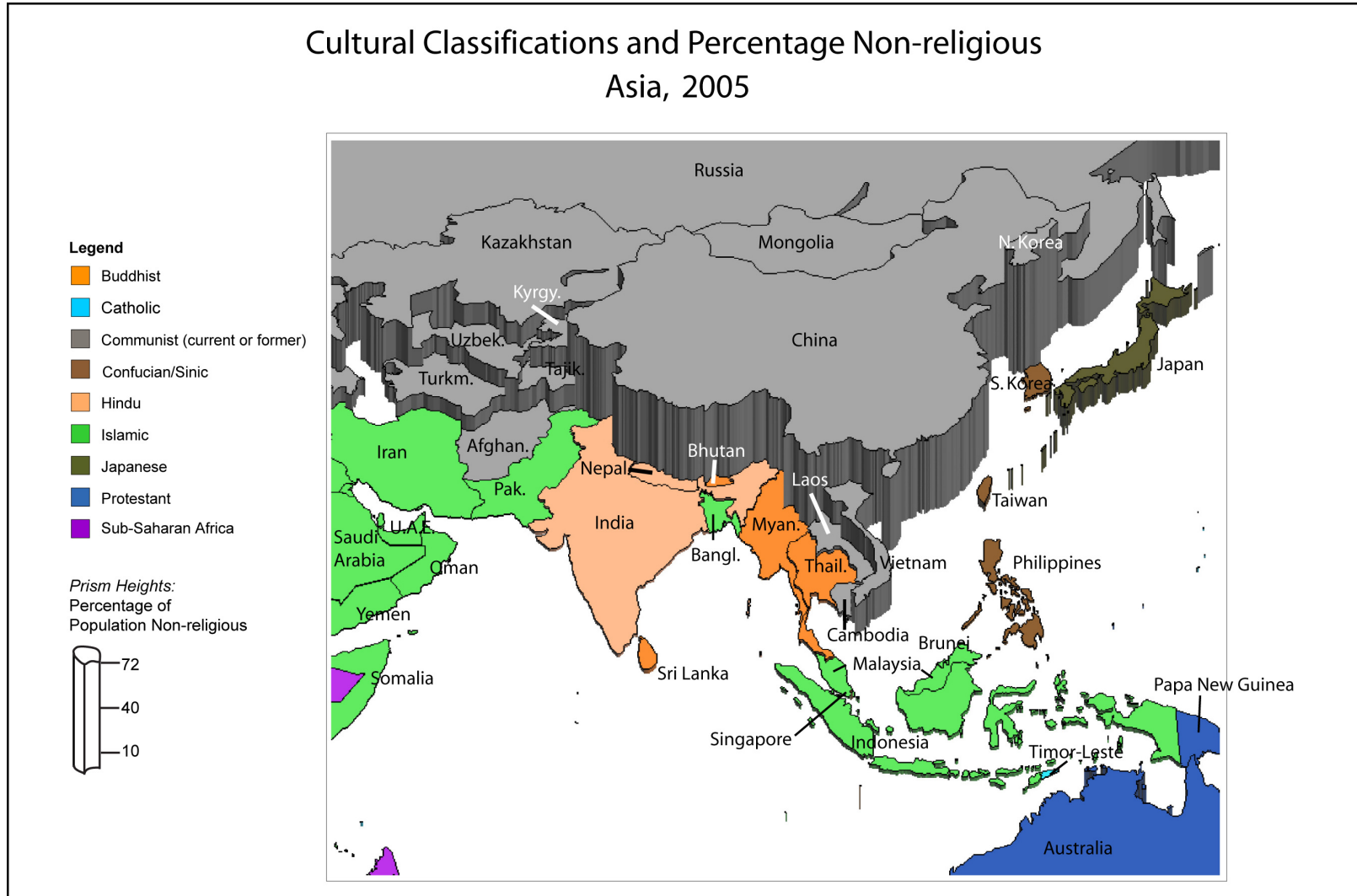


Figure 5.5: Cultural classifications and percentage non-religious (2005), Asia

Catholic, and Protestant show the most visible variability in non-religiosity within their respective zones. Non-religiosity is still a varying phenomenon in terms of its intensity among nation-states in the same cultural zone and geographic area.

Conceptual Space

The cultural zone factor was analyzed in the same conceptual space used in Chapter 4. The GINI coefficient is used for the X-axis and the HDI is used for the Y-axis. According to Norris and Inglehart's (2004) existential security theory of secularization, countries located in the upper left of the conceptual space (high human development, low income inequality) should be the most secular. Figure 5.6 displays the results with the dots representing each of the 123 countries of Subset 2, countries with both HDI and GINI values. The colors of the dots represent the appropriate cultural class. The classes with the highest HDI and lowest GINI values are the Protestant and Catholic classes. The Communist class is the next predominate class in the left corner and makes up a region slightly lower in HDI values than the Protestant and Catholic classes. Referring back to Figure 5.4, all three of these classes have high non-religious percentages. The Latin American is at a similar level of human development as the Communist zone. But from observations in the previous maps and from the statistics in Table 5.1, it has a significantly lower percentage non-religious. Following Norris and Inglehart's theory, this could be accounted for by increased income inequality (less personal security, more need for religion) in Latin America, displayed by the member country's locations towards the right side of the conceptual space (higher GINI values) compared with the Communist countries.

The zones with high levels of non-religiosity, Communist, Catholic, and Protestant, fit well with existential security theory in that they are located in the upper left of the conceptual diagram with the highest levels of human development and the lowest levels of income inequality. Most all of the cultural zones seem to cluster around certain general levels of human development. However, there is much more variation in the income inequalities of countries within the same cultural zone.

