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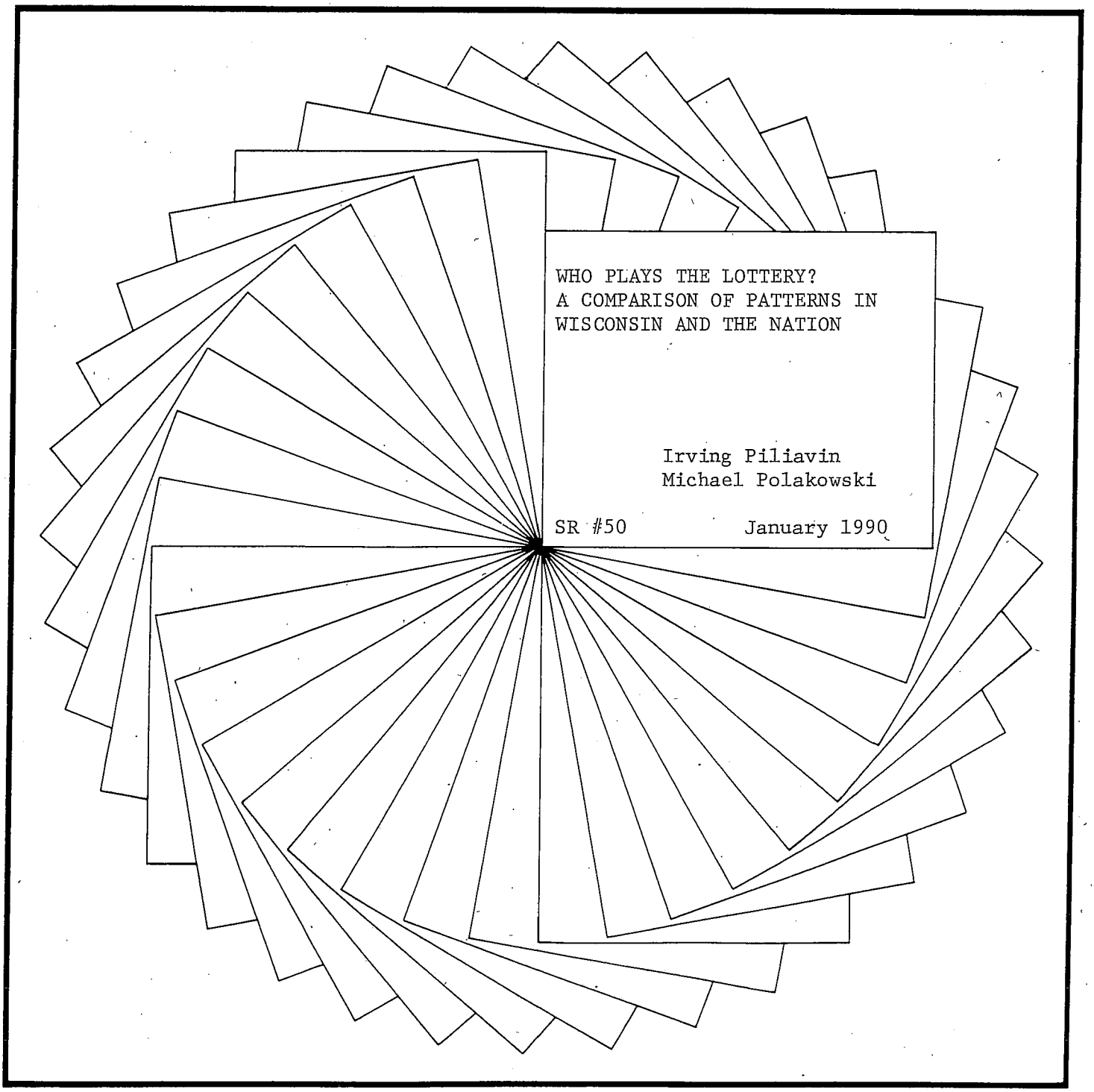

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Special Report no. 50

Who Plays the Lottery?

A Comparison of Patterns in Wisconsin and in the Nation

Report submitted to the
Joint Committee on Finance,
Wisconsin State Legislature

by

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EXECUTIVE SUMMARY

Within the past twenty-five years legal lotteries have made a dramatic resurgence in the United States. Prior to the introduction of the New Hampshire lottery in 1964, no legal lottery had existed in this country for seventy years. By 1989, twenty-eight states and the District of Columbia had either followed New Hampshire's lead by implementing functional lotteries or had passed legislation permitting their creation (Clotfelter and Cook, 1989b). Accompanying the renewed appeal of the lottery are concerns involving the potentially negative consequences that are perceived to be associated with this form of gambling. These concerns have been expressed in debates aired in the popular press and articulated in state legislatures. The following questions represent a recurrent set of key issues in these debates.

1. Does lottery play entail expenditures that citizens, particularly the poor, cannot afford? (Minneapolis Citizens League [MCL], 1986; Asbury, 1938)
2. Do lotteries capitalize on the naiveté of citizens regarding probabilities of winning and strategies for play? (Asbury, 1938; Peterson, 1951)
3. Does lottery play promote habitual gambling? (MCL, 1986)
4. Is the lottery a regressive form of taxation? (Brinner and Clotfelter, 1975)

We investigate these issues directly and indirectly in the present report. The study on which this report is based was conducted at the request of the State Lottery Board, in accordance with 1987 Wisconsin Act 119, Sec. 35(7), authorizing a state lottery and requesting "a study of the

state lottery's impact on Wisconsin residents of various income levels." The data for the study were collected during the summer of 1989 through telephone interviews with members of two independent samples. The first comprised residents from the state of Wisconsin (N=527); the second consisted of residents in the remaining contiguous states (N=733). Respondents from both samples provided data on their lottery play, their attitudes and perceptions concerning the consequences of lottery play, and their perceptions of the odds and strategies associated with that play. These data permit us to examine not only the relationship of respondents' lottery play to income, race, gender, marital status, and education, but also its relationship to various beliefs about lotteries in general and its possible consequences in respondents' family life.

Because our data come from a national as well as a state sample, we are also able to compare lottery play and attitudes of Wisconsinites to those of other U.S. citizens. Since members of the national sample have, on average, been exposed to lottery opportunities within their states for longer periods of time than Wisconsin residents, their experiences and attitudes are examined for trends of participation and attitudes toward the lottery that may materialize in Wisconsin.

We begin our investigation with a brief historical review of lotteries in the United States in Chapter 1. In this chapter we also present the findings of previous research on lottery play and attitudes toward such operations. In Chapter 2 we present an overview of the methods of data collection, questionnaire design, techniques of analysis, and a description of our samples. In Chapter 3 we describe the findings from the Wisconsin sample concerning general attitudes toward the lottery, the level of

lottery play, relationships between lottery play, attitudes, and personal characteristics. Chapter 4 follows a similar outline, but is based upon our findings for the national sample. In Chapter 5 we compare results from the national and state samples and present multivariate analyses of lottery play for both groups. We also describe probable trends of future lottery play within the state based upon those found to exist among national sample members who have been exposed to lottery operations in their states for longer periods of time.

SUMMARY OF MAJOR FINDINGS

1. A large majority of respondents, nationally and within Wisconsin, approve of state lotteries.
2. A majority of respondents residing in states that sponsor lotteries, including Wisconsin, have played their state's lottery at least once.
3. The current mean monthly expenditure on lottery play among Wisconsin residents who play the state's lottery is $10.57. The current median monthly expenditure is $4.60. Among members of the national sample, the mean monthly expenditure by those who play is $14.14 and the median expenditure is, like Wisconsin's, $4.60.
4. Among Wisconsin lottery players, monthly dollar expenditures on the lottery do not significantly vary across age groups, income groups, race, educational levels, or marital status. They do vary significantly by gender: men spend significantly more on

lottery play than do women.

5. Among Wisconsin players, the percentage of total family income spent by players on lottery games varies significantly across income groups, educational levels, and marital status. Those individuals with higher family incomes, more education, and who are married spend proportionately less on lottery play.
6. The vast majority of Wisconsin sample members (over 95%) who have played the lottery believe the money they spend on lottery play has had no adverse effect on their household expenditures.
7. Over one-third of Wisconsin sample members believe a system can be developed which would increase players' chances of winning a lotto game.
8. A large proportion of Wisconsin sample members underestimate the percentage of lottery revenues returned to players as prizes.
9. Based on national sample data, it appears that (1) as the novelty of lottery play decreases in Wisconsin, the proportion of males among players will increase; (2) lottery play will become somewhat more concentrated among those who spend more; (3) approval of the lottery will become less highly correlated with lottery expenditures. It also appears that approval of lotteries in Wisconsin will remain stable or will increase slightly.

