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**Making Sense of the Numbers:
Estimating Arts Participation in America**

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Making Sense of the Numbers: Estimating Arts Participation in America

There is considerable debate over the usefulness of survey data for studying patterns of behavior, opinions and social trends (Greeley, 1996; Lewontin, 1996; Murray, n.d.). Critics argue that individuals can be unreliable reporters of their own beliefs and activities and that small variations in question wording, format and order can cause large variations in responses (Andrews, 1984; Schwartz and Sudman, 1991; Smith, 1989). Comparing surveys which purport to measure the same phenomena, researchers have found large inconsistencies in estimates of rape (Lynch, 1996), church attendance (Smith, 1997), support for abortion (Schuman, Presser and Ludwig, 1981), voting behavior (Abelson, et al. 1992), arts participation (Robinson, 1989), attitudes toward arts funding (DiMaggio and Pettit, 1997), and drug use (Bachman and O'Malley, 1981). While acknowledging the imperfections of survey research, Greeley (1996) nonetheless argues that surveys are useful means of "approximating human behavior." Moreover, for many social phenomena, surveys are the only source of information available for estimating population statistics and trends over time.

Thus, policy makers and social scientists must resign themselves to making the most of an imperfect research tool. Experiments and cross-survey comparisons can illuminate the effects of differences in question wording, question order and survey administration. Such information can help researchers assess survey validity (do surveys measure what they say they measure?) and determine the accuracy of population estimates of important social indicators such as civic participation, health care visits and crime.

This article explores why estimates of arts participation in America diverge dramatically. It focuses on two similar surveys - the General Social Survey (GSS) and the Survey of Public Participation in the Arts (SPPA) - that produced very different estimates of attendance at museums, classical music concerts and dance performances. Comparing the design of each survey, this paper examines several possible explanations to account for the divergent estimates. Such a comparison can contribute to the growing literature of research investigating the cognitive and social processes involved in answering survey questions.

Arts Participation in America: Survey Results

There are several sources of information about arts participation in America. The two most widely used sources are surveys by Louis Harris and Associates (America and the Arts) and the Census Bureau on behalf of the National Endowment for the Arts (SPPA — Survey of Public Participation in the Arts). The Harris survey was first conducted in 1972 and the SPPA in 1982. Both have been repeated several times since (the SPPA survey in 1985, 1992 and 1997; the Harris in 1980, 1984, 1987 and 1992.) While the questions in each of the two surveys are similar (or responses can be re-coded to match each other), they yield very different participation rates. According to Robinson (1989), the rates reported by the Harris poll for attendance at plays, musicals, museums, opera, dance and classical music are almost twice as high as those of the SPPA.

Robinson (1989) systematically compares the Harris Poll and the SPPA survey to understand why their findings differ so much. He reports that a small part of the variation can be explained by question context, question wording and differences in the sampled populations. In terms of

question context, the Harris poll asks several preceding questions which attempt to measure opinions and attitudes about the arts. Robinson suggests some of these preceding questions could bias later responses. In an attempt to be consistent with earlier statements of support of the arts, respondents might be more likely to say they participated in the arts in the past year. Also, the prior arts questions might activate memories of art, helping respondents to recall actual visits. Second, Robinson found minor differences in question wording for the two surveys — in particular, the Harris poll makes use of two-stage filter questions (1. have you ever gone to a ballet; 2. if yes, how many times?) and multiple-activity questions (asking about two art forms in the same question —e.g. have you gone to plays *or* musicals?). Third, Robinson found that the Harris results were slightly higher because they under-sampled persons with less than a high school education.

While question context and sample differences explain some variation, Robinson concludes that most of the variation in participation rates is probably due to differences in the response rate. Because the Harris Poll was a commercial survey, Robinson assumed the response rate to be much lower than the SPPA survey (which had a rate of over 80 percent). The lower response rate could be associated with selection bias. He writes, "possibly respondents who take part in these [commercial] surveys are more interested in the arts than those who refuse or are hard to reach." Therefore, because of the SPPA's higher response rate, Robinson argues that its findings are more representative of the true proportion of the population that attends arts activities.

In 1993, the General Social Survey included a "Topical Module on the Sociology of Culture" which asked a selection of questions about arts attendance. This additional data source allows for

more careful examination of some of Robinson's hypotheses about why the Harris poll figures are so much higher than those of the SPPA. Although the GSS survey reports lower attendance rates than the Harris survey, its rates of participation are still considerably higher than the SPPA (between 15 and 81 percent higher depending on the activity, see table 1).

Table 1: Attendance at Museums, Concerts and Dance Performances

	General Social Survey 93		SPPA 92		T-Test
	N	%	N	%	Difference in II
Art Museums	646(1593)	40.6	3352(12716)	26.3	12.57
Concerts	254(1592)	16.0	1764(12724)	13.9	2.22
Dance	314(1593)	19.7	1339(12712)	10.5	10.0

However — and here's the puzzle — only one of the four reasons given by Robinson apply when comparing the GSS and SPPA surveys. Table 2 (see page 6) provides a schema for comparing the two surveys. As with the Harris pool, the GSS and SPPA also differ in terms of question wording and question context and this could account for some of the variation. However, in the other three areas where the SPPA and Harris surveys diverge, the GSS survey is not significantly different from the SPPA. In particular, there are no preceding questions that elicit favorable opinions about the arts. Also, the GSS survey did not under-sample individuals with low education (less than high school diploma). And, most importantly, the response rate for the GSS survey is comparable to the response rate for the SPPA. Therefore, if the reasons provided by Robinson for the vastly different arts attendance rates between the Harris and SPPA surveys don't apply when comparing the SPPA survey to the GSS survey, it is important to understand what reasons *do* account for the difference.

Comparing the GSS and SPPA Surveys

Sample Composition and Selection Bias

The most likely explanation for the variation between the GSS and SPPA is that the two surveys differ with respect to important variables which are also strongly related to arts participation. Are the sample populations similar or do they differ with respect to age, income, education, race, sex, place of residency and marital status (all factors which are related to arts participation)? Table 3.1 (appendix) reveals that the GSS sample has a greater percentage of people with high incomes (above \$62,500) and with some college education. There are also more women sampled in the GSS than in the SPPA.¹ Because sex, education and income are strong predictors of arts attendance, it would appear that these sample differences could explain a majority of the overall attendance differences between the two surveys. However, by comparing differences in participation for each subgroup of the sample (e.g. less than high school, high school, some college, college graduates, graduate school) we can test the hypothesis that overall differences in attendance are due to sample composition. In the case of museum and dance, every education and income subcategory in the GSS displays higher attendance rates than equivalent categories on the SPPA (see tables 4 and 5). Thus, 60.2 percent of college graduates who responded to the GSS survey visited a museum (table 4.3), while only 46.9 percent of college graduates who had responded to the SPPA had done so. Furthermore, 72.3 percent of persons earning \$85,000 or more visited a museum, according to the GSS; only 48.2 percent of the SPPA sample earning in

¹ The SPPA survey on the other hand had more big city residents, more whites and more unmarried persons among its respondents — all of which would predict an upward bias for the overall SPPA rates. However, because education, income and gender tend to be the strongest predictors of arts attendance, we might expect that the overall demographic differences would favor the GSS survey.