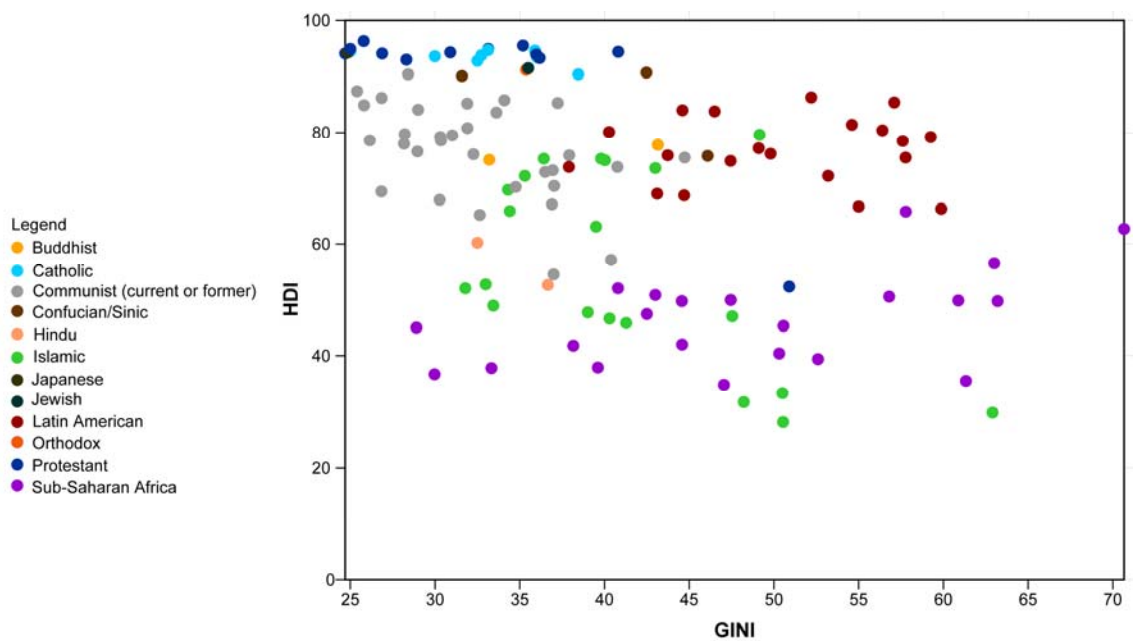


Figure 5.6: Conceptual space with GINI, HDI dimensions; classed by culture; Subset 2

Statistical Analysis

Multiple statistical procedures were conducted to further investigate the relationships between non-religiosity, quantitative variables of the existential security model of secularization, and the cultural heritages of nation-states. Statistical procedures

include the analysis of bivariate scatterplots and the construction of OLS models. Subset 2 is used again as this is the data set that has both HDI and GINI values (n=123).

In order to visually display the impact of Communism, two bivariate scatterplots are displayed, showing the relationship between non-religiosity and HDI (Figure 5.7) and GINI (Figure 5.8). Countries in the Communist cultural class are highlighted in each graphic. These graphics demonstrate the complicating impact of Communism on the assumed relationship between non-religiosity and modernization as measured by existential security. In Figure 5.7, there is a definite increase in percentage non-religious above an HDI value of 60. Countries below this point in human development have very low non-religious values. However, even within this upper limit, there is still a great deal of variation with countries with relatively low non-religious values, such as South Korea and Greece, and others with high values, such as Sweden.

Countries of the Communist class are displayed as red in Figure 5.7. This highlights the first major observation from the scatterplot: Communist countries have much higher percentages of their populations that are non-religious as compared with other countries of similar human development. Non-Communist countries with HDI values that are between 60 and 90, the general range for the Communist countries, have low levels of non-religiosity. The non-Communist world exhibits the pattern of substantially higher levels of non-religiosity only when reaching a very high level of human development (an HDI value of approximately 90 or greater). Sweden tops this upper group with a non-religious percentage slightly above 30%, and other mainly European countries, both Catholic and Protestant, are in this group as well. Again,

however, there is significant variation, with highly developed countries such as Norway and Ireland exhibiting low non-religious values.

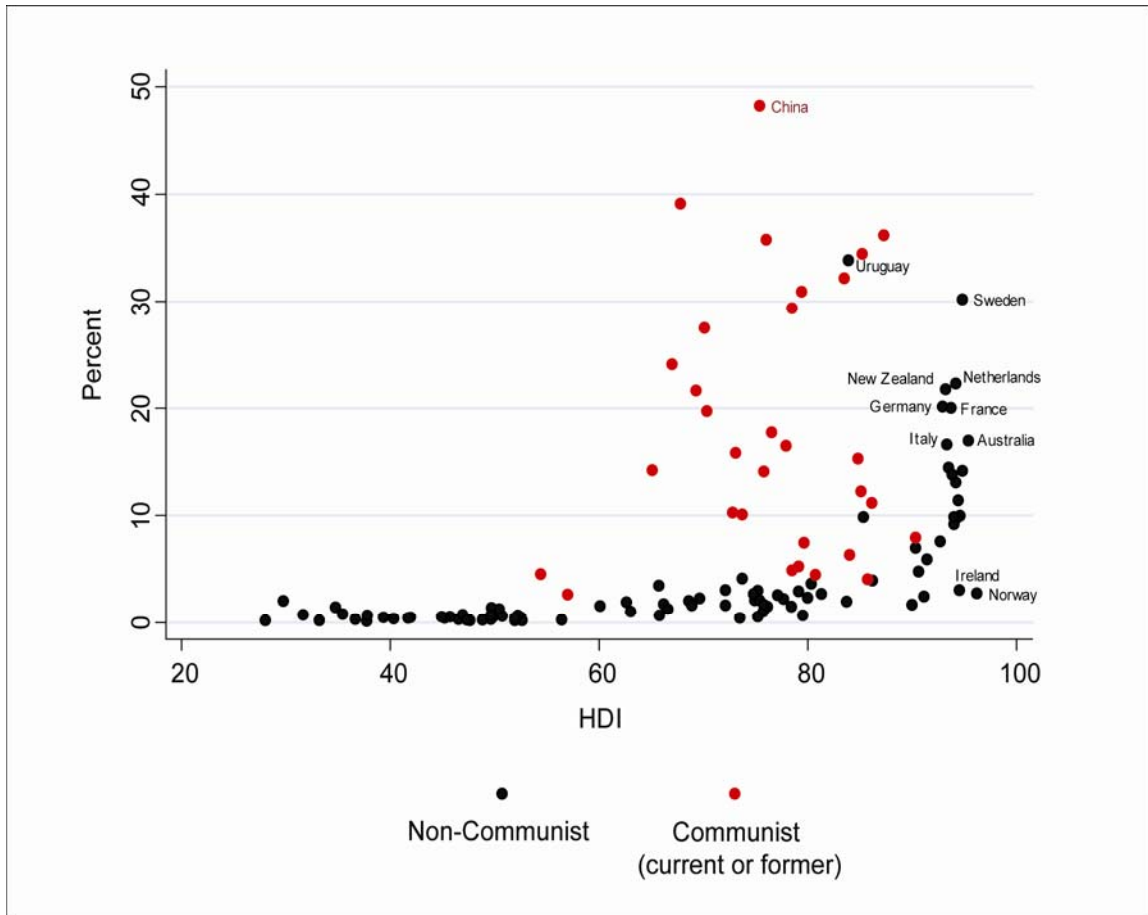


Figure 5.7: Scatterplot of HDI and Percentage Non-religious

Figure 5.8 below presents the scatterplot of GINI and percentage non-religious. There is a definite increase in non-religiosity with lower income inequality, but the relationship is weaker than the one between HDI and the percentage non-religious. No countries with GINI values greater than approximately 40 have large non-religious percentages, except for Chile. Additionally, current or former Communist countries are located on the lower end of the income inequality axis (more income equality), as would

be expected considering Communist ideology. These countries also have greater levels of non-religiosity.

