
DATA COLLECTION MODE AND SOCIAL DESIRABILITY BIAS IN SELF-REPORTED RELIGIOUS ATTENDANCE*

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Compared to conventional interviewer-administered questions about attendance at religious services, self-administered items and time-use items should minimize social desirability pressures. In fact, they each reduce claims of weekly religious attendance by about one-third. This difference in measurement approach does not generally affect associations between attendance and demographic characteristics. It does, however, alter the observed trend in religious attendance over time: In contrast to the almost constant attendance rate recorded by conventional interviewer-administered items, approaches minimizing social desirability bias reveal that weekly attendance has declined continuously over the past three decades. These results provide support for the hypothesis that America has become more secularized, and they demonstrate the role of mode of administration in reducing measurement error.

Hadaway, Marler, and Chaves (1993) question the accuracy of self-reported religious attendance, "the classic measure of religious participation" (Greeley 1989:42). They found that church attendance counts for 18 Catholic dioceses and for Protestant churches in one Ohio county were only half the level reported in surveys. This led them to speculate that survey results showing stability of religious attendance over the past 50 years (Greeley 1989) might be wrong if reporting error varied over time. Moreover, if

misreporting varied by social status (e.g., age and sex), conclusions about who attends religious services would also be called into question.

Interpreting Hadaway et al.'s (1993) results as stemming from respondent misreporting is consistent with record-checks of other socially approved behaviors such as voting and contributing to charities (Parry and Crossley 1950; Presser and Traugott 1992). Yet disparities between church attendance counts and survey results could also be caused by a combination of inaccuracies in the counts and nonresponse and coverage error in the surveys (Woodberry 1997). The research on misreporting of religious attendance that we present here is largely free of these complications.

Responding to survey questions about behavior consists of three stages: comprehending the question, recalling the past, and reporting an answer. Error may occur at each stage. Memory lapses can affect the recall stage. Social desirability pressures, leading to an unwillingness to admit to not having acted in a socially approved manner, can affect the reporting stage. Social desirability bias is enhanced when responses are made directly to an interviewer (Tourangeau and Smith 1996). Hence, using self-administered surveys is a method of dealing with this

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problem, and we employ it here as one way to assess misreporting.

Reporting error may also be stimulated by misinterpretation at the comprehension stage. For example, "Did you attend church?" might be interpreted to mean "Are you a good Christian?" If misinterpretation is a factor, eliminating reporting error requires avoiding meanings other than the intended ones.

Inquiring about time-use for a specific day does precisely that (Robinson 1977). Respondents asked to report everything they did yesterday (in chronological order) ought to mention attending religious services if they did so, but feel little pressure to report attending if they did not, as the question does not make religion salient. Moreover, asking about yesterday should minimize recall error.

Our main time-use study was conducted from 1992 to 1994 for the Environmental Protection Agency (EPA) to assess exposure to pollution. It asked adults and children to report the things they did and places they went "yesterday." We compare the level of religious attendance in this survey with that in Gallup and National Opinion Research Center (NORC) surveys from the same years. This comparison yields an estimate of the amount of misreporting to direct questions about religious attendance; it also allows us to examine the impact of misreporting on the correlates of attendance.

We then look at the effect of misreporting on trends in religious attendance by drawing on prior time-use studies, prior Gallup and NORC surveys, and longitudinal surveys of young people (both interviewer-administered and self-administered surveys). Thus we can assess whether misreporting affects survey results about who attends religious services, and whether religious attendance has changed over time.

CROSS-SECTIONAL ANALYSES

The University of Maryland Survey Research Center (SRC) conducted over 9,000 time-use interviews for the EPA from September 1992 through September 1994. Eight two-stage random digit dial (RDD) samples were drawn from the conterminous United States (one for each three-month period); a random respondent was selected within households and interviewed about "yesterday." The over-

all response rate was 65 percent (excluding nonresponse due to non-English-speakers). Interviews were randomly assigned to weekday or weekend samples. The former were administered Tuesday through Saturday and the latter Sunday or Monday. For this paper, we use only interviews with adults ages 18 and older that were conducted on Monday (asking about Sunday activities).¹

We compare results from the 1992-1994 time-use item to those from direct items about religious service attendance asked by Gallup and NORC during the same period. One of the Gallup surveys was conducted March 12-14, 1993; the other June 25-28, 1994 (Gallup 1993-1994). Both Gallup surveys used RDD samples from conterminous U.S. phone banks containing at least three published listings. Interviewers asked for the youngest man (18 or older) who was home, or if there was no such person the oldest woman (18 or older) who was home. We were unable to obtain response rates from Gallup.

