

ABSTRACT

In the Shadow of Death: Insecurity and Miracles in Latin America

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The difference between a miracle and luck relies on the interpretation of events. Existential threat theories would predict religious experiences are not necessarily related to individual education or income, but rather the economic and political stability that often accompanies modernization. Even in modern nations, those who experience threats to their existence are thought more likely to experience miracles. I investigate the prevalence of miracles in Latin American using a 2013 Pew survey of religious beliefs and experiences. Looking at 15,400 respondents from 16 separate countries, I analyze the extent to which experiencing miracles is correlated with education, SES, financial insecurity, cultural traditionalism, and several religious variables. I find education and SES have little correlation with the number of miracles experienced, financial insecurity is positively correlated with experiencing miracles, and Protestants have more divine encounters than Catholics. This suggests that both religious socialization and existential threat explain why individuals experience miracles.

In the Shadow of Death: Insecurity and Miracles in Latin America

by

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A Thesis

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Submitted to the Graduate Faculty of
Baylor University in Partial Fulfillment of the
Requirements for the Degree
of
Master of Arts

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August 2018

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ACKNOWLEDGMENTS

If anything in this thesis is "excellent or praiseworthy," to quote Paul the Apostle, a good portion of the credit should go to of the members of my thesis committee, especially Dr. Paul Froese, for their valuable insights. It would be remiss of me not to mention Sharon Tate and Esmeralda Soto and the work they have done behind the scenes to make this stressful process run more smoothly. Finally, I would like to thank Baylor University, and especially the Presidential Scholarship, for helping keep the lights on and food on the table while I worked.

DEDICATION

For Fred Eschler

See you in the funny papers

CHAPTER ONE

Introduction

Religious experiences, including miracles, play a critical role in the maintenance and transmission of a religious worldview. These experiences reaffirm the existence of the divine, however the experiencer defines it (James, 1982; Stark, 2017). This re-affirmation strengthens the experiencer's metanarratives, the worldviews or paradigms by which they judge their actions and interpret the world around them (Porpora, 2001; Smith, 2009), creating a positive feedback cycle where believers experience miracles which strengthens their belief.

While the effects of religious experiences have been touched upon by many sociologists of religion, the determinants, or what specifically causes a person to have miraculous experiences, have received less attention. Partly this is due to definitional difficulties. Many sociologists focus on how religious experiences engender religious belief, but ignore the cyclical relationship between belief and experience (Taves, 2009).

The goal of this research is to understand the conditions which lead to religious experiences, specifically miracles. I will do this by first defining miraculous experiences, then applying concepts from the secularization thesis, existential threat theory, and socialization to predict what social factors are associated with miraculous experiences.

CHAPTER TWO

Literature Review

Who is most likely to experience a miracle? To answer this question, we must define the nature of religious experience and its social correlates.

The Nature of the Religious Experience

Freud famously indicated that miracles are an attempt by an undeveloped mind to understand the inexplicable happenings in the world (Freud, 1919, 1961). His explanation, which posits atypical psychology as the source of religious experience, ignores the complex relationship between religiosity and mental health in general. Evidence collected since Freud's time demonstrates that there is often a negative correlation between psychopathology and religiosity (Gartner, Larson, & Allen, 1991; Hackney & Sanders, 2003; Koenig & Larson, 2001; Schumaker, 1992; Stark, 1971).

More recently, miracles have been defined as violations of natural law performed by supernatural agents (Stark, 2017). This appears to place miracles beyond the purview of science and rationality. As such, miracles, and more broadly religious experiences, are often given separate status from other kinds of experiences when studying religion. This elevates the religious experience to a special or unique kind of interaction with a super-empirical object which determines the nature of their religious belief and practice (summarized in Taves, 2009). This elevation is best seen in *The Varieties of Religious Experience*. William James argues that religious experience of the divine, however the individual defines the term, supersedes theology and religious social structures as the core of personal religion. In his words:

Religion . . . shall mean for us the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine. (James, 1982, pp. 31)

James, and the others who claim the unique nature of spiritual experiences, tend to ignore the role religious socialization plays in creating the vocabulary and concepts used to describe experience and emotion. James' view of spiritual experiences stems from the Enlightenment ideology that humans are rational, thinking beings who reason out their empirical experiences; this perspective has not weathered extensive social psychological (Gilovich, Griffin, & Kahneman, 2002) and philosophical (Smith, 2009) critique. Instead of rationally or systematically evaluating their experiences, humans tend to operate heuristically, using mental shortcuts and biases to interpret the world around them (Gilovich et al., 2002). Religion is a powerful source of such heuristics and biases (Wilde, 2004; Williams, 1996). Religious enculturation is so persistent that even as the influence of religious organizations wane, the biases they imparted to a culture at the height of their influence echo into the next era. For instance, while the direct influence of Protestant churches on government officials and policy waned throughout Europe in the Enlightenment era, its influence on the culture of Northern Europe continued to facilitate the spread of liberal democracy. Operating unconsciously, the biases and heuristics imparted to the culture at large extended past the influence of the religion itself as an institution (Bruce, 2004; Woodberry, 2012).

Interpretation based on these socialized heuristics and biases is key to understanding religious experiences. It is not that religious experiences are distinct by their nature, but that any experience can be interpreted as religious given the proper heuristic. It is the attribution of a religious cause that makes an experience religious (Quinn, 1998; Taves, 2009).

This attribution framework explains how the same event can have such varied implications for different individuals. For instance, differing beliefs about God are crucial in

understanding how people will interpret a natural disaster; specifically, Americans who believe in a Judgmental God were more likely to say that Hurricane Katrina was the result of God punishing a sinful city (Froese & Bader, 2010). Believers with a more Benevolent God tended to think that Katrina was a natural event but that God's influence was evident in individual stories of survival and heroism (Froese & Bader, 2010). Similarly, studies of paranormal believers demonstrate the critical importance of interpretation to belief. Among Bigfoot hunters, for instance, the presence of Bigfoot is often indicated by a strong smell. When accompanied by impartial observers, however, that exact same smell is reported as being very similar to the smell of an animal carcass, something not uncommon to the great outdoors. Those that study ghosts put great stock in orbs, phenomenon rarely seen by the naked eye but often picked up by cameras. Their size and color can indicate the power and disposition of the presence, with large red orbs indicating the presence of a powerful malevolence. Of course, those familiar with photography will know that similar orbs appear when the light of a camera flash bounces off dust or rain, especially in the low light conditions conducive to ghost sightings (Bader, Mencken, & Baker, 2010). In these instances, the same phenomena result in very different lived experiences.

Experiencing miracles does not mean that believers are unable to be rational, or that they do not recognize cause and effect outside of the supernatural sphere. An example of this can be found by examining the understanding of witchcraft among the Azande people of Africa. The Azande do not ignore causation: a boy who stubs his toe, causing a cut that gets infected, does not think the stump magically grew or that the cut was actually the result of a spell and not the stump. Instead, witchcraft explains why, of all the many times he has walked the path, this time he stubbed his toe, and why, of all the many times he has had cuts that have quickly healed, this cut got infected (Evans-Pritchard & Gillies, 1976). A

miraculous healing does not mean doctors played no role, only that the patient recovered so well, there must have been more to it.