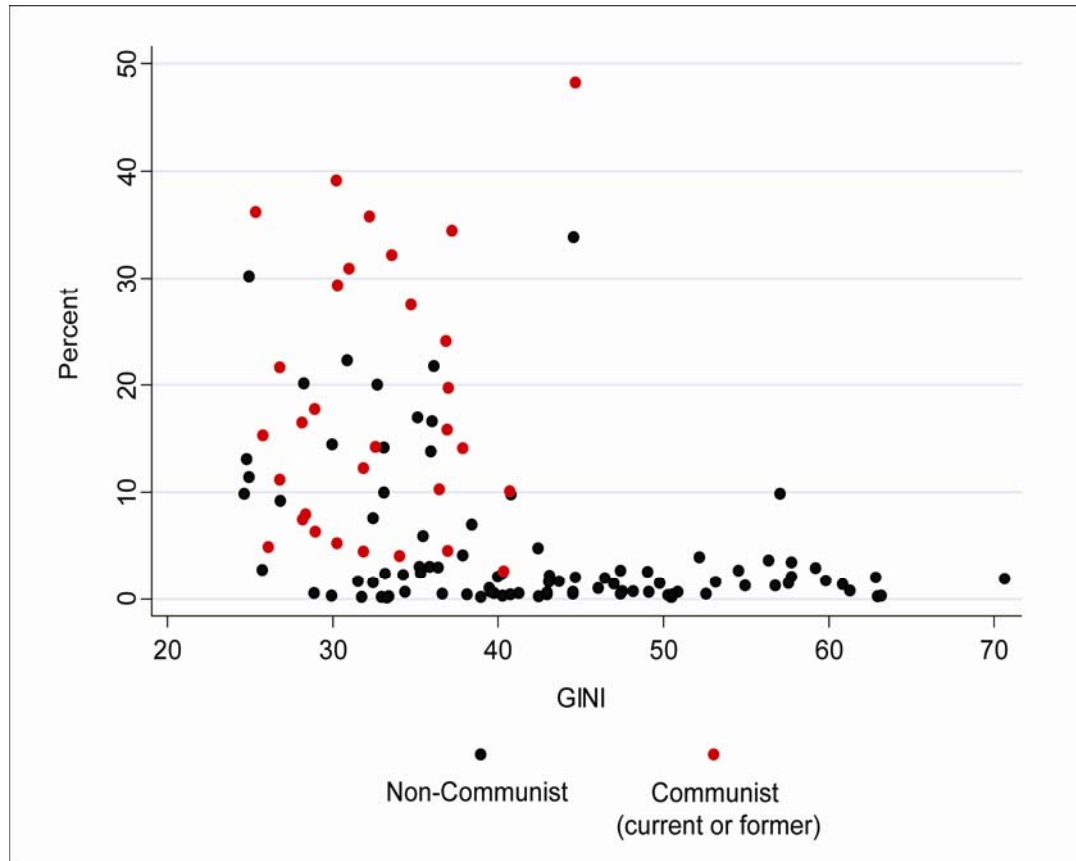


Figure 5.8: Scatterplot of GINI and Percentage Non-religious

OLS Model: Cultural Classification Scheme A

In terms of cultural heritage, the analysis presented so far focuses mainly on current or former Communist countries, relative outliers to the general positive relationship of human development and non-religiosity. To further test the statistical significance of cultural heritage, a model was produced that included the 12 cultural zone dummy variables (Model 2 in Table 5.3). The model from the previous chapter that includes only the quantitative indicators of existential security is included as Model 1.

Table 5.3: Models Predicting Percentage Non-religious; SSA omitted

	Model 1	Model 2	Model 3
<i>Percent Non-religious</i>	<i>Coeff.*</i>	<i>Coeff.*</i>	<i>Coeff.*</i>
HDI**	0.186	0.113	0.144
GINI**	-0.270	0.010	-0.066
Buddhist	--	-1.768	-3.484
Confucian	--	-2.604	-4.462
Catholic	--	5.354	2.715
Communist	--	14.212	--
Hinduism	--	-0.766	-2.128
Islamic	--	-0.785	-1.600
Jewish	--	0.186	-2.201
Japanese	--	7.206	3.928
Latin American	--	0.067	-0.728
Orthodox	--	-3.222	-5.609
Protestant	--	8.685	6.114
Buddhist – Comm.	--	--	15.403
Confucian – Comm.	--	--	33.353
Catholic – Comm.	--	--	2.823
Islamic – Comm.	--	--	15.560
Protestant – Comm.	--	--	21.257
Orthodox – Comm.	--	--	16.244
y-intercept	5.663	3.325	4.709
R ²	0.262	0.505	0.588
Adjusted R ²	0.249	0.446	0.516

* Results in **bold** font represent significance at the 0.05 level

** Variables centered for Models 2 and 3

The Sub-Saharan African zone was the omitted zone in Model 2 and the dummy variable coefficients are in reference to that zone. This model, including HDI, GINI, and cultural zones, explains 44.6% of the variation in the percentage non-religious in Subset 2. This is substantially higher than the 24.9% of the variation explained by the model without cultural designations (Model 1). In Model 2, the human development (HDI) and income inequality (GINI) variables become insignificant at the 0.05 p-value level, with the GINI value highly insignificant with a $p > t$ value of 0.921. This suggests that the cultural zones explain the variation in countries' levels of non-religiosity without the help

of the human development and income inequality variables. There is substantial variability between cultural zones in terms of the percentage non-religious. Approaching the situation from a different conceptual angle, levels of human development and income inequality are indeed clustered by cultural zones (see Figure 5.6), but the inclusion of the cultural zone variables in the analysis accounts for these effects.

Dummy variables for two cultural zones, Communist and Protestant, were statistically significant at the 0.05 level. The Communist dummy variable coefficient of 14.2 suggests that current or former Communist countries have an average percentage non-religious that is approximately 14.2 percentage points higher than the mean percentage non-religious value for Sub-Saharan African countries, net of HDI and GINI. The same interpretation can be applied to the Protestant coefficient value of 8.7. Thus, if a country is Communist or Protestant, it will on average have significantly higher non-religious percentages than the world's most religious cultural zones, the most religious being Sub-Saharan Africa. Protestant countries in Europe especially are driving the high non-religious percentage. It would be expected that the Catholic zone would be significant in this regression as it also has a high cross-national mean non-religious percentage (see Table 5.1). Although statistically insignificant, it has the fourth highest beta value behind Communist, Protestant, and HDI. In summary, the addition of cultural zones to the OLS model involving only human development and income inequality significantly increases its predictive ability. Cultural heritages, which have discernible socio-economic differences, are a major factor in accounting for non-religiosity among nation-states.