CHAPTER 1

HISTORY AND PREVIOUS RESEARCH

HISTORICAL ASPECTS OF LOTTERIES

Although the concerns addressed by this study do not require a historical account of lottery formation and prohibition, a brief summary of how and why lotteries in America came into being, were then outlawed, and have now reemerged will provide the background that influenced the construction of our survey instrument, described in the next chapter.

As a form of gambling, lotteries have a long and checkered past. From the 1600s through the nineteenth century, a major justification for lotteries was their provision of funds for worthy private and public ventures. Lottery revenues in the eighteenth century were used to endow many of America's best-known colleges, including Yale, Harvard, and Princeton (MCL, 1986; Rosecrance, 1988), as well as to finance such public projects as road paving, bridge construction, and even civil war expenses during the colonial period (Devereux, 1980; Clotfelter and Cook, 1989b). Proponents often claimed that without the lottery enterprise such worthwhile projects would never have been realized. To fuel patriotic participation in the earliest lotteries, elaborately orchestrated ceremonies often accompanied the choosing of winners. Approval and support were lent by respected public figures, among them George Washington, Benjamin Franklin, and many civic-minded business leaders (Devereux, 1980). Historically, the lottery appears to be the only method of gambling which

consistently won widespread approval from all classes of people in the United States (Asbury, 1938).

What eventually became a problematic feature of these earliest lotteries was the long time span between initial purchase of a ticket and the final choice of a winner. For the most part this resulted from the inefficient manner of ticket sales and reliance on volunteers. For this as well as economic reasons, in the nineteenth century governments began contracting with private operators to run lotteries. One observer speculates that it was at this juncture that the "noble" characteristics of lottery operations became soiled by greed and corruption. Asbury (1938) states that "the collapse of lottery systems in the nineteenth century can be traced to the fact that the management of drawings, sale of tickets, and promotion of lottery opportunities were turned over to private contractors, promoters, and agents." In contrast with the earlier lotteries that were operated by benevolent volunteers for the good of the general public, those of the nineteenth century were conducted by professionals who sought to exploit the profit potential of such popular events.

Even though the daily operation of lotteries in the nineteenth century was in the hands of private entrepreneurs, the creation of lotteries still depended on legislative mandates in the form of charters. Within the terms of the charters, state legislatures specified the particular charity or public project to be funded by revenues from the lottery, but rarely set the date on which the lottery operation was to expire or the exact percentage of lottery revenue that was to go to the project or charity. Under the guise of fulfilling the stated goals of the charter, these lottery operations therefore often ran for decades and much of the money

raised was siphoned off, only a small fraction going directly to the charity or public institution specified in the charter (Asbury, 1938). In time, privatization permitted lottery managers to illegally fix the prize winner or fail to pay prizes altogether. Whereas the most serious deficiency of the colonial lotteries was their inefficient operation, those of the nineteenth century were marred by embezzlement of lottery funds, production of counterfeit tickets by lottery agents, and bribes to public officials (Asbury, 1938; Peterson, 1951). Public support waned, and state governments began to restrict lottery operations. Because of the complexity of legislative charters, however, many lottery operators were able to capitalize on loopholes until the federal government banned the use of mails for lottery materials in 1890 and then outlawed the interstate transportation of such materials in 1895 (Devereux, 1980; Clotfelter and Cook, 1989b). Even then, lottery participation by Americans was not eliminated, since lotteries existed in numerous countries around the world.

The return of lotteries to the United States in the twentieth century, beginning in New Hampshire in 1964, resulted from a combination of factors. First, almost as soon as lotteries were banned, parties favoring them began action at several levels of government to repeal legal restrictions that prohibited lottery operations. Second, clever entrepreneurs devised schemes similar to lotteries that did not meet all the criteria--usually chance, consideration, and prize--specified in legislation outlawing lottery operations (Devereux, 1980). For example "bank night," played at movie theaters in the 1930s, did not require the purchase of a lottery ticket (consideration) to win a prize; the only condition was that the winner had to be present at the movie theater on the night of the drawing.

Similarly, manufacturers in the 1920s began efforts to boost sales by promoting contests in which participants sent in coupons or packaging labels that required the completion of word puzzles, jingles, or songs in order to qualify for a prize drawing. The companies argued that because it took certain skills to complete the mind teasers, the element of chance was eliminated (Devereux, 1980). Finally, churches offered an alternative to lotteries in the form of bingo. Even though bingo fits all three criteria specified in legislation prohibiting lotteries, police and city attorneys rarely tried to close down operations conducted under the auspices of religious organizations (Asbury, 1938; Peterson, 1951; Devereux, 1980). From these descriptions, and the illegal practices associated with lottery operations, it is evident that the major issues surrounding legalized gambling have changed very little over time.

LEGALIZED GAMING: CONTEMPORARY ISSUES

Current debates over the legalization of lottery gambling generally include moral as well as economic arguments. Some proponents of lottery legalization have contended that it is a viable alternative to the many forms of illegal gambling--policy, numbers, bingo, and the like--that flourished in the wake of lottery prohibition. Allowing lotteries to operate under strict regulative control of government, it is argued, can divert the tide of dollars flowing to and from organized crime (Peterson, 1951). Concern has also been expressed that illegal gambling creates an atmosphere of immorality in which citizens place less importance on the legality of their actions and more on the outcome. Therefore, if gambling

is made legal, the deleterious consequences associated with illegal gambling can be averted (Devereux, 1980).

In contrast, Peterson (1951) argues that "on the whole, legalization of gambling in the U.S. has completely failed... instead of eliminating abuses it increased them" (p. 143). According to Peterson, legalization of gambling gave rise to new forms of illegal betting schemes that paid off according to the same numbers chosen in legal lotteries or horse races. Other lottery opponents claim that government operation and control of gambling present a paradoxical message to the citizenry; by suggesting that gambling is a perfectly acceptable means of recreation when controlled by the government, such legal systems may undermine the morality of youth (Clotfelter and Cook, 1989a, 1989b; Devereux, 1980). Lotteries and similar legal alternatives have also been opposed on the moral grounds that they persuade the ignorant and careless to part with their hard-earned money for an opportunity to get rich quick (Asbury, 1938; MCL, 1986). In this vein, Brinner and Clotfelter (1975) have shown that lower-income families spend a larger percentage of their earnings on lottery tickets than families in higher-income brackets. Lottery opponents use such evidence to argue that the government should not be in the business of promoting the depletion of funds of lower-income groups.

Despite such opposition, it is apparent that the attitudes toward gambling in contemporary society are becoming more lenient. Rosecrance (1988) suggests that several conditions have fostered this change: the charitable contributions that are made with gambling revenues, the absence of a united religious front to oppose gambling as recreation, and the realization that huge profits can be made without cheating the

participants. Clotfelter and Cook (1989b) and Peterson (1951), among others, suggest that we have witnessed a general erosion of traditional American values and an increased orientation toward materialism which contribute to a political and social climate favorable to such gambling forms as the lottery. Further, since the reintroduction of legal lotteries in 1964, the accessibility of gambling has been reinforced by its integration into everyday life, as the bulk of lottery sales take place at stores, newsstands, and other retail outlets (Abt et al., 1985). Opinion surveys have also indicated that citizens desire legal opportunities to gamble in lotteries. Two surveys conducted in Minnesota, in 1984 and 1985, showed that an overwhelming majority of the adults polled favored the introduction of a lottery in that state (MCL, 1986). In Wisconsin, where gambling had been prohibited since statehood,[1] the electorate in 1987 passed a referendum allowing the legislature to lift the constitutional ban on lotteries.[2]

In addition, a major concern of lottery opponents has been reduced by the manner in which current lotteries are organized, making corruption and other illegal practices more remote. Unlike the private ventures of their nineteenth-century counterparts, contemporary lottery agencies are either subunits of, or closely aligned with, governmental agencies. Although this does not guarantee the absence of corruption, it appears to preclude the widespread and rampant growth of illegalities witnessed in earlier systems.

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[1]Since statehood Wisconsin has approved two other games of chance: bingo in 1973, and raffles in 1977.

[2]With just under 30% of the potential voting electorate casting ballots, the voters favored the referendum by the margin of 739,338 votes to 396,161 (65% vs. 35%) (Milwaukee Sentinel and Appleton Post Crescent; 8 April 1987 issues).

Another factor favoring lotteries is that proposals to permit them are often marketed as a means to avoid future tax increases or to permit earmarking revenues for projects of civic merit, such as educational, senior citizens', and arts programs (State of Wisconsin, 1985). In this respect contemporary lottery programs share the rationale of their colonial predecessors, as both sought to fund projects that were not expected to receive requisite monies from any other source.

Much of the historical debate surrounding legalized gambling has relied more on emotion than logic, on theoretical concepts rather than established facts, and on moral issues rather than social implications (Peterson, 1951). The fact is that there have been few systematic studies concerning the patterns and consequences of lottery play. We next review the findings of a few of these investigations.

