

ACCOUNTING FOR THE UNCOUNTED: COMPUTING CORRECTIVES FOR THE 2000 RCMS DATA

ROGER FINKE
PENNSYLVANIA STATE UNIVERSITY

CHRISTOPHER P. SCHEITL
PENNSYLVANIA STATE UNIVERSITY

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The 2000 Religious Congregations and Membership Study (RCMS) provides the most complete enumeration of religious congregations and their members by counties. Yet, this invaluable data collection suffers from two serious limitations. First, many denominations and religious groups did not participate in the study, resulting in serious undercounts of the total membership. Second, the undercounts are closely related to race and ethnicity. These two limitations distort both the descriptive and inferential statistics calculated from the RCMS data. This research computes two correctives for the RCMS study. The first provides a more accurate estimate for the national church adherence rate by counting the uncounted. The second corrective improves adherence rates for counties, states, and urban areas by adjusting for the racial and ethnic groups undercounted. After accounting for the uncounted, we estimate that the national adherence rate is 63 percent rather than the 50 percent estimated by using the RCMS data alone.

The 2000 Religious Congregations and Membership Study (RCMS) is an invaluable resource for religion scholars and practitioners alike. Providing data on religious congregations and their adherents for 149 denominations in the United States, the RCMS offers the most complete enumeration available by counties, states, and the nation. The goal of the RCMS is to approximate a census of American religion.

Yet, the RCMS has two serious limitations. The most obvious is that not all denominations participated. Despite the gallant efforts of a highly skilled inter-denominational research team, nearly 11 percent of the adherents reported in the annual *Yearbook of American and Canadian Churches* (YACC) were not included in the study. Thus, the first limitation of the RCMS is that it is incomplete.

A second limitation is that the extent of the undercounts varies across regions, distorting regional comparisons and biasing coefficients of bivariate and multivariate statistical analysis. If the percent of the undercount was consistent across counties and states, the church adherence estimates would be low but comparisons across areas would still be accurate. In other words, if you lower the church adherence rate of all counties by 20 percent, the relative rank of the counties remains unchanged. Unfortunately, the degree of the undercount is not uniform. Instead, the level of the undercount varies dramatically from one area to the next and is closely related to race and ethnicity—variables frequently included in social science models.

The first limitation reduces the usefulness of RCMS data for descriptive purposes by underestimating the level of involvement in local congregations. The second can distort both descriptive and inferential statistics. Specifically, descriptive accounts of regional variation are inaccurate because the undercounts vary by region and inferential statistics are often biased because the undercounts are closely related to other variables of interest. Both of these problems mean that the RCMS requires some adjustments before the usefulness of the data can be fully realized.

This research will attempt to offer these corrections.¹ First, we will offer a corrective for the national rate of adherence. For this correction we will focus on the numerator of the rate (i.e. religious adherents) by attempting to offer a more accurate count of religious adherents. We will draw on a variety of sources to offer a more complete estimate of total adherents in the United States by adding estimates for groups that did not participate in the RCMS.

We then provide a more accurate measure of church adherence for counties, states, and urban areas by making adjustments for racial and ethnic groups undercounted in the RCMS. In this second correction we will be adjusting the denominator for adherence rates. We will illustrate how the corrected adherence rates offer a more accurate regional profile of American religion and provide less biased measures of religious involvement, especially for research at the county, state, and urban level. Before computing these correctives, however, we first review how the RCMS was conducted and assess several of the acknowledged weaknesses of the data collection.

COUNTING THE FAITHFUL

After collecting a series of detailed and highly reliable religious censuses from 1850 to 1926, the Bureau of the Census acknowledged that their 1936 report was “seriously incomplete.” With several groups in the South and West refusing to participate, including many within the Southern Baptists and the Methodist Episcopal Church (South), the 1936 religious census was a bitter disappointment when compared to the earlier censuses. But if the 1936 census was a disappointment, the 1946 religious census was a complete failure. Facing stiff resistance from religious groups challenging its propriety, the effort was completely abandoned when Congress denied funding for the latter phases of the project (Christiano 1987; Finke and Stark 1992).² Beginning in 1933, the *Yearbook of American Churches* offered national membership totals by denominations on an annual or biannual basis, but they provided nothing by county, state, or even region.³ The result was that no data existed for conducting statistical analyses using counties or states as the unit of analysis, or even for offering descriptive profiles of religion by regions or states.

The National Council of Churches (1956) was the first to offer an alternative to the government-sponsored censuses. Reporting on churches and church membership data for 114 groups in 1952, they published *Churches and Church Membership in the United States: An Enumeration and Analysis by Counties, States and Regions*. This was followed by a similar study using 1971 membership statistics and was published in 1974 by the Glenmary Research Center (Johnson et al. 1974). A third study published in 1982 by the Glenmary Research Center used 1979 statistics and had several sponsors including the African Methodist Episcopal Zion Church, the Southern Baptist Convention, the Lutheran Council in the U.S.A., and the National Council of the Churches of Christ (Quinn et al. 1982). In 1990 the Association of Statisticians of American Religious Bodies (ASARB) sponsored the study, but the results were still published by Glenmary (Bradley et al. 1992).

The 2000 study of churches and church membership was again sponsored by ASARB, but the title was changed to Religious Congregations and Membership Study (RCMS) to better reflect the diversity of religious groups participating in the study. Most study materials were housed at the international offices of the Church of the Nazarene, with Richard Houseal and Dale Jones coordinating the data collection. A large interdenominational team, including Sherri Doty, Clifford Grammich, James E. Horsch, Mac Lynn, John P. Marcum, Kenneth M. Sanchagrin and Richard H. Taylor, was responsible for securing the data from participating denominations.