Table 2: COMPARISON OF GSS AND SPPA SURVEYS

	GSS	SPPA
Question Wording	Next, I'd like to ask about some leisure or recreational activities that people do during their free time. As I read each activity, can you tell me if it is something you have done in the past twelve months? 1. Go to live ballet or dance performance, not including school performances, ("godance") 2. Go to a classical music or opera performance, not including school performances, ("gomusic") 3. Visit an art museum or gallery. ("gomusm")	1. With the exception of elementary or high school performances, did you go to a live classical music performance such as symphony, chamber, or choral music during the last 12 months?* 2. With the exception of elementary or high school, did you go to a live opera during the last 12 months? * 3. With the exception...., did you go to a live ballet performance in the last 12 months?* 4. With exception ..., did you go to a live dance performance other than ballet, such as modern, folk or tap during the last 12 months?* 5. During the last 12 months, did you visit an art museum or gallery?* note: questions 1 and 2 were combined in coding to equal "gomusic"; questions 3 and 4 were combined to equal "godance." *Question is followed by "About how many times did you do this in the past 12 months?"
Question context	First question in category is about attending sports events. Also, leisure activities like camping, watching movies, etc. are interspersed with questions about high arts. No preceding statements or questions which connect the survey to the arts or to the sponsoring agency.	First question in category is about Jazz music and all subsequent questions in category relate to "high culture". Questions about more popular leisure activities are asked in a separate section later in the survey. Preceding statement acknowledging that the survey is being done on behalf of the National Endowment for the Arts.
Length of Survey	Approximately 90 minutes (arts questions near end of survey)	Two versions: 1. Crime Survey plus arts participation questions -approximately 30 minutes; 2. Crime Survey plus arts participation, arts education and leisure participation questions — 40-45 minutes.
Type of Interview	100 percent in-person interview	25 percent in-person; 75 percent by telephone
Survey Response	over 80 percent response rate	over 80 percent response rate
Sample Size	1,606	12,736
Average rate of "missing" and "don't know" responses	1 percent.	.5 percent
Prior Interviews	None (first contact)	Six, over preceding three years, as part of the National Crime Survey.

this range had done so. Similar findings hold for attendance at dance. This suggests that differences in the sample population can explain only part of the overall difference in participation rates.¹ If both samples were properly weighted to reflect Census data, their estimates would likely converge; nonetheless, evidence suggests that there would still be a substantial gap between the two.

Another plausible hypothesis is that the SPPA sample might select against people who attend the arts because of its strong emphasis on crime and victimization. The SPPA questions are asked to a subset of approximately 13,000 persons at the conclusion of the final survey administered as part of the 1992 Census Bureau's National Crime Survey (the same household is interviewed every six months for 3 years). The National Crime Survey asks extensive questions about the nature and extent of victimization (robbery, burglary, assault, rape, etc.). Because the crime survey lasted for three years and because of the nature of its questions, it is likely that those individuals and households that agree to participate are predisposed to talk about crime and victimization.² Such people may have certain dispositions and attitudes which are associated with lower arts attendance. DiMaggio (1996) found that attendance at museums is associated with distinctive social, cultural and political values. In particular, he found that "art-museum

¹ Without weighting the samples, it is difficult to know precisely how much of the gap between the two surveys is explained by sample composition. For example, while the gap decreases when we examine the subcategory of respondents who have some college education, it actually increases for those respondents with no college education. This suggests that whatever lies at the source of the variation between the two surveys is interacting with the socio-demographic characteristics of the respondents.

² Unfortunately, the SPPA data does not provide any information on the types of people who drop out of the National Crime Survey (NCS) over the course of 3 years. As the SPPA interview is added to the last crime interview (the 6th interview), arts participation questions are only asked to those who remain in the NCS for all three years.

visiting appears to be associated with an open, tolerant, trusting orientation, more positive attitudes toward racial and international 'others' and less punitive attitudes toward criminals." The flip side of that orientation are people who are less tolerant, less open, less trusting and less sympathetic to criminals — an orientation which may well be connected with an interest in talking about crime and victimization. Thus, people who enjoy the arts might be less likely to participate in a crime survey and people who participate in a 3 year crime survey might be less interested in the arts. Therefore, selection bias might account for much of the difference between the two surveys.

In an effort to test the above hypothesis, we used data from the 1993 GSS survey to examine the relationship between attendance at museums, classical music concerts and dance and four separate crime-related variables (three measuring attitudes toward crime and the fourth measuring victimization). Findings from the above analysis provide only weak support for the hypothesis that there is a significant relationship between attitudes about crime and arts attendance.³ After controlling for education, income, gender, age and size of city of residence, we found no relationship between "being afraid to walk at night in neighborhood" and arts attendance. Moreover, with one exception, we found no significant relationship between attitudes about the crime rate or the importance of law enforcement and arts attendance. (The exception was that people who believe that too little effort is spent halting the rising crime rate are significantly less likely to attend classical music concerts.) Finally, we found no significant relationship between whether a person was victimized (robbed or had a home broken into) and whether they attend the arts.

³ Because most results were statistically insignificant, the analysis is not documented in this paper. The results are available upon request.

Selection bias might also be at work in the GSS survey. Because of its unusual length — 90 minutes -- those who agree to participate in the GSS might have certain dispositions which make them more likely to attend the arts. Perhaps such people are generally more active and more socially engaged than non-respondents.⁵ One test of this hypothesis would be to examine whether respondents who were more interested and enthusiastic about taking the survey were also more likely to attend the arts. In the case of museum attendance, preliminary analysis supports this hypothesis (see table 7).⁶

Table 7: Logistic regression examining the effects of respondent's attitude toward survey (coop) on arts participation (museum, concert and dance participation).

