A Person-Centered Examination of Adolescent Religiosity Using Latent Class Analysis

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Empirical studies of religion's role in society, especially those focused on individuals and analyzing survey data, conceptualize and measure religiosity as ranging from low to high on a single measure or a summary index of multiple measures. Other concepts, such as "lived religion," "believing without belonging," or "fuzzy fidelity" emphasize what scholars have noted for decades: humans are rarely consistently low, medium, or high across dimensions of religiosity including institutional involvement, private practice, salience, or belief. A method with great promise for identifying population patterns in how individuals combine types and levels of belief, practice, and personal religious salience is latent class analysis. In this article, we use data from the first wave of the National Study of Youth and Religion's telephone survey to discuss how to select indicators of religiosity in an informed manner, as well as the implications of the number and types of indicators used for model fit. We identify five latent classes of religiosity among adolescents in the United States and their sociodemographic correlates. Our findings highlight the value of a person-centered approach to understanding how religion is lived by American adolescents.

Keywords: religiosity, latent class analysis, adolescents.

INTRODUCTION

To study the distributions, trends, predictors, and consequences of individual religiosity using survey data, social scientists have relied almost entirely on variable-centered approaches, or dimensional models. Single items, scales, or latent variables designed to measure religious practices, beliefs, and salience, or some combination thereof, serve as proxies for religiosity. However, when individual religiosity is reduced to a point, or average of points, on a continuum from low to high, information about how individuals uniquely combine varying types and levels of religious practices, beliefs, and salience is obscured (Chaves 2010; McGuire 2008; Storm 2009). Also problematic is that, in the United States, the high end of the religious continuum reflects norms of evangelicalism (i.e., higher exclusivism and frequency of institutional practice), suggesting that those who subscribe to a religious/spiritual system of meaning that is more pluralistic and less institutionally based are overall less religious (Ammerman 1997). This oversimplification blocks the discovery and understanding of more complex religious profiles and the people who embrace these profiles.

An alternative to the variable-based, or low-to-high continuum approach, is a person-centered approach in which the emphasis is the individual as a whole (Magnusson 1998). As Bergman and Magnusson (1997:293) state: "Operationally, this focus often involves studying individuals on the basis of their patterns of individual characteristics that are relevant for the problem under consideration." Using this approach to study forms of religiosity, individuals are viewed as falling into one of a few different types of religiosity defined by unique patterns in how different dimensions of religion are combined in one's life. Some may give responses to survey questions that all reflect "high" or "low" religiosity, but many will provide a mix of high and low answers. Pearce and Denton (2011) take a person-centered approach by conducting latent class analysis with survey data from the National Study of Youth and Religion to identify five common profiles of religiosity among adolescents in the United States. This article adds to what is accomplished in that book by (1) further detailing the theoretical motivation behind studying religiosity from a person-centered perspective, (2) discussing how to choose indicators of religiosity and fit a parsimonious latent class model, and (3) examining associations between sociodemographic background characteristics and membership in the latent classes of religiosity to better understanding adolescents' religious lives.

RELIGIOSITY

Defining Religiosity

In the sociology of religion, many have worked to describe and measure the concept of religiosity, and the consensus is that religiosity is a complex, multidimensional phenomenon (Cornwall et al. 1986; King and Hunt 1975). Several frameworks for categorizing multiple dimensions of religiosity have emerged over time, including Lenski's (1961) four dimensions, Glock and Stark's (1965) five-dimensional model, and Allport's intrinsic-extrinsic model (Allport and Ross 1967). Although the numbers of categories and their labels vary, these classification schemes generally share three core components of religiosity: the cognitive, affective, and behavioral components (Cornwall et al. 1986). As Cornwall and colleagues (1986) point out, this three-dimensional approach has roots in the work of Hall (1891), Starbuck (1905), and Leuba (1969).

The *cognitive* dimension of religiosity is reflected through beliefs. Beliefs that are relatively common across religions include belief in God or a divine figure(s), belief in an afterlife, belief in otherworldly beings such as angels, demons, or spirits, and other supernatural matters. Other cognitive elements of religion commonly considered are the degree to which one doubts his/her beliefs or how one views religion in terms of exclusivity: believing only one religion is true and/or believing all components or doctrine of a religion should be accepted by adherents (Trinitapoli 2007). Terms others use to refer to the cognitive element of religiosity include "ideology" (Glock 1962), "orthodoxy" (Stark and Glock 1968), and "creedal assent" (King and Hunt 1975).

The *affective* dimension of religiosity represents the emotional connection between an individual and the sacred or religious matter (e.g., divine figures, religious symbols, co-religionists, or institutions). This element of religiosity overlaps with Stark and Glock's (1968) dimensions of "experience" and "consequences." This component captures religious emotions and experiences, like how close a person feels to God, combined with the importance individuals give to religion. Others refer to this dimension of religiosity as "salience" (Bahr, Bartel, and Chadwick 1971; Roof and Perkins 1975; Wimberley 1989). This dimension of religiosity could also be considered spirituality (or at least where spirituality overlaps with religiosity), because of the emphasis on a personal effort to connect to a divine or sacred realm (Roof 2003).

The third dimension of religiosity, the *behavioral* element, is the doing of religion and frequently labeled "practice" (Stark and Glock 1968). Common examples of practice are attendance at religious services, prayer, and reading scripture. Practices can be performed alone or with

others; therefore, this dimension of religiosity is most often split in two, demarcating the "private" or "public" (Davidson 1977), "explicit" or "subjective" religiosity (Dittes 1971), "meaning" and "belonging" (Roof 1979), or "religious orientations" and "religious group involvement" (Lenski 1961). Increasingly, scholars are highlighting the importance of noninstitutionally based practices of religiosity or spirituality such as service to others through volunteering or other less organized efforts or care for one's own health (Ammerman 1997; Bender 2003; McGuire 2008).

Measuring Religiosity

In response to a conceptualization of religiosity as multidimensional, survey designers and analysts have developed individual survey questions and composite measures of the cognitive, affective, and behavioral dimensions of religiosity or spirituality. Most surveys now include measures of frequency of religious service attendance, a measure of the importance of religion, and, occasionally, measures of other practices, or questions about how religious or spiritual respondents feel. Surveys with more space devoted to religion often contain multiitem scales designed to tap into these three aspects of religiosity, as well as other domains like a quest orientation or spirituality (Hood et al. 2009). Despite the fact theories tend to define three unique components of religiosity and argue that individuals may combine them in unique ways, measures of the three dimensions are often used independently or in indices that measure religiosity on an assumed low to high continuum, much like weight or IQ.

The assumption that religiosity can be summarized in one variable (whether based on dimension of religiosity or some index of multiple dimensions) has been challenged by inductive studies of everyday life and religion's role therein (McGuire 2008). Two edited volumes that present studies with this perspective are *Lived Religion in America* (Hall 1997) and *Everyday Religion* (Ammerman 2007). These collections describe the ways in which religion is lived, especially how religious beliefs, experiences, and practices are complicated tapestries, not neatly fitting on a continuum from low to high (Ammerman 1997). Golden Rule Christians tend to emphasize living right, or moral practices, over believing right or creed. Although they are more liberal regarding beliefs and may attend religious services less, they join churches and believe in and experience transcendence (Ammerman 1997). Citing Hall (1990) and Butler (1990), Ammerman posits something akin to Golden Rule Christianity has existed throughout American history, "a strong strain of unorthodox-yet-spiritual morality" (Ammerman 1997:211). McGuire (2008) presents a more recent contribution to and description of the lived religion perspective.