PREVIOUS STUDIES

The following summary of research concerning lotteries is largely based upon a study conducted by the National Gambling Commission (Commission on the Review of the National Policy toward Gambling, 1976) and studies summarized by Clotfelter and Cook (1989b), who compare lottery systems in a number of states. This review is organized by such topical areas as attitudes, expenditures, and demographic characteristics of lottery players. Following this we will describe the methods, analytic techniques, and samples of the present study.

Attitudes Toward Lotteries

As noted above, polls conducted in Minnesota in 1984 and 1985 showed that almost three-fourths of the adult Minnesota residents queried favored the introduction of a state lottery. Clotfelter and Cook (1989b) have also compiled data from surveys spanning several decades showing that since 1938 a majority of respondents polled have favored the legalization of lotteries. The National Gambling Commission (1976) qualifies this finding: although a majority of randomly chosen respondents throughout the nation supported state-controlled lotteries, this support was much more pronounced in areas where lotteries already existed. The NGC study found that, on average, more negative attitudes toward lotteries existed among persons (1) over 65 years of age, (2) with an annual income under $5,000, (3) who reside in the south, (4) and who have less than a high school education. A strong finding of this survey was general support for state lotteries but overwhelming opposition toward national or local lotteries.

Characteristics of Players

At the time of the NGC survey (1974) only twelve states had functioning lotteries. It is not surprising, therefore, that only 24% of the total sample, which included respondents in states without a lottery, had purchased lottery tickets in the previous year. From a 1986 survey of California residents, one year after the introduction of a state lottery, Clotfelter and Cook (1989b) reported that 38% of the 2022 respondents had purchased lottery tickets, and 14% had spent five dollars or more, in the week before their interview. In both studies the age distribution of

lottery players followed an inverted "U" shape: those 18 to 24 years old, and those over 65, played the lottery least. The two surveys produced conflicting results concerning the educational background of lottery players. The NGC reported that the percentage of players increased as education increased; Clotfelter and Cook (1989b) found an inverse relationship in the California sample. Further, both studies reported that a higher percentage of men than women played the lottery, but this gender difference was not as marked in the California survey.

Although the two surveys used different income categories, both found that the percentage of players increased as income level increased. In the NGC report, twelve years before the California survey, the lowest family income category was $5,000 or less, and the highest was $30,000 or more. In the California study the lowest category was $10,000 or less, the highest was $60,000 or more.

Amount Wagered

The most consistent finding in the lottery literature is that there is little difference among income groups regarding the amount of money spent on the lottery: each income group reported spending, on average, about the same amount of money on the lottery (Brinner and Clotfelter, 1975; NGC, 1976). Brinner and Clotfelter compared absolute expenditures in Massachusetts, Connecticut, and Pennsylvania and found that the average annual family expenditure was about $40 per year and that this amount was most frequently spent by families with an income of $10,000 to $15,000. Those with family incomes under $5,000 or more than $25,000 spent between $20 and $30 annually.

The NGC reported an annual mean expenditure of $26 by each person playing the lottery. The amount spent did not significantly differ by income category: those reporting an annual income over $30,000 spent, on average, $17 annually, persons with incomes of $5,000 to $10,000 spent, on average, $37 annually.

The lack of wide variation in absolute amounts spent by people of different income levels means, of course, that the poor spend a substantially larger percentage of their income on lotteries than do the nonpoor. Lottery opponents have suggested that since this regressivity has been repeatedly found to exist we should control lottery purchases. But, as both the Minneapolis Citizens League (MCL, 1986) and Clotfelter and Cook (1989b) point out, all expenditures on household goods and living expenses are regressive: their purchase inevitably consumes a greater percentage of poor families' income than those who earn a higher wage. Since we do not impose restrictions on a poor person's ability to purchase these items, they argue, neither should we restrict their lottery play.

Lottery Participation and Other Gambling

Considerable concern has been expressed over the fact that legalization of the lottery may prompt individuals to become involved in other forms of gambling. The NGC study found that individuals who had participated in the lottery were more likely than nonplayers to wager on sports, bingo, and horse races, while both were equally involved in casino gambling and wagering on dog races. Illegal gambling was also more pronounced among lottery players. John Koza (1984) reported similar findings with regard to lottery players' involvement in bingo and horse-race wagering, but found no

difference between lottery participants and nonparticipants in playing cards for money. These results suggest that lottery players are more involved in a variety of gambling activities than the general population, but it is not clear that participation in the lottery significantly affects, or is affected by, participation in other forms of gambling. This ambiguity reflects that pertaining to a more general pattern observed among gamblers, namely that they are typically involved in more than one form of gambling. Research to date has failed to determine whether this reflects (1) a structural pattern in which involvement in one form of gambling leads, ceterus paribus, to other forms, or (2) a personality attribute involving susceptibility to gambling.

A related issue is whether lottery play promotes compulsive gambling. Little scientific evidence is available, but a prominent authority on compulsive behavior, Robert Custer, a staff doctor with the Veterans Administration, concluded from his clinical experience in treating veterans that "compulsive gamblers are not created by operations such as the lottery since it does not elicit the excitement needed to cause compulsive behavior" (MCL, 1986). The NGC (1976) found that those who played the lottery during 1974 reportedly experienced more excitement from lottery play than did persons who gambled in other ways (4.11 vs. 3.26, respectively, on a scale of 8), whereas nonbettors thought that little excitement resulted from playing the lottery (2.65 on the same scale). Unfortunately, the NCG study has no information that can be used to gauge compulsion. Additional research is needed to investigate the dynamic relationship between lottery play, other forms of gambling activity, and compulsive tendencies.

Reasons for Buying

The average payoff on $1 "scratch-off" tickets is about 50%, and the odds of winning some lotto games are more than a million to one. It is therefore interesting that over 70% of persons surveyed in the NGC study reported that monetary gain was the second most prominent reason for participating in the lottery. The first reason involves general interest, excitement, or challenge of the game (82% of players cited one of these). The primary reasons for not playing were similarly ranked. Among nonplayers the most frequently cited reason was lack of interest (68%), followed by monetary concerns (losing or a wasting of money, 46%). Moral and social reasons were relatively minor concerns expressed by nonplayers (9 and 2% respectively).

The preceding studies provide a point of departure for our own work. We attempt to locate phenomena related to, and reflecting the extent of, lottery play in Wisconsin: general attitudes toward lotteries, expenditures, and the demographic characteristics of lottery players. We also examine such issues as whether lottery play reduces household expenses and its impact on familial relations.

CHAPTER 2

SAMPLE AND SURVEY METHODS

The Letters and Science Survey Center, a unit of the College of Letters and Science at the University of Wisconsin-Madison, is supported by the College and the University's Graduate School. The Survey Center conducts a continuous national telephone survey, interviewing approximately 3000 households during the course of a year. The Wisconsin Lottery Survey was conducted by the Center from June 1 through August 6, 1989. It is important to note that because the survey was conducted prior to the introduction of the Lotto America game in Wisconsin, the Wisconsin sample members based their responses either upon their experience with scratch-off tickets, the only lottery game then available in the state, or upon their lottery play in other states.[1]

DESIGN OF THE SURVEY

Each day a small probability sample of telephone numbers is called for an interview. Any number that is not answered is retained for calling on the same day of the following week. Unanswered numbers remain in the day-of-the-week sample for four successive weeks, and all attempts to reach it are made on that day of the week. After four weeks, additional efforts to obtain an answer are made on other days of

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[1]The following description of the survey procedure applies to both the national and Wisconsin studies. Only major discrepancies between the two procedures, therefore, are noted in the text.

the week, as time permits. An unanswered number is called until a total of eight attempts have been made.

Interviewing is done primarily in the evening, although during the four weeks that a number is in the day-of-the-week sample, at least one call is made in the afternoon. Calls are placed each evening on a schedule designed to maximize a successful contact within each time zone.

The calls made on any given day can be thought of as a probability sample of the United States population, stratified on the differential probability of answering the telephone on a particular day of the week. This sampling scheme is based on an idea of Kish and Hess (1959).

Sample of Households

Sample telephone numbers are purchased by the Center from Nielsen Media Research. For the Wisconsin survey a total of 1500 telephone numbers, representative of currently working residential numbers, was purchased by the Center.[2] For the national survey, the entire sample is, on average, representative of currently working residential telephone numbers in the United States (exclusive of Alaska and Hawaii), including both listed and nonlisted numbers. Nielsen updates the sample three times a year, and the Center purchases sample telephone numbers from each update. It is estimated that approximately 5-7% percent of U.S. households do not have telephones and so would not be represented

[2]Since the national survey is continuous in nature, we are unable to derive an exact figure which would accurately represent the telephone numbers potentially comprising the final national sample.

in the sample. We do not know what this proportion is in Wisconsin, but it is probably in this range.