The study began by inviting every religious group that was identified in the 1999 *Yearbook of American and Canadian Churches* (YACC) to participate. This source along with other suggested contacts produced 285 invited groups. In the end, 149 religious bodies were able to participate in the RCMS. This may seem like a fairly low response rate, but it includes most of the larger religious bodies in the United States and represented 89.3 percent of all adherents reported in the YACC.

When attempting to provide a standardized measure of church members and adherents, the researchers of the RCMS faced several difficulties. The first was creating definitions that would make comparisons across groups possible. Counting objects or people would seem to be an elementary task, however it becomes complicated when it is not entirely clear who is to be counted and how they should be counted. In the case of counting members of a religious group, who should be considered part of the group? Are only full members, as defined by the religious group, to be counted? Are regular participants, even if they are not "official members," to be counted? Of course, this begs the question of what defines "regular participation."

In the face of these difficulties, the RCMS asked the participants for two numbers. The first was the number of "individuals with full membership status." The criterion for this "membership" number obviously varies from group to group. The second number asked for was the group's "total adherents," defined as "all members, including full members, their children and the estimated number of other participants who are not considered members." This latter number was meant to come closer to a standardized number with which to compare groups.

A little less than half (n=67) of the participating groups only provided a full membership number and not a "total adherents" number. In these cases a total adherents number was estimated by calculating how many children were likely to be part of the religious group. In other words, the final adherents total included both the adult members reported by the denomination and an estimate of the number of children involved.⁴ The specific formula for estimating adherents from the membership counts is as follows:

*Reported Church Members * [Total Population / (Total Population - Children 13 years and under)]⁵*

By factoring in children 13 years of age and under for denominations not counting children, this total significantly reduces biases when making comparisons across denominations and over time.

Table 1 shows how the 2000 RCMS compares with previous churches and church membership studies. Generally the studies have become more inclusive and complete over time. The percent of YACC adherents included increased from 79.3 percent in 1952 to 94.3 percent in 1990 and then dropped slightly to 89.3 in 2000. The number of participating religious groups dropped sharply in 1971, from 114 in 1952 to 53 in 1971. Since 1971, however, the

Table 1
Comparing the 2000 RCMS to Previous Church and Church Membership Surveys

Year of RCMS Collection	1952	1971	1980	1990	2000
# Groups Invited to participate			228	246	285
# Groups Participating	114	53	111	132	149
Total adherents reported	74,125,462	100,812,489	112,538,310	137,064,509	141,371,963
Total Adherents in YACC*	87,027,507	124,829,551	133,748,776	145,383,738	158,294,022
Percent of YACC adherents covered by RCMS	85.1	80.8	84.1	94.3	89.3
African-American Denominations	Not included	Not included	AMEZ incl.	AMEZ incl. Black Baptist est.	No major groups included
Information reported	Membership as defined by group	Churches Membership Adherents	Churches Membership Adherents	Churches Membership Adherents	Congregations Membership Adherents Attendance
Non-Christian groups reported	Jewish Estimates Spiritualists	None included	Some Conservative and Reform Jewish synagogues	Jewish Estimates	Jewish Estimates Baha'i Muslim Estimates
Conducted by*	Congregation numbers for Baha'i NCC	NCC Lutheran Church— Missouri Synod	NCC, AMEZ, SBC Lutheran Council in U.S.A.	ASARB	ASARB
Published by Glenmary	No	Yes	Yes	Yes	Yes
Distributed by the ARDA*	Yes	Yes	Yes	Yes	Online Preview

Notes: *YACC: Yearbook of American and Canadian Churches; NCC: National Council of Churches; AMEZ: African Methodist Episcopal Zion Church; SBC: Southern Baptist Convention; ASARB: Association of Statisticians of American Religious Bodies; ARDA: American Religion Data Archive (www.TheARDA.com)

Table 2
2000 YACC Adherents for Groups Not Participating in the 2000 RCMS

Religious Body	Inclusive Membership (Total Adherents)
<i>Historically African-American</i>	
African Methodist Episcopal Church	2,500,000
African Methodist Episcopal Zion	1,252,369
Christian Methodist Episcopal Church	850,000
Church of God in Christ	5,499,875
National Baptist Convention of America, Inc.	3,500,000
National Baptist Convention, USA, Inc.	5,000,000
National Missionary Baptist Convention of America	2,500,000
Pentecostal Assemblies of the World, Inc.	1,500,000
Progressive National Baptist Convention, Inc.	2,500,000
<i>Others</i>	
Baptist Bible Fellowship	1,200,000
Christian Brethren	100,000
Christian Congregation, Inc.	117,039
Full Gospel Fellowship of Churches and Ministers International	275,200
Jehovah's Witnesses	1,040,283
Large Group Total:	27,834,766
122 religious groups with under 100,000 adherents	1,217,725
Total:	29,052,491

number has steadily increased, reaching 149 in 2000. Estimates for Jewish groups appeared in the 1952, 1990, and 2000 data. The 1980 data contained actual counts of 1,501 Conservative and Reform congregations. However, the 2000 RCMS was the first of the studies to include congregational estimates for Muslims, Hindus, Buddhists and other groups outside of the Judeo-Christian tradition. The most serious omission of the studies has been the inability to consistently include accurate counts for most African American churches.