	Museum B-Coeff (SE)	Dance B-Coeff (SE)	Concerts B-Coeff (SE)
Female	.314 (.123)	1.01 (.152)	.584 (.163)
Income (In)	.686 (.179)	.895 (.224)	1.35 (.273)
Education	.293 (.027)	.210 (.031)	.291 (.035)
Race			
white			
black:	-.468 (.220)	.195 (.240)	-.716 (.347)
other:	.112 (.291)	.689 (.302)	.055 (.357)
Age	-.006 (.004)	.004 (.005)	.008 (.005)
Place Size			
under 10K			
10K-99K	.465 (.141)	.477 (.174)	.395 (.191)
100K-999K	.763 (.183)	.571 (.219)	.570 (.240)
1 million and above	.530 (.276)	.850 (.288)	.3100338)
Coop			
friendly/interested			
cooperative/not interested	-.812(.186)	-.110 (.211)	-.221 (.246)
impatient or hostile	.941 (.441)	-.035 (.502)	-.088 (.628)
Constant	-7.71 (.816)	-8.75 (1.00)	-12.7 (1.27)
data = GSS 93			
n=1457			

Respondents who were friendly and interested in the survey were 2.25 times as likely (un-exponentiated coefficient = -.812) to visit a museum within the past 12 months compared to those who were cooperative but not interested in the survey. If we assume that the population of

⁵ This would explain why the GSS respondents seem to "do more" of everything, including watching sports, camping and going to the movies (see tables 8-10 in appendix).

people who agree to take a 90 minute survey is likely to have more eager and interested respondents than the population of people who choose not to participate, then, based upon the above results, selection bias should inflate the GSS reports.

Question Wording and Context

Question Wording. One possible explanation for the difference between the two surveys is question wording. Past research demonstrates that slight variations in wording can influence answers in three distinct ways. First, wording can influence the meaning of a question. Smith (1997) shows that weekly church attendance varies depending on whether the question is asked as "did you attend religious services" vs. "did you attend a church or synagogue." Second, question wording can influence recall of events and feelings. Smith (1990) states that the number of events reported for any activity varies directly with the specificity and directness of the question. Vague, general questions retrieve the lowest number of reports and questions which list specific events separately produce the highest reports. Finally, wording can influence whether a question elicits socially desirable answers.

Of the three arts participation activities surveyed by both the SPPA and GSS, two were asked as "multiple activity questions" in the GSS. For example, the GSS asks "did you go to a classical music or opera performance" in the past 12 months? The SPPA asks these questions separately: first, "did you go to live classical music performance?" and second, "did you go to live opera?" Again, for dance the GSS asks a single question (did you attend live ballet or dance?) and the SPPA asks two separate questions ("live ballet"; and "live dance"). The question on museum and gallery attendance is identical for the two surveys (both ask "have you visited an art museum or

⁶ Although insignificant, the relationship is in the same direction for dance and concert.

gallery?"). For dance and music attendance, the two separate questions on the SPPA survey were re-coded into a single variable. Thus, if a respondent answered yes to either classical music or opera (or both), they were designated as having attended "classical concerts" in the past 12 months.

Based on evidence cited above (Smith, 1990), asking questions separately on the SPPA should, if anything, inflate reports for dance and music. Moreover, the SPPA provides examples of activities that would be considered dance or music (symphony, chamber, choral, jazz, tap, and modern) whereas the GSS asks only about the general category of dance and music. Again, the increased specificity should elicit higher (not lower) participation rates. For example, respondents who have attended church-related choral music might answer "no" to the GSS survey question about classical music attendance and "yes" to the SPPA question where choral music is mentioned by name. In fact, this example of choral music might partly explain why the estimates of classical music attendance by the SPPA and GSS are almost the same (14 and 16 percent respectively). Finally, the most significant difference in attendance rates between the two surveys is for museums and galleries - the one question that was identical for both. Given this fact and the above evidence, it seems unlikely that question wording can explain the higher GSS reports.

Nonetheless, there is one minor difference in the wording of the "lead-in" statement which might influence reports for reasons of social desirability. The GSS begins the section on arts participation with the following statement; "Next, I'd like to ask about some leisure or recreational activities that people do during their free time. As I read each activity, can you tell

me if it is something you have done in the past 12 months." It is possible that by stating the arts are "activities that people do during their free time," the GSS survey leads respondents to feel that the arts are something they "ought" to do - thereby evoking higher self-reports,

Context. Many scholars in the field of survey research suggest that the placement of questions on a survey can significantly affect responses (Schwarz and Sudman, 1991; Smith, 1989; Smith, 1995; Schuman, Presser and Ludwig, 1981). Preceding questions can bias later answers by providing clues as to the purpose and/or sponsor of the survey. This is known as the propaganda effect (Smith, 1989). Also, in an effort to appear consistent, respondents might stretch the truth when answering later questions in order to match earlier responses to a related topic. From a cognitive perspective, preceding questions can serve as cues to help respondents more easily recall memories of distant events; they also provide respondents with a frame of reference from which to interpret subsequent questions.

One difference between the two surveys is that the SPPA acknowledges that the questions on arts participation are being asked on behalf of the National Endowment for the Arts; the GSS survey does not reveal the sponsoring organization nor give clues as to the mission or purpose of the culture module. Based on social desirability arguments, revealing the NEA as the sponsor should, if anything, inflate the attendance rates for the SPPA. Regardless of the mention of the sponsoring organization, participation in the arts is likely seen as a socially desirable activity (a sign of an educated and cultivated person). Thus, like voting -- an attribute of good citizenship - or church attendance — an attribute of a good person - we might generally expect inflated self-reports (Abelson, et al., 1992; Smith, 1997). Such inflated self-reports can be attenuated by

asking respondents to substantiate their reported attendance with details about the event in question (Smith, 1997). Thus, questions which ask for specific counts of behavior make over-reporting more difficult for respondents. The SPPA asks for specific counts, whereas the GSS does not. In particular, the SPPA survey uses the general question about attendance as a filter for a more specific question which asks people to estimate how many times they have attended the aforementioned activity. This second question might serve to call a respondent's "bluff." For example, respondents who have not attended a concert are less likely to answer affirmatively knowing that the next question will ask them to specify how many concerts they have actually attended.

The filter pattern of the SPPA might explain lower rates; however, the Harris Poll also used a two-stage filter and its attendance rates, as reported above, were even higher than those of the GSS. While this fact casts some doubt on the two-stage filter theory as a possible explanation, it does not entirely discredit it. The Harris and the SPPA questions are not identical. The Harris filter asks: "Have you *ever* visited a museum?"; the SPPA asks, "Have you visited a museum *in the last 12 months!*" The Harris filter has two possible sources of bias. First, the filter may create a telescoping effect — an individual may remember going to the museum 2 years ago and answer "yes" to the first question, then confuse the time frame of the event and erroneously report it as happening within the last year. The second source of bias relates to social desirability. Robinson (1989) suggests that answering "yes" to the long-term question in the Harris Poll ("have you ever...") will lead respondents to over-estimate more recent participation in an effort to remain consistent with the first-stage question. Thus, in the case of the Harris Survey, the deflating effect of the follow-up question "how many times?" may be offset by the

inflating effect of the long-range filter question.

Finally, question order and context can influence a respondent's frame of reference. For example, Smith (1997) suggests that by asking about church attendance alongside questions about visiting the doctor, going to movies and eating out, social desirability will be reduced by framing the question as about *events in general* during the last week. A similar framing process could be at work in the GSS. In the GSS survey, the arts questions are interspersed alongside questions relating to different leisure activities (sports, gardening, etc.). The SPPA, on the other hand, asks all art questions before asking anything about other leisure activities. It is possible that by linking arts activities with other leisure activities, the GSS might lead respondents to think about arts events more generally (visiting an art museum becomes framed as visiting any museum -- including science and history; attending a dance performance becomes framed as "going dancing").