OLS Model: Classification Scheme B

This section will move the analysis one step further by exploring the underlying religious/cultural heritages of countries that experienced Communist rule. These heritages, as well as their interactions with Communism, will help explain further variations in non-religiosity. The aggregate non-religious percentage for each cultural zone is calculated after the countries in the Communist category are assigned to their specific underlying religious/cultural heritage. Categories into which Communist countries are reclassified increase in non-religiosity, with the exception of the Catholic zone. The two cultural heritages most affected by the addition of Communist countries are the Confucian and Orthodox cultures. The inclusion of China, North Korea, and Vietnam in the Confucian class increases its percentage non-religious to 42.3% as compared with 1.7% with the five non-Communist, Confucian nation-states. Twelve current or former Communist countries have Orthodox heritages, and when added to the previous set of two Orthodox countries, the non-religiosity percentage increases from 2.5% to 22.7%. The Buddhist category increased from 1.5% to 2.4%, and after adding the Communist countries with Islamic heritages, the Islamic class doubled in percentage non-religious from 1.0% to 2.2%. These drastic changes display the power of Communism to alter our perception of the regional and cultural patterns of non-religiosity.

Model 3 in Table 5.3 incorporates the second regional classification scheme by including 10 cultural zones as dummy variables, again omitting the Sub-Saharan African zone again for comparison purposes. The impact of Communism is captured in this model by creating interaction terms for each of the six regions that include current or

former Communist countries. The underlying hypothesis is that Communism deflects the trajectory of religious development in a nation for multiple reasons. The model presented here allows us to see which regions have been most affected by Communism. It also allows a geographically-sensitive understanding of Communism's impact on secularization. The Communist influence is assumed to be an additional factor to supplement the underlying religious/cultural heritage; the government-sponsored ideology takes hold in the context of the existing culture and belief system.

The adjusted R^2 value increased from a value of 0.446 in the regression without interaction terms to 0.516 in the current model with interaction terms. This indicates that over half of the variation in percentage non-religious is explained by cultural/religious classifications, interactions between Communism and these classifications, the level of human development, and the GINI coefficient. Five of the six interaction terms are significant. However, not all cultural zones and interactions are significant, and the GINI coefficient of income inequality is highly insignificant with a p-value value of 0.485. The p-value for HDI is 0.053, just missing significance at the standard of $p > 0.05$. This is in contrast to the 0.126 p-value for HDI in the regression with cultural zones that included the Communist class (Model 2). Thus, when religious heritage/majority is considered primarily, and Communism is added as an interaction, the level of human development becomes a significant predictor of non-religiosity. In the previous regression without interaction terms, the Communist classification as the cultural zone had the most influence on the results and over-shadowed all other variables.

The partial leverage plot for HDI from the Communist interaction term regression is shown in Figure 5.9 below. This plot represents the variations in HDI and percentage

non-religious that are not accounted for by any of the other independent variables in Model 3 (Table 5.3): the cultural zones, Communist interaction terms, or the GINI coefficient. The X-axis represents the variability of HDI, net of the other x-variables in the model. The Y-axis represents the variability of the percentage non-religious variable, net of all of the x-variables except HDI. This relationship has a p-value of 0.053 and has a beta-value of 0.258, moderately strong values for regression. The actual coefficient for HDI (centered) is 0.144, interpreted that for each additional 10-unit increase in HDI above the cross-national HDI mean, there will be an increase in a country's percentage non-religious of 1.44 percentage points, net of the effects of cultural zones, Communist interactions, and income inequality (GINI).

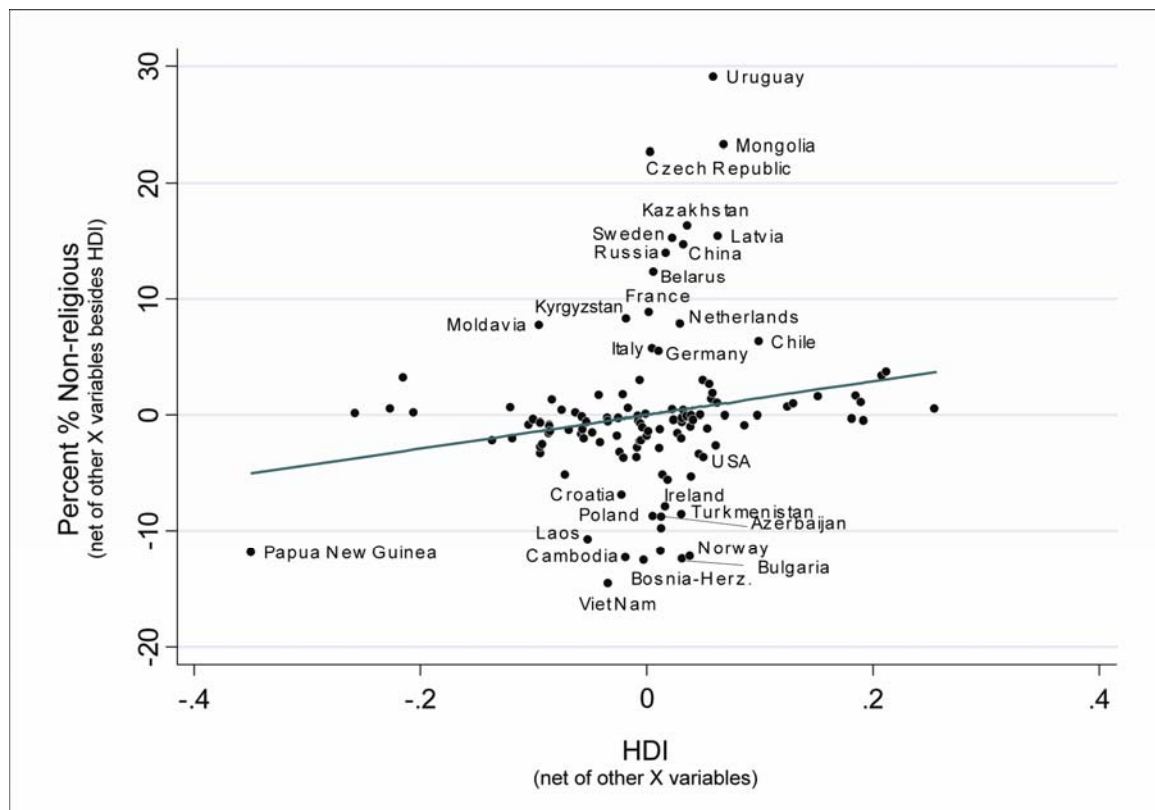


Figure 5.9: Partial leverage plot of HDI and PNR from interaction term regression