Likewise, exposure to extraordinary supernatural experiences is not limited to those inhabiting the social and cultural periphery. Most paranormalists in the United States, for instance, live regular lives, working full time and maintaining families, reserving their paranormal pursuits for their private time. Some even occupy high-paying and prestigious positions at major companies. While there are certain attributes more common among those who hold certain paranormal beliefs, they overlap so well with the general population that the only real distinguishing factor is simply their deviant beliefs, not any particular lifestyle or habits (Bader et al., 2010).

Predicting Predilections Toward the Miraculous

The attributive nature of religion is a core part of the secularization thesis. Secularization is not the idea that religious ideas and ideologies will eventually die out, as much as some non-academic proponents and opponents may protest to the contrary, but simply that fewer and fewer things of import will be attributed to religious causes. As societies modernize, their favored heuristics rely more on rational/scientific explanations accepted by the wider society than on religious explanations which are often particular to a specific faith tradition (Bruce, 2002).

The secularization thesis still faces several problems, however: the first is that it has very little predictive power outside of Western Europe (Davie, 2013). The United States is simultaneously one of the most modern and highly religious nations in the world (Putnam & Campbell, 2012). Likewise, a scan of civilizations around the world shows that not all countries “modernize” the same way: it is not a strict, identical, or linear path. While most Western European nations did become less religious as they modernized, when Japan

modernized it embraced its Shinto roots during the Meiji Ishin to distinguish itself from Western nations. Part of this process included the reinstatement of a divine emperor, as close to the opposite of religion losing its influence in the public sphere as one can get (Eisenstadt, 1994). Islam and Hindi nations have faced similar transformations, with religion gaining power in the public sphere as they try to modernize without losing their identity to Western European powers (Hefner, 1998). Likewise, the fall of state imposed atheism in the former Soviet Bloc and China shows a very clear non-linearity to the path of modernization, as the people of these states have returned to religion (Froese, 2008; Stark & Wang, 2015).

These problems with secularization led to the formation of a new theoretical approach to explaining religiosity, one that could account for falls *and* rises. Although they refer to their theory as a modified form of secularization thesis, Norris and Inglehart's proposed theory of existential threat stands much better on its own (2011). It shares the roots in attribution theory that is the basis of secularization, but instead of positing the emergence of rationality as driving the shift in attribution away from religious sources, it posits a feeling of existential security. In the relative security that a peaceful postindustrial society provides, there isn't much need for the conception of an external force maintaining reality: if the system works, there is no need to question it. Lack of security, on the other hand, increases the individual's need for a strong and benevolent external force to be at the world's rudder.

The form that force takes is not universal, however, hence the diversity of religious expression. Religious attribution requires some sort of religious context to draw from (Taves, 2009). Norris and Inglehart account for this in their work, claiming that the effects of existential security are path-dependent (2011), something affirmed by the multiple

modernity theories (Eisenstadt, 1994; Hefner, 1998). These paths are determined by the heuristics and biases mentioned above when discussing attribution theory.

Hypotheses

Secularization Hypotheses

Secularization is difficult to measure at the individual level as opposed to the nation, as many of its propositions focus on macro-level analysis of the world's economies, politics, and societies. However, there are some elements, at least as the secularization paradigm is presented by Steve Bruce (2002), that can be approximated by individual-level data. First, the larger hypothesis:

H1. Greater modernization will be associated with fewer miraculous experiences.

Looking at secularization not as the elimination of religion, but the removal of religion as a primary frame through which one views the world, this hypothesis follows definitionally. The heuristics that replace the religious mindset at the individual level, or at least facilitate that replacement, are rationality, pluralism, egalitarianism, and relativism.

H1a. Exposure to intellectual diversity, as measured by education, will be associated with fewer miraculous experiences.

Rationality is a difficult concept to measure directly with survey items. Humans are bad at analyzing how we reach conclusions: biases and heuristics function quietly and automatically, and then we attribute the end result to a more desirable process, which in the West is rationality (Haidt, 2012). However, education can serve as a proxy for rationality as Western education does impart rational heuristics. Economics and class definitely play a role in who receives an education, but once economic factors and class are controlled for we are

left with those who had an ability to succeed in school, which indicates rationality at some level.

H1b. Exposure to cultural diversity, as measured by urbanity, will be associated with fewer miraculous experiences.

Pluralism has been interpreted as the impetus driving moral relativism and a breakdown in religious exclusivity, which in turn is theorized to lead to the removal of religion as a prime source of heuristics. The realities of a pluralistic society leads to less exclusive framings of the world (Berger, 1990; Bruce, 2002). Going back one step further, a precursor to pluralism must be diversity: in a homogenous village pluralism is impossible, as there is no one to accept who is different. Urbanity might not have a direct relationship with religious attribution, but it is a good measure of the religious diversity a respondent is exposed to and therefore it is a precursor to pluralism.

H1c. More gender egalitarian beliefs, measured by questions about a wife and mother's role, will be associated with fewer miraculous experiences.

Diversity alone does not lead to pluralism: a society that does not value difference will maintain antagonistic relationships with those outside the norm. For pluralism to flourish there must also be an egalitarian impulse, or a sense that all people have value and rights regardless of differentiating factors. Specifically, questions about the role of women could offer some insight into an individual's egalitarian ideas.

H1d. Decreased moral relativism, as measured by harsher opinions about traditional social/sexual issues and by seeing science and religion as being in conflict, will be associated with more miraculous experiences.

While exposure to diversity and egalitarianism are good proxy measures, it is also important to directly examine a respondent's moral relativism when possible. This can be

done in two ways: the first is to ask if respondents take moral stances on certain issues. These stances are the antithesis of relativism. These beliefs indicate a worldview with a clear right and a clear wrong, relying upon a consistent moral ethic. These ethics are more likely to be religious, as most secular ethics in the West are strongly individualistic, precluding judgment of activities such as homosexuality that are not directly harmful to others. Likewise, if someone sees inherent conflict between two ideologies they definitionally cannot be relativistic, as they see the ideologies as being inherently at odds.

Existential Threat Hypotheses

While Norris and Inglehart mostly measure existential threat at the national level, it functions at an individual level. It is the direct threat to one's personal security that causes the desire for an ordered universe. The following general hypothesis is proposed.

H2. Greater existential threat will be associated with more miraculous experiences.

As no single acculturating force in our lives provides a complete and comprehensive understanding of the world, we are instead in our interactions forced to choose between several different cultural toolkits when deciding how to interpret events (Sewell, 2005). Religion's cultural power stems from the authoritative and comprehensive nature of its interpretations (Berger, 1990; Stark, 2017). Therefore, when selecting between the schemas available to them (see the section on socialization below), during times of threat individuals will be more likely to attribute events to religious sources in an attempt to bring conceptual order to the world around them, essentially creating a new internal security to make up for the lack of external security.

H2a: Financial threat, as measured by self-rated current and future financial distress as well as the unavailability of necessities, will be associated with more miraculous experiences.