The Nielsen Media Research begins with a file of the 60,000,000 residential telephone numbers that are listed in published telephone directories. This file is, in effect, sorted by exchange and number within exchange. Within each exchange the 10,000 potential telephone numbers (XXX-0000 through XXX-9999) are divided into 100 blocks of 100 consecutive numbers. Any block that has no listed residential numbers is eliminated from the sample. A sample is drawn from the remaining numbers. Thus the sample includes telephone numbers that are listed in the published directories, those that are unlisted, and numbers within those blocks that have been assigned since the most recent issue of the telephone directory.[3] Use of this sampling scheme is more efficient than a simple random-digit-dialing procedure, since the time and expense of making calls to blocks that have no currently assigned numbers or to nonexistent or nonresidential exchanges is avoided.

Selection of the Respondent Within Sample Households

One person is selected at random from among the adult (age 18 or older) members of the sample household for the interview. The procedure used to select the respondent in households including more than one adult is to ask how many adults of each sex live in the household using that telephone number. If there is more than one adult of the same sex,

[3]It does, however, also include both nonresidential and nonworking numbers that are in the blocks that contain some residential numbers.

the identity of the oldest and youngest is determined, and one of them is then selected at random. The respondent may therefore be, for example, the male or the female in a married-couple household, or the youngest or oldest person in a household of two or more male adults or the youngest woman in a household of two women and one man. Only that person is interviewed.

THE CATI INTERVIEW

The interview is conducted using a Computer Assisted Telephone Interview (CATI) system. The text of all questions appears on the screen for the interviewer to read. The routing through the interview is determined by the computer, based on skip logic programmed into the computer. Question wording may be adapted according to answers given previously in the interview. The system allows inclusion of precoded questions, open-ended questions, and combinations of the two. In addition, the computer allows only valid responses; when an invalid response is entered, the computer asks the interviewer to reenter the response. The system also keeps track of the current status of all sample telephone numbers, automatically routes unanswered numbers to the proper directory for the next attempt, and maintains an elaborate set of management records.

The Interview

The interview, which is up to a half-hour in length, includes about ten minutes of core "demographic" items and up to twenty minutes of

material for clients who are University of Wisconsin researchers or instructors of classes in survey research methods or issues related to public opinion.[4] At any time the questions of several different clients or projects may be on the survey.[5]

The length of the Wisconsin interview averaged 16 minutes. As noted above, an unanswered sample number was called up to eight times at various times during the afternoon, evening, and weekends. Most respondents who initially refused to be interviewed, were recontacted, in an effort to persuade them to participate. A sample of 1500 telephone numbers were used in the Wisconsin study.[6] This resulted in

527	completed interviews
177	refusals
2	other
649	not in sample - nonworking numbers, nonresidential numbers, etc.
101	answered but not interviewed - respondent selected, but not available.
44	number was never answered

$$\text{Response rate} = \frac{527}{527 + 177 + 2 + 101 + (.52)44} = .635$$

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[4]Appendix A represents those survey questions created solely for this lottery study. The demographic items are regularly included in the survey to which the lottery survey was appended.

[5]An attempt is made to sequence questions in such a way that the different sequences do not contaminate one another and to avoid including incompatible material.

[6]Due to the continuous nature of the national survey, and the introduction of the present lottery questions into the ongoing survey, the Letters and Science Survey Center was unable to produce comparable figures for the national sample. Therefore, we are not able to compute a response rate for the national survey.

DESCRIPTION OF SAMPLE MEMBERS

A number of demographic attributes of the Wisconsin and national sample members are presented in Table 1. In the Wisconsin sample, almost 55% of the respondents are female, the vast majority, 94%, are white, 58% are currently married, and 19% have never been married. The median income of Wisconsin sample members is $26,113; 88% have completed high school and 19.5% have completed college as well. While the representativeness of the reported income statistic cannot be directly examined, all other attributes correspond closely to those reported for Wisconsin citizens in the 1980 Census.

Among the national sample members, about 54% are female, 87% are white, 56% are currently married and 16% have never been married. The reported median pretax family income is approximately $28,800; 86% have completed high school and 28% have also completed college. Ignoring the small (2.6%) group of respondents who professed ignorance, 69% of the sample said they lived in states having lotteries. With the exception of race and college completion, there is substantial correspondence in the features of the two samples, and the race discrepancy closely corresponds to the 1985 proportion of the nonwhite population in Wisconsin, 5.8%, as compared to the nation as a whole, 12.2% (U.S. Bureau of the Census, 1989).

We should also note that data from the Bureau of the Census indicate that the measured characteristics of our national sample are generally in close correspondence with those of the U.S. population. In addition to the correspondence in racial composition, the Census data

Table 1

Demographic Characteristics of Lottery Study Sample Members

	Wisconsin Sample (N = 527)	National Sample (N = 733)
Median age	43.8 Years	49.2 Years
Percentage white	94.3%	87.0%
Percentage male	45.2%	45.7%
Percentage married	58.4%	56.3%
Percentage single	18.8%	16.1%
Percentage widowed	10.4%	11.1%
Percentage divorced/separated	12.3%	16.5%
Percentage high school graduates	88.0%	86.2%
Percentage college graduates	19.5%	27.8%
Median income	$26,113	$28,761
Mean income	$23,680	$25,740

indicate that the national population is about 88% white and has a median pretax family income of about $27,400; of those aged 20 or older, 56% are married and 19% are single. The major discrepancy between the data for our national sample and the Census information on the U.S. population concerns educational levels. Whereas in our national sample, as noted above, 86% were high school graduates and 28% were college graduates, Census data indicate that for the nation as a whole, 76% are high school graduates and 20% are college graduates.

DATA ANALYSIS

Most of the analyses to follow were conducted using one of two principal computer programs. For the cross-tabular analyses, which investigate relationships between two or three variables at a time, we employed the general SPSS-X program. For example, if we wanted to know whether lottery play differed by age, we compared the expected number of people in each age category, based on total sample percentages, compared to the actual number in the sample who reported that they played. In this way we can detect any significant difference in lottery play across age groupings. When we examined average monthly expenditure on the lottery and percentage of income spent on the lottery, we employed analysis of variance using the SPSS-X program. Essentially, analysis of variance means that we are testing the hypothesis that average expenditures do not differ markedly across age groups, income groups, educational levels, and marital status, or among men and women and whites and nonwhites. For the more complex analyses using logistic

regressions we employ William Greene's LIMDEP (1988) program. The dependent variables investigated by the regressions represent whether the respondent has ever played the lottery, 1=yes and 0=no. In the following chapter we present the basic cross-tabular findings for the Wisconsin sample.

CHAPTER 3

LOTTERY PLAY: WISCONSIN SAMPLE

In Table 2 we present data on lottery play and relevant attitudes of the Wisconsin sample members. As seen in the top row of the table, a substantial majority, 68% of sample members, acknowledged having played a lottery game at some time in their lives. At the time of the survey, when the Wisconsin state lottery had been in existence for only ten months, 58% of the sample members reported having played at least once in the state's lottery games. The amount of play was generally limited, however. Only 53% of the players (36% of the total sample) reported that they had played as often as once a month during the year preceding their survey interview, while 27% of the players (18% of the entire sample) reported they played the lottery as often as once a week during the same period.

The median monthly expenditure on Wisconsin lottery games by those who played games during the year was about $4.60, while the mean (average) monthly expenditure was $10.57. The substantial difference between the mean and median is due to five "outliers," who reported spending more than $100 per month on lottery play. Approximately 9% of Wisconsin players reported spending more than $20 per month on lottery games; 2% reported spending more than $50 per month. An examination of lottery play as a fraction of reported family income suggests similar ratios. Half of the Wisconsin sample who acknowledged being Wisconsin lottery players reported spending less than 0.3% of their monthly income on this activity, and 87% spent less than 1%. These outlays should not be considered the net costs to players of lottery games, since the Wisconsin lottery returns, on

Table 2

Gambling, Lottery Play, and Opinions: Wisconsin Sample
(N = 527)

Response	Value
Ever played a lottery	67.8%
Ever played the Wisconsin lottery	58.1%
Play Wisconsin lottery at least once a month	35.6%
Play Wisconsin lottery at least once a week	18.0%
Median monthly lottery expenditure (players only[a])	$4.60
Mean monthly lottery expenditure (players only)	$10.57
Median percentage of monthly income spent by players on lottery	.3%
Participates in other forms of gambling	49.7%
In favor or strongly in favor of state lotteries	72.8%
Agree or strongly agree:	
Lotteries are harmless forms of recreation	57.5%
Lottery play reduces money for household expenses (players only)	3.9%
Gambling is a problem for self	2.9%
Gambling is a problem for partner (married or cohabitating only)	2.5%
Believe a system can be devised to improve one's chances to win at lotto	34.3%
Percentage of money wagered on lottery that is returned as winnings:	
0-25%	60.1%
26-50%	31.7%
51% and above	8.2%

[a]"Players" refers to those respondents who reported that they had played the Wisconsin lottery.

average, 50% of gross revenues on scratch-off tickets to players. Average net losses to players are therefore half of the dollar and proportionate income expenditures noted above.[1]