Despite the limitations of the RCMS data, however, the study has several advantages over other attempts to enumerate the religious population of the United States. As noted earlier, the YACC provides a more complete estimate for congregational membership in the United States, but offers only national estimates and the estimates often rely on different reporting years. This eliminates the possibility of drawing regional comparisons or conducting more advanced statistical analysis using counties, states, or urban areas as the unit of analysis. The RCMS also has advantages over large national surveys such as the American Religious Identification Survey (ARIS). Based on a telephone survey of a large sample of Americans (N=50,281), the ARIS offers a detailed profile of American religion and allows for statistical analysis using individuals as the unit of analysis, but even this survey cannot offer meaningful membership estimates for counties, states, or urban areas. Moreover, the survey measures self-reported religious affiliation rather than membership (Kosmin, Mayer and Keysar 2001). The 2000 RCMS remains the only recent census of religious membership in America.

Table 3
RCMS Participating Groups Who Did Not Provide
Membership-Adherents Numbers and Their 2000 YACC Adherents

Religious Group	YACC Adherents
Coptic Orthodox Church	300,000
Patriarchal Parishes of the Russian Orthodox Church in the USA	9,780
Serbian Orthodox Church in the USA	67,000
Total	376,780

A CORRECTIVE FOR THE NATIONAL ADHERENCE RATE

The goal of our correctives is to improve the measure for church adherence. What percent of the population holds membership in a local religious congregation? To calculate a total adherence rate for the United States, we must have both a numerator (total number of adherents) and a denominator (total population). The latter is fairly easy to acquire through Census data, but the former is more difficult accurately to produce. Our first tactic for improving our measure of church adherence is to make the final count for adherents (the numerator) more complete.

YACC Omissions

The 2000 RCMS reports a total count of 141,371,963 adherents in the 149 groups participating in the study. To offer a more complete count, however, we must first identify the religious groups that did not participate in RCMS and then secure an adherent estimate for each group. We begin with denominations that listed membership totals in the *Yearbook of American and Canadian Churches* (YACC), but did not participate in RCMS. Some of these missing groups were unable to provide the desired statistics and others simply refused to participate. Regardless of the reason, however, the result was an undercount of congregations and church adherents.

As shown in Table 2, there were over 29 million adherents reported in the YACC that go uncounted in the RCMS. The vast majority of these omissions are from 14 denominations with over 100,000 members. These 14 groups alone account for 27,834,766 additional adherents. If we add these adherents to the RCMS number, we get an adherents numerator of 169,206,729. Returning these adherents to the total corrects for the absence of the historically African American denominations that were not included in the RCMS totals.⁶

There were also an additional 122 groups reported in the YACC with less than 100,000 members that did not participate in the 2000 RCMS. If we sum the adherents of these smaller groups together this adds another 1,217,725 adherents increasing our numerator to 170,424,454.⁷

Estimates from Congregational Totals

Additions are also needed for groups that participated in the RCMS, but only provided counts of congregations, not membership or adherents. A few of these groups did list national adherent totals in the YACC. Table 3 displays these groups and reports the adherents numbers provided in the 2000 YACC. This adds another 376,780 adherents to bring the total to 170,801,234.

Table 4
Adherents Estimates for Groups Based on Number of Congregations

Religious Group	Number of Congregations	Estimated Adherents
Calvary Chapel Fellowship Churches	728	109,200
Primitive Baptist Churches-Old Line	1,381	207,150
Reformed Baptist Churches	197	29,550
Russian Orthodox Church Outside of Russia	161	24,150
Southwide Baptist Fellowship	501	75,150
Church of Christ, Scientist	2,200	330,000
Church of Our Lord Jesus Christ of the Apostolic Faith, Inc.	500	75,000
Elim Fellowship	100	15,000
National Spiritualist Association of Churches	156*	23,400
United House of Prayer	135	20,250
Volunteers of America	333**	49,950
United Pentecostal Church International	3,790	568,500
Independent\Non-denominational (Less than 300 members)	33,295	2,330,650
Total		3,857,950

Notes: a.* Number of pastors serving parishes; b. ** Total number of clergy

There were also a few Christian groups that listed congregational totals, but did not offer membership totals in either the RCMS or the YACC. These groups, and their congregational totals, are listed in Table 4. To calculate an adherent estimate for each of these groups, we assumed 150 adherents per congregation. This assumes that their congregations are less than one half the size of the average Protestant congregation in the 2000 RCMS (322 adherents). We recognize that many of the groups in Table 4 support small congregations (e.g., Church of Christ, Scientist) that fall far below the national average, but we also know that at least a few of the groups support sizeable congregations. For example, the Hartford Institute for Religion Research lists 27 of the 728 Calvary Chapel congregations as having a weekly attendance of 2000 or more (Hartford 2004). By contrast, only 2 of the 7,314 Episcopal congregations report a weekly attendance of 2000 or more. In any event, our estimate of 150 adherents per congregation should be a conservative one. Using this estimate, we add another 1,527,300 adherents to our total. But this does not include the many small independent\non-denominational congregations not counted by RCMS.