The partial leverage plot shows significant clustering around the regression line. However, there are marked outliers above and below the line. Outliers above the line represent countries with higher non-religious values than would be expected for their level of human development. Most of these are former Communist countries. Uruguay has the highest position above the line, and it is a marked outlier in the Latin American cultural zone with a non-religious percentage above 30%. Sweden also has a higher non-religious value than would be expected, as shown in Figure 5.4 as it towers above its European neighbors. Countries that fall significantly below the regression line include some current or former Communist countries also, as well as Protestant Norway and Papua New Guinea and Catholic Ireland. These Protestant and Catholic countries have lower non-religious values than would be expected for their level of human development. Thus, cultures producing non-religiosity values traditionally higher than the global, aggregated mean (such as Communist, Protestant, and Catholic) are not uniform within themselves. This again shows the inherent *variability* of non-religiosity, even within cultural zones. A more localized study would be needed to analyze these outliers to secularization theory. (The partial leverage plot for GINI from the Communist interaction term regression is not analyzed here as this variable was insignificant in the regression, and a poor relationship was shown in the graphic.)

Map of Residuals

A map of the countries' residual values from Model 3 of Table 5.3 is displayed in Figure 5.10. The countries with the smallest residual values (-3 to 3) are spread throughout the globe, including much of Latin America, Africa, and the South Pacific.

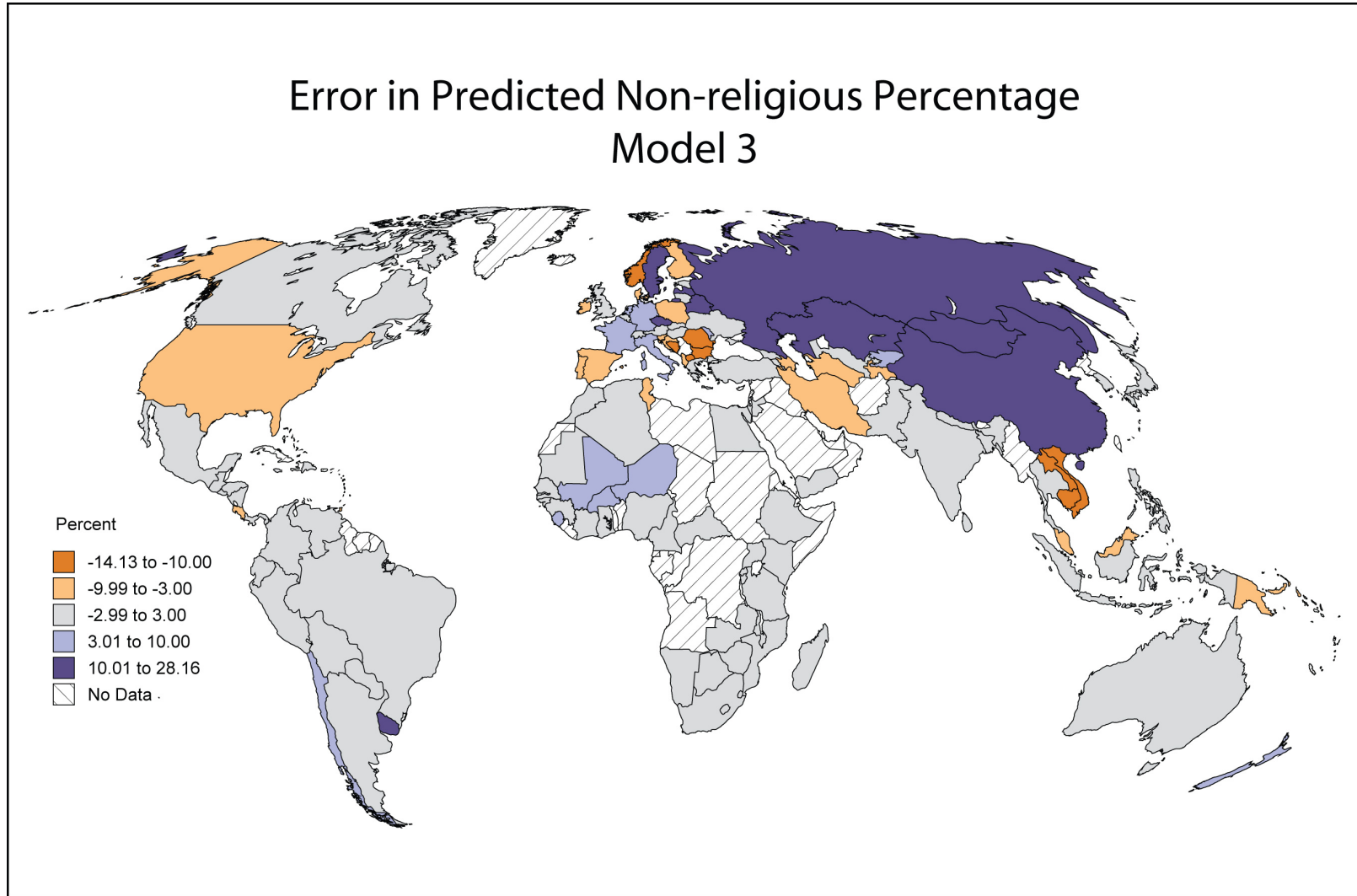


Figure 5.10: Countries' residual values Model 3

These countries have non-religious values close to those predicted by the OLS model that includes human development (HDI), income inequality (GINI), cultural classifications by religious heritage/majority, and interactions with the Communist (current or former) variable. In North America, the United States has a lower non-religious value than would be expected by the model. In Central America, Costa Rica has lower non-religious values than would be expected, while in South America Chile and Uruguay have higher non-religious values than would be expected by the regression.

In the continent of Africa, the countries Mali, Niger, Burkina Faso, and Sierra Leone all have residuals in the second highest positive category (3-10). These countries have the four lowest HDI values of the 123-country subset, and their percentage non-religious values were most likely higher than what would be predicted for that level of human development, even though it was still very low. In Southeast Asia, Laos, Vietnam, and Cambodia have significantly lower non-religious values than would be expected by the regression. This is likely because of their Communist heritage and their low non-religious values in comparison to some of the other Communist-classed countries. Turkmenistan, Tajikistan, and Azerbaijan have lower non-religious values than expected. These are Islamic countries that also fall in the former Communist category and have lower non-religious than other former or current Communist countries.