There are two possible tests of the leisure hypothesis. The claim above suggests that respondents to the GSS survey are blurring the line between high arts and popular leisure. If this is true, this should inflate reports of arts activities, but have little affect on reports of leisure activities.⁷ Thus, rates of participation in leisure activities - in contrast to arts activities — should not differ between the two surveys. Second, many researchers have demonstrated the strong relationship between social class and arts consumption (Bourdieu, 1984; DiMaggio, 1987; Levine, 1988). If respondents to the GSS are blurring the high arts/popular leisure boundary, then the relationship

⁷While it is possible that leisure activities influence the frame of reference for arts activities, the reverse is difficult to imagine. That is, there is no reason to suspect that respondents on the SPPA report lower rates of camping because they confuse this activity with a form of high art,

between social class and attendance should be attenuated. In particular, we would expect the relationship between education/income and the arts to be weaker in the GSS data than in the SPPA data.

There is no evidence that the mixing of popular leisure and arts participation in the GSS survey creates an upward bias. Tables 8, 9 and 10 compare participation in camping activities, sports and movies for the two surveys. To account for much of the variation in demographic characteristics, we compared participation across individuals subdivided by income, education, sex and place size. In every category for each of the three leisure activities, the GSS survey reports higher rates of participation. This suggests that questions about leisure in the GSS are not responsible for the higher reports of arts participation. Second, if we examine the relationships between education, income and the arts participation, we do not find stronger relationships in the SPPA data compared to the GSS data. The partial correlation for both education and income (In) and attendance at museums is similar for the two surveys (see table 11).

Table 11
 Partial Correlation Coefficients
 Comparing GSS and SPPA Surveys

GSS Survey

Correlation between Education, Income (In) and Attendance at Art Museums controlling for income (In) and education respectively, as well as marital status, size of resident community, sex and race.

	Go Museums	Educate	Income (In)
Go Museum	1.00	.298**	.116**
Educate	.298**	1.00	
Income (In)	.116**		1.00

**Correlation is significant at the .01 level (2-tailed)

Table 11 - continued

SPPA Survey

Correlation between Education, Income (In) and Attendance at Art Museums controlling for income (In) and education respectively, as well as marital status, size of resident community, sex and race.

	Go Museums	Educate	Income (In)
Go Museum	1.00	.285**	.107**
Educate	.285**	1.00	
Income (In)	.107**		1.00

**Correlation is significant at the .01 level (2-tailed)

Survey Length and Interview Type

Research has demonstrated that questionnaire length can have negative consequences on both response rates and response quality (Burchell and Marsh, 1992). The GSS and SPPA surveys differ significantly in terms of survey length. The GSS survey takes approximately 90 minutes to complete, whereas the SPPA survey (including the crime questions) takes between 30 and 45 minutes. The greater length of the GSS survey does not appear to have had much effect on response rates (both the GSS and SPPA rates were above 80 percent). However, past research suggests that after a long series of questions, respondents grow fatigued and give less complete and more perfunctory answers (Courtenay, 1978; Sheatsley, 1983; Smith, 1989). As Burchell and Marsh (1992) point out, respondents are more prone to response-set bias (answering every question in a series the same way) when batteries of questions appear near the end of a questionnaire. If we examine the rate of "missing" or "don't know"¹ responses, we find no evidence that fatigue caused people to stop answering questions on the GSS survey (the rate of missing and don't know responses is low for both surveys — 1 percent for the GSS and .5 percent for the SPPA). Second, questions about arts and leisure participation in the GSS come immediately after a battery of questions about people's likes and dislikes of different types of music. Thus, because the response scales are so different for the two types of questions, there is no prior pattern of "yes" responses which might inflate reports about arts attendance.

Finally, all respondents to the GSS survey were interviewed in person, compared to only 25 percent of respondents in the SPPA (the remaining 75 percent being interviewed by telephone). In-person interviews might lead to higher reports if respondents are more prone to social-

desirability pressures when sitting face-to-face with an interviewer; or, alternatively, respondents might be more likely to ask an interviewer in-person to clarify the meaning of a question, thereby leading to more specificity and better recall. However, an examination of the relationship between interview type and arts attendance reveals contrary results. In the case of dance and concert attendance, having been interviewed by telephone corresponds to higher reports of attendance; and for museum attendance, the relationship is insignificant (see table 12). Thus, interview type (in person or telephone) fails to explain the GSS's higher attendance rates.

Table 12: Logistic Regression Examining the Effect of Interview Type on Attendance at Museums, Dance and Classical Music

	Museums (b-coef)	Dance (b-coef)	Music (b-coef)
Intercept	-8.04 (.378)	-6.56 (.491)	-9.36 (.493)
Interview (1=tele; 0=home)	-.052 (.067)	.157 (.093)	.360 (.089)
Education	.313 (.012)	.219 (.015)	.308 (.015)
Income(ln)	.269 (.039)	.113 (.052)	.260 (.050)
Female	.183 (.056)	.335 (.075)	.337 (.069)
Race			
white			
black	-.315 (.096)	-.052 (.124)	-.633 (.137)
other	-.164 (.148)	-.168 (.200)	-.317 (.187)
Place Size			
less than 10k			
10k - 99k	.400 (.076)	.469 (.112)	.456 (.102)
100k -999K	.379 (.086)	.318 (.123)	.377 (.111)
over 1 million	.602 (.106)	.757 (.140)	.690 (.133)

Standard Errors are displayed in parentheses
 data = SPPA 92; n= **10,846**

Why Do Differences Matter?

As mentioned earlier, divergent survey estimates of such salient behaviors and opinions as drug use, rape, civic participation, voting and support for abortion often lead to heated and unproductive policy debates. Better estimates would provide for more informed debate and policy making. However, in spite of differences in overall population estimates, can similar surveys be used reliably to test important relationships within the data? For example, can the

GSS and SPPA surveys be used, with comparable results, to test the relationship between income and arts attendance? Theoretically, the answer is no. The relationship between two variables is defined by the covariance equation:

$$\sigma_{xy} = [\sum(X_i - \bar{X})(Y_i - \bar{Y})]/n.^8$$

Thus, the relationship depends on both the mean of the independent (X) and dependent (Y) variables. When samples differ in terms of demographic characteristics (as do the GSS and SPPA surveys), then the mean value of our independent variables (education, income, etc.) will differ between the two surveys and, hence, the covariance for education and arts will not be the same. But, even if the samples are properly weighted, if the population estimates for arts attendance (the mean of Y) are different, then again by nature of the covariance formula, the relationship between arts attendance and other variables will differ between the two surveys. Andrews (1984) demonstrates this empirically by illustrating the various ways in which measurement error can distort the relationship between two variables in a regression equation, causing correlations to rise or fall substantially. In addition, McFarland (1981) demonstrates that question order effects may vary as a function of the demographic attributes of the respondents. He writes, "respondents with little education may be more susceptible to order effects than are the more educated (pp. 209)." Thus, when question wording and order effects are not universal for all relevant groups, important relationships within the data may not be consistent across surveys.