Describing the religious landscape in Britain and other European societies, Davie (1994) coined the term "believing without belonging." She too is identifying the extent to which humans are capable of drawing on particular components of religious life more than others—in Europe's case, the emphasis is on membership in religious institutions while religious service attendance has declined dramatically.

These types of theory and research suggest that there are religious profiles in the population other than those who are either high attending, institutionally involved, and personally engaged, or not religious at all. That people exhibiting these understudied profiles have different life experiences and outcomes than either those who score as highly religious across the board, or those who are completely irreligious, motivates new work to assess how we might better measure the multiple types of religiosity that do exist across the full population with existing survey data.

Examples of Person-Centered Approaches

Studying religiosity as an individualized system with multiple interactive components is a challenge for researchers. Taking such a person-centered approach requires identifying combinations of religious beliefs, salience, and practices that are meaningful to individuals, yet shared by many. While some studies develop a typology of religious profiles *a priori* and some use

inductive statistical methods to identify profiles, both approaches are person-centered because they characterize people by their overall style of "living" religion. Understanding these profiles helps us see variance in how religion operates in individuals' lives.

The *a priori* method of developing a typology of religious profiles is often achieved through the analysis of qualitative data from interviews or observations (e.g., Clark 2003; Flory and Miller 2008), although others have used survey data to establish religious profiles among the population (e.g., Smith and Denton 2005; Storm 2009; Voas 2009). For example, Smith and Denton (2005) use data from the National Study of Youth and Religion (Wave 1, 2002–2003) to designate four ideal types of religiosity among adolescents: the Devoted, the Regulars, the Sporadic, and the Disengaged. This strategy offers an important picture of how a key segment of the adolescent population sorts into clear-cut and consistent profiles of high, moderate, somewhat low, and very low levels of religiosity. However, their classification scheme covers only 63 percent of the youth in the study. They purposefully omit the other 37 percent of cases to not have their analysis of the relationship between religious type and other outcomes "clouded by more ambiguous cases." We know little about the ways in which a significant portion of other youth are living out their religious and spiritual lives, especially those who report high levels of religious belief and salience, but rarely attend religious services.

Similarly, Voas (2009), in an effort to understand the definition and dynamics of religiosity in Europe, identified "fuzzy fidelity" as having some loyalty to religious tradition in an uncommitted way. He argues that individuals expressing fuzzy fidelity can be studied as a group compared to the "religious" and the "secular," and suggests an *a priori* classification of the three groups from survey responses to questions about attendance, prayer, religiosity, and the importance or religion.

Voas (2009) urges researchers to define categories of religiosity themselves rather than relying on a more inductive approach. This is understandable for cases in which researchers are searching for a relatively well-anticipated set of categories such as "consistently low," "mixed," and "consistently high" levels. However, studies of lived religion suggest there is heterogeneity in how individuals mix levels of public and private practice and religious salience. These unique profiles may or may not be identifiable by researchers *a priori*, and the inductive, emergent properties of cluster or latent class analysis may serve researchers well in discovering and understanding particular profiles of religiosity. For example, Storm (2009) insightfully uses the inductive statistical method of cluster analysis to identify four common forms of "fuzzy fidelity" across 11 European countries, showing the heterogeneity within Voas's (2009) unitary middle category. Methodological approaches such as this focus much needed attention on many whose religious experiences, beliefs, and practices do not fit neatly into the categories of "religious in every way" or "secular." It is clear that these typological, person-centered methods preserve unique configurations of religious belief, practice, and salience that would otherwise be obscured in studies using single-scale measures (Storm 2009).

In an approach similar to that of the cluster analysis used by Storm (2009) to study forms of religiosity in Europe, Jones et al. (2011) and Pearce and Denton (2011) apply latent class analyses to identify profiles of religiosity in the United States. Jones et al. (2011) use latent class analyses of survey data from 27- and 30-year old individuals who had originally been selected as fifth graders for an intervention study in high-crime area serving Seattle elementary schools to (1) ascertain six latent classes of religiosity and (2) estimate the relationship between religious class membership and both ethnicity and gender. Pearce and Denton (2011) apply latent class analyses to two waves of survey data from a nationally representative sample of American adolescents to classify types of religiosity common among American adolescents. These two applications of latent class analysis to investigate types of religiosity are focused on the results and the contributions made to understanding the more complex types of religiosity and the distinction between atheists and those who show few signs of religiosity but believe in God.

Because these person-centered methods are making such interesting contributions to under-standing the religious landscape, it is important that we better understand latent class methods

and the implications of number and types of indicators. Therefore, in this article, we use one wave of the survey data (NSYR, Wave 1) used by Pearce and Denton (2011) to demonstrate a similar latent class analysis of adolescent religiosity. Through this application, we discuss which indicators of class membership to choose before estimating latent classes of religiosity, how to determine the best model (or number of latent classes), how to statistically assess which indicators are more or less necessary in estimating a model of religious types, and how this person-centered angle on measuring religiosity can inform the larger study of religion and its role in other aspects of life.

DATA

For the latent class analyses presented here, we use survey data from the National Study of Youth and Religion (NSYR). The NYSR survey (Wave 1) is a nationally representative telephone survey of one adolescent and one parent in 3,290 English- and/or Spanish-speaking households nationwide. Selected between July 2002 and April 2003 using a random-digit dial (RDD) method, the sample represents all U.S. households with at least one teenager between the ages of 13 and 17. Diagnostic analyses comparing NSYR survey data with U.S. Census data on comparable households and with other similar adolescent surveys (such as Monitoring the Future, the National Household Education Survey, and the National Longitudinal Study of Adolescent Health) suggest that the NSYR provides a nationally representative sample of U.S. teenagers ages 13–17 and their residential parents (for details, see Smith and Denton 2005). For descriptive analyses, we use a sampling weight created to adjust for number of teenagers in the household, number of household telephone numbers, census region, and household income.

METHODS

For our analyses, we use latent class analysis (LCA), which, generally speaking, is a data reduction technique much like factor analysis or cluster analysis (Muthén and Muthén 2000). LCA is a person-centered analysis; the focus is on identifying subgroups of individuals in a population. These subgroups are only imperfectly captured by any single indicator. By drawing on a set of indicators, LCA produces better estimates of the size of the subgroups and more accurate representations of their composition than would a single indicator.

What basis exists for asserting that latent classes of religiosity exist, rather than a latent trait of religiosity? Two issues are salient here, and data can only help resolve the first. That first issue is the matter of complexity—a single scale of religiosity imposes a rather stringent structure on the relationship. If motivated through classical test theory, the items that comprise the scale are treated as interchangeable, each reflecting the underlying construct equally well. This assertion, if not implausible, is certainly one to be tested rather than assumed. Even within a factor analytic approach, a unidimensional structure also imposes a rather stringent structure on the indicator variables. While the items may vary in their reliability, the model still assumes a monotonic relationship between the indicators and the common factor—individuals who are higher on the factor are expected to score higher on each and every indicator. Again, this assumption seems best treated as a hypothesis rather than an established fact. As discussed above, more than enough evidence exists at this point to establish that religiosity is multidimensional.

In choosing between latent class and multidimensional latent trait approaches, a second issue arises: each is equally effective as a data reduction technique (Bartholomew 2011; Skrondal and Rabe-Hesketh 2004). To be specific, a given data structure can be represented equally well by a latent class analysis with $k + 1$ classes or by k latent factors (Bartholomew 2011). In that case, the data cannot help us distinguish one multidimensional approach from the other. The basis for selecting the model, therefore, best lies in one's theoretically and empirically grounded

predictions about the structure of the latent construct and its utility once estimated. In this case, a typology better fits common conceptualizations of religiosity. One can see this in the indicators themselves—several are categorical in nature (for example, religious service attendance). Such an approach is more intuitive to thinking of individuals high on one dimension and low on another.