Although Norris and Inglehart's work measure financial insecurity by looking at the rate of absolute poverty, it is possible to more directly measure a respondent's sense of threat by directly asking them about their current financial situation and their how confident they are in their future financial situation. It is also possible to ask directly if any of the necessities of life—food, clothing, and medicine—have been unavailable because of cost. These measures more directly assess how much threat an individual feels regardless of objective reality, which is a better measure of threat. Studies of the financial sector have found that changes in behavior are better predicted by simple and subjective indicators of loss than by more long-term, market tested measures (Ryan & Haslam, 2005).

H2b: Social threat, measured as respondent's lack of satisfaction with their local community and their country overall, will be associated with more miraculous experiences.

Norris and Inglehart concern themselves almost exclusively with matters of existential threat, such as economic measures or development. However, looking at Maslow's hierarchy of needs, directly above the base levels of physiology and safety are social needs (Maslow, 1943). By comparing miraculous experiences and community satisfaction, we can see how far up the hierarchy existential threat covers.

Religious Socialization

Both secularization and existential threat theories rely upon attribution to explain shifts in religiosity, but ultimately the attributions available for individuals to make will be based on their cultural context. Some even make the claim that secularism as we know it today would not be possible without Christian ideologies (Zizek & Fiennes, 2014). As such,

H3: Being religiously socialized will be associated with more miraculous experiences.

The more religion someone is exposed to as a child, the greater number of their schema will be directly or indirectly related to religion. Even if individuals are unversed in

the doctrines and dogmas of their religion, as most lay members are, the simple awareness of miracles, angels, God, and hell might change how one interprets a specific event.

H3a: Religious capital, here measured by respondent's affiliation (and its negative state, being unaffiliated), will have a great effect on the likelihood of experiencing miracles.

While placed in the socialization hypothetical family, affiliation actually operates on two fronts. The first is that religious traditions are highly correlated with certain cultural schemas, or religious social capital (Stark, 2017) some of which are doctrinal in nature and some of which are simply the result of that tradition's historical position. The second is a sort of social threat, as most Latin American countries are majority Catholic, meaning that there is a potential loss of status or security associated with non-Catholic affiliation, especially non-Christian affiliation. Either way, I would predict that religious capital as approximated by affiliation strongly predicts the likelihood of miraculous experiences.

H3b: A greater number of beliefs in supernatural aspects of religion, such as belief in sorcery or transubstantiation, will be associated with greater likelihood of experiencing miracles.

Measures of supernatural belief will directly show the number of available religious schema at a respondent's disposal. The more supernatural beliefs a respondent holds should represent a greater availability of religious schema, in turn making respondents more likely to interpret events in this frame of mind. If one does not believe that miracles are a thing that can happen, they are unlikely to describe a miraculous experience, and someone who does not believe in spirits or possession is more likely to attribute odd behavior to mental illness.

H3c: Religious behavior will be associated with greater likelihood of experiencing miracles. These behaviors include group-oriented behaviors like church attendance and participation in study groups, as well as more individual behaviors like paying tithes and fasting.

Religious behaviors measure a level of engagement with a religious framework that belief and affiliation can't get to. Behaviors require time and effort, indicating a devotion that simple belief or affiliation do not necessarily indicate. This means that those who more actively live their religion are more likely to think their religion is important and act upon its precepts, so it only makes sense they would attribute events to miraculous or holy sources.

CHAPTER THREE

Data and Analysis

Data

This research uses the Religion in Latin America (RELLA) data set collected by the Pew Research Center. This data was collected between October 2013 and February 2014 by the Princeton Survey Research Associates International in eighteen central and South American countries and one US territory: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Uruguay, and Venezuela. 30,326 in-home interviews were conducted, around 1,500 in each country (with Mexico having an oversample of interviews in southern states and the Dominican Republic, Ecuador, Puerto Rico, and Venezuela oversampling to correct for gender imbalances in the sample).

While stratified random sampling was used, in some countries remote populations (such as the interior of the Amazon states in Brazil), gated communities, or areas deemed unsafe due to conflict were not interviewed. Interviews were conducted in Spanish except in Brazil, where they were conducted in Portuguese, and Paraguay, where some interviews were conducted in Guarani. Most questions, as much as language would allow, were identically worded from country to country.

Some of the questions unique to each country were asked in such a way that their responses were incompatible. For this research project, difference in race/ethnicity measures resulted in data from Chile, Panama, and Puerto Rico being incomparable to the rest of the dataset. This, and the use of listwise deletion, resulted in a final sample of 15,400

respondents. As can be seen in Table 3.1, while not every country lost cases proportionate to the others, the absolute number of cases per country didn't drop below 800.

RELLA data and documentation is available from the Association of Religion Data Archives (ARDA), including the original survey instrument.

Table 3.1

Sample by Country

Country	Not in Sample	In Sample	Total
Argentina	1,045	467	1,512
Bolivia	810	693	1,503
Brazil	563	1,437	2,000
Colombia	777	731	1,509
Costa Rica	550	950	1,500
Dominican Republic	375	1,324	1,699
Ecuador	594	1,256	1,850
El Salvador	576	924	1,500
Guatemala	419	1,081	1,500
Mexico	430	1,070	2,000
Honduras	754	1,246	1,500
Nicaragua	557	943	1,500
Paraguay	572	932	1,504
Peru	857	643	1,500
Uruguay	779	727	1,506
Venezuela	564	976	1,540
Chile	1,504	0	1,504
Panama	1,500	0	1,500
Puerto Rico	1,700	0	1,700
Total	14,926	15,400	30,326

Methodology

For this research I conducted two nested regressions. The first is a logistic regression looking at who experiences miracles, while the second, an OLS model, looks at how many different types of religious experiences respondents report. The logistic model regressed a variable indicating whether or not a respondent had experienced a miracle on demographic variables, secularization measures, existential threat measures, and socialization

measures. The OLS model regressed a variable indicating how many types of miracles a respondent had experienced on the same four categories. Descriptive statistics for these variables are included in Table 3.2.

Key Independent Variables

RELLA respondents were explicitly asked if they ever had the following religious experiences: experienced or witnessed a divine healing of an illness or injury, given or interpreted prophecy, received a direct revelation from God, experienced or witnessed the devil or evil spirits being driven out of a person, or spoken or prayed in tongues. It should be noted that despite the association between speaking in tongues and Pentecostalism (indeed, Pentecostal Protestants are by far the most likely to have reported it), in preliminary models looking at predictors of each type of miracle independently they functioned similarly to each other. These responses were coded into two variables: the first is a variable indicating the respondent had answered yes to any of the above-mentioned miracles, the second an additive measure counting how many types of miracles respondents reported experiencing. It is important to point out that this second variable does not measure frequency of miraculous experiences, but simply variety experienced.

A note on terminology: according to the typology of religious experiences proposed by Rodney Stark in *Why God* (Stark, 2017), these experiences are not all actually miracles: Stark distinguishes a revelatory experience, a direct communication with a supernatural being, as being a stronger, more transformative experience than a miracle, an interventional violation of natural law. However, in my research I did not find that revelations behaved differently enough from the other miracles to be treated separately: for simplicity's sake, all of these experiences are referred to as miracles in this piece.