Russia and China and many adjacent current or former Communist countries have very high positive residuals, indicating that these countries have higher non-religious values than would be expected by the regression model. This is most likely, as discussed previously, because of their lower levels of human development compared to other countries with high levels of non-religiosity, such as Protestant and Catholic European

countries. However, many current or former Communist countries in Eastern Europe possess moderate to high negative residuals reflecting their decreased actual values of non-religious percentages as compared to what would be expected for the model. The level of non-religiosity is not as high for these countries that are further away from the heartland of Communism in Russia and China. Case-study analysis could reveal more about the diffusion of Communist ideology as well as other socio-political factors in these Eastern European countries.

Some Protestant countries and one Catholic country in Europe (Ireland) have lower non-religious values than would be expected by the model. They have more religiosity than would be indicated by their levels of human development and cultural factors, most likely. Other Protestant and Catholic countries in Europe have higher non-religious values than expected by the global model, and this lends support to observations and theories about the increased secularization of the area compared to other parts of the world. In summary, the countries that do not follow the predictions of the model give legitimacy to the claim that secularization theory should not be applied universally and that it is inherently variable.

Discussion

The analyses of this chapter highlight the explanatory power of cultural and religious heritages, in addition to quantitative measures of human development and income equality, in predicting levels of non-religiosity. Significant differences exist in the percentage non-religious among the 12 cultural classifications, and these are clearly visible in world maps and conceptual visualizations. The cultural zone classifications, as

defined by religious heritage or religious majority, are inherently geographic and regional. The Catholic, Japanese, and Protestant cultural zones are the most non-religious and follow the existential security model of secularization in a very clear manner. Human development is a more robust predictor of non-religiosity than income inequality, and cultural zones with lower levels of human development showed lower levels of non-religiosity. However, the addition of cultural factors to previous statistical models increases their power in explaining variations in non-religiosity. They account for the difference in HDI and GINI among nation-states and better predict levels of non-religiosity than the model with HDI and GINI alone. The interaction term model accounted for the most variation and supported the idea that the underlying religious heritage plays a major role in determining levels of non-religiosity and that the imposition of Communism occurs in the context of previous, powerful ideologies.

Not only do the cultural zone variables highlight natural clustering by human development (and, to a lesser degree, income inequality), but they provide a framework for analyzing the non-religiosity of nation-states in broader terms than quantitative socioeconomic measures. For example, Communist countries are more non-religious than would be predicted by their level of human development, and this represents a major conclusion of the chapter. The cultural zone classification in this instance provided a next step for analyzing why a group of country's exhibited certain relationships between non-religiosity and human development different from traditional theory. A second, related observation is that among non-Communist countries, the higher non-religious percentages occur only at higher levels of development, above an HDI value of

approximately 90 (see Figure 5.7). The exceptions are Chile and Uruguay, and it is proposed that this is due to previous leftist political climates, as discussed earlier.

The cultural zones in general provide a benchmark and initial starting place for analysis and can suggest more qualitative factors than socio-economic measures. For example, during an analysis of the continent of Africa, there is a separation of the nation-states into the Islamic zone and the Sub-Saharan Africa zone. Knowing the religious basis of the majority of the country, either Islamic or a mixture of multiple religions with the Sub-Saharan zone (such as Protestantism, Catholicism, Islamic, and local, indigenous religions), one can begin to theorize about the relationship of secular values to these worldviews. One can see that the direct influx of Westernized culture to the nation-state of South Africa probably plays a role in its higher non-religious percentage as compared to other nearby Sub-Saharan countries.

However, these general religious heritage categories fall short in explaining many other variations, such as the decreased non-religiosity in some Eastern European countries and the stark differences in European countries of the same Protestant or Catholic culture zones. Non-religiosity appears to take hold in varying degrees across geographic space and cultural traditions and cannot be explained completely by broad, generalized categories. Further case studies are needed as each country's social, political, and religious histories have developed with important localized factors that a macro-level analysis cannot hope to capture. But, this analysis in this chapter has significantly improved upon the findings of the previous chapter that was blind to cultural heritage effects. It is now necessary to place the results of this analysis in the broader theoretical context of the secularization debate and its cultural critique.

6. Conclusions and Implications

This study attempts to add to the existing theoretical and empirical analyses of Norris and Inglehart's (2004) existential security theory of secularization, providing a statistical and cartographic assessment with a large, cross-national data set. The quantitative measure, the percentage of a country's population that is non-religious or atheist, is used to represent secularization. The investigation examines existential security theory (Norris and Inglehart, 2004) using nationally-aggregated data in a more culturally-bound context. The initial regression model shows statistically significant relationships between the percentage of a country's population that is non-religious and high levels human development and low levels of income inequality. Visually, the distribution of secularization appears to follow fairly predictable patterns. Stark (1999, p.253), a rational-choice theorist discrediting secularization theory and its predictions for the reduction in the demand for religion over time, states, as quoted in Ch.2, "Many scholars appear to believe that if rates of individual religious belief and participation for most nations of northern and western Europe were graphed, they would be reciprocal to the trends in modernization." Stark disagrees with this assessment, but in a general sense, the results of the current study show that Europe and countries from other regions of the world do follow this trend. There is a certain level of *coherence* with existential security theory in that many countries show a positive relationship between modernity, as measured by indicators of existential security, and secularization. The non-Communist countries with high non-religious percentages of their populations have relatively high

levels of development compared to the rest of the global sample. Also, cultural zones show unique behavior in terms of levels of secularization and human development.

However, significant *variability* in levels of secularization is present. The addition of cultural zones to the regression model significantly improves the results, with over 50% of the variation in the percentage non-religious variable explained (Model 2). The regression model with only HDI and GINI explains 25% of the cross-national variations in the percentage non-religious variable. A general trend is apparent, but the overall results and outliers indicate that another factor is missing from the analysis. Improving upon Model 2, the interaction term model (Model 3) displays the influence of the underlying religious/cultural heritage present in a country that has or is experiencing Communism. This model explained the most variation in non-religiosity and reflects the complex relationships between religious tradition and new ideologies.

These culturally-based models along with the cartographical analysis of significant outliers illustrate the weakness of existential security theory to deal with global variability. Levels of human development and income inequality do not tell the entire the story. The study captures the inherent *variability* in global secularization in addition to levels of *coherence* as described above. There is variability in terms of levels of secularization among countries within similar economic or cultural classifications. Also, the concept of variability also encompasses the outliers to either existential security theory or the final regression model of Chapter 5 that included existential security indicators as well as cultural zones. The cultural classifications serve as a useful framework for explaining more of the variation in non-religiosity, a much-needed qualitative factor, and a starting framework for future investigation.