Once the researcher has decided to characterize religiosity with a particular taxonomy or set of categories, LCA has several advantages over alternative approaches. *Ad hoc* efforts to group observations rely on cutoffs in the variables believed to identify subgroups of individuals (e.g., individuals who endorse an item "strongly" or "very strongly"). Such cutoffs are usually arbitrary and not data based. LCA has much in common with cluster analysis but has several advantages. LCA generates parameter estimates by maximizing a likelihood function rather than arbitrary objective function (e.g., Euclidean distance). A key difference between LCA and cluster analysis is that the former does not produce deterministic class memberships. Rather, the method produces only estimates of the probability of class membership. Cluster analysis assigns each individual to one and only one class. The difference reflects the fact that LCA treats class membership as latent. As a result, actual class membership is unobserved. This feature of LCA is much like factor analysis: one can obtain only estimates of the true factor scores. The actual factors scores are unknown. For a discussion of the relationship between cluster analysis and LCA, see Vermunt and Magidson (2002).

The LCA approach is more intuitive and ties the method to other tools with which sociologists are familiar. For example, the maximum-likelihood framework allows the model to be extended in a variety of ways, such as multilevel models (Skrondal and Rabe-Hesketh 2004; Vermunt 2003), or integrated with variable-centered approaches, such growth-curve models (Muthén and Muthén 2000). LCA allows one to simultaneously estimate the relationship between the indicators of the latent class and latent class membership as well as the link between class membership and covariates.

Following Lanza and colleagues (2007), one can represent the basic LCA model as Equation (1).

$$P(Y_i = y \mid X_i = x) = \sum_{l=1}^{n_c} \gamma_l \prod_{m=1}^{M} \prod_{k=1}^{r_m} \rho_{mk|l}^{I(y_m=k)}. \tag{1}$$

The key parameters are ρ (the probability of item response conditional on latent class) and γ (the probabilities of class membership). The first summation is over the number of classes, n_c (in our case, 5). The first product is across items, M (in our case, 12) and r_m, the number of possible responses for each item.

SELECTING INDICATORS FOR LATENT CLASS ANALYSIS

There is relatively little guidance in the literature on LCA regarding how to go about choosing the indicators for a latent class model. Often, researchers have a limited number of indicators available so the obvious choice is to select them all. In our case, we have many survey items available, so we must make choices about which indicators of religiosity to use.

The approach we take is to ground our item selection process in the existing literature's consensus around the main dimensions of religiosity described above: the cognitive, affective, and behavioral dimensions of religiosity (Cornwall et al. 1986). The measures of the cognitive side of religiosity we selected are view of God, belief in an afterlife, exclusivism, and having doubts about beliefs. We selected these indicators both because they are commonly discussed in the literature as central beliefs in most religions, especially Christianity, which is the majority religion among the population we are examining. Also, we know that exclusivism (a combination between believing only one religion is true and that one must accept all tenets of his/her religious

faith) is a dimension along which religious individuals vary (Trinitapoli 2007). We do not use religious affiliation in our estimation of the latent classes of religiosity because, although it may signify theological differences, it involves more measurement error than directly asking belief questions. This is because those who identify with a religious tradition sometimes disagree with that tradition's ideologies. Therefore, we prefer more direct measures of personal belief. In addition, including an indicator, such as affiliation, with several response categories often stretches the limits of the model or makes interpretation difficult, so it is not the most parsimonious measure of religious ideology either.

The measures of affective religiosity we selected are importance of religion, perceived closeness to God, how often someone thinks about the meaning of life, and being spiritual but not religious. How often one thinks about the meaning of life is not purely about religion, but we include it to help distinguish individuals whose more conventional religious beliefs and practices go along (or not) with a conscious emphasis on having a meaningful life. This is based on research finding some individuals express their religious or spiritual identity in terms of their role in making life and the world better (Ammerman 1997; Bender 2003; McGuire 2008).

Our measures of the behavioral side of religion are attending religious services, frequency of prayer, volunteering, and helping others outside of organized volunteer activities. Although volunteering and helping others are not necessarily religious practices in and of themselves, other studies have identified the significance of service-oriented practices for some people's religious/spiritual identities (Bender 2003; McGuire 2008). Similar to our reasoning for including the measure of how often one thinks about the meaning of life, we include these two service-oriented indicators to see who combines these activities with other religious beliefs, feelings, and actions and who does not. Table 1 presents the wording of each item used as an indicator and the distribution of responses to each item.

We employ LCA to derive and identify individuals by discrete profiles of religiosity. LCA allows us to take into account the fact that religious beliefs, salience, and practices are related and interact with each other, or that while some people may score consistently low, medium, or high across the indicators, some will mix levels of low, medium, and high depending on the indicator. As mentioned above, we use 12 categorical variables from the NSYR survey as indicators of the latent classes. These 12 variables have 3, 3, 2, 3, 4, 4, 4, 3, 4, 4, 3, and 4 response categories, respectively. Therefore, there are 1,990,656 unique response patterns possible. The large number of unique response patterns observed (2,896) shows the sample has a great deal of variety in combinations of responses; as a result, one or two measures of religiosity may not differentiate respondents' profiles of religiosity well.

Measures of model fit compare the expected pattern of responses generated by the postulated model with the observed pattern. Several measures, such as the G^2, involve a statistic distributed as chi-square with the degrees of freedom the difference between the number of response patterns in the data minus the number of model parameters and the number of groups (Eid, Langeheine, and Diener 2003). Those statistics, however, suffer from a limitation—complex models always improve model fit. For that reason, information criterions such as the Bayesian information criterion (BIC) are preferred. These methods include a penalty for model complexity. One can motivate these measures as determining model fit for a new observation, one not used in fitting the model. In other words, the measure removes the benefits of using an observation to predict itself.

Latent Class Analysis Results

Based on the 12 indicators of religiosity described above, our interpretation of the LCA results suggests a model with five latent classes of religiosity fits these data the best. We present the fit statistics for each model we tested in Table 2. Comparing the models to one another using the BIC

Table 1: Measures of cognitive, affective, and behavioral religiosity

	Percent	N
Cognitive religiosity		
View of God: which comes closest to your own view of God?		
Does not believe in God[a]	3.3	100
God not personally involved in lives	28.7	898
God personally involved in lives	68.0	2,135
Total	100.0	3,133
Afterlife: do you believe in life after death?		
Not at all	13.0	435
Maybe	37.6	1,247
Definitely	49.5	1,603
Total	100.0	3,285
Only one religion: only one religion is true and not okay to pick and choose religious beliefs?		
No	79.8	2,629
Yes	20.2	651
Total	100.0	3,280
Doubts: how much do you have doubts about your religious beliefs?		
Many or some doubts	20.1	662
A few doubts	31.4	996
No doubts	48.5	1,614
Total	100.0	3,272
Affective religiosity		
Importance of faith: how important is religious faith in shaping how you live your daily life?		
Not at all or not very important	18.1	578
Somewhat important	31.2	1,049
Very Important	31.0	1,016
Extremely important	19.7	640
Total	100.0	3,283
Closeness to God: how distant or close do you feel to God most of the time?		
Does not believe in God[a]	3.1	100
Extremely to somewhat distant	25.1	806
Somewhat close	35.1	1,144
Very or extremely close	36.6	1,227
Total	100.0	3,277
Meaning of life: how often do you think about the importance of life?		
Rarely or never	28.7	889
Sometimes	31.8	1,051
Fairly often	18.0	603
Very often	21.5	743
Total	100.0	3,286
Spiritual but not religious: do you consider yourself spiritual, but not religious?		
Very true	8.6	297
Somewhat true	47.4	1,516
Not at all true	44.0	1,403
Total	100.0	3,216

(*Continued*)

Table 1 (*Continued*)

	Percent	*N*
Behavioral religiosity		
Religious service attendance: about how often do you usually attend religious services?		
Never	18.1	604
Few times to many times a year	22.5	767
One to three times a month	18.8	636
Once a week or more	40.6	1,278
Total	100.0	3,285
Prayer: how often, if ever, do you pray by yourself alone?		
Never	14.7	463
Less than once a month to 1–2 per month	20.4	670
About once a week to a few times a week	27.2	902
About once a day to many times a day	37.8	1,245
Total	100.0	3,280
Volunteering: how often have you done organized volunteer work or community service in the past year?		
Never	32.7	1,122
A few times	34.8	1,136
Occasionally or regularly	32.5	1,025
Total	100.0	3,283
Helped: how often have you helped people in need, not through an organization?		
None	25.9	839
A little	30.3	976
Some	33.5	1,101
A lot	10.3	369
Total	100.0	3,285

[a] Ascertained from response to earlier question about belief in God.