Table 3.2

Summary Statistics

Variable	Have Not Experienced a Miracle Mean/%	Have Experienced a Miracle Mean/%	Total Sample Mean/%	Min	Max
Number of Miracles Experienced	N/A	2.13	1.14	0	5
Demographics					
Female	48.30%	54.32%	51.51%		
Age	41.11	42.55	41.88	18	95
Race					
White/Mestizo	82.80%	72.56%	77.33%		
Black	5.39%	9.17%	7.41%		
Indigenous	9.60%	12.57%	11.12%		
Other	2.20%	5.70%	4.07%		
Income Quartile	2.31	2.19	2.25	1	4
Marital Status					
Married	39.98%	41.45%	40.77%		
Living with Partner	21.62%	21.25%	21.42%		
Divorced	3.22%	3.51%	3.38%		
Separated	7.35%	9.94%	8.73%		
Widowed	5.23%	6.01%	5.64%		
Never Married	22.61%	17.83%	20.05%		
Secularization					
Education					
Less than Primary	12.53%	21.75%	17.45%		
Completed Primary	38.79%	37.98%	37.82%		
Completed Secondary	39.09%	33.16%	35.92%		
University Degree	9.59%	8.11%	8.80%		
Urbanity					
Urban	72.51%	70.07%	71.21%		
Rural	25.76%	29.29%	27.64%		
Semi-Urban	1.73%	0.64%	1.15%		
Social and Sexual Beliefs Scale	4.74	5.67	5.23	0	8
Wife's Subservience	1.52	1.93	1.75	0	3
Mother Responsible for Children	4.93%	4.52%	4.71%		
Believes Science and Religion Conflict	51.31%	59.66%	55.77%		

(continued)

Variable	Have Not Experienced a Miracle Mean/%	Have Experienced a Miracle Mean/%	Total Sample Mean/%	Min	Max
Existential Threat					
Personal Economic Situation	1.77	1.63	1.70	0	3
Financial Unease	3.10	3.14	3.12	0	4
Availability of Necessities Scale	1.17	1.55	1.37	0	3
Community Satisfaction	2.27	2.28	2.28	0	3
Satisfied with Country's Direction	34.21%	31.70%	32.87%		
Religious Socialization					
Affiliation					
Non-Pentecostal Catholic	44.77%	26.30%	34.91%		
Pentecostal Catholic	31.93%	29.44%	30.60%		
Non-Pentecostal Protestant	4.14%	11.44%	8.04%		
Pentecostal Protestant	4.34%	23.50%	14.57%		
Other	3.01%	3.36%	3.19%		
Unaffiliated Since Childhood	4.45%	1.45%	2.84%		
Recently Unaffiliated	7.36%	4.51%	5.84%		
Does Not Believe in Evolution	36.19%	45.33%	41.07%		
Supernatural Beliefs Scale	.33	.40	.37	0	1
Group Behavior Scale	-0.22	0.36	0.09	-1.72	1.63
Tithes	21.10%	45.93%	34.36%		
Fasts	25.38%	48.02%	37.47%		
N	7,174	8,226	15,400		

Demographics

Race and gender are theoretically foundational in sociology, and as such are measured in this analysis. Age also is theoretically salient when studying religion, as regardless of the theoretical perspective taken on religious change (Bruce, 2002; Davie, 2013;

Norris & Inglehart, 2011; Stark, 2017), it is agreed upon that different generations experience religion differently (Bengtson, 2013), even if they disagree on the details.

As gender and age were the simplest variables, allow me to start with them.

Respondents were asked if they were male or female, I recoded their responses into an indicator variable, with 1 indicating female. Age was measured by asking respondents how old they were at their last birthday and was coded continuously with a cap at 95 years old.

Race was one of the few variables that used measures specific to each country. The largest difference was countries included multiple indigenous groups not found in other countries, however there were other differences between racial coding schemes, for example several countries split black and mulatto into separate categories. Other countries took poor advantage of their "other" category: Argentina specified out Asian respondents despite their only being 8 in their sample of 1,360 respondents.

Two countries and Puerto Rico had differences that could not be reconciled, and so they were dropped from the data. In Chile, the race question was replaced with one about indigenous ethnicity; Panama only asked if respondents were indigenous, of African descent, or other; and in Puerto Rico respondents were asked about nationality. In the remaining countries, over 90% responded as white, mestizo (a racial group somewhat unique to Latin American countries descended from unions between colonizing white Europeans and indigenous Americans), black, mulatto, or indigenous.

I created a series of indicators recoding the individual country responses into categories for black (including mulatto respondents in countries that made the distinction), and indigenous respondents. Dealing with mestizo respondents created some difficulty as 4 countries, Columbia, Costa Rica, the Dominican Republic, and Guatemala, did not differentiate between white and mestizo respondents. I considered dropping these

countries, however regressions that distinguished between white and mestizo respondents showed no statistical difference between the groups when regressing them on the key variables, and so for all countries whites and mestizos were coded together into one indicator variable. Finally, all other responses were coded as other.

Class was approximated using two measures: income and marital status. Education is also an indicator of class, but is measured as part of the secularization tests. The role of marital status as a proxy for class is somewhat unique to Latin America. Where cohabitation inside the United States is relatively uncommon, with most respondents either living alone or getting married, in Latin America there is a tradition of cohabitation, with nuptials being divided into formal marriages encouraged by the upper class and consensual unions often taking the place of marriage among the poor since the colonial era (Carlos & Sellers, 1972; Heaton, Forste, & Otterstrom, 2002; Martín, 2002). This difference in cohabitation patterns is clearly seen by comparing RELLA data to the 2014 General Social Survey (GSS). Only 8% of GSS respondents reported being unmarried with a cohabitating partner (NORC, 2014) compared to 21% of RELLA respondents in the sample (see Table 3.2).

Income was asked in each individual country's currency. I recoded all income variables into quartiles, which would allow direct comparison between countries and also speak somewhat to parity, as those coded into the 1st quartile in each country would be poorest in their country regardless of relative strength of their income. One problem that this coding scheme runs into is some countries have incredible wealth disparity. For example, in the Dominican Republic 74% of respondents fall into the lowest possible income category. In these situations, respondents were coded into the lowest income bracket available, so three quarters of Dominicans are coded as 1st quartile and the last

quarter are coded as 4th quartile. This created an ordinal variable running from 1 to 4 for each country.

Marital status was divided into six groups: married, living with a partner, divorced, separated, widowed, and never married. These groups were identical in every country and therefore I simply created indicator variables to measure them.

Every model controls for each country included in the final sample, Argentina, Bolivia, Brazil, Columbia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Mexico, Paraguay, Peru, Uruguay, and Venezuela. Mexico was chosen as the reference group because it has the lowest proportion of respondents who have claimed to experience a miracle (only 31% of the final sample).