This argument is borne out by a comparison of regression models estimating the relationship between museum attendance and six socio-demographic traits (sex, race, income, age, education

⁸This holds true for multiple regression as well, which is basically the covariance of two variables with all other relevant variables held constant.

and place size). Although most relationships in both surveys are in the same direction, tables 13.1 and 13.2 reveal discrepancies. For example, the GSS data predict that women will be 1.4 times more likely to attend the arts than men; the SPPA data predict that women will only be 1.2 times as likely. We find larger differences for income and place size. Thus, surveys which under or over-report the prevalence of certain activities in the population may be equally unreliable in their description of the relationship between variables of interest (e.g. income and arts participation).

Table 13.1
Logistic Regression: GSS Survey: Dependent
variable = Attendance at Museums

Variable	B-Coefficient	S.E.	Exp(B)
Female	.347	.122	1.41
Race = black	-.523	.214	.593
Race = other	.096	.288	1.10
Income(LN)	.729	.177	2.07
Age	-.005	.004	.995
Education	.297	.027	1.35
Size = 10K - 99K	.467	.139	1.59
Size = 100K - 999K	.748	.181	2.11
Size >= 1 million	.532	.274	1.70
Constant	-7.59	.805	

n= 1,460

Table 13.2
Logistic Regression: SPPA Survey
Dependent variable - Attendance at Museums

Variable	B-Coefficient	S.E.	Exp(B)
Female	.191	.056	1.21
Race - black	-.355	.096	.701
Race = other	-.218	.149	.804
Income(LN)	.266	.038	1.30
Age	-.010	.002	.990
Education	.308	.012	1.36
Size = 10K - 99K	.390	.079	1.48
Size = 100K - 999K	.360	.056	1.43
Size >- \ million	.600	.107	1.82
Constant	-7.57	.382	

n=7,929

Conclusion

This paper has examined several possible explanations for differences in arts participation rates between the SPPA and the GSS surveys, and, unfortunately, has failed to reveal an unambiguous answer to the puzzle. Below is a summary of the findings (also see table 14).

Acquitted

The research presented in this paper helps us rule out several possible explanations for the reported differences in arts participation. First, question wording doesn't appear to play an important role, since there are large differences in attendance even among questions that are worded identically. Second, question context fails to explain the difference. In particular, the mixing of questions about leisure and arts participation doesn't appear to inflate attendance rates on the GSS survey. Third, interview-type (telephone or in-person) should, if anything, increase the rates of attendance for the SPPA. Seventy five percent of the SPPA respondents were interviewed by telephone (whereas all of the GSS interviews were conducted in-person), and evidence suggests that telephone interviews increase attendance reports for concerts and dance. Finally, there is no evidence that survey length affects the accuracy of individual reports.

Likely Accomplices

We found that differences in the sample population (e.g. the GSS over-sampled persons with high levels of income and education compared to the SPPA) likely explain part of the discrepancy between the surveys. Comparing museum attendance, the greatest decline in the gap between the two surveys is for persons making approximately \$62,500, where the GSS rates are 23 percent higher than the SPPA rates (compared to 55 percent for the full sample). For the

subgroup of persons with some college education the GSS rates are 35 percent higher. However, for several income and education categories, there is no noticeable convergence in attendance rates; and, for some categories (persons with incomes under \$12,500 and those with no college education) the gap actually increases. Thus, there are still substantial differences when comparing subgroups of each sample. Even if the surveys were properly weighted, there would remain significantly different attendance rates.

In addition, there is evidence that selection bias might be at work in the GSS survey. Because of its unusual length — 90 minutes - those who agree to participate in the GSS might have certain dispositions which make them more likely to attend the arts. Preliminary analysis suggests that respondents who were more interested in the survey were also more likely to attend museums. Those who agree to be interviewed for the 90-minute GSS are more likely to be enthusiastic about surveys in general and, on average, more likely to attend arts events. This selection bias should inflate the GSS reports.

Suspects

There are two additional explanations which remain as likely contenders for solving part of the puzzle. First, it is quite possible that the two-stage filter of the SPPA survey (asking respondents who answer "yes" to specify how many times they attended) elicits less inflated responses.

Second, selection bias due to the context of the SPPA survey may account for some of the difference in reported rates. It is possible that persons who participate in the three year National Crime Survey (the umbrella survey for the SPPA) are more likely to have strong negative attitudes toward crime and criminals and be less tolerant and less trusting. Given DiMaggio's

findings (1996) about the cultural, social and political orientation of museum attendees, it is reasonable to surmise that the Crime Survey selects against people who are more likely to attend the arts. However, preliminary analysis directly testing the relationship between crime experience and attitudes and arts participation does not strongly support this conclusion.⁹ Analysis of the recent SPPA survey might offer some more definitive answers. The 1997 survey was administered by an independent survey research firm; therefore, the SPPA questions were disentangled from the Census Bureau's National Crime Study. Thus, higher rates of attendance on the 1997 survey would lend strong support to the crime-framing hypothesis.

Robinson's (1989) analysis served as the point of departure for this research. Robinson found that question wording, question context and survey composition account for only a small part of the difference in arts attendance between the Harris poll and the SPPA. He concludes that external factors such as cooperation rates and respondent selection procedures are the most likely suspects for solving the mystery of divergent arts participation estimates. He argued that SPPA rates were likely more accurate because of the survey's higher response rate. In contrast, he concluded that the Harris poll results were biased upward because, "possible respondents who take part in these [commercial] surveys are more interested in the arts than those who refuse or are hard to reach." (pp. 411). As both the SPPA and GSS surveys have similar response rates, the fact that the GSS reports are still much higher than the SPPA reports throws doubt on

⁹The questions from the GSS which were used to investigate the relationship between attitudes about crime and arts attendance might not adequately capture the orientation of persons who are likely to participate in the National Crime Survey. For example, the GSS opinion questions deal more with government policy relating to crime than with attitudes about crime itself. Also, only 84 or 1,073 GSS respondents reported having been burglarized or robbed in the past year. Given the relatively small sample size and the distribution of the independent variable ("victimization"), we might expect high standard errors in our regression models and consequently few statistically significant results.

Robinson's primary suspect (response rate differences). Nonetheless, our findings lead us to the same general conclusion. Question wording, context and survey design appear to explain very little of the variation in attendance reports between the two surveys. Instead, we suspect, as Robinson does, that external factors are the primary culprits. Namely, people who agree to participate in these surveys have certain dispositions which are related to arts attendance. In the case of the GSS survey, selection bias might favor those people who are more active and more engaged ("doers") are therefore more likely to participate in the arts; whereas the SPPA survey might attract people who like to talk about crime and victimization - a disposition which could be related to lower attendance rates.