Table 2: Fit statistics for latent class models

	G^2	BIC	AIC
Independence	33322.41	33557.27	33380.41
Two latent classes	28542.88	29020.70	28660.88
Three latent classes	27070.36	27791.14	27248.36
Four latent classes	26341.98	27305.71	26579.98
Five latent classes	26000.50	27207.19	26298.50
Six latent classes	25695.15	27144.80	26053.15
Seven latent classes	25601.39	27294.01	26019.39

(Nagin 2005), the model with one class fits the data most poorly. The models containing both three and four classes offer an improved fit in comparison to the two-class solution. The models with five and six classes have the lowest BIC scores. The seven-class model's BIC worsens. Another method for evaluating model fit is the bootstrapped likelihood ratio test (BLRT) presented by Nylund, Asparouhov, and Muthén (2007).

Although the six-class model technically has the lowest BIC score by a small margin over the five-class model, additional empirical analyses and theory suggest the five-class model provides as much substantive insight to patterns of religiosity as the six-class model. Upon examination of the posterior probabilities used to characterize each class, we find that in moving from the

five- to the six-class model, one latent class (see a description of the Avoiders later) has basically split in two. The conditional probabilities of answering each question particular ways are largely similar for these two classes with one of the classes having slightly higher probabilities of being somewhat affectively and cognitively religious. For example, one of the two classes is more likely to give the next-to-the-lowest answer on questions like the importance of faith, closeness to God, or belief in God than the lowest answer, but the two classes are still obviously distinguished from the Adapters and Assenters by having similarly minute probabilities of any kind of religious practice (e.g., prayer, attendance, or helping others). Given that these two latent classes show little distinction from each other and similar distinctions from the other four classes, and that the model fit is only slightly better than a five-class model, we choose to use the five-class model as the best representation of unique types of religiosity in the adolescent population of the United States. Collins and Lanza (2010:82) advise using such considerations of "parsimony" and "interpretability" in selecting the best LCA model.

Two other empirical considerations drive our decision. First, we want our empirical model to be adaptable to a diversity of available indicators that researchers might use in future studies. Therefore, as reported in more detail below, we examine fit statistics for five- and six-class models using several combinations of fewer predictors (dropping one variable at a time, as well as estimating 8- and 4-indicator models). In 8 of 14 iterations, the five-class model performs best, and in one of the iterations the results are essentially identical. The five remaining iterations show a better fit for the six-class model. In addition, other empirical tests reveal that the accuracy of class membership improves slightly using the five-class model compared to the six-class model. The average probability of latent class membership in a respondent's most probable class improves to .86 from .83 when using the five-class model, compared to the six-class model. This adds to our confidence in choosing the five-class model to best represent types of religiosity being lived among adolescents in the United States. Detailed descriptions of these five classes are provided next.

Five Classes of Religiosity

Table 3 presents the latent class probability estimates and the conditional probability estimates for the five-class model. In accordance with Pearce and Denton (2011), we label this set of classes, "The Five As": the "Abiders," the "Adapters," the "Assenters," the "Avoiders," and the "Atheists." The first row of results in Table 3 reveals the estimated percentage of our sample in each class. Because what we have identified are "latent" classes, one respondent may not fit perfectly into one of the five classes; in fact, most do not. A probability of membership in each class is computed for every respondent, and these probabilities total to 1.0. For example, one respondent might have a .80 probability of being an Abider, a .15 probability of being an Adapter, and a .5 probability of being an Avoider. As stated earlier, this is how LCA differs from cluster analysis—respondents are not just assigned to one cluster, but they are assigned probabilities of membership in all of the latent classes that emerge.

The second row in Table 3 contains group ranges and the third row displays the mean posterior probabilities of latent class membership. The latter being the average predicted probability of class membership for each assigned member of a class. Because our model fit the data well, most individuals have one very high probability (generally, above .75) of belonging to a single class. In other words, there are not many respondents with equally high probabilities of being in multiple classes. The conditional probabilities (the fourth row and lower in Table 3) report the probability of giving a particular response to the question, given membership in a latent class. For example, the probability that a member of the Abider latent class will say he or she believes in a God who is personally involved in his or her life is .94. By studying these conditional probabilities, the contours of each latent class are revealed.

Table 3: Proportions and conditional probabilities of responses for five latent classes

	Abiders	Adapters	Assenters	Avoiders	Atheists
Proportion of sample in class	.25	.19	.31	.22	.03
Range and mean of predicted probability of being in this class (for those identified as most likely to be in this class)	.38–1 (.87)	.37–1 (.76)	.36–1 (.78)	.30–1 (.89)	.76–1 (1.00)
Cognitive religiosity					
View of God					
Does not believe in God	.00	.00	.00	.00	1.00
God not personally involved in lives	.06	.32	.20	.69	.00
God personally involved in lives	.94	.68	.80	.31	.00
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Afterlife					
Not at all	.11	.17	.10	.15	.40
Maybe	.11	.34	.42	.66	.44
Definitely	.78	.50	.49	.19	.16
Only one religion					
No	.51	.92	.83	.97	.98
Yes	.49	.08	.17	.03	.02
Doubts					
Many or some doubts	.06	.32	.20	.28	.16
A few doubts	.26	.25	.40	.29	.08
No doubts	.68	.43	.40	.43	.76
Affective religiosity					
Importance of faith					
Not at all or not very important	.00	.06	.04	.58	.84
Somewhat important	.04	.29	.55	.38	.08
Very important	.41	.43	.38	.04	.07
Extremely important	.55	.22	.04	.01	.01
Closeness to God					
Does not believe in God (not asked)	.00	.00	.00	.00	1.00
Extremely to somewhat distant	.03	.14	.15	.74	.00
Somewhat close	.15	.30	.65	.24	.00
Very or extremely close	.82	.56	.20	.02	.00
Meaning of life					
Rarely or never	.21	.08	.32	.41	.40
Sometimes	.30	.22	.39	.33	.31
Fairly often	.21	.14	.21	.15	.17
Very often	.27	.57	.08	.11	.13
Spiritual but not religious					
Very true	.06	.21	.04	.10	.09
Somewhat true	.18	.55	.61	.56	.30
Not at all true	.75	.24	.35	.34	.61

(*Continued*)

Table 3 (*Continued*)

	Abiders	Adapters	Assenters	Avoiders	Atheists
Behavioral religiosity					
Religious service attendance					
Never	.00	.20	.07	.45	.78
Few times to many times a year	.10	.30	.25	.32	.08
One to three times a month	.12	.24	.27	.14	.13
Once a week or more	.78	.26	.40	.08	.01
Prayer					
Never	.01	.06	.04	.42	.85
Less than once a month to 1–2 per month	.04	.14	.24	.41	.08
About once a week to a few times a week	.18	.29	.45	.14	.06
About once a day to many times a day	.77	.51	.27	.03	.01
Volunteering					
Never	.26	.38	.33	.42	.40
A few times	.34	.36	.36	.33	.28
Occasionally or regularly	.41	.27	.31	.25	.33
Helped					
None	.22	.18	.24	.37	.35
A little	.32	.22	.34	.29	.25
Some	.31	.36	.37	.29	.32
A lot	.14	.24	.05	.06	.09

$N = 3,290$.