Secularization

Education variables varied largely due to differences in school systems. Several countries split their secondary education into preparatory schools and technical programs, for instance, others distinguished between different types of postsecondary education. However, unlike income and race, there were still easily identified universal cutoffs: those who had not completed a primary education, those who had only a primary education, those who had completed a secondary education, and those who had a university degree, for which I created indicator variables. I would have liked to code for other forms of postsecondary education, or at least for those who had started but not finished a postsecondary education, however data collection was not precise enough in every country to allow for this.

The urbanity of the respondent's residence is used as a proxy for the diversity they are exposed to. Urbanity was recorded by the surveyors themselves during data collection and was not asked of respondents. When generating their sample, locations were rated as

urban, semi-urban, and rural. I have generated indicator variables for each of these responses.

Several measures look at the respondent's religiosity. The first measure is based on a series of questions asking if certain behaviors were morally acceptable, morally wrong, not a moral issue, or their morality depends on the situation (this last one was not read to respondents, but recorded if they volunteered it). The behaviors were divorce, using contraceptives, drinking alcohol, suicide, having an abortion, prostitution, sex outside marriage, and homosexual behaviors. For each of these behaviors, an indicator variable was created for believing it to be morally wrong. These indicator variables were added together into a summative scale of traditional social and sexual beliefs ($\alpha=0.76$). The second question asked if respondents thought there was generally a conflict between science and religion. Those who believed there was a conflict I coded as a 1, and those who did not I coded as 0.

As a special note, when studying religion in the United States, Biblical literalism and inerrancy is a strong predictor of attitudes, beliefs, and behavior (Bartkowski, 1996; Boone, 1989; Hoffmann & Bartkowski, 2008; Malley, 2004). However, the measure of Biblical literalism available in the RELLA data, a combined measure asking first if respondents believe the Bible is the word of God or written by men and is not the word of God then, if they answered it is the word of God, asking if they believe it is to be taken literally, word for word, or not, was not significant in any model that included the variable measuring a belief in the conflict between religion and science, indicating that this measure of Biblical literalism said more about their stance on this issue than their actual belief. Because of this, Biblical literalism was left out of the models and this belief in the conflict between science and religion left in.

The next two measures looked at egalitarian perspectives towards family roles. The first asks respondents to agree or disagree with the statement "A wife must always obey her husband." I reverse coded this so that 0 was completely disagree, 1 was mostly disagree, 2 was mostly agree, and 3 was completely agree. The second asked respondent who should have the greater responsibility for raising children, the mother, the father, both equally, or parents and extended family (the last of which was not read, but recorded if respondents volunteered it). This was recoded into an indicator variable with a 1 indicating a response that the mother should have the greater responsibility for raising children.

Existential Threat

Financial threat was measured using three variables. The first is a self-evaluation of the respondent's personal economic situation: they were asked to describe it as very good, somewhat good, somewhat bad, and very bad. This was reverse coded so that 0 was very bad and 3 was very good. The second is a measure of the availability of necessities. Respondents were asked if over the past year they had ever not had enough money to buy food, pay for medical and health care, or buy clothing their family needed. These responses were recoded so that a yes response was a 1 and a no response was a zero, then added together to form an additive scale ($\alpha=0.89$) with 0 representing having money for all three necessities and 3 representing not having money for all three necessities at some point over the last year. The final measure looked at their financial unease: over the next five years, did they expect their personal economic situation to improve a lot, improve a little, remain the same, worsen a little, or worsen a lot., measured from 1 (improve a lot) to 5 (worsen a lot).

The first measure of social existentialism is the respondent's community satisfaction: respondents were asked if they would rate their community as a very good, somewhat good, somewhat bad, or very bad place to live: this was coded with 0 being very bad and 3 being

very good. The second measure was satisfaction with the way things are going in their country, measured with responses of satisfied or dissatisfied and recoded into a variable indicating satisfaction. These variables serve as a sort of proxy measure, as previous research has shown community satisfaction to be linked to economic conditions, social integration, and general quality of life (Filkins, Allen, & Cordes, 2000).

Religious Socialization

The final battery of questions looks at the religiosity of respondents as approximated by belonging, belief, and behavior. Belonging is measured using the respondent's religious affiliation. Respondents were initially asked an open-ended question, "What is your present religion, if any?" However, Pew decided that in order to prevent respondents being identified by their religious affiliation combined with other variables in the dataset, it would be in the best interests of respondents to recode responses into four major categories: Roman Catholic, Protestant/Evangelical, other religion, and unaffiliated. While this last category includes atheists, it should be noted that this is in fact a minority: of the 1,319 unaffiliated respondents, only 232 indicated they did not believe in God.

A potential concern with Pew's recoding is its collapsing of Evangelical and non-Evangelical Protestants into the same category: there is a large corpus of research showing that these groups behave differently, hence the discrimination between the two groups in RELTRAD, the standard measure of religious affiliation in modern religious research (Steensland et al., 2000). However, the rise of Pentecostal and Charismatic Christians in Latin America (Allen, 2006) allows us to approximate this divide by using separate variables from RELLA which asked Christian respondents if they described themselves as Pentecostal or Charismatic.

There is also some previous literature on the unaffiliated that shows it is a category in flux, with many transitioning into and out of affiliation during their lives (Baker & Smith, 2015; Bengtson, 2013; Putnam & Campbell, 2012). This is the case in the RELLA data, where 899 of the 1,337 unaffiliated respondents had been born into a religious affiliation and since disaffiliated. It should be noted childhood affiliation is available for all respondents, but there is no way to differentiate Pentecostal and non-Pentecostal Christians in the childhood religion measure, so there is not parity between categories like there is for the unaffiliated. We would expect those who were raised in a religion to have different access to religious capital, and as such the unaffiliated have been divided into those raised unaffiliated and those who disaffiliated since childhood. These variables were combined to create a new affiliation variable indicating non-Pentecostal/Charismatic Catholics, Catholics who self-identify as Pentecostal/Charismatic, non-Pentecostal/Charismatic Evangelicals, Pentecostal/Charismatic Evangelicals, religious others, religiously unaffiliated since childhood, and the recently unaffiliated.

A note that should be made here is that one's relationship to their religious affiliation may also have an affect here: for instance, those in greater tension with their specific denomination would likely behave differently than a devout follower for several reasons covered by the several theories listed here. However, due to the unspecific nature of the religious affiliation coding, measuring this tension would only be possible with Catholics, and so tension was not analyzed.

RELLA contained quite a few measures of religious belief: several of them duplicated items covered by other measures in the scale of traditional social and sexual beliefs mentioned above. Supernatural beliefs were covered by a series of questions asking if respondents believed in God, in the evil eye or other curses, in communication with spirits,

in Heaven, in Hell, in reincarnation, in magic/sorcery/witchcraft, in Angels, in Miracles, in astrology, that Jesus will return during their lifetimes, or that in communion the bread and wine actually become the body and blood of Christ. Beliefs that were religion specific, including those regarding the second coming of Christ, transubstantiation, Heaven, and Hell, were excluded from the model. Likewise, belief in God was so ubiquitous that it was removed. Finally, because this data is cross-sectional it would be impossible to suss out the causal order between belief in miracles and experiencing miracles, this belief was dropped. The remaining uncommon supernatural beliefs, named such because they are held by less than half the population, were turned into indicator variables, with a 1 indicating an affirmative answer, then added together and divided by the total number of items the respondent answered to form a scale indicating the proportion of affirmative answers they gave ($\alpha=0.63$). An additional question on belief was included. Respondents were asked which statement, "Humans and other living things have evolved over time," or "Humans and other living things have existed in their present form since the beginning of time," best represented their view on evolution. I have coded this question into an indicator so that the anti-evolutionary response, that humans and other living things have always held their present form, is a 1.