This research's main limitation is one of sample size. If we think of differences in survey design (context and order) as possible independent variables influencing reports of arts attendance, then essentially we have a sample size of 2 - the SPPA and the GSS surveys. Based on previous research, and by comparing the rates of attendance for the two surveys, we can speculate that differences in question wording or context might account for observed differences between the surveys. However, more confident conclusions require an experimental design which would randomly assign respondents to one of several possible surveys - each survey varying on one dimension of interest. Relevant dimensions in the case of leisure and arts participation would include - use of filters ("have you attended in the last 12 months" vs. "have you attended, and if so, how many times?"); propaganda effect (surveys which mention the sponsoring agency and those which don't); specificity (surveys which ask about general categories of events vs. those which provide specific examples within each category); and context (surveys which mix questions about popular leisure and arts participation vs. those which ask these questions

separately). In addition, an experimental design could illuminate the effects of selection bias. For example, two identical surveys could be administered to two random samples. However, possible respondents would receive different information about the length of the survey - one group would be told the interview would last 15 minutes; the other would be told 90 minutes. The two surveys could then be compared to see if the respondents who agree to take the (allegedly) longer survey tend to give different answers from those who take the (allegedly) shorter survey.

This paper raises troubling questions for scholars interested in public participation in the arts who have assumed that the SPPA estimates are the correct one. Robinson's main argument for accepting the SPPA as more accurate (because of its higher response rate) does not hold up when we take into account data from the GSS survey, which has a comparable response rate and still has much higher participation rates. Once sample is accounted for, differences in wording, survey context, item order and intra-item context likely produce variations in reports. In addition, external factors — such as selection bias due to survey length or "house effects" — can create differences in reported rates of arts attendance. Finally, our results suggest that our surveys differ not only in their estimates of arts participation but also with regard to important relationships between variables within the data (e.g. the relationship between income and arts attendance). Experiments are called for to better understand this variability and to better inform judgments about the accuracy of survey estimates of arts participation in America

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Table 3.1: Comparing Samples for General Social Survey and SPPA by Age Group

Age Groups (N= 1,601)	GSS 93 (N= 12,7 12)	SPPA 92
	Percent	Percent
18-26 years	12.4	15.2
27-36	22.5	22.7
37-46	23.0	20.4
47-56	14.4	14.2
57-66	11.1	12.0
67-76	10.6	9.9
77 and older	5.9	5.5

Table 3.2: Comparing Samples for General Social Survey and SPPA by Income

Family Income Levels	GSS 93 (N= 1,467)	SPPA 92 (N=11,617)
	Percent	Percent
2,500	6.5	5.0
7,500	8.6	8.9
12,500	10.0	11.4
17,500	8.3	9.7
25,000	16.2	17.8
35,000	15.3	16.8
45,000	9.1	10.6
62,500	15.1	11.8
85,000	10.9	7.9

Table 3.3: Comparing Samples for General Social Survey and SPPA by Education

Education Levels	GSS 93 (N= 1,602)	SPPA 92 (N= 12,620)
	Percent	Percent
no high school completion	20.0	20.5
high school	29.8	38.3
some college	25.3	19.3
college graduate	14.0	13.2
graduate school	10.9	8.6

Table 3.4: Comparing Samples for General Social Survey and SPPA by Sex

Sex	GSS 93 (N= 1,601)	SPPA 92 (N=12,712)
	Percent	Percent
Male	42.7	46.3
Female	57.3	53.7

Table 4.1: Attendance at Museums: Comparing GSS and SPPA by Age Categories

Table 3.5: Comparing Samples for General Social Survey and SPPA by Race

Race (N=1,601)	GSS 93 (N=1 2,724)	SPPA 92
	Percent	Percent
White	83.9	85.8
Black	11.1	10.6
Other	5.0	3.7

Table 3.6: Comparing Samples for General Social Survey and SPPA by Marital Status

Marital Status	GSS 93 (N= 1,601)	SPPA 92 (N= 12,7 12)
	Percent	Percent
Married	53.5	60.4
Widowed	10.7	8.0
Divorced	14.3	8.3
Separated	2.7	2.6
Never Married	18.7	20.7

Table 3.7: Comparing Samples for General Social Survey and SPPA by Place Size

Place Size (population)	GSS 93 (N= 1,601)	SPPA 92 (N=8,803)
	Percent	Percent
< 10,000	34.0	19.1
10,000 -99,000	42.4	40.0
100,000-999,999	17.2	26.0
1 million and above	6.4	14.9

Age Groups	GSS 93 (N=1,588)	SPPA 92 (N=12,716)
	% Attending	% Attending
18-26 years	41.9	28.52
27-36 2	43.5	28.95
37-46	46.6	31.06
47-56	44.5	27.36
57-66	40.9	24.09
67-76	21.6	18.96
77 and older	24.5	8.31

Table 4.2: Attendance at Museums: Comparing GSS and SPPA by Income Categories

Family Income Levels	GSS 93 (N= 1,463)	SPPA 92 (N=1 1,608)
	Percent	Percent
2,500	19.8	11.69
7,500	23.8	12.21
12,500	28.1	11.90
17,500	27.3	20.95
25,000	34.2	26.84
35,000	44.0	30.21
45,000	46.6	30.78
62,500	51.8	42.14
85,000	72.3	48.17

Table 4.3: Attendance at Museums: Comparing GSS and SPPA by Education Categories

Education Levels	GSS 93 (N= 1,590)	SPPA 92 (N=12,652)
	Percent	Percent
no high school completion	14.1	6.4
high school	29.4	17.0
some college	48.0	35.7
college graduate	60.2	46.9
graduate school	77.7	58.9

Table 4.5: Attendance at Museums: Comparing GSS and SPPA b) Race Categories

Race	GSS 93 (N=1,601)	SPPA 92 (N=12,712)
	Percent	Percent
White	42.1	27.2
Black	26.7	18.9
Other	45.6	26.9

Table 4.6: Attendance at Museums: Comparing GSS and SPPA by Marital Status

Marital Status	GSS 93 (N= 1,592)	SPPA 92 (N= 12,700)
	Percent	Percent
Married	42.6	25.7
Widowed	25.0	14.8
Divorced	39.7	29.8
Separated	25.0	22.1
Never Married	46.15	32.2

Table 4.7: Attendance at Museums: Comparing GSS and SPPA by Place Size

Place Size (population)	GSS 93 (N= 1,602}	SPPA 92 (N=8,797)
	Percent	Percent
< 10,000	29.8	19.8
10,000-99,000	44.2	30.8
100,000-999,999	49.1	29.1
1 million and above	46.5	31.3