In studying cultural heritage, the most significant effects on secularization were related to Communism. The secularization debate in the literature has focused on either modernization (classic theory) or pluralism (rational choice theory) but does not pay as much attention to the role of Communist and Marxist ideology. Whether this lack of interest is from the obvious nature of phenomenon (Communism has an irreligious framework) or other reasons, state-sponsored rejection of religion should play more of a factor in global secularization analyses. Current or former Communist countries have much larger non-religious percentages than any other countries and have substantially lower levels of development than other relatively highly secularized nations. Empirically, the presence of Communism dominates the results and has strong effects on existing religious traditions. The legacy of this ideology must be considered when attempting to study the uneven geographic relationship between secularization and modernization.

Two issues remain as worthy of additional analysis. The first consideration is a call for further case studies (qualitative and quantitative) to complement and enhance cartographic and statistical analysis. The final regression model of the current study takes into account two socio-economic measures accounting for existential security theory, cultural heritage, and the impact of Communism by using interaction terms. After these considerations, there are still multiple countries that do not follow the trends of the model. The countries that lie outside the predictive capability of the model highlight the variation of culture and the need to dive into deeper, case-specific analyses, recognizing the limits of global, cultural theories.

Main areas for investigation for case studies are variations within cultures themselves, especially Protestant, Catholic, and current and former Communist countries. Though as a whole they exhibit unique patterns of behavior as compared to other regions of the globe (i.e., certain levels of increased non-religiosity), there is significant variation within these zones. Countries that sit side-by-side and have a similar religious heritage show markedly different levels of non-religiosity. This observation is partially a result of the generalizing natures of the cultural classifications themselves; other powerful religious and ideological factors are at play in a country that is classified as ‘Catholic’ for example. Second, the varied human experiences and social influences relating to spirituality will never be adequately captured in a regression model or a static visualization. Additional case-study analyses of outliers within cultural zones and outliers to the global model can shed some additional light and promise rich returns. Intricacies of the human condition are further understood by data that both conforms to and varies from expectations. The scale of the current study produces an analysis with sweeping predictions and simplifications and deviant cases should be considered as ‘outliers’ to theory and regressions, but also as very meaningful cases in regards to human nature, society, and the secularization debate. The current study is limited in that it cannot speak to religious passion, devotion, or personal adherence that survey responses could address. However, considering the large scale of the current analysis and of over-arching secularization theories, the current methods and dataset are highly sufficient.

The second issue for further analysis is a time factor. Much of the classic secularization theory speaks of the march of modernization and its accompanying

increases in non-religiosity. The current study provides a snapshot of socio-economic measures and religiosity for the early 21st Century. Relevant future analyses could include the investigation of non-religious percentages for previous time periods and their relationships to socio-economic variables. Also, investigations can be continued concerning scholars' findings of continued increases in religiosity in former Communist countries. Or, the continued work of global surveys and religious statistics may shed light on religious resurgence or decline in the future. Data from Europe may continue to support classic secularization theory and data from the U.S. and other countries may continue support the new paradigm of rational choice theory (increased religiosity with more competition and less religious regulation.) Or, a cyclical model (Duke and Johnson, 1989) may be found to be at work in which religious decline will be replaced by future resurgence. In addition, the secularization story is less clear in regions without traditionally strong religious research, such as Africa, the Middle East, Southeast Asia, and to some regards, Latin America. These are areas where human development is continuing to increase and will be ripe for evaluating the claims put forward by secularization theorists. Non-Western areas are reportedly clinging to traditional values in the wake of modernization (Huntington, 1996), and if one decides to define secularization as a 'Western' idea, the march of secularization side-by-side with modernization may need to be re-evaluated. True, according to the current analysis, the cultural zones show significant correlations between modernization and secularization. But, this is reflective of the current point in time, and one must be extremely cautious of extrapolating that trend to non-Western societies with very different histories and socio-political experiences. A geographic approach that considers distribution, local and global

factors, and both the variability and coherence of secularization can be adopted to explore future religious trends.

The current study solidifies the need for a more geographic and culturally-sensitive approach to secularization. Religion plays a very pertinent role in international affairs in the early 21st Century, and an understanding of secularization can aid in understanding global culture. Secularization, itself relating to various aspects of religiosity such as participation, attitudes, and institutions, is an incredibly broad unit for analysis. Scholars of secularization have argued through the years as they study different areas using different methodologies over different time periods. Using the concept of religious identification, the current study finds some empirical support for the importance of existential security in non-Communist countries. Even so, this is not the case for all countries, and a consideration of a country's cultural, social, and religious context, especially Communism, helps to further explain secularization trends and geographic variability.

References

- Asad, Talal. 2003. *Formations of the secular: Christianity, Islam, modernity*. Stanford, CA: Stanford University Press.
- Barrett, David B., ed. 1982. *World Christian Encyclopedia*. Nairobi: Oxford University Press.
- Barrett, David B., and Todd M. Johnson. 2001. *World Christian Trends*. Pasadena, CA: William Carey Library Publishers.
- Barrett, David B., George T. Kurian, and Todd M. Johnson. 2001. *World Christian Encyclopedia: A Survey of Churches and Religions in the Modern World*. Oxford: Oxford University Press.
- . 2006. *World Christian Database*: Breuer and Co.
- Berger, Peter L. 1967. *The Sacred Canopy: Elements of a Sociological Theory of Religion*. New York: Anchor Books.
- . 1997. "Epistemological modesty." *Christian Century* 114:972-975, 978.
- . 1999. *The Desecularization of the World: Resurgent Religion and World Politics*. Grand Rapids, MI: Wm. B. Eerdmans.
- . 2001. "Reflections on the Sociology of Religion Today." *Sociology of Religion* 62 (4):443-454.
- Boiter, Albert. 1980. *Religion in the Soviet Union, The Washington Papers, VIII, 8*. Beverly Hills: Sage.
- Borowik, Irena. 2002. "Between orthodoxy and eclecticism: On the religious transformations of Russia, Belarus and Ukraine." *Social Compass* 49 (4):497-508.
- Brook, S. 1979. "Ethnic, racial and religious structure of the world population." *Population and Development Review* 5 (3):505-534.
- Bruce, Steve. 2001. "Christianity in Britain, R.I.P." *Sociology of Religion* 62 (2):191-203.
- Casanova, Jose. 1994. *Public Religions in the Modern World*. Chicago: Chicago Univ. Press.
- . 2003. Beyond European and American exceptionalisms: towards a global perspective. In *Predicting Religion: Christian, Secular and Alternative Futures*, edited by G. Davie, P. Heelas and L. Woodhead. Burlington, VT: Ashgate.