Describing the Five *A*s

Members of the *Abiders* latent class are so named because they display high levels across all our measured dimensions of religiosity and because they follow or "abide" by religion in a classic institutional sense. In addition to high belief in a personal God, Abiders believe in an afterlife and are the most likely to hold exclusivist beliefs. They are least likely to doubt their beliefs. In the affective realm, they emphasize the role of faith in their daily lives and their felt closeness to God, but they think about the meaning of life no more often than individuals in the other classes. They are the least likely to identify themselves as "spiritual but not religious." When it comes to practice, Abiders are the most likely to attend religious services weekly or more and pray once a day or more. Abiders are the most likely to reply that they volunteer occasionally or regularly, and the second most likely class to report helping others outside of organized volunteer opportunities "a lot." In sum, this latent class is highly religious on nearly all dimensions.

Measures of religiosity that operate on a high-low continuum are unlikely to identify our second class, the *Adapters*. Those measures require consistency across specific items. Whether consciously or not, this group is adapting its beliefs, practices, and salience to a form less institutionally based. In some ways these youth appear very religious and spiritual, but in others, less so. In terms of the cognitive side of religiosity, the Adapters believe in God and are most likely to see God as personally involved in their lives (.68), but more of them than of the Abiders see God as existing but not personally involved in people's lives (.32). Adapters are most likely to say they definitely believe in the afterlife (.50), with a substantial probability (.34) of responding "maybe." A big difference between the Adapters and Abiders is that the latter are quite pluralistic. Members

of this group are much less likely to hold exclusivist beliefs than the Abiders. The Adapters score relatively high on the measures of religious salience or affect. They have the second most highly skewed distribution of the importance of faith and closeness to God. Members of this group are more likely to report that they think about the meaning of life very often (.57) than any other group, and they are most likely to say the label "spiritual, but not religious" is "very true" or "somewhat true" for them.

On the practice side, the Adapters are less consistent. They are nearly as likely to never attend religious services (.20) as to attend more than once a week (.26). A single measure of religiosity (like attendance) does not distinguish this group from the other classes. Like the Abiders, the Adapters are very likely to pray once a day or more. They are a little less likely than the Abiders to volunteer the most frequently, but they are more likely to help others outside of volunteer activities "a lot" (.24). So, the Adapters believe strongly in God but are not exclusivist. They find religion important and report being close to God. This group thinks most about the meaning of life and its members are the most likely to see themselves as "spiritual but not religious." They are not particularly low or high on religious service attendance, but pray often, volunteer sometimes, and are most likely to be giving help outside of organized volunteer settings. In other words, the Adapters are religious and spiritual but in a very personal and individualistic way. They seem more spiritually oriented and possibly more service oriented (at least in ways that are not institutionally based).

The third latent class, the *Assenters*, shows somewhat more consistency across categories. We label this latent class Assenters because these individuals assent to religious belief and public practice (especially the same institutionally based forms exhibited by the Abiders) but are not particularly strong in personal salience, spirituality, and service to others (like the Adapters are). They are more likely to believe in a personal God than the Adapters but less so than the Abiders. They look very similar to the Adapters in terms of belief in an afterlife, but are slightly more likely to hold exclusivist beliefs (.17). They are about equally as likely as the Adapters to have "no doubts" about their beliefs (.40), but they are much less likely to have "many doubts." Where they differ from the first two classes is in religious salience or affect. They are most likely to say religion is just "somewhat" important, they are "somewhat" close to God, and they "sometimes," "rarely," or "never" think of the meaning of life. Members of this class have a very low probability of responding that it is "very true" they are "spiritual but not religious." When it comes to religious practice, they do seem more likely to attend religious services than the Adapters (the probability that they attend once a week or more is .40), but their prayer clusters somewhere between once a week and once a day. They look similar to the Adapters in terms of organized volunteer activities, but are less likely than both the Adapters and Abiders to help people outside of volunteering.

We call the fourth latent class the *Avoiders*: members of this class avoid religious involvement and broader issues of the relevance of religion for their life. They believe in God but a less personal God. They are most likely to think that the afterlife "maybe" exists. They are very unlikely to be exclusivist (.03) and look a lot like the Adapters when it comes to the level of doubts they have about religious beliefs. The Avoiders are most likely to say that religious faith is "not at all important" or "not very important," that they are "extremely" to "somewhat distant" from God, and that they "rarely" or "never" think about the meaning of life. Avoiders do not see themselves as "spiritual but not religious"; their probability of saying this is "very true" is .10 and the probability that a randomly selected member of this group will say it is "somewhat true" is .56. Avoiders are especially inactive in terms of practice. They are most likely to respond that they never attend religious services, pray, volunteer, or help others than any other response option. Avoiders are religiously inactive, but we call them Avoiders for two reasons. They avoid religious practice and salience, but they also avoid being Atheists by expressing belief in God, the afterlife to some extent, and doubt their beliefs relatively little.

Atheists are the one group identified by a single indicator: they have no belief in God and little doubt in that. On many of the other indicators they look a lot like the Avoiders, but what distinguishes this small group in the population (3 percent) is its members' willingness to say

that they do not believe in God. Given the strong stigma attached to atheism in the United States (Edgell, Gerteis, and Hartmann 2006), this group is likely to be very different than the Avoiders in both social and demographic characteristics but possibly outcomes as well. This group offers further justification for a taxonomic approach to religiosity. In a variable-based model, the Avoiders and Atheists reside so close on the assumed low to high continuum of religiosity, that the predictors and experiences of this small and unique group would be outweighed by the larger Avoider group.

How the Number and Combination of Indicators Matter in Defining the Classes

For both theoretical and practical reasons, it is important to evaluate how many and which indicators are necessary for a theoretically informed yet parsimonious model of the latent classes of religiosity. For example, how effective would a single item be in capturing our five latent classes of religiosity? If we focus on the item, Abiders have a probability of nearly .80 of saying they attend religious services more than once a week. However, any one respondent who reports attending religious services once a week or more has only a .48 probability of being categorized in the Abider class. One can see that the LCA model detects patterns in religious involvement that are not apparent for a single item. If we were to rely on a single item and an arbitrary cutoff, we would misidentify many individuals.[1] This is strong support for the usefulness of a LCA approach to understanding patterns of religiosity.

The usefulness of having multiple indicators of religiosity seems clear, but how many are necessary? It is helpful to examine whether all the indicators are contributing to the model in useful ways, and whether analyses drawing on fewer indicators of religiosity would produce similar results. We present two different ways to address these issues: (1) comparing the fit of the full 12-item model to a model in which one or more indicator's parameters are restricted to not vary; and (2) examining the correlation in respondent's probabilities of class membership when one or more items is removed from the LCA.