The RCMS included 1,705 independent\non-denominational congregations, all of which had more than 300 members (see Jones et al. 2002:535). The Faith Communities Today Project estimated that there are about 35,000 independent congregations in the United States (Dudley and Roozen 2001) and the Organizing Religious Work study arrived at similar estimates (Ammerman, Lummis, Roozen, and Thumma 1998). This means that approximately 33,295 independent congregations were not counted by the RCMS. Considering that all of these congregations are less than 300 members and some of them will be very small store-front congregations, the mean size of these congregations will be skewed to the lower end of the range. If we assume that these small congregations have a mean size of 70 mem-

Table 5
Adherents estimates for non-Christian Groups*

Hindu	1,110,000
Buddhist	2,000,000
Other Eastern	281,422
Native American	281,422
Total	3,672,844

* Estimates for Muslim adherents were included in the RCMS totals and therefore are not included in our corrections.

bers each, then this adds 2,330,650 adherents to our total adherents estimate. This estimate is supported by data from the National Congregations Study showing that independent congregations with less than 300 regular participants have a mean of 72 'regulars' (Chaves 1998).⁸ This addition is also noted in Table 4.

Non-Christian Additions and Adjustments

One of the many significant new contributions of the 2000 RCMS was the involvement of non-Christian groups in the study. For Muslims, the RCMS team developed a strategy for estimating total adherents based on data collected by the Faith Communities Today Project (Bagby, Perl, and Froehle 2001). These adherent estimates are included in the RCMS totals reported earlier. For the Hindu, Buddhist, Jain, Sikh, Tao, and Zoroastrian groups, however, only the number of congregations was reported. This means that our current total is missing the adherents of these non-Christian groups and we must add an estimate to account for them.

The first step is to find adherent totals for the uncounted Eastern religions. In an analysis of over twenty-three recent studies and sources, Tom Smith reports that "there is a great consensus that the Hindu population is a little over 1,000,000," with 74 percent of the estimates falling between one million and 1.5 million adherents (Smith 2002:581). We will use the average estimate he finds among all of these sources, which falls at 1,110,000 Hindus.

On the other hand, Smith found that there is a much larger range of estimates for the Buddhist population, with some sources estimating over 5,000,000 Buddhists and others estimating less than 500,000. Using data from the GSS and three other sources he calculates that the Buddhist population ranges from 0.5 to 1.0 percent of the total population. This would equal between 1.4 and 2.8 million adherents to Buddhism. Because Smith estimates that the total is closer to the lower estimate, we will add a total of 2 million Buddhists to our adherents total. These two religious groups along with Muslims "account for about half the people following other religions" (Smith 2002:578).

According to GSS data from 1991-2000, Smith estimates that the "other Eastern" religions such as Sikhism and Jainism collectively make up about 0.1 percent of the population. This would equal a population of about 281,422 adherents. It is unfortunate that this number is rather broad in what it contains, but since we do not have any individual estimates for these "other" groups this will have to do. Similarly, GSS data shows that Native American religions comprise about 0.1 percent of the population, so we will add another 281,422 adherents to our numerator. Table 5 shows the adherents estimates for the non-Christian groups.

Table 6
Total Adherents Estimates

RCMS Total Adherents	141,371,963
YACC Large-Group Correction	27,834,766
YACC Small-Group Correction	1,217,725
Other YACC Corrections	376,780
Congregation Imputations	3,857,950
Non-Christian Estimates	3,672,844
Secular Jewish Correction	-1,854,680
Total Adherents	176,477,348
Total Population (Census-April 2000)	281,421,906
National Rate of Adherence	62.7%

Table 5 summarizes our additions for Hindus, Buddhists, and other non-Christian religions. The table totals to 3,672,844 and, when combined with the previous corrections, brings the RCMS undercount up to 178,332,028. Before computing a new adherence rate, however, we need to make a final adjustment to the RCMS estimate for Jewish adherents. The RCMS offers adherents totals for Muslims and Jews, but the count for Jews is based on all Jews (secular and practicing) and requires an adjustment to make it comparable with the other measures of religious adherents.

The RCMS research team acknowledged that their estimate of 6,141,325 Jewish adherents, which comes from the *American Jewish Year Book 2001*, did not match the RCMS adherent standard used for other denominations (see Jones et al. 2002:535). Rather than representing the number of people holding membership in a local synagogue or temple, this number represents the total Jewish population. This is confirmed by other sources. The 2000 General Social Survey found that self-affiliated Jews made up 2.2 percent of their sample. If this same percentage was applied to the general population this would translate into 6,191,280 people, or a count very similar to the *American Jewish Year Book* figure reported by RCMS. But this figure represents religious affiliation or identity, *not* membership or participation. What percent of the Jewish population or those affiliating as Jews should be considered “adherents” in the same way that the other RCMS groups calculated adherents?

To clarify what percentage of the Jewish affiliates held any involvement in the local congregation, we looked at worship service attendance in the 2000 GSS and found that 30.2 percent of all self-identified Jews never attended worship services. In the absence of any other measure of membership, we use this as an indicator of involvement in the local synagogue or temple. When we multiply the RCMS adherents estimate for Jews by 30.2 percent we arrive at an estimated 1,854,680 self-identified Jews that would *not* be considered adherents. Reducing the RCMS total by this amount results in an adjusted estimate of 4,286,644 Jewish adherents.

After making all of the corrections and adjustments, we estimate that there are 176,477,348 total adherents representing 62.7 percent of the population, a national adherence rate that is similar to a previous estimate of 62 percent computed in 1980 (Stark 1987).