Analysis of opinions of sample members regarding lotteries, summarized in Table 2, indicates that the views of a substantial majority of the sample members are positive: almost three-fourths either favor or strongly favor of the games. Despite this strong support, many individuals seem to view lottery play as something other than an innocuous activity. This is suggested by the finding that over 40% percent of the Wisconsin respondents disagreed with the statement that lotteries were a harmless form of recreation. Although we cannot directly explain this apparent inconsistency, it appears that disagreement with the statement that lotteries are harmless cannot be attributed to the personal experiences of sample members with lotteries since less than 4% of those who reported lottery play in the year preceding their interview stated that the game

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[1]The accuracy of our mean gross lottery expenditure estimate can be determined by the following formula:

Ms * %Play * WIpop * 12 = GS, where

Ms = mean gross monthly lottery expenditure by Wisconsin players

%Play = percent of Wisconsin sample members who are players

WIpop = number of people in Wisconsin over 17 years of age

GS = gross annual lottery sales in Wisconsin

Based on our mean gross expenditure estimate of $10.57 per month and the percentage of our sample who have ever played the Wisconsin lottery, our data suggest the gross annual lottery sales in Wisconsin are $249 million. The actual gross sales of the Wisconsin lottery during its first year were actually $233 million, suggesting that our overall purchase data are quite good.

reduced their household expenditures, only 2.9% of the sample believed gambling of any form was a problem for them, and, among the married, only 2.5% thought gambling was a problem for their spouses.

Two other attitudinal questions put to sample members dealt with their views regarding the possible payoffs from lottery play. The first asked whether sample members believed a system could be developed which would increase a player's chances of beating the lotto game. The second asked sample members what they believed to be the percentage of wagered lottery money that was returned to players. Surprisingly, about 34% of those with an opinion reported they believed a system could be created to improve the chances of beating the lotto game. The responses of sample members who answered the second question varied widely: about 60% claimed that the return was 25% or less, another 32% stated it was between 25% and 50%, while only 8% suggested it was more than 50%.

It appears then that our Wisconsin sample members are generally in favor of lottery play, are not knowledgeable about payoff probabilities, have rarely found play to deprive them of funds required for living expenses, and typically believe that gambling in general is not a problem for themselves or their spouses. Nevertheless, it is also evident from the data in Tables 1 and 2 that not everyone plays or favors lotteries, that lottery expenditures are not uniform among those who do play, and that some individuals and families have experienced problems in connection with lottery play. In the sections to follow we examine these patterns in more detail to ascertain whether they are associated with the demographic, economic, and attitudinal attributes of Wisconsin residents.

LOTTERY PLAY IN WISCONSIN: DEMOGRAPHIC CORRELATES

We have noted above that 68% of our Wisconsin sample members reported having ever played a lottery and that 58% acknowledged playing Wisconsin lottery games in the year preceding their interviews for this study. These overall participation rates mask substantial differences in lottery play to be found among various demographic groups within the sample. The second and third columns of Tables 3 to 9 contain data on the relationships between attributes of those who had ever played and those who had played in Wisconsin.

First, examining patterns in the "ever played" group (column 2), there are clear associations of play with respondents' reported marital status, income, age, education, and overall gambling activity. Individuals with annual incomes below $20,000 are less likely to play than are those of higher incomes (Table 3); widows and widowers are less likely to play than are married, single, and divorced people (Table 4); and younger people are more likely to play than are those who are older (Table 5). Among age groupings, the greatest frequency of play, approximately 80%, is found among people between the ages of 18 and 35.

The relationship of educational attainment to lottery play is complex (Table 6). Individuals with the least education--those who failed to graduate from high school--compose the group having the lowest proportion of lottery players (52%). This finding might be simply explained by the fact that members of this group also have a lower average income, $13,000, than the other educational groups. On the other hand, the group with the next lowest proportion of lottery players contains individuals with the

Table 3

Percentage Who Have Ever Played a Lottery or Have Played the Wisconsin Lottery in the Past Year, by Reported Income: Wisconsin Sample

Pretax Annual Family Income	Ever Played a Lottery*	Played Wisconsin Lottery*	Total (N)
0 - $9,999	53.3%	45.3%	75
$10,000 - $19,999	59.5%	47.7%	111
$20,000 - $29,999	77.7%	71.3%	94
$30,000 - $39,999	76.4%	61.8%	89
$40,000 - $49,999	68.9%	62.2%	45
$50,000 +	80.5%	69.9%	82

*Differences across groups are statistically significant.

Table 4

Percentage Who Have Ever Played a Lottery or Have Played the Wisconsin Lottery in the Past Year, by Marital Status: Wisconsin Sample

Marital Status	Ever Played a Lottery*	Played Wisconsin Lottery*	Total (N)
Single	76.8%	68.7%	99
Married	69.6	60.1	308
Divorced/separated	67.7	55.4	55
Widowed	41.8	30.9	65

*Differences across groups are statistically significant.

Table 5

Percentage Who Have Ever Played a Lottery or Have Played the Wisconsin Lottery in the Past Year, by Age: Wisconsin Sample

Age	Ever Played a Lottery*	Played Wisconsin Lottery*	Total (N)
18-25	76.9%	70.8%	65
26-30	84.3	80.3	71
31-35	77.8	66.7	81
36-40	66.7	59.4	64
41-45	75.0	62.5	32
46-50	75.0	57.5	40
51-60	62.3	54.7	53
61-70	54.2	44.1	59
71+	37.1	21.0	62

*Differences across groups are statistically significant.

Table 6

Percentage Who Have Ever Played a Lottery or Have Played the Wisconsin Lottery in the Past Year, by Education: Wisconsin Sample

Education	Ever Played a Lottery*	Played Wisconsin Lottery*	Total (N)
Less than high school	51.6%	38.1%	63
High school graduate	67.2	61.2	134
Some post-high school education	71.0	56.8	132
College associate arts degree (two-year)	84.2	77.9	95
College graduate	59.2	49.5	103

*Differences across groups are statistically significant.

Table 7

Percentage Who Have Ever Played a Lottery or Have Played the Wisconsin Lottery in the Past Year, by Respondents' Other Gambling Activity: Wisconsin Sample

Does Other Gambling	Ever Played a Lottery*	Played Wisconsin Lottery*	Total (N)
Yes	82.4%	72.5%	261
No	53.4	43.8	264

*Differences between the groups are statistically significant.

Table 8

Percentage Who Have Ever Played a Lottery or Have Played the Wisconsin Lottery in the Past Year, by Gender: Wisconsin Sample

Gender	Ever Played a Lottery	Played Wisconsin Lottery	Total (N)
Male	70.9%	58.4%	238
Female	65.3	57.8	289

Note: Differences are not statistically significant.

Table 9

Percentage Who Have Ever Played a Lottery or Have Played the Wisconsin Lottery in the Past Year, by Race: Wisconsin Sample

Race	Ever Played a Lottery	Played Wisconsin Lottery	Total (N)
White	68.1%	59.0%	496
Nonwhite	62.1	43.3	29

Note: Differences are not statistically significant.

highest level of education, namely college graduates. The reasons for the relatively low lottery play of this group, whose average income is, not surprisingly, the highest of our five educational classes, are not evident.

Finally, we note that, as might be expected, people who admit engaging in other forms of gambling are far more likely than other members of the sample (82% vs 53%) to say they have ever engaged in lottery play (Table 7).

All of the associations discussed above are so strong that they can be considered statistically significant. That is, they are quite unlikely to have occurred by chance. On the other hand, the relationship between lottery play and two other attributes of sample members, their sex and race, are relatively small. A little more than 70% of the men as compared to 65.3% of the women had ever played any lottery; and 68% of the whites as compared to 62% of the nonwhites had ever done so. In both instances statistical tests indicate that these differences are sufficiently small that they are likely to be due to chance.

The attributes of sample members associated with lottery play in Wisconsin are considered in the third columns of Tables 3 to 9. The findings are similar to those dealing with lottery play in general. That is, people whose family incomes are below $20,000, those who are widowed, are over 60 years of age, and who have the least and the most education, are less likely to play than are the members of their respective comparison groups. Again, race and gender fail to be significant factors distinguishing players and nonplayers. Almost half of the Wisconsin sample (48%) engaged in other forms of gambling, and 72% of these individuals, as

compared to 44% of those who did not otherwise gamble, played Wisconsin lottery games.