Table 4.4: Attendance at Museums; Comparing GSS and SPPA by Sex Categories

Sex	GSS 93 (N= 1,593)	SPPA 92 (N= 12,7 16)
	Percent	Percent
Male	39.0	26.0
Female	42.0	26.0

Table 5.1: Attendance at Dance: Comparing GSS and SPPA by Age Categories

Age Groups	GSS 93 (N= 1,587)	SPPA 92 (N= 12,7 12)
	% Attending	% Attending
18-26 years	14.7	10.7
27-36 2	12.5	11.3
37-46	18.8	12.0
47-56	20.7	10.0
57-66	18.2	11.0
67-76	13.2	8.2
77 and older	8.6	6.1

Table 5.2: Attendance at Dance: Comparing GSS and SPPA by Income Categories

Family Income Levels	GSS 93 (N= 1,462)	SPPA 92 (N=1 1,605)
	Percent	Percent
2,500	7.3	5.1
7,500	10.3	6.8
12,500	14.5	5.3
17,500	11.6	8.7
25,000	16.9	9.1
35,000	22.7	11.7
45,000	21.1	12.8
62,500	25.3	15.1
85,000	37.7	18.9

Table 5.3: Attendance at Dance: Comparing GSS and SPPA by Education Categories

Table 5.5: Attendance at Dance: Comparing GSS and SPPA by Race Categories

Race	GSS 93 (N= 1,593)	SPPA 92 (N= 12,712)
	Percent	Percent
White	19.1	10.7
Black	18.2	8.4
Other	32.9	11.8

Table 5.6: Attendance at Dance: Comparing GSS and SPPA by Marital Status

Marital Status	GSS 93 (N= 1,592)	SPPA 92 (N= 12,696)
	Percent	Percent
Married	18.3	10.0
Widowed	17.9	7.6
Divorced	20.1	12.2
Separated	6.8	8.6
Never Married	26.1	13.1

Table 5.7: Attendance at Dance: Comparing GSS and SPPA by Place Size

Place Size (population)	GSS 93 (N= 1,593)	SPPA 92 (N=8,797)
	Percent	Percent
< 10,000	11.9	7.3
10,000 -99,000	21.8	12.4
100,000-999,999	23.8	11.1
1 million and above	33.7	14.0

Education Levels	GSS 93 (N= 1,589)	SPPA 92 (N= 12,648)
	Percent	Percent
no high school completion	6.3	3.5
high school	13.3	7.2
some college	23.9	13.9
college graduate	30.2	16.3
graduate school	38.9	23.9

Table 5.4: Attendance at Dance: Comparing GSS and SPPA by Sex Categories

Sex	GSS 93 (N=1,593)	SPPA 92 (N=12,703)
	Percent	Percent
Male	12.8	9.3
Female	24.9	11.5

Table 6.1: Attendance at Concerts: Comparing GSS and SPPA by Age Categories

Age Groups	GSS 93 (N=1,601)	SPPA 92 (N=12,712)
	% Attending	% Attending
18-26 years	14.7	11.0
27-36 2	12.5	11.7
37-46	18.8	15.1
47-56	29.7	18.5
57-66	18.2	15.3
67-76	13.2	15.5
77 and older	8.6	7.7

Table 6.5: Attendance at Concerts: Comparing GSS and SPPA by Race Categories

Race	GSS 93 (N= 1,592)	SPPA 92 (N=1 2,724)
	Percent	Percent
White	17.1	14.7
Black	7.4	7.9
Other	16.5	12.5

Table 6.6: Attendance at Concerts: Comparing GSS and SPPA by Marital Status

Table 6.2: Attendance at Concerts: Comparing GSS and SPPA by Income Categories

Family Income Levels	GSS 93 (N=1,463)	SPPA 92 (N=11,617)
	Percent	Percent
2,500	4.2	5.4
7,500	4.0	5.1
12,500	6.3	7.0
17,500	8.3	10.3
25,000	11.4	12.2
35,000	18.2	14.5
45,000	20.3	14.6
62,500	21.3	22.9
85,000	27.7	33.1

Table 6.3: Attendance at Concerts: Comparing GSS and SPPA by Education Categories

Education Levels	GSS 93 (N=1,589)	SPPA 92 (N= 12,620)
	Percent	Percent
no high school completion	4.1	3.1
high school	8.3	7.9
some college	14.9	16.9
college graduate	29.3	26.0
graduate school	44.0	38.7

Marital Status	GSS 93 (N= 1,591)	SPPA 92 (N=12,708)
	Percent	Percent
Married	15.9	13.9
Widowed	13.8	11.4
Divorced	14.9	15.1
Separated	6.8	10.0
Never Married	19.5	15.0

Table 6.7: Attendance at Concerts: Comparing GSS and SPPA by Place Size

Place Size (population)	GSS 93 (N= 1,592)	SPPA 92 (N=8,803)
	Percent	Percent
< 10,000	10.1	9.9
10,000-99,000	18.3	16.9
100,000-999,999	19.8	15.4
1 million and above	18.9	16.1

Table 6.4: Attendance at Concerts: Comparing GSS and SPPA by Sex Categories

Sex	GSS 93 (N= 1,592)	SPPA 92 (N= 12,715)
	Percent	Percent
Male	13.5	13.0
Female	17.8	14.6

TABLES 8-10; COMPARING LEISURE PARTICIPATION BY CATEGORY

Table 8.1: Camping: Comparing GSS and SPPA by Income Categories

Family Income Levels	GSS 93 (N= 1,593)	SPPA 92 (N=5,934)
	Percent	Percent
2,500	18.8	17.0
7,500	26.2	18.2
12,500	30.1	20.6
17,500	39.3	31.5
25,000	42.2	35.2
35,000	51.1	40.1
45,000	50.4	38.3
62,500	55.0	44.1
85,000	49.1	43.7

Table 9.1: Go to Sports Events: Comparing GSS and SPPA by Income Categories

Family Income levels	GSS 93 (N= 1,593)	SPPA 92 (N=5,934)
	Percent	Percent
2,500	29.2	22.1
7,500	25.4	19.8
12,500	39.0	19.9
17,500	46.7	27.2
25,000	50.0	32.9
35,000	63.6	41.1
45,000	60.9	49.7
62,500	74.2	48.8
85,000	75.5	56.7

Table 10.1: Go to Movies: Comparing GSS and SPPA by Income Categories

Family Income Levels	GSS 93 (N=i,593)	SPPA 92 (N=5,934)
	Percent	Percent
2,500	52.1	41.2
7,500	46.0	33.8
12,500	58.2	40.8
17,500	66.9	50.5
25,000	68.8	54.8
35,000	76.0	66.2
45,000	85.0	74.6
62,500	80.1	70.5
85,000	86.8	82.9

Table 8.2: Camping: Comparing GSS and SPPA by Education Categories

Education Levels	GSS 93 (N=1,602)	SPPA 92 (N=5,297)
	Percent	Percent
no high school completion	22.6	16.7
high school	39.5	31.2
some college	46.3	40.9
college graduate	49.1	40.8
graduate school	62.6	49.2