A CORRECTIVE FOR COUNTIES, STATES, AND URBAN AREAS

The RCMS survey accounted for 79.1 percent of all religious adherents reported in Table 6. If the undercounts were evenly distributed across every county in the United States, corrections would be easy. We could divide the RCMS totals by 79.1 percent of the population and we would have corrected the adherence rate for every county, state, and urban area in the nation. But the undercounts are not evenly distributed. As shown earlier in Table 2, the absence of adherent totals for the historically African American denominations is a major omission that shows wide-ranging variation across counties. To develop a corrective for this omission, we need to adjust the adherence rate to account for the uncounted.

Table 7
Number and Percent of Adherents Counted in RCMS by Race

Denominational Groups	Adherents		Inclusion in RCMS		
	%	Number	Counted	Uncounted	Percent Uncounted
Historically African-American	100.0	21,337,484	7,840	21,329,644	99.9
Black	89.0	19,000,574	7,840	18,992,734	99.9
White	6.9	1,461,150	0	1,461,150	100.0
Other	4.1	875,760	0	875,760	100.0
Mainline	100.0	26,055,503	26,055,503	0	0
Black	7.6	1,991,115	1,991,115	0	0
White	90.1	23,469,602	23,469,602	0	0
Other	2.3	594,786	594,786	0	0
Evangelical	100.0	41,089,496	32,313,909	8,775,588	21.4
Black	11.7	4,198,208	1,781,506	2,416,702	57.6
White	80.0	34,197,481	28,816,582	5,380,900	15.7
Other	8.3	2,693,807	1,715,821	977,986	36.3
Catholic	100.0	62,035,042	62,035,042	0	0
Black	3.0	1,861,051	1,861,051	0	0
White	64.0	39,702,427	39,702,427	0	0
Other	33.0	20,471,564	20,471,564	0	0
Other Groups	100.0	25,959,822	19,104,990	6,854,832	26.4
Black	10.3	2,248,075	1,503,504	744,571	33.1
White	82.0	19,039,232	15,294,346	3,744,886	19.7
Other	7.7	4,672,515	2,307,140	2,365,375	50.6
Totals	100.0	176,477,348	139,517,284	36,960,065	20.9
Black	16.6	29,299,024	7,145,016	22,154,008	75.6
White	66.8	117,869,892	107,282,957	10,586,935	8.9
Other	16.6	29,308,432	25,089,311	4,219,122	14.4

Note: Due to rounding, numbers may not perfectly sum together.

Table 8
Adjusted Denominator Calculations

Group	2000 Population ¹	Multiplier	Adjusted Population
White	211,460,626	.911	192,640,630
Black	34,658,190	.244	8,456,598
Other	35,303,090	.866	30,572,476
Total	281,421,906		231,669,704

Notes: ¹ Census numbers used were “white alone” and “black alone” and the other category was calculated by the subtracting the sum of white alone and black alone from the total population.

When developing a corrective for the national adherence rate, our attention focused on getting a more complete count. In other words, we corrected the numerator of the adherence rate because the YACC and other sources provided additional data on the number of church adherents in the nation. When we offer a corrective for counties and other regional units, however, our attention shifts from the numerator (total adherents) to the denominator (total population). What is the appropriate denominator when some groups are not fully represented in the numerator’s count of adherents? In other words, if only 50 percent of a racial or ethnic group’s adherents are included in the numerator, then only 50 percent of its population should be in the denominator.

The need for this correction is most apparent for African-Americans. Because none of the large historically African-American denominations are included in the RCMS, we know that there is a severe undercount of black adherents. This is openly acknowledged by the researchers (Jones et al. 2002:xiii). One solution would be to simply exclude all blacks from the denominator (i.e. total population minus black population), but this solution would ignore the fact that many blacks are members of denominations that are not part of the historically African-American groups. This means that some blacks are counted among the RCMS groups, so it would not be accurate to exclude all blacks from the population.

Our second corrective will attempt to find the proportion of church adherents excluded from the 2000 RCMS by race (the numerator) and then exclude an equal proportion of the population from the denominator for each race. Here our attention will focus on the percent of religious adherents counted for each major racial grouping. For instance, what percent of black adherents are included within the RCMS? What percent of white adherents? Calculating the percent of religious adherents uncounted by the RCMS for each race allows us to generate multipliers for adjusting the denominator and greatly improves the estimate for religious adherence.

The first step in adjusting the denominator is finding the racial breakdown for each denomination. This allows us to calculate the number of adherents counted and uncounted by race. For the largest denominations we turned to the American Religious Identification Survey (ARIS) of 2001 and a merged file of the last ten years of the General Social Survey (GSS). Each survey gave us a large sample of the population with measures for both race and religion. Whenever possible, and especially for denominations where self-identification was more difficult (e.g., the multiple branches of Baptists), we verified the estimates with denominational reports, denominational surveys, and with brief phone calls or e-mails to those collecting data for the denomination.⁹ For the smaller denominations even the ARIS and the merged GSS files did not have enough cases for racial estimates. For these