Behaviors were grouped into two categories: group behaviors, including a measure of church attendance (ranging from 0=never and 5=more than once a week), participation in prayer or scripture study groups (ranging from 0=never to 4=at least once a week), how often the respondent shared their faith or views on God with people outside their religion (ranging from 0=never to 4=at least once a week), and how often they visited the sick and needy (ranging from 0=never to 4=at least once a week). These group oriented behaviors,

which should indicate a sort of integration and security that should contraindicate the need for miracles, were standardized and measured as a single scale ($\alpha=0.80$).

The second group, individual behaviors, were measured independently through two variables which asked whether or not respondents tithe or fast. Both were reported as yes or no questions and recoded into indicator variables with a 1 indicating they do participate in these behaviors.

CHAPTER FOUR

Results and Discussion

Results

First, let's begin by analyzing the OLS models. Looking to Table 4.1, we can see that in the first model many of these demographic factors remain significant. Women experience more miracles than men, black and indigenous respondents were more likely to experience miracles than white/mestizo respondents, and aging is associated with a slight increase in miraculous experience. On the other hand, an increase in one's income quartile is associated with a decrease in miraculous experience.

Surprisingly, married people, who should be the most secure group, both from the standpoint of social integration and from the unique class implications of marriage in Latin America, are the most likely to experience miracles (although divorced respondents aren't significantly different). This may have something to do with only the most religiously devoted getting married.

The addition of secularization models causes age, income, and marital separation to drop out of the model. Income is likely an approximate of education and rurality, and the effects of age and marital status appear to be connected to traditional social-sexual and gender beliefs.

Of these new variables, it appears living in semi-urban environments has no impact on miraculous experiences, though this lack of significance could be because there are only 177 semi-urban respondents. Compared to rural respondents, however, urban respondents are *more* likely to experience a miracle, the opposite of what the secularization thesis would

predict. Traditional social sexual beliefs, belief in a wife's subservience to her husband, and believing there is conflict between science and religion are all associated with increases in miraculous experiences, believing the mother bears sole responsibility for children is not.

Model 3 added in existential threat variables. While most variables already in the model were not affected in terms of statistical significance or size of effect, the exceptions are interesting. First, it appears the effect of being indigenous as opposed to white/mestizo has little to do with a racial difference and more to do with the financial difficulties experienced by that ethnic group, as existential threat variables caused being indigenous to lose its effect. Also, while educational attainment below a secondary education still has no effect, having a university degree is associated with more miraculous experiences in this model, not less, again contraindicating the secularization thesis.

The existential threat variables paint an interesting portrait: there appears to be something immediate about the effects of financial insecurity. A better self-perceived economic situation and the unavailability of necessities are both associated with greater miraculous experiences, but unease about one's financial future has no effect. It also appears that community and country satisfaction have no effect.

The religious socialization measures, as was expected, had a powerful effect on the rest of the model. The inclusion of religious controls caused womanhood to drop out of the model, meaning that women are more likely to experience multiple miracles not directly because of their femininity but indirectly through their greater religiosity (Pew Research Center, 2016). Age regains its significance in this model, indicating a difference in how people of different age cohorts interact with traditional beliefs and religion.

Table 4.1

OLS Coefficients for Predictors of Variety of Miracles Experienced

Predictors	Model 1	Model 2	Model 3	Model 4
Demographics				
Female	0.133***	0.146***	0.139***	0.020
Age	0.003***	0.001	0.001	0.002**
Race^a				
Black	0.179***	0.168***	0.155***	0.106**
Indigenous	0.095**	0.077*	0.070	0.023
Other	0.119	0.106	0.104	0.074
Income Quartile	-0.046***	-0.0168	0.000	-0.006
Marital Status^b				
Living with Partner	-0.249***	-0.208***	-0.219***	-0.039
Divorced	0.013	0.055	0.040	0.097*
Separated	0.104**	-0.053	-0.070	0.054
Widowed	-0.101*	-0.108*	-0.105*	-0.071
Never Married	-0.228***	-0.182***	-0.175***	-0.059*
Secularization				
Education^c				
Less than Primary		0.051	0.021	0.033
Completed Primary		0.012	-0.006	-0.030
University Degree		0.067	0.079*	0.063
Urbanity^d				
Semi-Urban		0.045	0.039	-0.069
Urban		0.131***	0.129***	0.078***
Social and Sexual Beliefs Scale		0.093***	0.093***	0.009
Wife's Subsistence		0.139***	0.138***	0.060***
Mother Responsible for Children		-0.037	-0.033	0.078
Believes Science and Religion Conflict		0.108***	0.100***	0.057**
Existential Threat				
Personal Economic Situation			-0.053***	-0.053***
Financial Unease			0.014	-0.019
Availability of Necessities Scale			0.061***	0.035***
Community Satisfaction			-0.004	0.004
Satisfied with Country's Direction			0.042	0.063**

(continued)

Predictors	Model 1	Model 2	Model 3	Model 4
Religious Socialization				
Affiliation ^c				
Pentecostal Catholic				0.095***
Non-Pentecostal				0.563***
Protestant				
Pentecostal Protestant				1.025***
Other				0.094
Unaffiliated Since				0.313***
Childhood				
Recently Unaffiliated				0.414***
Does Not Believe in				0.072***
Evolution				
Uncommon				0.581***
Supernatural Beliefs				
Scale				
Group Behavior Scale				0.368***
Tithes				0.250***
Fasts				0.315***
Country				
Argentina	0.115	0.245***	0.271***	0.288***
Bolivia	0.267***	0.117	0.098	0.141*
Brazil	0.791***	0.684***	0.729***	0.560***
Colombia	0.657***	0.604***	0.612***	0.519***
Costa Rica	0.685***	0.594***	0.618***	0.488***
Dominican Republic	1.230***	1.002***	0.963***	0.821***
Ecuador	0.183***	0.057	0.049	0.186***
El Salvador	1.054***	0.789***	0.748***	0.5000***
Guatemala	1.133***	0.780***	0.747***	0.411***
Honduras	1.257***	0.943***	0.904***	0.532***
Nicaragua	0.993***	0.754***	0.715***	0.407***
Paraguay	0.036	-0.070	-0.033	-0.053
Peru	0.322***	0.199**	0.189**	0.272***
Uruguay	0.085	0.289***	0.308***	0.480***
Venezuela	0.470***	0.364***	0.377***	0.440***
Constant	0.499***	-0.250***	-0.303***	-0.578***
R Squared	.1259	.1615	.1658	.3617

Note: All reported results are OLS coefficients.

a Reference category is White/Mestizo

b Reference category is Married

c Reference category is Secondary Education

d Reference category is Rural

e Reference category is Non-Pentecostal Catholics

*P<.05 **P<.01 ***P<.001

Black respondents are still more likely than white/mestizo respondents to experience a miracle, though that effect has been lessened, so at least some of their greater likelihood in previous models was due to the religiosity of black respondents.