The 1993 and 1994 NORC General Social Surveys (GSS) involved face-to-face interviews with randomly selected adults (18 or older) from multi-stage area household samples (Davis and Smith 1996). Interviews were conducted from February through April in both years, and response rates (omitting language problems) were 82 percent and 78 percent. We exclude households without telephones to minimize differences between GSS and the SRC and Gallup surveys. Except for the inclusion of Alaska and Hawaii in the GSS sampling frame,² the results we present from these surveys apply to the same population: English-speaking adults ages 18 and older in U.S. households with telephones.³

¹ There are 1,442 adult interviews about Sunday and 999 about Saturday. Except for religious attendance, Sunday cases are almost identical to the total weekend sample on the variables we analyze.

² The handful of Alaska cases (there are none from Hawaii) cannot be deleted as they were drawn from (and thus represent) a stratum that included areas of the western United States in addition to Alaska and Hawaii.

³ The GSS and SRC samples have similar proportions of women (57 percent), blacks (11 to 12 percent), and midwesterners and southerners (58 to 60 percent); but the corresponding Gallup figures are about 5 percentage points lower. The

Table 1. Items Used to Measure Religious Attendance: Selected U.S. Surveys

Survey	Year	Item Type	Item
GSS	1993 and 1994	Direct	"How often do you attend religious services?" ^a
Gallup	1993 and 1994a	Direct	"Did you, yourself, happen to attend church or synagogue in the last seven days, or not?"
Gallup	1994b	Direct	"How often do you attend church or synagogue? At least once a week, almost every week, about once a month, seldom, or never?" ^b
SRC	1992–1994	Time-use	"I would like to ask you about the things you did yesterday—from midnight Saturday to midnight last night. Let's start with midnight Saturday. What were you doing? What time did you finish? Where were you? What did you do next?" ^c

^a Interviewers coded responses into nine categories: (1) several times a week; (2) every week; (3) nearly every week; (4) 2 to 3 times a month; (5) about once a month; (6) several times a year; (7) about once or twice a year; (8) less than once a year; (9) never.

^b This question was asked immediately after the other Gallup item.

^c Responses to the question "What did you do next?" were assigned an activity code. We use responses coded in the "Religious Practice" category: Attending services of a church or synagogue, including participating in the service; ushering; singing in the choir; leading youth group; going to church, funeral, baptism. Individual practice or religious practice carried out in a small group; praying, meditating, Bible study group, visiting graves, Bible reading.

The correlation between the responses assigned by coders to the Religious Practice category and the interviewer-recorded answer "church" to the question "Where were you?" is .96. Of 1,442 cases, 18 reported religious activity somewhere other than at a church, and 6 reported nonreligious activity at a church.

Measures

The items that we used to measure religious service attendance are shown in Table 1. The SRC time-use item measures only Sunday religious attendance, whereas the direct items in the other surveys refer to attendance on all days of the week. We gauged the impact of this difference with a 1996 GSS item: "On what day or days did you attend religious services during the last seven days?" (Davis and Smith 1996). Less than 3 percent of respondents did not mention Sunday and claimed attendance on another day. Thus in making comparisons to the Gallup and GSS surveys, we increase the SRC

education distributions for the Gallup and SRC samples are similar, but somewhat higher than GSS's—Gallup and SRC have 10 to 13 percent with less than 12 years of school and 36 to 37 percent with 12 years, compared to GSS's 18 percent and 31 percent. All three samples have about the same percentage Hispanic (5 to 6). Finally, the SRC sample is slightly older than GSS's and Gallup's (20 percent over age 64 versus 17 to 18 percent).

1992–1994 time-use estimate by 3 percentage points.

The SRC survey and one of the Gallup items refer to "yesterday" or "the last seven days," whereas the GSS and the other Gallup item ask about frequency of religious attendance in general. For comparability we assigned probabilities of attendance to the frequencies. "Every week" or more was assigned 1.0; "nearly" or "almost" every week, .75; "2 to 3 times a month," .5; "about once a month," .15; and all lesser frequencies, 0. Multiplying the proportion of responses in a category by the appropriate probability and summing the products yields an estimate of religious service attendance for any given week. The probabilities are conservative, and thus probably produce underestimates.