One approach to testing whether models obtained with fewer indicators produce similar results or not is to restrict the parameters for a given indicator or set of indicators to be equal. This restricted model is considered "nested" and allows for a test of whether that model's fit is statistically significantly better than the full model or not (Lanza et al. 2007). We use this approach to test whether the 12-indicator model we use is comparable to a model without each of the 12 indicators. In other words, we ran 12 models in which a different indicator was restricted to be equal across classes (thus creating an 11-indicator model) each time. We also test whether a model estimated with eight indicators (still well representing the three main dimensions of religiosity) achieves comparable fit. Our results, presented in Table 4, demonstrate that none of the alternative models have a lower AIC score. Only the model in which the measure of volunteering is restricted from use has a lower BIC score, but a test of the difference in log-likelihoods does not achieve statistical significance. The remaining models do perform significantly worse than the full model. However, these models do predict the same number of classes with similar attributes, making them useful for the classification of adolescent religiosity in circumstances in which using more indicators is not possible. We provide further evidence of this conclusion later.

A second approach for assessing the impact of a model relying on fewer indicators is to run the results of a five-class model using different numbers of indicators, outputting each respondent's probabilities of being in each of the five classes, and seeing how closely correlated a respondent's probabilities of being in one of the classes are across the different analyses. In this case, we compare the full 12-indicator analysis to an analysis where we use eight theoretically

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[1]More detail on the substantive qualities of the five latent classes of adolescent religiosity is available in Pearce and Denton (2011).

Table 4: Comparing five-class model fit for 12-, 11-, and 8-indicator models

	AIC	BIC	G^2	df	Log-likelihood
12-Item Model	26297.53	27206.23	25999.53	1,990,506	−39379.17
11-Item Model					
View of God	27539.03	28398.93	27257.03	1,990,514	−40007.91
Afterlife	26,862.09	27,722.00	26,580.09	1,990,514	−39,669.45
Exclusivism	26781.64	27665.95	26491.64	1,990,510	−39625.22
Doubts	26513.40	27373.31	26231.40	1,990,514	−39495.10
Importance of faith	28278.06	29113.57	28004.06	1,990,518	−40381.43
Closeness to God	28408.38	29243.90	28134.38	1,990,518	−40446.59
Meaning of life	26467.11	27302.63	26193.11	1,990,518	−39475.96
Spiritual but not religious	26669.04	27528.95	26387.04	1,990,514	−39572.92
Religious service attendance	27409.21	28244.73	27135.21	1,990,518	−39947.01
Prayer	27896.46	28731.98	27622.46	1,990,518	−40190.63
Volunteering	26340.33	27200.24	26058.33	1,990,514	−39408.57
Helped	26402.17	27237.69	26128.17	1,990,518	−39443.49
8-Item Model (*Afterlife, Doubts, Spiritual but not religious, Volunteering*)	27465.42	28178.97	27231.42	1,990,538	−39995.11

Note: Items in italics are those restricted.

Table 5: Correlations between respondents' probabilities of being in each latent class using a 12-indicator analysis and either an 8- or 4-indicator analysis

	Abider	Adapter	Assenter	Avoider	Atheist
8-indicator model	.93	.88	.95	.99	.99
4-indicator model	.80	.40	.58	.74	.59

motivated[2] indicators (view of God, exclusivism, importance of religion, perceived closeness to God, how often someone thinks about the meaning of life, attending religious services, frequency of prayer, and helping others outside of organized volunteer activities) and an analysis using four theoretically motivated indicators (view of God, importance of religion, attending religious services, and prayer). The 4-indicator model uses measures contained in many surveys; therefore, finding that these four indicators could produce findings similar to our 12- and 8-indicator models would lead to a wider application of these methods to available data.

The results of this type of analysis applied to our data on religiosity are presented in Table 5. The top row presents the correlations between respondent probabilities of being in a given class from a 12- and an 8-indicator analysis. The probabilities are high, ranging from .88 to .99, providing evidence that class identification based on these eight indicators will be nearly identical to that assigned using a 12-indicator analysis, or that the dimensions of religiosity measured by the four additional indicators are to some extent already well represented in the remaining eight indicators. This 8-indicator model is used in Pearce and Denton (2011) and Denton (2012) because this more parsimonious model allows for extension to latent transition analyses across multiple waves of the NSYR.[3]

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[2]By "theoretically motivated" we mean the selection of indicators is meant to represent all three of the main dimensions of religiosity (cognitive, affective, and behavioral) as well as distinguishing public and private practice.

[3]Latent transition analysis estimates the probabilities that, given membership in a latent class at time 1, an individual belongs to the same class or any of the other classes at time 2 (Collins and Lanza 2010).

The second row displays correlations between the probabilities of being in a given class when a 4-indicator model and a 12-indicator model are used. In this case, the correlations are far weaker, ranging from .40 to .80. This suggests that the five classes that result from a 4-indicator analysis are qualitatively different than the five classes resulting from a 12- or 8-indicator model. One could debate which specification is better, but this argument should focus on which dimensions of religiosity are essential to a global concept of religiosity and therefore must be represented by at least one indicator. We posit that a good assessment of a global concept of religiosity takes into account the combination of standard indicators of religiosity and less conventional or less institutionally based indicators of religiosity such as how often one thinks about the meaning of life and service to others. For this reason we prefer a more full set of indicators to describe the contours of religiosity among adolescents in the United States.

Correlates of Membership in the Five *A*s

Once a set of latent classes of religiosity is derived, a variety of other statistical analyses may ensue, including tests to see whether the same class structure holds across different subgroups (cf. Jones et al. 2011), the likelihood that members of one latent class have of transitioning to other classes over time or the latent trajectories cases follow (cf. Macmillan and Eliason 2003; Pearce and Denton 2011; Petts 2009; Vermunt 2003), or how other variables related to membership in a given class or transitions between classes over time (cf. Denton 2012). Here, we provide one example by showing how mean values for a set of socioeconomic background characteristics vary by membership in each of the five classes of religiosity. Table 6 shows the relationship between membership in the five latent classes and gender, age, and race/ethnicity and family background factors such as religious affiliation, parent education and income, region of the country, and percentage rural in the county a respondent was living in at the first wave. For this analysis, we assigned each respondent to one class of religiosity using maximum-probability assignment, or coding individuals as fully belonging to the class for which they have the highest probability of belonging. This approach is warranted given the high average posterior probability of membership for each class (Nagin 2005).

As Table 6 shows, adolescent girls are more likely to be Abiders or Adapters than to be Assenters, Avoiders, or Atheists. They are also more likely to be Assenters than to be Avoiders or Atheists. Adolescent boys are over represented in the Atheist and Avoider classes, and are underrepresented in the Abider and Adapter classes. To some extent, these results parallel what studies using a variable-based approach have learned regarding gender and religiosity. Women tend to be more "religious" than men across a variety of dimensions measured (de Vaus and McAllister 1987; Miller and Hoffmann 1995; Miller and Stark 2002), so we should not be surprised that they disproportionately populate the classes with the highest levels of each of the three components of religiosity. What we learn by looking at gender in relation to latent classes of religiosity is that there is no relationship between gender and the odds of being an Abider versus an Adapter, so girls seem no more or less likely to be living a highly consistent, institutionally based, and exclusivist type of religion than a type of religion that is highly centered in personal or affective religiosity and a spiritual and service orientation.

In terms of age, there is not much difference across the five latent classes. Mainly it is Atheists who are different from everyone else. On average, they are about a half-year older than all others. It appears to be in later adolescence, as more independence and autonomy is established, that youth are more likely to state they do not believe in God. Keep in mind, however, this is still a relatively small segment of the total adolescent population—3 percent (see Table 1).