Income has remained insignificant, and education has dropped completely out of the model. Most of the effects of marital status appear to have been approximating the difference between the religiosity of married respondents and respondents of any other marital type: living with a partner, widowhood and being separated is no longer significantly different from being married. Divorcees appear to be positively associated with miraculous experiences now that the religion effects have been isolated, likely due to the insecurity placed on one in such a liminal condition, however those who have never married are still less likely to experience miracles despite their status.

Traditional social/sexual beliefs are no longer important, likely because they were correlated with supernatural beliefs, and supernatural beliefs appear to have a greater impact on attribution. However, belief in a wife's subservience and conflict between science and religion are still significant, though even their effects are halved by the inclusion of religious socialization measures.

The effect of availability of necessities has lessened, as has urbanity: this may be the result of the access to social programs provided by certain religions mitigating the insecurity caused by the unavailability of life's necessities.

Surprisingly, the significance of satisfaction with the direction a respondent's country is headed was apparently moderated by religious factors, as it has become significant in this model. This effect may be due to the broad application of what a country's direction could be: possibly the more strongly religious interpreted it morally and answered negatively while those who were less religious interpreted it politically, allowing the positive correlation

between country satisfaction and miracles to come out once religiosity was controlled for. Regardless of explanation, in this model satisfaction with a country's direction is associated with greater experiencing of miracles.

Religious capital certainly matters: net all other effects in the model, simply being a Pentecostal Protestant instead of a non-Pentecostal Catholic makes you likely to have experienced one more type of miracle. It appears every religious group experiences a greater diversity of miracles than non-Pentecostal Catholics.

Likewise, other measures of religious socialization, including supernatural beliefs and religious behavior, are all associated with diversity of miraculous experiences.

Instead of discussing in detail the results of the logistic regression models measuring likelihood of experiencing any miracles at all, I will be reporting on the differences between the fourth model of both the OLS and logistic regression which can be seen in Table 4.2. The results of the logistic regression, reported in Table 4.3, are similar enough in both content and theoretical explanation to those of the multivariate OLS regression that it seems a better use of time to focus on the differences between the two regression models.

The first is that while in the full models the effect of femininity drops out of the OLS model, meaning being a woman has no effect on the number of miracles experienced, women still have 11.6% greater odds of experiencing a miracle.

It also appears that marital status functions differently for how many types of miracles a respondent experiences as compared to the likelihood of experiencing a miracle. Being separated doesn't appear to affect how many types of miracles a respondent experiences, but separated respondents have 22.9% greater odds of experiencing a miracle than married respondents. At the same time, single respondents who experience a miracle

will be exposed to different types of miracles than married respondents, but aren't any more or less likely to experience a miracle in the first place.

The difference in significance for the traditional social/sexual beliefs is a good demonstration of the nuance that is lost by reporting only asterisks. In the OLS model, $P=0.094$ and in the logistic model $P=0.034$. This discrepancy appears to be a statistical artifact of the scale balancing on significance and insignificance more than an indication of differences in function.

Table 4.2

Direction of Significant Effects for Predictors with Discrepancies between the OLS and Logistic Model

	Model 1		Model 2		Model 3		Model 4	
	OLS	Odds	OLS	Odds	OLS	Odds	OLS	Odds
Demographics								
Female	+	+	+	+	+	+		+
Race								
Indigenous	+	+	+	+		+		
Other		+						
Income								
Quartile	-	-		-				
Marital Status								
Separated	-							+
Widowed	-		-		-			
Never	-		-		-			
Married	-	-	-	-	-	-	-	
Secularization								
Social and								
Sexual Beliefs			+	+	+	+		+
Scale								
Religious								
Socialization								
Affiliation								
Other								+
Unaffiliated								
Since							+	
Childhood								

Note: This table includes only variables where there was a difference between the direction or significance of the OLS coefficient and odds ratio for any of the four models.

Where we do see something interesting is in affiliation measures. Members of "other" faiths appear to be more likely to experience a miracle, though those that experience miracles experience no more or less variety than non-Pentecostal Catholics, though again $P=0.077$, so this is more likely an artifact of the group's relatively small (492 total respondents) size. Those who have been unaffiliated since childhood that do experience a miracle experience a greater variety, however they are not more or less likely to experience a miracle in the first place than non-Pentecostal Catholics ($P=0.436$). Compare this to those who have become unaffiliated since childhood, and who are more likely to experience a miracle.

Country effects remain throughout the models. Mexico was selected as the reference category because it had the lowest proportion of its population reporting miraculous experiences. As Table 4.4 shows, there are strong country effects on miraculous experience without any other variables in the model. I had labored under the assumption that these country effects would eventually drop in significance as individual-level factors were added into the model; their persistence is a strong indicator that I need to turn to multi-level modelling that can control for the conditions in each of these countries, as there appears to be something at a country level which influences its resident's likelihood of reporting a miraculous experience.

Discussion

Returning to my general hypotheses,

H1: Modernization will be associated with fewer miraculous experiences.

H2: Existential threat will be associated with more miraculous experiences.

H3: Being religiously socialized will be associated with more miraculous experiences.

Table 4.3

Odds Ratios for Predictors of Likelihood of Experiencing a Miracle

Predictors	Model 1	Model 2	Model 3	Model 4
Demographics				
Female	1.329***	1.344***	1.330***	1.116**
Age	1.006***	1.002	1.002	1.004**
Race^a				
Black	1.354***	1.347***	1.320***	1.280**
Indigenous	1.205**	1.165*	1.154*	1.084
Other	1.262*	1.237	1.231	1.182
Income Quartile	0.916***	0.955**	0.980	0.971
Marital Status^b				
Living with Partner	0.851***	0.898*	0.883*	1.108
Divorced	1.075	1.181	1.154	1.320**
Separated	1.025	1.097	1.067	1.229**
Widowed	0.932	0.922	0.927	0.946
Never Married	0.797***	0.846**	0.854**	0.972
Secularization				
Education^c				
Less than Primary		1.124	1.072	1.099
Completed Primary		1.075	1.046	1.029
University Degree		1.121	1.143*	1.133
Urbanity^d				
Semi-Urban		1.087	1.075	0.926
Urban		1.171***	1.166***	1.114*
Social and Sexual Beliefs Scale		1.140***	1.140***	1.024*
Wife's Subsistence		1.153***	1.153***	1.046*
Mother Responsible for Children		0.995	1.002	1.184
Believes Science and Religion Conflict		1.224***	1.212***	1.152***
Existential Threat				
Personal Economic Situation			0.914***	0.901***
Financial Unease			1.020	0.968
Availability of Necessities Scale			1.092***	1.061***
Community Satisfaction			0.986	0.988
Satisfied with Country's Direction			1.055	1.104*

(continued)