Size of the Bias

Table 2 shows that, at least in these cases, no matter how one asks direct questions about religious attendance, approximately 40 percent of respondents claim to attend during any given week. By contrast, after correcting

Table 2. Estimated Percentages of Respondents Attending Religious Services "Last Week," by Item Type: Selected U.S. Surveys

Item Type/Survey	Estimated Percentage Attending	Two Standard Errors (Percent)	Number of Respondents
<i>Direct Item</i>			
GSS 1993	41	±3	1,464
GSS 1994	37	±2	2,774
Gallup 1993	43	±3	1,005
Gallup 1994a ^a	41	±3	1,017
Gallup 1994b ^a	45	±3	1,016
<i>Time-Use Item</i>			
SRC 1992-1994	29 (26 + 3 for non-Sunday)	±2	1,442

Note: The standard errors reported here assume simple random samples, and thus underestimate the actual sampling error for GSS, which used a clustered sampling design.

^a Two different items were asked in the 1994 Gallup survey. See Table 1.

for the GSS estimate of non-Sunday religious observance, the time-use approach indicates fewer than 30 percent attend. Thus misreporting error produces an increase in attendance claims of almost 50 percent ($p < .0001$).⁴

Effects on Estimating Who Attends

Does misreporting affect inferences about the characteristics of regular attenders? We examined the relationship between weekly religious attendance and the six demographic status variables that were available on all the surveys: region, age, sex, education, race,

⁴ The SRC 1992-1994 estimate (though not the N) is weighted to correct for unequal sample selection probabilities by whether a household contained children, a feature unique to that study. By contrast, none of the results is weighted to reflect the fact that all the surveys selected respondents with probabilities inversely proportional to the number of adults in the household, and in the telephone surveys, directly proportional to number of telephone lines in the household. Weights are not available for all the studies, and thus (with the exception noted above) we use weights for none to avoid unwanted variation. Although this procedure poses no problem for assessing misreporting (comparing samples sharing the same unequal design), it could skew population estimates (extrapolating from sample to population). However, the appropriate SRC 1992-1994 weights have little effect, increasing attendance only from 26.0 percent to 26.9 percent.

and Hispanic ethnicity (unfortunately religion was not included on the time-use study).

We fit log-linear models to three-way cross-classifications of attendance, status, and item (time-use item versus direct item) to test the hypothesis that the attendance-status associations are the same for the different items. The hypothesis can be rejected only for ethnicity, which although not significantly related to the direct items, just reaches significance with the time-use item ($p < .01$ comparing SRC to GSS or Gallup). Hispanics apparently attend services more regularly than non-Hispanics and over-report their attendance less, but the small Hispanic sample makes us hesitant to make much of this.⁵

Associations between religious attendance and the remaining background variables are very similar across the items. As others have observed, women, blacks, southerners, midwesterners, and older people are more likely to claim attendance in response to direct items (Chalfant and Heller 1991; de Vaus 1984; Glenn and Gotard 1977; Hout and Greeley 1987), but this is equally true for the time-use item. Likewise, education is not related to attendance on the direct items, and the same is true using the time-use item.

Despite its extent, then, misreporting has strikingly little impact on the relationships

⁵ See Presser and Stinson (1996) for tables showing this result and for the results summarized in the next paragraph.

between religious service attendance and common background variables. Put differently, these background variables are generally unrelated to the propensity to misreport.

LONGITUDINAL ANALYSES

To address whether misreporting error affects conclusions about religious attendance over time we draw on a diverse set of additional surveys. One of the earliest time-use studies, conducted by the University of Michigan Survey Research Center (SRC), used a multi-stage area sample of residences in Standard Metropolitan Statistical Areas (SMSAs), which at the time of the survey contained about two-thirds of the U.S. population (Robinson and Converse 1972). Only households with an 18- to 65-year-old employed in the nonagricultural labor force were eligible; the respondent was randomly selected from all household members ages 18 to 65. Preliminary interviews were conducted face-to-face, and respondents were then asked to keep a diary of the following day. Interviewers returned to review the diary, probing respondents for details as needed.⁶ About three-quarters of the interviews were conducted from November 15 to December 15, 1965; the remainder from March 1 to April 25, 1966. The overall response rate was 72 percent. Simultaneously, identical procedures were employed with a multi-stage area sample of Jackson, Michigan residences yielding an 82 percent response rate. A random two-sevenths of both samples was assigned to weekends, and we use only the Sunday diaries.⁷

A decade later, the Michigan SRC conducted a second time-use survey consisting of face-to-face interviews with randomly selected adults (and their spouses where present) from a multi-stage area sample of all residences in the conterminous United States

⁶ The forward to the diary listed "kinds of activities," including "going to church services." We think it unlikely this stimulated much misreporting, as it appeared in the middle of over 50 other examples.