LOTTERY EXPENDITURES IN WISCONSIN: DEMOGRAPHIC CORRELATES

We turn now to an examination of the attributes of Wisconsin lottery players that are associated with their expenditures on Wisconsin lottery games. We employ two indicators to measure expenditures: (1) the dollar amount spent monthly on lottery games, as reported by sample members; (2) the percentage of monthly income represented by this amount. We first examine attributes of sample members that are associated with monthly dollar expenditures. As noted above, the average monthly expenditure on lottery games among those who stated that they had played during the year preceding their interview was $10.57, which is slightly more than 0.54% of lottery players' average annual income of $23,680. These dollar expenditures by Wisconsin players were not significantly related to differences in age, family income, race, education, or marital status (Table 10). The family income finding is perhaps most surprising--we do not see significant variations by income level; note also that individuals within these income groups do not spend on average more than $20 per month or less than $6. The only attribute that was significantly related to dollar amounts of lottery expenditures was gender: men spend considerably more each month for lottery games than do women ($13.37 vs. $8.12).

When we examine the demographic factors associated with the percentage of monthly income spent on lottery games (Table 11), a series of findings appears that is quite different from the results concerning dollar amounts.

Table 10

Players' Average Monthly Wisconsin Lottery Expenditures, by Demographic Characteristics; Wisconsin Sample

a. Age	Mean Monthly Expenditure	N
18-25	$11.87	48
26-30	7.79	57
31-35	14.90	57
36-40	10.50	39
41-45	7.84	21
46-50	10.13	24
51-60	8.07	29
61-70	10.65	26
71+	10.07	15

b. Annual Family Income	Mean Monthly Expenditure	N
Less than $10,000	$8.32	36
$10,000 to $19,999	12.73	55
$20,000 to $29,999	9.14	68
$30,000 to $39,999	10.55	58
$40,000 to $49,999	6.55	29
$50,000 to $59,999	18.50	24
$60,000 or more	10.89	28

c. Gender*	Mean Monthly Expenditure	N
Male	$13.37	146
Female	8.18	170

d. Race	Mean Monthly Expenditure	N
White	$10.48	302
Nonwhite	12.56	14

e. Education	Mean Monthly Expenditure	N
Not high school graduate	$15.25	25
High school graduate or GED	8.46	83
Some college, no degree	14.08	79
Associate arts degree	10.58	75
College graduate	6.55	54

f. Marital Status	Mean Monthly Expenditure	N
Single	$10.59	72
Married	9.80	189
Widowed	10.28	18
Divorced/ separated	14.64	37

*Difference is statistically significant.

Table 11

Percentage of Players' Monthly Income Spent on Wisconsin Lottery, by Demographic Characteristics: Wisconsin Sample

a. Age	% Monthly Income	N
18-25	.75	48
26-30	.40	57
31-35	.69	57
36-40	.40	39
41-45	.34	21
46-50	.34	24
51-60	.42	29
61-70	.71	26
71+	.91	15

b. Annual Family Income*	% Monthly Income	N
Less than $10,000	1.00	36
$10,000 to $19,999	1.02	55
$20,000 to $29,999	.44	68
$30,000 to $39,999	.36	58
$40,000 to $49,999	.17	29
$50,000 to $59,999	.40	24
$60,000 or more	.20	28

c. Gender*	% Monthly Income	N
Male	.68	146
Female	.43	170

d. Race	% Monthly Income	N
White	.53	302
Nonwhite	.87	14

e. Education*	% Monthly Income	N
Not high school graduate	1.08	25
High school graduate or GED	.48	83
Some college, no degree	.61	79
Associate arts degree	.61	75
College graduate	.23	54

f. Marital Status*	% Monthly Income	N
Single	.62	72
Married	.39	189
Widowed	.98	18
Divorced/ separated	.97	37

*Differences across groups are statistically significant.

Whereas dollar expenditures are related only to gender, we find that the proportion of income spent on lottery games is significantly related not only to gender but also to income level, educational level, and marital status. Women, people with higher incomes, those with more education, and individuals who are either married or single spend a significantly smaller percentage of their family incomes on lotteries than do men, those with relatively less education, those from low-income households, and those who are divorced or widowed. The apparently discrepant findings concerning dollars expended versus proportion of income expended are due to the different character of these two measures: even though there is not much difference in the absolute dollar expenditures by families on lotteries, there are great differences in the incomes of these families; Therefore, relatively constant expenditures when divided by these incomes convert to widely differing expenditure ratios. Because poor families spend about the same magnitude of dollars on lotteries as do well-to-do families, they spend a significantly larger share of their incomes on these games. And because marital status and education are closely related to income (married-couple families and families of more educated people earn more) these variables are also associated with the percentage of income spent on lotteries.

LOTTERY PLAY IN WISCONSIN: ATTITUDINAL CORRELATES

In Table 12 we present data on the beliefs and attitudes associated with the lottery play in Wisconsin. We examine these attitudes:

1. Degree of approval of state lotteries.

Table 12

Percentage Who Have Played the Wisconsin Lottery in the Past Year, by Attitudes and Opinions: Wisconsin Sample

a. Attitude toward State Lotteries*

	Played Lottery	N
Strongly in favor	87.5%	144
Somewhat in favor	64.6	240
Neutral	25.0	8
Somewhat oppose	30.2	63
Strongly oppose	6.3	63

b. Can't Play Lottery More Because Lack Extra Money*

	Played Lottery	N
Strongly agree	90.0%	20
Agree	70.2	94
Disagree	61.9	247
Strongly disagree	43.5	154

c. Lottery Is Harmless Form of Recreation*

	Played Lottery	N
Strongly agree	83.7%	49
Agree	70.4	250
Disagree	47.2	159
Strongly disagree	18.0	50

d. Lottery Is Easy Way to Make Money*

	Played Lottery	N
Strongly agree	83.0%	6
Agree	60.9	64
Disagree	62.3	300
Strongly disagree	50.3	147

e. Percentage of Dollars Wagered on Lottery Returned as Winnings*

	Played Lottery	N
25% or less	57.9%	233
26%-50%	69.9	123
Over 50%	75.0	32

f. Possible to Create a System to Improve One's Chances to Win Lotto*

	Played Lottery	N
Agree	69.4%	160
Disagree	56.7	307

*Differences across groups are statistically significant.

2. Belief that a betting system can be devised to improve one's chances of winning lotto games.
3. Belief that lottery play is a harmless recreation.
4. Beliefs regarding the percentages of dollars wagered that are returned to winning players.
5. Belief that lottery play is an easy way to make money.
6. Belief that the respondent cannot play lottery games as much as he or she would like owing to lack of funds.

As might be expected, whether or not people play lotteries in Wisconsin is significantly associated with their attitudes toward and expectations about lottery play (Table 12). We find that those members of our sample who had ever played Wisconsin lottery games are more likely be among those who (1) approve of lotteries in general, (2) see lotteries as harmless forms of recreation, (3) believe that lotteries are an easy way to make money, (4) believe that systems can be created to increase players' chances of winning lotto, and (5) make relatively high estimates on the percentage returns to winning players. One opinion not associated with Wisconsin lottery play deals with respondents' beliefs as to whether gambling was a problem for them. Our inability to find that this belief was associated with lottery play may have been due to the small number of people in our sample to admit that gambling was for them a problem (2.9%). Finally, in what may seem at first to be a perverse finding, there was a strong association between playing lotteries in Wisconsin and respondents' belief that they could not play as much as they would like, owing to lack of money. Those most likely to agree with this statement were those most likely to play the lotteries, and those least likely to agree were those

least likely to play the lotteries. It appears that those more likely to play lotteries are those who would play even more if they had more money.

MONTHLY EXPENDITURES ON WISCONSIN LOTTERY PLAY: ATTITUDINAL CORRELATES

In Table 13 we present data on the beliefs and attitudes associated with the amount of money spent monthly by players on the Wisconsin lottery. We examine here and in the following section the same attitudes we looked at in the preceding section. In the interest of a more parsimonious presentation, we present data only for those two attitudes that we find to be significantly associated with expenditures. These included sample members' overall attitude toward state lotteries (Table 13:a), and their belief regarding the percentage of dollars wagered by lottery players that are returned to winners (Table 13:b). Those players who strongly approve of lotteries wager more money each month than do players who, while favorable to lotteries, are somewhat less enthusiastic.[2] Furthermore,

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[2]We should note that the "general attitude" variable doesn't appear at first glance to be as clearly associated with the dollar-expenditures variable as our comment suggests, inasmuch as it appears that players who say they strongly oppose the lottery also report spending more money on lotteries than those who merely oppose or are neutral toward lotteries. And, in fact, those players who say they "somewhat oppose" the lottery spend a greater percentage of their income on lottery play than do those people who are neutral about the existence of lotteries. The basis for asserting that favorable attitudes are generally associated with greater play is based on the fact that those sample members who deviate from this general pattern are few in number. Only five players answered that they "strongly oppose" lotteries, and only two members of the sample were neutral. Because of their small number, these "deviant" cases have only minor effects on the general trend, which show up in the spending patterns of those who either "strongly favor," "favor," or "somewhat oppose" lotteries. Several similar instances of apparent inconsistencies appear in later tables. We discuss those instances that can not be explained by the phenomenon of "a few deviant cases."