Predictors	Model 1	Model 2	Model 3	Model 4
Religious Socialization				
Affiliation ^c				
Pentecostal Catholic				1.249***
Non-Pentecostal				2.450***
Protestant				
Pentecostal Protestant				4.196***
Other				1.366**
Unaffiliated Since				1.108
Childhood				
Recently Unaffiliated				1.698***
Does Not Believe in				1.087*
Evolution				
Uncommon				3.028***
Supernatural Beliefs				
Scale				
Group Behavior Scale				1.747***
Tithes				1.505***
Fasts				1.650***
Country				
Argentina	1.231	1.472**	1.539***	1.744***
Bolivia	1.677***	1.404***	1.376**	1.546***
Brazil	3.153***	2.826***	3.043***	2.852***
Colombia	2.982***	2.862***	2.929***	3.083***
Costa Rica	3.306***	2.986***	3.118***	3.233***
Dominican Republic	6.462***	5.137***	4.892***	5.502***
Ecuador	1.537***	1.327**	1.324**	1.779***
El Salvador	5.983***	4.469***	4.235***	3.751***
Guatemala	7.534***	4.987***	4.806***	3.882***
Honduras	6.629***	4.658***	4.449***	3.384***
Nicaragua	5.479***	4.217***	4.039***	3.380***
Paraguay	0.936	0.816*	0.867	0.830
Peru	1.898***	1.656***	1.636***	2.103***
Uruguay	0.856***	1.085	1.125	1.723***
Venezuela	2.196***	1.996***	2.055***	2.607***
Constant	0.364***	0.127***	0.121***	0.046***

Note: All reported results are odds ratios.

a Reference category is White/Mestizo

b Reference category is Married

c Reference category is Secondary Education

d Reference category is Rural

e Reference category is Non-Pentecostal Catholics

*P<.05 **P<.01 ***P<.001

Hypothesis one appears to have been weakly supported. Exposure to intellectual diversity, at least as measured by education, did not appear to affect either the number of different miracles experienced or the likelihood of experiencing any miracles. Egalitarian beliefs and moral relativism were associated with less variety of religious experience. However, greater cultural diversity as measured by urbanity was actually associated with *higher* odds of experiencing a miracle. While directly contradicting the secularization hypothesis, this finding may be explained by a theory of religious portfolios: similar to the socialization hypothesis presented here, the main conceit of religious portfolios is that instead of diversity limiting belief, people raised in religious diversity will gather to themselves a portfolio of beliefs that helps them best navigate the world (Iannaccone, 1995). This might help explain why belief in miracles thrives in diversity instead of being reduced: it is a desirable religious good.

Hypothesis two is strongly supported, as the rejection of H2b: social threat will be associated with more miraculous experiences, simply shows my attempt to expand the definition of existential threat is not backed by data. This reinforces the literal, and not philosophical, use of "existential" by Norris and Inglehart: religious attribution appears to be most common among those who are having difficulty providing the basic necessities of life for themselves. Measures representing social needs (community satisfaction and marital status) have no (or the opposite of what was expected) effect while economic situation and the availability of clothing, food, and medical treatment had a persistent, significant affect.

Hypothesis three is completely supported, as religious capital, increased number of supernatural beliefs, and both group and individual behaviors are associated with a greater diversity and likelihood of miraculous experiences. Not only that, but models which included secularization and existential threat data accounted for 17% of the variation in

responses while the final model including religious socialization accounted for 36% of the variation. This strongly affirms that the heuristics and biases conferred by religious context strongly influence the interpretation and attribution of their experiences.

Table 4.4

Simple Effects of Country of Residence on Variety of Miracles Experienced and Likelihood of Experiencing any Number of Miracles

Country (Mexico as Reference)	Variety of Miracles Experienced (OLS Coefficient)	Likelihood of Experiencing a Miracle (Odds Ratios)
Argentina	0.079	1.183
Bolivia	0.222***	1.576***
Brazil	0.790***	3.061***
Colombia	0.616***	2.884***
Costa Rica	0.686***	3.246***
Dominican Republic	1.282***	7.585***
Ecuador	0.176***	1.547***
El Salvador	0.980***	5.195***
Guatemala	1.119***	7.133***
Honduras	1.188***	5.964***
Nicaragua	0.931***	4.938***
Paraguay	-0.042	0.837
Peru	0.261***	1.774***
Uruguay	0.044	0.821
Venezuela	0.427***	2.108***

Note: *P<.05 **P<.01 ***P<.001

It is important to remember though that these religious contexts did not completely wash out the effects of modernization or existential threat. Attribution of miraculous experiences also depends upon the life circumstance one is in. This strongly supports existential threat theory: while religious context determines the pathway, the feelings of existential security will slowly lead that path to secularization, with fewer religious experiences leading to less strongly held beliefs, while existential threat will point that path towards sacralization as respondents seek to attribute the events in their life to a higher power and, in turn, strengthen those heuristics and biases that include the divine.

A potential criticism of this work is that all I've done is perpetuate a tautology: religion leads to religion. But this is a slight moving of the goalpost: if miracles were non-attribitional, then affiliation and belief shouldn't have mattered. At the least, there shouldn't have been a significant difference between the different branches of Christianity. Of the miracles discussed, all have strong precedents in Christian orthodoxy. If religious experience is the core of religiosity and leads to religious belief, we might expect to find some difference in the variety of miracles experienced, but the logistic regression should have found no significant difference between religious affiliations. So the direction of effect discussed in this research has solid theoretical and empirical backing.

Conclusions

This paper sought to explain the conditions under which people will have miraculous experiences. Key to that understanding was attribution theory: that while religious experiences can reaffirm one's beliefs and behaviors, what really determines whether or not someone will have a miraculous experience is whether the biases and heuristics they've grown up with predispose them to interpret events as miraculous.

Further research might seek to flesh out measures of existential threat even further: while Norris and Inglehart used income as one of their primary indicators, I've shown that income is in fact less important than more subjective measures of threat. The RELLA data was focused on collecting religious information, which was important for establishing the role of religious context/socialization, but data that asked about religious experiences with more comprehensive financial measures, both objective and subjective, would help to really isolate the specific mechanisms by which existential threat worked.

In that vein, it would also be nice to test more robust measures of social threat. While I approximated that here with community satisfaction, measures of tension or

embattlement might show that social threat can create a sense of existential dread where no real threat to one's physiological needs or security is present.

Also, as was mentioned above, the persistence of country effects shows the need for hierarchical models. It may well be that income doesn't matter at the individual level, but national poverty rates do. Likewise, it would be interesting to see if affiliation remains significant once one controls for the religious contexts of the nation as a whole, both historically and contemporarily.

A key finding of this research was that no single religious theory completely explained miraculous attribution, nor was any theoretical approach completely explained away. The relationship between social factors and religiosity is more complex and situational than many proponents of religious markets, secularization, or existential threat allow for in their theoretical approaches. Learning how and when to apply these frameworks may be a more important question than simply testing them against each other.

Understanding religious experiences is key to understanding religion itself. While they may not be the primary motivator/factor in religious life as some might claim, they remain a key part of understanding the current questions in the field about secularization and sacralization which have come to prominence since the 1990s. This research puts us a little closer to understanding that relationship.

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