Table 9
Unadjusted and adjusted state rates of adherence

State	Unadjusted Adherence Rate	Adjusted Rate	Percent Change
South			
Alabama	54.8%	74.4%	19.6%
Arkansas	57.1%	71.0%	13.9%
Delaware	40.6%	52.0%	11.4%
Florida	41.1%	50.8%	9.7%
Georgia	44.8%	62.5%	17.7%
Kentucky	53.4%	62.0%	8.6%
Louisiana	58.8%	84.9%	26.1%
Maryland	43.3%	50.0%	6.7%
Mississippi	54.6%	81.8%	27.2%
North Carolina	45.4%	59.4%	14.0%
Oklahoma	60.8%	71.2%	10.4%
South Carolina	47.6%	66.7%	19.1%
Tennessee	51.1%	63.8%	12.7%
Texas	55.5%	67.2%	11.7%
Virginia	41.6%	53.5%	11.9%
West Virginia	35.9%	40.4%	4.5%
Region	49.1%	62.9%	13.8%
Northeast			
Connecticut	57.9%	68.4%	10.5%
Maine	36.4%	40.1%	3.7%
Massachusetts	64.1%	73.6%	9.5%
New Hampshire	47.7%	52.7%	5.0%
New Jersey	57.7%	70.9%	13.2%
New York	60.4%	75.7%	15.3%
Pennsylvania	57.9%	68.8%	10.9%
Rhode Island	63.5%	72.4%	8.9%
Vermont	39.1%	43.2%	4.1%
Region	58.6%	70.6%	12.%

denominations we assigned their group the racial breakdown of the larger religious category in which they fell (e.g., Evangelical, Mainline, African-American, Catholic, etc)¹⁰.

A summary of our work is presented in Table 7. As expected the churches are clearly segregated with the majority of blacks continuing to attend historically African-American denominations. But the summary table does mask some areas of integration. Many Pentecostal denominations and the Jehovah’s Witnesses show a high percentage of blacks and “other” races. Also, notice that the percent white in the Catholic Church has declined as immigration from the South and East continues. Two major national polls recently found that 28 to 29 percent of Catholic respondents are now Hispanic and even conservative estimates place the percentage around 20 percent or above.¹¹

For our task at hand, however, we are most interested in the breakdown of uncounted adherents by race. If we move to the bottom three rows of Table 7 and divide the total number of uncounted adherents by the total number of adherents for each race, we learn that 75.6 per-

Table 9 - continued
Unadjusted and adjusted state rates of adherence

State	Unadjusted Adherence Rate	Adjusted Rate	Percent Change
Midwest			
Illinois	55.3%	68.7%	13.4%
Indiana	42.9%	50.3%	7.4%
Iowa	58.5%	65.3%	6.8%
Kansas	49.4%	56.8%	7.4%
Michigan	41.8%	51.4%	9.6%
Minnesota	61.7%	69.8%	8.1%
Missouri	51.7%	62.0%	10.3%
Nebraska	58.8%	65.1%	6.3%
North Dakota	73.2%	81.0%	7.8%
Ohio	44.9%	54.0%	9.1%
South Dakota	67.8%	75.2%	7.4%
Wisconsin	60.4%	69.4%	9.0%
Region	51.1%	60.7%	9.6%
West			
Alaska	34.3%	39.2%	4.9%
Arizona	39.9%	45.3%	5.4%
California	46.1%	54.2%	8.1%
Colorado	39.5%	44.9%	5.4%
Hawaii	36.2%	41.8%	5.6%
Idaho	48.5%	53.6%	5.1%
Montana	44.7%	49.4%	4.7%
Nevada	34.3%	39.6%	5.3%
New Mexico	58.2%	65.8%	7.6%
Oregon	31.3%	35.0%	3.7%
Utah	74.7%	82.9%	8.2%
Washington	33.0%	37.3%	4.3%
Wyoming	46.7%	51.8%	5.1%
Region	43.8%	50.6%	6.8%

cent of all black adherents were not counted by the RCMS, 8.9 percent of all white adherents were not counted, and 14.4 percent of those falling in the other category went uncounted.

These percentages provide the justification for developing multipliers for correcting the denominator (total population) of the adherence rate. If 75.6 percent of black adherents are excluded from the RCMS totals (numerator), then 75.6 percent of the black population should be excluded from the total population (denominator) when calculating an adherence rate. When translated into a multiplier, the black population should be multiplied by 24.4 percent to include only the portion of the black population that is counted in the numerator. The multipliers are shown in Table 8 along with the adjusted population totals for the United States.

Although Table 8 applies the multipliers to adjust the denominator for the national rate of adherence, the greatest value of the multipliers is for revising estimates of church adherence for counties, states, and urban areas.

The most significant question is: does this make a difference? We close by evaluating the value of the corrective for research.

RESEARCH APPLICATIONS

Applying the corrective to states, results in some obvious improvements. Like the correctives to past church and church membership surveys, this one provides a more accurate regional profile of religion (Stark 1987). As shown in Table 9, the adherence rates jump sharply for many Southern states once the corrective is applied. Alabama and South Carolina jump over 19 points after the adjustment and Mississippi jumps over 27 points. Prior to the adjustment Georgia had an adherence rate that was lower than California and was near the rates of many of the Western states long known for their low rate of religious involvement. In general, the adjusted rates provide a regional profile that more accurately fits with other accounts of American religion.

When we compare the adjusted rates reported in Table 9 with regional profiles provided by other sources, the results are reassuring. The 2000 General Social Survey shows that 64.4% of the South, 55.8% of the Northeast, 58.9% of the Midwest, and 50.2% of the population in the West report attending church several times a year or more. This profile is nearly identical to the one given by the adjusted regional adherence rates, with the lone exception of the Northeast. By contrast, when the unadjusted rates are used, the South has a rate of 49.1%, the Northeast's rate is 58.6%, the Midwest's rate is 51.1%, and the West has an adherence rate of 43.8%. It seems then that overall the corrections applied to the unadjusted numbers produce a more accurate regional profile of adherence rates.