Table 13

Players' Average Monthly Wisconsin Lottery Expenditures, by Attitudes and Opinions: Wisconsin Sample

a. Attitude toward State Lotteries*	Mean Monthly Expenditure	N
Strongly favor	$14.73	129
Favor	8.13	159
Neutral	3.00	2
Oppose	4.98	21
Strongly oppose	7.60	5

b. Percentage of Dollars Wagered on Lotteries Returned as Winnings*	Mean Monthly Expenditure	N
25% or less	$9.54	137
26%-50%	9.61	92
More than 50%	24.74	25

*Differences across groups are statistically significant.

players who believe that lotteries return relatively large percentages of wagers to winners bet more money on games.

PERCENTAGE OF FAMILY INCOME SPENT ON THE WISCONSIN LOTTERY

In Table 14 we present data on the attitudes of Wisconsin lottery players that are linked to the percentage of income spent on lottery play. As in the case of dollar expenditures, players' general attitude toward lotteries (Table 14:a) and their perceptions of the percentage of total wagers returned to winners (Table 14:b) were significantly associated with percentage of income spent on lottery play: those with positive attitudes and those anticipating higher percentage payoffs were more likely to spend larger percentages of their incomes on lottery play. Players' belief that "lottery play is an easy way to make money" (Table 14:c) was also significantly associated with percentage of income spent. Those respondents who believed that the lottery was an easy way to make money were more likely to spend a higher percentage of their income on lottery play.

ATTITUDES TOWARD LOTTERIES: DEMOGRAPHIC CORRELATES

We now examine how attitudes toward state lotteries are related to demographic attributes of respondents. We examine the following attitudes:

1. Degree of approval of lotteries.

Table 14

Percentage of Players' Income Spent on the Wisconsin Lottery, by Various Attitudes: Wisconsin Sample

a. General Attitude toward State Lotteries*

	% Income Spent on Lottery	N
Strongly favor	.73%	123
Somewhat favor	.42	148
Neutral	.13	2
Somewhat oppose	.36	20
Strongly oppose	.82	5

b. Percentage of Dollars Wagered on Lotteries Returned as Winnings*

	% Income Spent on Lottery	N
25% or less	.49%	137
26% to 50%	.46	92
More than 50%	1.03	25

c. Playing Lottery Is an Easy Way to Make Money*

	% Income Spent on Lottery	N
Strongly agree	.09%	4
Agree	.92	40
Disagree	.52	180
Strongly disagree	.44	73

*Differences across groups are statistically significant.

2. Whether it is possible to create a system to improve one's chances to win a lotto game.
3. Whether lottery play is a harmless form of recreation.
4. Beliefs regarding the percentage of money wagered on lotteries that is returned to winning players.

Approval of Lotteries

We have earlier noted that, overall, almost 73% of our Wisconsin sample approved or strongly approved of lotteries. The degree of that support was strongly related to most of the demographic attributes of sample members on which we obtained information (Table 15). Less approval was found among respondents with smaller incomes (15:b), those who were above 60 years of age (15:c), were widowed (15:a), and were at the top or bottom of the ladder of educational attainment (15:d). Gender and race were not found to be significantly associated with general attitude toward lotteries.

System Can be Devised to Improve One's Chances of Winning Lotto

Earlier we reported that a substantial proportion of our sample members expressed the belief that players can develop systems to improve their chances to win in the lotto game. Two measured personal attributes are associated with this belief: race (Table 16:a) and marital status (Table 16:b). Nonwhite, single, and divorced people are more likely to believe that systems can be developed to increase one's odds of beating the lotto game. Even though the only groups in which a majority held this view were nonwhites (53.8%) and divorced/separated persons (50%), a large proportion

Table 15

General Attitude Toward State Lotteries,
by Demographic Characteristics: Wisconsin Sample

a. Marital Status*	Belief Score[a]	N	b. Annual Family Income*	Belief Score[a]	N
			Less than $10,000	2.79	73
Single	2.11	97	$10,000 to $19,999	2.51	109
Married	2.36	304	$20,000 to $29,999	2.17	93
Widowed	3.02	41	$30,000 to $39,999	2.15	88
Divorced/ separated	2.09	58	$40,000 to $49,999	1.91	45
			$50,000 to $59,999	2.00	31
			$60,000 or more	2.43	42

c. Age*	Belief Score[a]	N	d. Education*	Belief Score[a]	N
18-25	2.06	65	Not high school graduate	2.69	59
26-30	1.94	68	High school graduate or GED	2.38	133
31-35	2.16	81	Some college	2.30	131
36-40	2.10	63	2-year degree	1.89	93
41-45	2.19	32	College graduate	2.57	102
46-50	2.17	40			
51-60	2.38	53			
61-70	3.02	57			
71+	3.17	59			

[a]Replies are scored as follows:
Strongly favor.....1
Somewhat favor.....2
None of these.....3
Somewhat oppose.....4
Strongly oppose.....5

*Differences across groups are statistically significant.

Table 16

Belief that a System Can be Devised to Improve One's Chances to Win Lotto, by Demographic Characteristics: Wisconsin Sample

a. Race*	Belief Score[a]	N	b. Marital Status*	Belief Score[a]	N
White	1.67	441	Single	1.56	90
Nonwhite	1.46	26	Married	1.71	278
			Widowed	1.76	41
			Divorced/separated	1.50	58

[a]Replies are scored as follows:
Yes.....1
No.....2

*Differences across groups are statistically significant.

of respondents in the total sample believed that such systems could be devised (34.3%). The character of these systems was not pursued in our survey.

Lottery Play Is a Harmless Recreation

We noted above that the great majority of our sample members spent relatively small amounts monthly on lottery games and expressed the view that for them and their spouses gambling was not a problem. Nevertheless many (41.2%) believed that lottery play is a potentially harmful activity. This opinion was linked to age and marital status, but not to gender, race, income, or education. Table 17 shows that, on average, widowed respondents (Table 17:a) and older respondents (Table 17:b) were more negative toward lotteries than were other respondents. In terms of percentages, whereas 31.1% of the sample members 35 years of age and younger believed lottery play may be harmful, this was true for 62.3% of those over the age of 60. Whereas 39% of married, single, and divorced people thought lottery play was harmless, 56% of those who were widowed held this view. The similarity of views expressed by the aged and widowed segments of our sample is obviously not coincidental, since the elderly population is more likely to contain those who are widowed.

Proportion of Wagered Money Returned to Lottery Winners

We have noted above that most members of the sample underestimate the proportion of monies spent on lotteries that is returned to winning players. The estimates vary however, by personal attributes. The data in

Table 17

Belief that Lottery is a Harmless Recreation,
by Demographic Characteristics: Wisconsin Sample

a. Marital Status*	Belief Score[a]	N	b. Age*	Belief Score[a]	N
Single	2.27	96	18-25	2.34	65
Married	2.43	300	26-30	2.09	69
Widowed	2.70	50	31-35	2.31	81
Divorced/ separated	2.34	62	36-40	2.38	63
			41-45	2.55	31
			46-50	2.18	39
			51-60	2.43	51
			61-70	2.76	55
			71+	2.83	54

[a]Replies are scored as follows:
Strongly agree lottery play is harmless.....1
Agree lottery play is harmless.....2
Disagree lottery play is harmless.....3
Strongly disagree lottery play is harmless...4

*Differences across groups are statistically significant.

Table 18 indicate that respondents who are older (18:b), widowed (18:c) and who are lowest and highest in educational achievement (18:a) are more likely than other sample members to make low estimates of the percentage of return to winners.

Table 18

Percentage of Lottery Revenues Returned as Winnings to Lottery Players, by Demographic Characteristics: Wisconsin Sample

b. Education*	Estimate of Return to Players	N
Not high school graduate	14.1%	29
High school graduate or GED	28.5	97
Some college, no degree	29.1	101
Associate arts degree	26.9	76
College graduate	24.7	85

b. Age*	Estimate of Return to Players	N
18-25	29.1%	57
26-30	29.4	61
31-35	30.5	70
36-40	28.1	51
41-45	32.6	27
46-50	23.0	28
51-60	20.5	37
61-70	23.4	33
71+	7.8	24

c. Marital Status*	Estimate of Return to Players	N
Single	29.5%	82
Married	26.9	234
Widowed	8.9	26
Divorced/ separated	28.7	46

*Differences across groups are statistically significant.

CHAPTER 4

LOTTERY PLAY: NATIONAL SAMPLE

In this chapter we present the findings from the national sample survey. Although the results largely mirror those presented in Chapter 3 for the Wisconsin sample, we find and discuss several differences.