⁷ Saturday and Sunday demographics are generally similar, though there are exceptions. In the Jackson sample, for example, fewer Saturday diaries are from men ($p < .10$); the Sunday proportion of men is closer to the census estimate.

(Juster and Stafford 1985). Interviewers administered "yesterday" diaries in October and November of 1975, achieving a 72 percent response rate for the randomly designated adults. We use only interviews conducted on Mondays with randomly selected respondents (not their spouses).⁸ In comparing this survey to the 1965–1966 time-use survey, we exclude households outside SMSAs, those where neither the respondent nor spouse was in the labor force, and respondents older than age 65. For comparisons to the 1992–1994 time-use study we exclude households without a telephone.

In 1986 another time-use study was conducted in Jackson, Michigan using a sample drawn partly from the Polk City Directory and partly by RDD (Robinson, Andreyenkov, and Patrushev 1988). In the directory sample, a diary to be kept the following day was left with respondents after an initial face-to-face interview; in the RDD sample the diary was mailed to respondents after an initial telephone interview. Data were collected from February to May, but response rates were not reported. For comparability to the 1965–1966 Jackson study, we use only diaries for Sunday from respondents ages 18 to 65 living in households where someone was employed.

We use published tallies of religious attendance from Gallup surveys of the U.S. adult household population conducted about the same time as the 1965–1966 and 1975 time-use surveys (Gallup 1972; Benson 1981). Response rates cannot be computed for these multi-stage area samples, as interviewers visited residences in sequence, starting at a random location and continuing on a prescribed path until they had obtained an assigned quota of interviews. The youngest man/oldest woman selection method (described above) was used in these surveys.

We draw on the two GSSs conducted immediately before and after the 1975 time-use survey (Davis and Smith 1996). A random half of the 1975 and 1976 GSSs was similar in design to the later GSSs, and it obtained response rates of 75 to 76 percent. The other half of these GSSs used a quota design simi-

⁸ The demographics of the randomly selected respondents interviewed on Monday are very similar to those of the randomly selected respondents interviewed Tuesday through Sunday.

lar to Gallup's. The two halves show no difference in reported religious attendance.

Every spring since 1975, Michigan's SRC has asked a religious attendance item as part of Monitoring the Future (MTF), a survey of high school seniors in the conterminous United States (Johnston, Bachman, and O'Malley 1993). Between 65 percent and 80 percent of selected schools participate; refusals are replaced by schools similar in size, region, and urbanicity. Self-administered questionnaires are completed by about 85 percent of selected students, with most non-response due to absence from school. A random sample of respondents is then mailed questionnaires at two-year intervals (half in odd years, half in even): This yields about 80 percent cooperation in the first follow-up, and much higher cooperation in succeeding waves (with retention after 10 years of about 70 percent of the original respondents).

In 1991, MTF began similar annual surveys of tenth-graders, which attain 86 percent to 88 percent within-school response rates. These surveys of tenth-graders can be compared to the Youth in Transition (YIT) study, a national survey of tenth-grade boys conducted by Michigan's SRC in 1966 (Bachman, O'Malley, and Johnston 1978). The YIT sample design resembled MTF's, and its within-school response rate was 97 percent.

Finally, we use published reports of religious attendance from the Gallup Youth Survey, a telephone study of teenagers (ages 13 to 17) that has been conducted regularly since 1977. The surveys use RDD samples of households in the conterminous United States; response rates are unavailable.

Effects on Estimating Trends

Table 3 presents religious attendance estimates from the surveys of the adult population. It shows there has been little change over the past 30 years in reports to the Gallup and GSS direct items.⁹ This remarkable sta-

⁹ Direct religious attendance items in the National Election Study also show no change from 1952 to 1994, except for a small decline of 5 percentage points between 1964 and 1968. (See [tab1b_5a.htm](http://www.umich.edu/~nes/nesguide/toptables) and [tab1b_5b.htm](http://www.umich.edu/~nes/nesguide/toptables) at <<http://www.umich.edu/~nes/nesguide/toptables>>.)

bility has been cited as evidence against the hypothesis that America has become more secularized (Hout and Greeley 1987).