- Chaves, Mark, and Philip S. Gorski. 2001. "Religious Pluralism and Religious Participation." *Annual Review of Sociology* 27:261-281.
- deBlij, H.J., and P.O. Miller. 1986. *Human Geography; Culture, Society and Space*. New York: Wiley.
- Duke, James T., and Barry L. Johnson. 1989. "The Stages of Religious Transformation: A Study of 200 Nations." *Review of Religious Research* 30 (3).
- Durkheim, Emile. 1995 [1915]. *The Elementary Forms of Religious Life*. Translated by K. E. Fields. New York: The Free Press.
- Finke, Roger, and Lawrence R. Iannaccone. 1993. "The illusion of shifting demand: supply-side explanations for trends and change in the American religious market place." *Annals of the American Association of Political and Social Science* 527:27-39.
- Froese, Paul. 2001. "Hungary for religion: a supply-side interpretation of Hungarian religious revival." *Journal for the Scientific Study of Religion* 40 (2):251-268.
- . 2004. "Forced secularization in Soviet Russia: why an atheistic monopoly failed." *Journal for the Scientific Study of Religion* 43 (1):35-50.
- Froese, Paul, and S. Pfaff. 2001. "Replete and desolate markets: Poland, East Germany, and the new religious paradigm." *Social Forces* 80 (2):481-507.
- Gaustad, E.S., and P.L. Barlow. 2001. *New Historical Atlas of Religion in America*. New York: Oxford University Press.
- Gay, J. 1971. *Geography of Religion in England*. London: Duckworth.
- Greeley, Andrew M. 1994. "A religious revival in Russia?" *Journal for the Scientific Study of Religion* 33 (3):253-272.
- . 2003. *Religion in Europe at the End of the Second Millennium*. New Brunswick, NJ: Transaction Publishers.
- Herbert, David. 2003. *Religion and Civil Society: Rethinking Public Religion in the Contemporary World*. Burlington, VT: Ashgate.
- Hodder, Rupert. 2000. *Development Geography*. New York: Routledge.
- Huntington, Samuel P. 1996. *The Clash of Civilizations and the Remaking of World Order*. New York: Simon & Schuster.
- Iannaccone, Lawrence R. 2002. Looking backward: a century of international religion statistics. Paper read at 2002 Meeting of the Society for the Scientific Study of Religion.

- Inglehart, Ronald, and Wayne E. Baker. 2000. "Modernization, Cultural Change, and the Persistence of Traditional Values." *American Sociological Review* 65 (1):19-51.
- Inglehart, Ronald, and Christian Welzel. 2005. *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. Cambridge: Cambridge Univ. Press.
- Ivakhiv, Adrian. 2006. "Toward a Geography of "Religion": Mapping the Distribution of an Unstable Signifier." *Annals of the Association of American Geographers* 96 (1):169-175.
- Jordan, T.G., M. Domosh, and L. Rowntree. 1997. *The Human Mosaic: A Thematic Introduction to Cultural Geography*. 7th ed. New York, NY: Addison Wesley Longman, Inc.
- Jordan, T.G., and L. Rowntree. 1990. *The Human Mosaic; a Thematic Introduction to Cultural Geography*. New York: Harper and Row.
- Kuran, T. 1995. *Private truths, public lies*. Cambridge: Harvard University Press.
- Ley, D.F. 2002. "Mapping the Metaphysical, Plotting the Pious: Assessing Four New Atlases of Religion." *Church History* 71:143-151.
- Martin, David. 2003. On secularization and its prediction: a self-examination. In *Predicting Religion: Christian, Secular, and Alternative Futures*, edited by G. Davie, P. Heelas and L. Woodhead. Burlington, VT: Ashgate.
- McCleary, Rachel M., and Robert J. Barro. 2006. "Religion and Political Economy in an International Panel." *Journal for the Scientific Study of Religion* 45 (2):149-175.
- McClymond, Michael J. 2002. "Making Sense of the Census, or, What 1,999,563,838 Christians Might Mean for the Study of Religion." *Journal of the American Academy of Religion* 70 (4):875-890.
- Melleuish, Gregory. 2005. "Globalised Religions for a Globalised World." *Policy* 21 (2):16-20.
- Moghadam, Assaf. 2003. A global resurgence of religion? Working Paper #03-03. Weatherhead Center for International Affairs, Harvard University. <http://www.wcfia.harvard.edu> (Accessed 01 Nov., 2005).
- Murray, Warwick E. 2006. *Geographies of Globalization*. New York: Routledge.
- Myrdal, Gunnar. 1971. *Asian Drama*. New York: Pantheon.
- Norris, Pippa, and Ronald Inglehart. 2004. *Sacred and Secular: Religion and Politics Worldwide*. Cambridge: Cambridge Univ. Press.

- Opocensky, Milan. 2004. "Theology between yesterday and tomorrow." *Religion in Eastern Europe* 24 (1):5-18.
- Pacione, Michael. 2005. "The Geography of Religious Affiliation in Scotland." *The Professional Geographer* 57 (2):235-255.
- Park, Chris C. 1994. *Sacred Worlds: An Introduction to Geography and Religion*. New York: Routledge.
- Perrin, R.D. 1989. "American religion in the post-Aquarian age; values and demographic factors in church growth and decline." *Journal for the Scientific Study of Religion* 28:75-89.
- Pospielovsky, D. 1987. *A history of Soviet atheism in theory and practice, and the true believer*. New York: St. Martin's Press.
- Proctor, James. 2006. "Introduction: Theorizing and Studying Religion." *Annals of the Association of American Geographers* 96 (1):165-168.
- Radic, Radmila. 1999. "The Proselytizing Nature of Marxism-Leninism." *Journal of Ecumenical Studies* 36 (1):80-94.
- Stark, Rodney. 1999. "Secularization, R.I.P." *Sociology of Religion* 60 (3):249-273.
- Stark, Rodney, and Roger Finke. 2000. *Acts of Faith: Explaining the Human Side of Religion*. Los Angeles, CA: University of California Press.
- Swatos, W. 1994. *Politics and religion in central and eastern Europe*. London: Praeger.
- The World Bank. 2006. *World Development Indicators*. Washington, D.C.: The World Bank. <http://devdata.worldbank.org/wdi2006/contents/index2.htm> (Accessed 4 June, 2006).
- Todaro, Michael P. 1989. *Economic Development in the Third World*. White Plains, NY: Longman.
- Tuan, Y.F. 1976. "Humanistic geography." *Annals of the Association of American Geographers* 66:266-76.
- United Nations. 2005. *Human Development Report 2005*. New York: United Nations Development Program.
- Vasquez, Manuel A., and Marie F. Marquardt. 2003. *Globalizing the Sacred: Religion across the Americas*. New Brunswick: Rutgers University Press.
- Weber, Max. 1993 [1922]. *The Sociology of Religion*. Boston: Beacon Press.