Table 9.2: Go to Sports Events: Comparing GSS and SPPA by Education Categories

Education Levels	GSS 93 N= 1,602	SPPA 92 N=5,297
	Percent	Percent
no high school completion	27.6	14.9
high school	48.4	32.6
some college	63.7	45.7
college graduate	65.8	49.9
graduate school	77.1	49.9

Table 10.2: Go to Movies: Comparing GSS and SPPA by Education Categories

Education Levels	GSS 93 (N= 1,602)	SPPA 92 (N=5,297)
	Percent	Percent
no high school completion	40.4	27.2
high school	66.8	55.1
some college	80.8	71.4
college graduate	85.6	77.4
graduate school	86.9	78.9

Table 8.3: Camping: Comparing GSS and SPPA by Sex Categories

Sex	GSS 93 (N=1,593)	SPPA 92 (N=5,735)
	Percent	Percent
Male	49.0	39.0
Female	36.3	28.7

Table 9.3: Go to Sports Events: Comparing GSS and SPPA by Sex Categories

Table 10.3: Go to Movies: Comparing GSS and SPPA by Sex Categories

Sex	GSS 93 (N=1,593)	SPPA 92 (N=5,735)
	Percent	Percent
Male	60.8	44.0
Female	48.3	29.3

Sex	GSS 93 (N=1,593)	SPPA 92 (N=5,735)
	Percent	Percent
Male	67.1	58.4
Female	72.0	58.0

Table 8.4: Camping: Comparing GSS and SPPA by Place Size

Place Size (population)	GSS 93 (N=1,593)	SPPA 92 (N=3,925)
	Percent	Percent
<10,000	41.3	30.1
10,000 -99,000	43.7	31.8
100,000-999,999	43.2	30.9
>=1 million	26.0	19.6

Table 9.4: Go to Sports Events: Comparing GSS and SPPA by Place Size

Place Size (population)	GSS 93 (N=1,593)	SPPA 92 (N=3,925)
	Percent	Percent
< 10,000	50.8	35.0
10,000 -99,000	57.8	39.0
100,000-999,999	54.6	37.3
999,999 >=1 million	38.2	29.2

Table 10.4: Go to Movies: Comparing GSS and SPPA by Place Size

Place Size (population)	GSS 93 (N=1,593)	SPPA 92 (N=3,925)
	Percent	Percent
< 10,000	60.4	54.7
10,000-99,000	75.8	61.6
100,000-999,999	70.3	64.0
>=1 million	80.2	56.7

Table 14. Summary of Hypotheses, Methods and Results

SAMPLE COMPOSITION AND SELECTION BIAS		
Hypothesis	Methods	Results
<p>Hyp. 1. GSS rates are higher because the sample includes more women, more college educated and more higher income individuals.</p> <p>Hyp. 2. SPPA results are lower because it is linked to the Census Bureau's Crime Survey (and, people who like to answer questions about crime are less likely to attend the arts).</p> <p>Hyp 3. GSS rates are higher because people who agree to participate in a 90- minute survey are more likely to attend the arts.</p>	<p>Comparison across sub-groups</p> <p>Regression analysis investigating the relationship between opinions about crime and arts participation.</p> <p>Regression analysis investigating the relationship between a respondent's attitude toward taking the survey and their participation in arts events.</p>	<p>Even amongst sub-groups (e.g. college educated in both samples), the GSS rates were much higher. Large differences in attendance persist even after taking sample composition into account</p> <p>No evidence of a strong relationship between various opinions about crime and arts participation.</p> <p>Respondents who are eager and interested in the survey are more likely to attend museums and galleries. This provides some support for the hypothesis that selection bias for the GSS results in higher reports of museum attendance.</p>
QUESTION WORDING AND CONTEXT		
Hypothesis	Methods	Results
<p>Hyp. 4. The GSS's multiple-activity question format could lead to higher reports.</p> <p>Hyp. 5. The GSS attendance rates are higher because it prefaces questions about arts attendance with "the following are activities which people do in their free-time... do you do this?" - a format which could create social-desirability bias.</p>	<p>Speculative. Comparison of marginals.</p> <p>Speculative. Comparison of marginals.</p>	<p>Based on previous research, the SPPA question format, not the GSS format, should lead to higher reports. As opposed to the GSS's multiple-question format, the SPPA asks questions about arts events separately; it also offers examples of possible events in each category. This specificity should lead to higher, not lower reports.</p> <p>Also, even when question wording is identical - in the case of museum attendance — large differences persist.</p> <p>Inconclusive. Difficult to test with available data.</p>

Table 14 - continued

<p>Hyp. 6. The SPPA rates could be influenced by a "propaganda effect" because the survey sponsor (the NBA) is revealed to the participant at the beginning of interview.</p> <p>Hyp. 7. The SPPA attendance rates are lower because the tendency to inflate reports (as a result of social desirability) is checked by asking for specific counts of the activity in question.</p> <p>Hyp. 8. GSS rates are higher because respondents confuse participation in the arts with participation in popular leisure activities.</p>	<p>Speculative. Comparison of marginals.</p> <p>Speculative. Also, comparison with the Harris Survey.</p> <p>1. Cross-survey comparison of participation rates in leisure activities. 2. Partial correlation analysis</p>	<p>Hypothesis is incompatible with evidence. If there was a propaganda effect, it would likely bias the SPPA reports upwards, not downwards.</p> <p>Inconclusive. Asking for specific counts might lead to "truer" reports, but this is difficult to test with our data.</p> <p>No evidence that the mixing of popular leisure and arts participation creates an upward bias in the GSS attendance figures. The GSS reports higher attendance rates for leisure as well as for the arts; and, the GSS survey doesn't exhibit a weaker relation ship between socio-economic indicators and arts participation.</p>
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SURVEY LENGTH AND SURVEY TYPE

Hypothesis	Methods	Results
<p>Hyp. 9. GSS rates are higher because the survey takes 45 minutes longer than the SPPA. Lengthier surveys can lead to fatigue and response sets.</p> <p>Hyp. 10. GSS rates are higher because a greater percentage of respondents were interviewed in person (as opposed to by telephone).</p>	<p>Examination of "don't knows" and "missing" values. Also, a review of previous questions on the GSS to investigate the possibility of a prior pattern of "yes" responses (a fixed response set).</p> <p>Regression analysis investigating the impact of interview-type on arts participation.</p>	<p>No evidence of survey fatigue (rates of "don't know" and "missing" responses are similar). Also, preceding questions on the GSS have a different format and thus are not likely to lead to response set-bias.</p> <p>For attendance at concerts and dance, evidence refutes the claim that in-person interviews are associated with higher reports. In fact, for these activities, telephone interviews are associated with higher attendance rates. This should lead to higher SPPA reports as opposed to higher GSS reports.</p>