This person-centered approach of latent class analysis helps us understand more carefully the characteristics of minority religious experience. Table 6 shows that white youth are a little more likely to be Abiders, Avoiders, or Atheists. African-American youth are much more likely to be Adapters and less likely to be Avoiders and Atheists. Latinos are a little less likely to be Abiders,

Table 6: Mean values or proportions at each level for sociodemographic variables

	Full Sample	Abiders	Adapters	Assenters	Avoiders	Atheists
Gender						
Female	.49	.55[a–c]	.54[a–c]	.49[b–e]	.41[a,d,e]	.37[a,d,e]
Male	.51	.45[a–c]	.46[a–c]	.51[b–e]	.59[a,d,e]	.63[a,d,e]
Age	15.03	15.0[c]	15.0[c]	15.0[b,c]	15.1[a,c]	15.5[a,b,d,e]
Race/Ethnicity						
White/Caucasian	.66	.72[b,c,e]	.40[a–d]	.65[b,c,e]	.78[a,d,e]	.80[a,d,e]
African American	.16	.16[a–c,e]	.35[a–d]	.14[b–e]	.06[a,d,e]	.02[a,d,e]
Latino	.12	.08[a,e]	.17[a,d]	.15[d,e]	.10	.10
Other	.06	.03[b,c]	.08[b]	.06	.06[d]	.08[d]
Religious affiliation						
Evangelical Protestant	.41	.61[a–c,e]	.48[b–d]	.41[b–d]	.19[a,d,e]	.08[a,d,e]
Mainline Protestant	.11	.12[c]	.09[a]	.14[b–e]	.09[a]	.05[d]
Catholic	.27	.17[a–c,e]	.26[a,c,d]	.36[b–e]	.30[a,c,d]	.07[a,b,d,e]
Other religion	.08	.10[a,e]	.05[b–d]	.05[b–d]	.11[a,e]	.13[a,e]
Not affiliated	.12	.00[a–d]	.13[a–d]	.04[b–e]	.30[a,c–e]	.66[a,b,d,e]
Highest parent education						
Less than high school	.07	.04[a,e]	.15[a–d]	.06[d,e]	.05[e]	.05[e]
High school diploma	.17	.14[e]	.26[a–d]	.17[e]	.14[e]	.14[e]
Some college	.34	.32	.37	.35	.34	.30
Bachelor's degree	.20	.24[e]	.14[a,c,d]	.21[e]	.20	.20[e]
Graduate/professional school	.22	.27[a,e]	.08[a–d]	.21[b,d,e]	.27[a,e]	.30[e]
Family income						
Less than 150% of poverty line	.23	.17[e]	.40[a–d]	.22[d]	.20[e]	.19[e]
150% to 250% of poverty line	.20	.18[e]	.25[c,d]	.20	.19	.15[e]
350% to 4 times the poverty line	.24	.28[a,c,e]	.19[a,b,d]	.24[d,e]	.23[e]	.14[d]
Over 4 times the poverty line	.27	.30[c,e]	.10[a–d]	.27[c,e]	.32[c,e]	.48[a,b,d,e]
Missing income	.06	.06	.06	.07	.05	.04
Region						
Northeast	.17	.11[a–c,e]	.15[b,d]	.18[b,d]	.22[a,d,e]	.22[d]
Midwest	.22	.20[a,b]	.19	.24[d]	.25[d]	.23
South	.37	.47[a–c,e]	.46[b–d]	.36[b–d]	.24[a,d,e]	.14[a,d,e]
West	.24	.23[b,c]	.19[b,c]	.22[b]	.28[a,d,e]	.40[a,d,e]
Percentage rural in county	.24	.27[a–c,e]	.24[c,d]	.23[c,d]	.22[d]	.16[a,d,e]

Source: National Study of Youth and Religion, Wave 1, 2002.

[a]Statistically significant difference from Assenters at the $p < .05$ level.
[b]Statistically significant difference from Avoiders at the $p < .05$ level.
[c]Statistically significant difference from Atheists at the $p < .05$ level.
[d]Statistically significant difference from Abiders at the $p < .05$ level.
[e]Statistically significant difference from Adapters at the $p < .05$ level.

Avoiders, or Atheists, and a little more likely on average to be Adapters or Assenters. Variable-based approaches regularly find higher "average" religiosity among minority youth (Regnerus 2003), which suggests minority youth would be most likely to belong to the Abider group, but by allowing their high personal and affective religiosity to coexist with their slightly higher odds of thinking about the meaning of life and helping others and their less exclusivist take on religion, we get a more nuanced view of just how different subgroups are religiously. These findings add to

the insight provided by Ellison and Sherkat (1995); African Americans have higher average levels of religious service attendance, but they are more spread across the highest few response options, while white survey respondents tend to answer in a more polarized fashion—either "weekly or more" or "never." In other words, stepping back from an "average" or variable-based view of religiosity reveals unique patterns and distributions of religiosity.

In light of religious-tradition-based doctrinal or normative differences in beliefs about exclusivity, views of God, the expression of affective religiosity, and expectations about the regularity of attending religious services (Smith and Denton 2005; Trinitapoli 2007), we see expected differences in the distribution of religious affiliations across the five latent classes of religiosity. Evangelical Protestants are more represented in the Abider and Adapter classes, and underrepresented in the Avoider and Atheist classes. Mainline Protestants are not very likely to be classified as Atheists but are distributed fairly equally across the other classes, except for a slight over-representation in the Assenters category. Catholics are less likely to be Abiders, Adapters, and Atheists, and they are more likely to be Assenters and Avoiders. Those who identify with other religions are spread pretty evenly across the classes. Those who have no religious affiliation are highly likely to be Atheists or Avoiders and are especially unlikely to be Abiders or Assenters.

Family socioeconomic status, measured by parent education and income, is also related to membership in the five latent classes of religiosity. Table 6 shows that Adapters tend to have parents with lower levels of education and having a parent with a graduate or professional degree is much more common for Abiders, Avoiders, and Atheists. The same goes for family income. The more affluent a family, the more it tends to be either fully engaged or completely unengaged in institutionally based religiosity. That families with greater socioeconomic advantage are on two ends of what is normally measured as a continuum of religiosity helps explain why variable-centered studies of the relationship between family socioeconomic background and continuous measures of religiosity tend not to find associations (Smith and Denton 2005; Regnerus 2003).

Residents of the Northeast are more likely to be Avoiders or Atheists, less likely to be Adapters or Assenters, and least likely of all to be Abiders. Those in the Midwest seem fairly equally spread across the five latent classes, with a little higher representation in the categories of Assenter or Avoider. Variable-centered studies of religiosity often find residents of the South to be "more religious" than others and residents of the West to be "less religious" than all others (Silk 2008). This is supported in our analysis. Southerners are more likely to be Abiders or Adapters, two groups with high levels of religious salience. And, living in the West is highly related to the likelihood of being an Atheist and to some extent an Avoider, two groups with low levels of religious practice and salience.

Youth who live in rural counties are likely to be a part of smaller communities that may place more of an emphasis on religious life and participation. Table 6 shows that the greater percentage of rural residents in one's county, the more likely one is to be an Abider and the less likely one is to be an Atheist. In Table 6 and other analyses, we find no statistically significant differences in the percentage rural in the counties of Adapters, Assenter, and Avoiders. What is most unique about Abiders and Atheists is their highly consistent profiles of religiosity, especially when it comes to religious service attendance, so it is likely that the rural nature of one's county of residence is especially influential on the practice dimensions of religiosity and keeping the other dimensions of religiosity similarly high. It is also clear that Atheists (or those who express their disbelief in God on a survey) are highly likely to live in far less rural settings.