But the adjusted rates offer much more than an improved regional profile. To the extent that they more accurately measure church membership, they should more accurately measure the effects of religious involvement. In particular, they should reduce the racial bias inherent in the uncorrected measures for adherence. Whereas the uncorrected rates were uncorrelated with the percent of blacks in a state (.01), the corrected rates held a positive and highly significant correlation of .38. This confirms what we know from multiple sources. Blacks have a higher rate of involvement in religious organizations than the general population and they are more concentrated in the South where religious involvement is higher. The corrected rate offers a more accurate relationship between religious involvement and race, and should reduce the bias of coefficients when used in multivariate statistical models.

Finally, the correctives point to some important trends that otherwise might not be noticed. When Rodney Stark corrected the 1971 and 1980 *Churches and Church Membership* studies, he found that California, Oregon, and Washington had the lowest church membership rates in the nation in 1971 and showed little change in 1980. He and William Sims Bainbridge (1985) described the entire West Coast as the Unchurched Belt. Although Oregon and Washington remain at the bottom in 2000, the rate for California has jumped from 368 adherents per 1,000 to 542 and now exceeds several states in the Northeast and Midwest.

A second significant trend is the increasing percentage of African-Americans holding membership outside the historically African American denominations. Stark estimated the percentage at only 10% in 1971 and the 1952 *Churches and Church Membership* study suggested that the black population could be removed from the denominator when computing rates because so few were members of "white" denominations. In contrast, when estimating membership by race and major religious groupings (see Table 7), we found that 35.1 percent (10,298,449 of the 29,299,024) held membership in denominations that are *not* his-

torically African American. As we noted in the correctives, 24.4 percent of all African-American members now belong to denominations counted by the RCMS.

Dale Jones (2002) illustrated this trend by computing the 1952 and 2000 adherence rates for several urban areas. When the black population is excluded from the denominator for Fulton County (Atlanta), Baltimore, and New Orleans in 1952, the church adherents are 61, 73, and 81 percent of the population, respectively. These are rates that seem plausible for the non-black population of each urban area. But when the entire black population is excluded from the denominator in 2000, the new rates exceed 100 for each of these urban areas.¹² Clearly an increasing number of African-Americans are attending historically “white” denominations. Not only does this point to an important trend in American religion, it highlights the importance of implementing the correctives just reviewed.

Thus, the correctives offer a more accurate regional profile of American religion, reduce significant measurement biases when the data are entered into multivariate statistical models, and help to identify significant trends overtime.

CONCLUSION

When we began our effort to compute correctives for the 2000 *Religious Congregations and Membership Study*, we noted that the RCMS has two serious limitations. First, the data are incomplete, missing adherent totals for hundreds of small religious groups and at least 23 religious groups with a membership of 100,000 or more. Second, the extent of the measurement error varies across regional units and is closely related to race. The result is measurement error that distorts both descriptive and inferential statistics using the data.

To address these limitations, we have provided two methods for correcting the adherence rate. The first improves our estimate for the national rate of adherence by adding adherent totals for the groups not counted by the RCMS. When the missing groups are added the national adherence rate jumps from 50.2 percent of the population to 62.7. The second method calculated corrective multipliers to account for the percent of whites, blacks, or other groups who were missing from the RCMS. These corrective multipliers were necessary because most of the historically African American denominations were not included in the RCMS collection. This omission sharply underestimates adherence rates for counties and states with large black populations.

We are confident that our correctives improve the RCMS data, but we are equally certain that even the corrected measures have flaws. The first corrective, adding missing adherents to the numerator, greatly improves our count of total adherents, but we are aware of at least two potential sources of error—one that potentially decreases the total, a second that increases the total. The first of the potential errors is the adherent totals we used for the historically African American denominations. For several denominations these are admittedly rough estimates offered by the denomination, and might be optimistic.¹³ Using the totals reported in Table 7, for example, the adherence rate for blacks is 84.4 percent. Although surveys consistently report that blacks hold far higher levels of involvement in congregations and are less likely to report their religious preference as none, even these differences would suggest a slightly smaller gap between the adherence rates of whites and blacks.¹⁴

But, if the adherent totals for the African-American denominations threaten to inflate the total number of adherents, the second source of error underestimates the total. We are well aware that our effort to add all missing groups to the total is still far from complete. Whereas, the RCMS reports on 149 religious groups and the *Yearbook of American and*

Canadian Churches includes 215 groups, J. Gordon Melton's *Encyclopedia of American Religions* (Melton 2003) finds over 2,100 groups in the United States. We capture some of these groups in our estimate for "Other Eastern" and "Native American" religions, yet we know that many groups remain uncaptured. Several detailed regional studies point to this undercounting and suggest it is especially sharp in areas with numerous small religious groups. Deborah Vansau McCauley's study of Appalachia found a "wealth of religious life . . . flourishing in the mountains," but the religious life was far removed and often ignored by more mainstream American religion (McCauley 1995:447). This might help to explain the relatively low rate (.404) of West Virginia. Nor is this undercount confined to Appalachia. When Ram Cnaan and associates canvassed Philadelphia for congregations, they found 2,095 congregations compared to the 876 reported in RCMS (Cnaan and Boddie 2001). Likewise, Wilbur Zelinsky's (2004) exhaustive search for congregations in Cook County, Illinois found over 5,100 congregations compared to the 2,346 reported in RCMS. Although many of the missing urban congregations are African-American or independent churches accounted for in our corrections, even these churches do not account for the full difference.