The time-use items reveal a dramatically different pattern. The national samples registered a drop in religious attendance of about one-third between 1965–1966 and 1975 ($p < .005$), and an additional decline of 5 percentage points from 1975 to 1992–1994, although the latter change is not statistically significant ($p = .12$).¹⁰ Similarly, reported religious attendance in Jackson fell from 38 percent in 1965–1966 to 25 percent in 1986 ($p < .05$).

A decline in religious attendance is also recorded by the direct items in SRC's youth surveys. Whereas 57 percent of tenth-grade boys reported weekly attendance in 1966 ($N = 2,058$), only 35 percent did so in 1991 ($N = 7,200$). Likewise Table 4 shows that weekly attendance among high school seniors (both male and female) dropped from 40 percent in 1976 to 32 percent in 1993.¹¹ Moreover, the follow-up surveys of these senior classes show declining attendance for successive cohorts (reading down Table 4's columns).

The declines in reported attendance occurred disproportionately among Catholics. Catholic tenth-graders' attendance fell from 76 percent in 1966 to 47 percent in 1991, whereas Protestants' went from 55 percent to 38 percent. Catholic seniors' attendance declined from 55 percent in 1976 to 39 percent in 1993, while Protestant seniors' dropped from 40 percent to 35 percent.

¹⁰ SRC 1992–1994 shows higher attendance in the second quarter (April–June) than in other quarters (32 percent versus 24 percent; $p < .01$). Thus Table 3 probably understates the post-1975 decline, as that quarter contributes to 1992–1994's estimate but not to 1975's. (The March–April 1966 figure is not significantly different from—in fact is lower than—the November–December 1965 figure; but unlike the 1992–1994 quarter estimates, these figures are from a single sample, and therefore are not independent.)

¹¹ The 1966 question was "How often do you go to church? About once a week or more, Once or twice a month, A few times a year, Never." The item in all the other years was "How often do you attend religious services? Never, Rarely, Once or twice a month, About once a week or more."

Table 3. Estimated Percentage of Respondents Attending Religious Services "Last Week," by Item Type and Year: Selected U.S. Surveys

Item Type/ Year/Survey	Estimated Percentage Attending	Two Standard Errors (Percent)	Number of Respondents
<i>Direct Item^a</i>			
Conterminous United States			
1993–1994 GSS	38	±2	4,238
1975–1976 GSS	40	±2	2,670
1993–1994a Gallup	42	±2	2,022
1976 Gallup	42	—	Unknown
1965–1966 Gallup	44	—	Unknown
<i>Time-Use Item^b</i>			
Conterminous United States			
1992–1994 ^c	26	±2	1,442
1975 ^c	31	±6	274
1975 ^d	27	±7	154
1965–1966 ^d	42	±7	178
Jackson, MI			
1986	25	±10	81
1965–1966	38	±9	117

^a The 1975–1976 GSS item was identical to that asked in 1993–1994; the 1965–1966 and 1976 Gallup item varied slightly from the 1993–1994 item (omitting the words "or synagogue").

^b The 1975 time-use approach was identical to that used in 1992–1994, except that it added "Who was with you?" and "Were you doing anything else at the same time?" for each activity. The 1965–1966 and 1986 time-use measure was the 1975 measure adapted for self-administration. Essentially the same set of activity codes was used in all the time-use studies.

^c Excluding non-telephone households.

^d Excluding households not located in SMSAs, respondents over age 65, and households with no member in the labor force.

Similarly, the 1965–1966 to 1975 drop in attendance for adults revealed by the time-use items occurred mainly among Catholics: 71 percent to 40 percent, though these estimates are very imprecise as they are based on small samples ($N = 63$ and 43 , respectively). Protestants changed only from 28 percent to 26 percent ($N = 97$ and 101 , respectively). By comparison, 38 percent of Protestants claimed weekly attendance in both the 1965–1966 and 1976 Gallup surveys, whereas Catholic claims to the Gallup direct item fell from 68 percent to 54 percent during this time.¹² Thus Catholic misreporting appears minimal prior to the late 1960s, probably be-

cause true attendance among Catholics was very high. Misreporting grew, however, as attendance fell, possibly because of the stigma Catholics attach to missing weekly mass.