Conclusions

The goal of this article was to theoretically motivate and then provide detailed description of the methodology behind the use of LCA to identify types of religiosity in the adolescent population. Using LCA, we identify five general types or profiles of religiosity/spirituality within

a sample of the American adolescent population in 2002–2003: Abiders, Adapters, Assenters, Avoiders, and Atheists. The Atheist and Abider categories look like groups many would expect to find at two ends of a continuum of religiosity, from low to high. The middle three classes, however, are not simply a group of respondents falling somewhere in between the irreligious and very religious but are a set of subgroups whose mixture of beliefs, experiences, and practices are complex and interesting. The Adapters have higher personal religiosity and spirituality but are less involved in religious institutions. The Assenters are more institutionally involved than Adapters, but religion is less salient for them than for Adapters or Abiders. The Avoiders resemble Atheists, finding little importance in religion and having virtually no religious practice in their life. However, they do believe in God and have little doubt about their beliefs.

Some of the classes we discovered mesh with types of religiosity identified in other research that takes a more *a priori* defined approach to identifying types. The Adapters and Assenters resemble Ammerman's (1997) "Golden Rule Christians," even though her focus is adults and ours is adolescents. The Avoiders seem akin to Clark's (2007) "not-so-religious" youth and Davie's (1994) "believers without belonging." In addition, our five-class typology overlaps with but expands Smith and Denton's (2005) ideal types of religiosity. Our Abiders seem very similar to their Devoted group, but we incorporate a higher percentage of youth in this class of religiosity, probably because the latent class model is identifying youth with a high probability of membership who are not necessarily a perfect fit to this ideal type that were identified by Smith and Denton (2005) using a strict set of criteria. We also find similarities in the latent classes of religiosity derived from our analysis and the types of "fuzzy fidelity" identified by Storm (2009) in Europe and latent classes derived by Jones et al. (2011) in their Seattle-based sample.

A key finding in our analysis is the empirical distinction between Avoiders and Atheists. Although they would score very similar using any one item or a scale of religiosity measures from a survey, these two groups are very different in their willingness to eschew religion and a belief in God altogether. This is a key distinction in worldview, even if their practices (or lack thereof) suggest strong similarities. Both are seemingly unreligious on all counts, but Atheists seem more likely to have thought through their beliefs and have decided to separate themselves from any kind of religious identity. Pearce and Denton (2011) provide evidence that the Atheists are faring better than Avoiders in terms of subjective well-being, risk behaviors, and educational aspirations. In some cases, the Atheists appear to be doing as well as the Abiders, so it will be important to follow these groups through time with more in-depth analyses to assess their well-being, but it might be that having a system of meaning involving disbelief can provide some of the same protections as having a belief-based system of meaning. This would be further evidence for the limitations of a variable-based definition of religiosity that runs from low to high and is associated with other outcomes.

Much like prior variable-based approaches have established, we show that age, race/ethnicity, religious affiliation, parent education, and region of the country are related to the probabilities of falling into the five different classes of religiosity (Jones et al. 2011). This suggests the continued importance of controlling for these factors when trying to understand any influence of religiosity (whether through a variable- or person-centered approach) on other aspects of life. It also provides added evidence that profiles of religiosity, or the way religiosity is lived in everyday life, are patterned by our social contexts and experiences. Some youth are more likely than others to have consistent packages of religiosity (i.e., similar levels of cognitive, affective, and behavioral religiosity), whether it is in the way of the Abiders or the Atheists, than others. Then, for those youth who have seemingly incongruous packages of the multiple dimensions of religiosity, certain demographic and family characteristics seem to shape which unique profiles of religiosity they exhibit.

Findings from latent class analyses add to the current understanding of religiosity manifest in the lives of American youth, and possibly generalize more broadly to what might be found in adult populations. We only analyze data on adolescents here, but we know that youth religiosity

is highly correlated with parent religiosity (Smith and Denton 2005), so we would expect the parents of these adolescents to produce a similar scheme of latent classes of religiosity. Other segments of the adult population might have a different distribution across the five classes, but we expect that this five-class typology would fit the population of adults in the United States well. Research should continue to examine how far the class typologies that we (and others) have derived might extend to other subgroups of the United States and beyond.

Another way in which this line of research can be further developed in the future is to examine how well this latent class structure replicates in data sets with different measures of religiosity. We stayed as close to prior research and theory on the key dimensions of religiosity and spirituality as we could. We have arguably one of the most extensive sets of religiosity measures of any nationally representative data set, but we recognize that our measures of noninstitutionally based religiosity and spirituality may not be ideal. We use measures of thinking about the meaning of life, identification as "spiritual, but not religious," volunteer work, and helping others outside of organized volunteer activities to try to tap the kinds of noninstitutional religiosity and spirituality often cited as prevalent in the United States, but that are very difficult to measure. There may be other dimensions of religiosity or spirituality that better capture and help distinguish the latent classes of religiosity than those we have. Further theoretical and measurement work will provide fodder for additional latent class analyses to refine our understanding of general religious types.

We do provide evidence that a slightly smaller set of indicators (8 rather than 12) derives a very similar model for the five classes of religiosity, so that suggests having fewer indicators is feasible; however, reducing to four indicators (which meant losing the indicators on noninstitutional practices and expressions of affective religiosity) greatly altered our results. Therefore, based on the theories and definitions of religion we were using, we needed those eight indicators. Deciding how many indicators to use in a latent class analysis is a different exercise than deciding how many measures to include in a variable scale. In the latter case, one is aiming to find measures of the same thing that eliminate measurement error. In the former, we are looking to represent all the different facets of religiosity, so the model can recognize unique combinations of *different* types of religious belief, practice, or salience.

Future research using data sets with more limited measurement of religion should consider what a person-centered analysis using that particular set of measures might offer. It may not be that one can claim the resulting profiles of religiosity take into account a wide set of facets and types of religiosity, but it may still be useful to think about how respondents combine answers to that particular set of questions rather than averaging them together or looking at them separately. In other words, sometimes the goal is representing as global a construct as possible, and other times it's finding the ways in which respondents combine responses to the measures at hand and associating these latent classes with the outcomes of study.

An additional expansion of this line of research is extending this type of inductive, person-centered, quantitative data analysis outside the boundaries of the United States and Western Europe (or even inside these boundaries into religious minority groups that do not have much weight in these analyses of nationally representative samples). It is not necessarily that we should be looking to find five classes in places like India or China. We should first be drawing on theory and prior research to understand the dimensions of religiosity that exist in those places and for other major religions. This will lead to a well-informed selection of indicators from which to derive valuable, setting-specific latent classes of religiosity.

Our results from latent class analyses of survey data corroborate and expand what others using qualitative data or *a priori* typologies of survey data have suggested in previous research and well fit the theoretical underpinnings of a lived religion approach to studying religiosity in the general population. Of course, we do not mean to suggest that this method is comparable to intensive ethnography to unpack the rich details of religious life. The ethnographic approach is more deeply person-centered because it can capture far more complex interactions between the

components of religiosity as well as the dynamics in religiosity over time. Unfortunately, what that type of approach sacrifices is the ability to widen the lens and take stock of general patterns in types of religiosity across a representative sample of the population. Latent class analyses using sample survey data do just that.

We also do not mean to suggest that a person-centered approach is always preferable to a variable-based approach. There are times when research needs to isolate the dynamics or correlates of one particular dimension of religiosity and that calls for a variable-based analysis. Working from what Morgan (2007) defines as a "pragmatic approach"—a research approach that mixes the inductive with the deductive, uses both subjectivity and objectivity, and favors transferability over generalizability—motivates us to apply what we learn from one type of data and its findings to how we use other types of methods and data. We are what Bourdieu (2004) calls "methodological polytheists" in that we find value in studying the qualitative nature of religiosity from a variety of angles. And, we argue that evidence from both qualitative and quantitative data will be the "building blocks of evidence" that advance the field (Lieberson 1992).

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