The second corrective also has potential shortcomings. Table 7 estimates that 24.4 percent of all blacks in the nation are members of churches counted by the RCMS. But this percentage could potentially change from one county to the next, a change that would not be reflected in our multiplier. We also know that this correction will slightly underestimate the rate of adherence, though it is vastly improved over no correction.¹⁵ Given that blacks have higher rates of adherence, the overall rate will be lowered when only 24.4 percent of black adherents are included in the numerator and only 24.4 percent of the black population is included in the denominator. And, finally, the corrective attempts to improve the rate by making the denominator (population counted by RCMS) compatible with the numerator (adherents counted by RCMS), but this corrective does not "bring back" the groups that did not participate.

Recognizing these flaws, however, should not distract from the significant improvements these correctives offer. The national adherence rate of 62.7 is based on more complete and accurate counts of church adherents than the rate of 50.2 percent, which relies on the RCMS data alone. Likewise, the shortcomings of the second corrective method are a small price to pay for gaining more accurate estimates at the county level. These county level estimates offer the most promise for future research. Not only will this corrective greatly improve regional profiles of American religion, it will also reduce the bias of coefficients when the county, state, and urban data are used in statistical models.

Finally, we would be remiss not to acknowledge the significant service ASARB provides by collecting these data. Working with little budget and limited institutional support, a small group of denominational researchers coordinates a major national data collection every ten years. Although this article has focused on correcting omissions, we find it remarkable that the omissions are so few.

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NOTES

¹Rodney Stark offered similar corrections for the 1971 and 1980 churches and church membership surveys (see Stark 1987).

²The Bureau of the Census first collected data on religion in 1850 when local census supervisors collected data on the seating capacity, value, and denomination of churches for every county in the United States. Beginning with the 1890, however, duties for collecting the data were transferred to regional representatives of religious groups (e.g., a clerk of the regional diocese, conference, synod, or presbytery) and far more detailed data were collected. The project was then shifted to the sixth year of the decade in order to relieve the workload on the Bureau of the Census—so the next one was conducted in 1906, and again in 1916, 1926, and 1936.

³The *Yearbook of American Churches* was later changed to the *Yearbook of American and Canadian Churches* in 1973. Prior to the 1933 *Yearbook of American Churches*, the *Federal Council Yearbook*, the *Yearbook of the Churches*, and the *Handbook of the Churches* also reported national membership totals by denomination.

⁴This correction technique was used in the 1971 churches and church membership study and has been used in each of the following studies (Johnson et al. 1974).

⁵“Reported Church Members” refers to adult members with full membership status. The figures for “Total Population” and “Children 13 years and under” are taken directly from U.S. Census data. Thus, if a denomination reported 200 adult members in a county and the county had a total population of 1,000 with 200 being 13 years of age or under. The estimated adherents for this denomination would be $200 * (1000 / (1000 - 200))$ or a total of 250 adherents. This total accounts for the 200 adult members reported and estimates the children not reported.

⁶A reviewer asked how we identified the historically African-American denominations. Along with the obvious clues in many names (e.g. African Methodist Episcopal Church) and a knowledge of the groups, we relied on J. Gordon Melton’s (2003) *Encyclopedia of American Religions* and Frank S. Mead’s *Handbook of Denominations*.

⁷For some of the small groups data were not reported for 2000, but were reported for an earlier year. We selected the data that came closest to 2000.

⁸Whereas, the FACT and ORW studies estimate that around 11-12 percent of all churches are independent/nondenominational, the National Congregations Study estimates the total at 19 percent. Again, we go with the more conservative estimate to avoid inflating the totals.

⁹This verification was especially crucial for Baptists. For instance, the GSS reported that 22.7% of Southern Baptists were black, but a research report published by the Southern Baptist Convention reported that only 4% of their membership is black (Jones 2002).

¹⁰The classification system utilized by the American Religion Data Archive and developed in Steensland, et al. 2000 was used.

¹¹The 2001 American Religious Identification Survey of 50,281 residential households estimates that 29 percent of Catholics are Hispanic (Kosmin, Mayer, and Keysar 2001) and the Center for Applied Research in the Apostolate’s Catholic Poll estimates 28 percent. The 1999 Gallup Poll of Catholics (D’Antonio et al. 2001) and the General Social Surveys (2000 and 2002 combined) found 23 and 19 percent. The 1999 Gallup Poll and the General Social Surveys can be downloaded free of charge from the American Religion Data Archive (www.TheAR-DA.com).

¹²For some small counties the adherence rate might exceed the population because some church members are residents in a neighboring county. For a populous county like Fulton County, however, this explanation does not hold.

¹³Yet another problem is that some African-American congregations hold affiliation with more than one denomination. Even if the denomination has a correct tally, a congregation might be counted in more than one group.

¹⁴For example, when the General Social Surveys are merged from 1993 to 2002, 74.3 percent of blacks report attending church several times a year or more compared to 58 percent for whites. When asked their religious preference, 8.7 percent of blacks report none and 12.5 percent of whites do so.

¹⁵When we use the adjusted denominator total computed from Tables 7 and 8, the national rate of adherence is 61.0 percent. This is far higher than the 50.2 percent estimated by the RCMS, but 1.7 percent lower than the estimate we calculate when adjusting the numerator in the previous correction, where African-American denominations are included.

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