Why then do direct items generally show stability over time for adults, but declines for youth? We believe the key is not age, but the fact that SRC's youth surveys—unlike the adult surveys—were self-administered, which minimizes misreporting. In fact, our results suggest that self-administration reduces misreporting error to about the same extent as time-use items. This can be seen by comparing the youth follow-ups with comparable subsamples of the adult surveys. Combining Table 4's shaded entries (first follow-up for 1992's class, second follow-up for 1990's class, and so on) provides a 1993–1994 attendance estimate for 19 to 28 year-olds of 23 percent ($N = 6,706$, based on self-

¹² The Gallup data, however, are from all adults, whereas the time-use data are from adults ages 18 to 65 in SMSA households with at least one employed person.

Table 4. Estimated Percentage of Respondents Attending Weekly Religious Services, by High School Class and Age: Monitoring the Future, 1976 to 1993

High School Class	Modal Age					
	18 (Senior Year)	19-20 (Follow-Up 1)	21-22 (Follow-Up 2)	23-24 (Follow-Up 3)	25-26 (Follow-Up 4)	27-28 (Follow-Up 5)
1976	40	28	26	25	25	26
1977	39	30	24	24	22	23
1978	41	31	27	27	26	26
1979	41	35	28	28	26	26
1980	44	36	30	27	26	28
1981	40	32	28	24	25	27
1982	39	32	25	23	20	24
1983	39	31	25	22	24	24
1984	37	29	23	22	22	23
1985	35	27	22	21	22	23
1986	34	27	23	22	22	—
1987	31	24	21	19	20	—
1988	32	25	21	21	—	—
1989	32	25	20	21	—	—
1990	32	25	22	—	—	—
1991	30	22	19	—	—	—
1992	32	26	—	—	—	—
1993	32	24	—	—	—	—
Number of respondents	1,629-2,174	1,190-1,626	1,323-1,480	1,297-1,407	1,161-1,371	1,113-1,308

Note: Table 4 shows the percentages choosing option 4 in response to the question, "How often do you attend religious services? (1) Never; (2) Rarely; (3) Once or twice a month; (4) About once a week or more." Follow-up interviews occur every two years: half in even years, half in odd years (e.g., half of follow-up 1 for the 1976 class was in 1977, and half was in 1978).

Shaded entries refer to 1993-1994.

administered direct items). This is very close to the 21 percent attendance rate for 19 to 28 year-olds who had graduated from high school in the SRC 1992-1994 survey ($N = 253$, based on a time-use item), but much lower than the reported attendance of 30 percent and 36 percent among those ages 19 to 28 with at least a high school diploma in the 1993-1994 GSS and the 1993-1994 Gallup surveys ($N = 602$ and 321, respectively, based on interviewer-administered direct items).

If mode of administration (self-administered versus interviewer-administered) explains why direct items show declines in religious attendance for youth but stability for adults, then Gallup's Youth Survey, which asks an interviewer-administered direct item,

should show temporal stability. Indeed, weekly religious attendance in this survey shows almost no variation over time, and 1993's attendance estimate (50 percent) is not significantly different from 1977's (47 percent).¹³

CONCLUSIONS

Our results support Hadaway et al.'s (1993) conclusion: Respondents in conventional surveys substantially overreport their religious attendance. Apparently, misreporting error is

¹³ The item asked is identical to Gallup 1993-1994a (see Table 1), and each estimate is based on about 1,000 cases. See the Princeton Religion Research Center newsletter *Emerging Trends*.

caused mainly by social desirability pressures associated with interviewer-administration. The error can be minimized through either self-administration or asking about time-use.

We find that misreporting error does not generally affect relations between demographic variables and religious attendance. However, if misreporting were more strongly related to other variables (e.g., religious identification) than it is to demographics, inferences about the relation between such variables and attendance would be affected.

Our findings also suggest that misreporting has increased in the last 30 years, thus distorting trends in religious attendance. Although reports to interviewer-administered direct items have shown little change in attendance over time, measures less subject to misreporting (time-use items and self-administered items) reveal a continuous decline in attendance since the mid-1960s, providing support for the hypothesis that America has become more secularized.

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