Perhaps reflecting of the fact that only 69% of national sample members lived in a state which had a lottery, a smaller proportion of the national sample (62%) than of the Wisconsin sample (68%) reported having played a lottery at some time in their lives (Table 19). As in the Wisconsin sample, we find that 60% of the national sample who resided in states having lotteries reported that they had played the lottery in their home state during the year preceding the survey. Of these, 23% had played once a week or more over the past year and 40% had played at least once a month. Thus, in-state lottery play is similar among national and Wisconsin sample members. We do find some differences between the samples regarding their out-of-state lottery play. Of national sample members, 8% played exclusively outside their home state, while only 3% of Wisconsin sample members did so. Furthermore, 11% of national sample members, as compared to 27% of the Wisconsin sample, reported both in-and out-of-state play in the past year. Even correcting for the lower proportion of the national sample members who resided in a state with a functioning lottery system, these results do not indicate similar playing patterns. The larger percentage of dual-state players among the Wisconsin sample may be due to the fact

Table 19

Gambling, Lottery Play, and Opinions: National Sample
(N = 733)

Response	Value
Ever played a lottery	62.5%
Resides in a state offering a lottery	69.2%
Play the lottery at least once a month in home state	39.9%
Play the lottery at least once a week in home state	23.1%
Percentage who played in home state that reside in lottery state (306 of 507)	60.4%
Median monthly lottery expenditure (players only[a])	$4.60
Mean monthly lottery expenditure (players only[a])	$14.14
Median percentage of monthly income spent on lottery (players only[a])	.21%
Participates in other forms of gambling	39.2%
In favor or strongly in favor of state lotteries	72.5%
For those residing in states with lotteries (N = 507)	75.8%
Agree or strongly agree:	
Lotteries are harmless forms of recreation	56.2%
Lottery play reduces money for household expenses	3.1%
Gambling is a problem for self (players only)	3.3%
Gambling is a problem for partner (married or cohabiting only)	1.9%
Believe a system can be devised to improve one's chances to win at lotto	30.3%
Percentage of money wagered on lottery that is returned as winnings:	
0-25%	60.9%
26-50%	29.9%
51% and above	9.2%

[a]"Players" refers to respondents who reported that they had played a lottery within the past year.

that the lotto game had not yet been introduced in Wisconsin, and its availability in neighboring states attracted lottery play there.

Table 19 shows that the median monthly expenditure on lottery play by national sample members was $4.60; the mean expenditure was $14.14.[1] Relatively speaking, about 12% of the national sample lottery players reported spending more than $20 per month on lottery games, and 4% stated they spent more than $50 per month on these activities. Investigation of the percentage of income annually spent on the lottery yields substantially similar results: over half of those who had played a lottery in the past year spent less than 0.2% of their income on the lottery, and 88% spent less than 1%. These results are quite comparable to those of the Wisconsin survey.

We now examine the attitudes of the national sample members regarding their perceptions of the lottery. As in Wisconsin a majority of the respondents (72.5%) were either somewhat or strongly in favor of lottery games;[2] and paradoxically, as in Wisconsin, 44% of the national sample did not regard lottery play as a harmless form of recreation. The similarities across the two samples are striking, and as noted earlier we do not completely understand the paradox. As with Wisconsin

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[1]The average expenditure is higher than Wisconsin's $10.57 because eight respondents reported spending more than $100 per month on lottery play. These individuals did not seem to differ from other national sample members in any significant manner beyond the rather large amount of money they report spending on the lottery.

[2]The general level of support among sample members residing in states where lotteries exist was 75.8%. However, those sample members not residing in lottery states reported a significantly lower level of general support (68.7%)

respondents, the belief in the potential harm of lottery play does not appear to result from deleterious experiences of lottery play: only 3% of the national sample members reported that lottery play had adversely affected their household expenses and, similarly, small proportions thought that gambling in any form had been a problem for themselves or their spouses.

Three other attitudinal questions dealt with sample members' (1) views regarding whether the lottery represents an easy way to make money, (2) opinions as to whether a system could be created to improve chances of winning a lotto game, and (3) perceptions of the percentages of lottery revenues that are returned to players in the form of prizes. Less than 20% of the respondents agreed that lotteries are an easy way to make money, and 30% believed a system to improve a player's chances of winning could be created. The responses to the query on expected returns to players revealed that, as in Wisconsin, most respondents underestimated the percentage of monies wagered that are returned as prizes. Over 60% of the sample stated these returns were no more than 25% of the amount wagered. In actuality, for most jurisdictions, the returns are about 50%.

These findings show that national sample members generally favor the lottery, rarely experience adverse consequences from lottery play, generally believe that the lottery is not an easy way to make money, and underestimate the probabilities of winning. As in the Wisconsin sample, it is apparent that not everyone plays or favors lotteries and that lottery expenditures are not uniform among players. We examine in the

remainder of this chapter how lottery play is associated with national sample members' attitudes and demographic attributes.

LOTTERY PLAY: DEMOGRAPHIC CORRELATES

The data dealing with the associations between national sample members' demographic characteristics and their propensity to play lotteries are found in Tables 20 to 26. Several significant associations are evident between lottery play and respondents' income, gender, educational level, marital status, and overall gambling activity. As in Wisconsin, a relatively large proportion of individuals with lower annual family incomes had never played the lottery (Table 20): 54% of those with incomes below $10,000, and 38% of those with incomes from $10,000 to $50,000, had not played. Second, again as in Wisconsin, widows and widowers were less likely to play than other respondents (Table 21), and third, older people were less likely to play than younger individuals (Table 22).

A result that contrasts with that found among Wisconsin sample members is that there is a larger gender gap: women are significantly less likely to have played the lottery than men (Table 25: 68.3% vs. 57.6%, respectively). As we will see in later tables, however, this does not translate into lower expenditures on lotteries among women who play.

A more complex relationship exists between lottery play and educational attainment (Table 23). Among those without a high school

Table 20

Percentage Who Have Ever Played a Lottery or Have Played in Home State during the Past Year, by Income: National Sample

Pretax Annual Family Income	Ever Played a Lottery*	Total (N)	Played Lottery in Home State*	Total (N)
0 - $9,999	45.9%	112	43.6%	55
$10,000 - $19,999	62.4	109	54.9	71
$20,000 - $29,999	57.8	147	57.1	105
$30,000 - $39,999	72.0	133	70.1	97
$40,000 - $49,999	70.7	75	66.7	60
$50,000 +	71.5	123	65.3	98

*Differences across groups are statistically significant.

Table 21

Percentage Who Have Ever Played a Lottery or Have Played in Home State during the Past Year, by Marital Status: National Sample

Marital Status	Ever Played a Lottery*	Total (N)	Played Lottery in Home State*	Total (N)
Single	63.6%	118	63.6%	88
Married	63.9	413	64.5	287
Divorced/separated	69.4	121	55.8	86
Widowed	40.7	81	36.9	46

*Differences across groups are statistically significant.

Table 22

Percentage Who Have Ever Played a Lottery or Have Played in Home State during the Past Year, by Age: National Sample

Age	Ever Played a Lottery*	Total (N)	Played Lottery in Home State*	Total (N)
18-25	60.3%	78	62.0%	50
26-30	71.0	93	74.2	66
31-35	70.8	97	65.3	72
36-40	66.3	86	65.5	55
41-45	69.6	69	56.6	53
46-50	58.8	51	63.2	38
51-60	64.2	95	63.7	69
61-70	63.4	82	58.6	58
71+	32.9	82	26.1	46

*Differences across groups are statistically significant.

Table 23

Percentage Who Have Ever Played a Lottery or Have Played in Home State during the Past Year, by Education: National Sample

Education	Ever Played a Lottery*	Total (N)	Played Lottery in Home State	Total (N)
Less than high school	41.5%	101	49.1%	55
High school graduate	68.0	147	67.7	96
Some post-high school education	63.5	167	60.2	118
College associate arts degree (two-year)	69.3	114	67.1	82
College graduate	63.2	204	56.4	156

*Differences across groups are statistically significant.

Table 24

Percentage Who Have Ever Played a Lottery or Have Played in Home State during the Past Year, by Respondents' Other Gambling Activity: National Sample

Does Other Gambling	Ever Played a Lottery*	Total (N)	Played Lottery in Home State*	Total (N)
Yes	78.4%	287	70.1%	211
No	51.8	446	53.3	296

*Differences between groups are statistically significant.

Table 25

Percentage Who Have Ever Played a Lottery or Have Played in Home State during the Past Year, by Gender: National Sample

Gender	Ever Played a Lottery*	Total (N)	Played Lottery in Home State*	Total (N)
Male	68.1%	335	66.7%	231
Female	57.3	398	55.1	276

*Differences between groups are statistically significant.

Table 26

Percentage Who Have Ever Played a Lottery or Have Played in Home State during the Past Year, by Race: National Sample

Race	Ever Played a Lottery	Total (N)	Played Lottery in Home State	Total (N)
White	63.0%	638	60.4%	450
Nonwhite	56.8	95	59.6	57

Note: Differences are not statistically significant.

education in the national sample, the proportion who reported ever playing the lottery (42%) is substantially smaller than for those in the remaining educational categories. A similar trend is found in regard to in-state lottery play among those living in lottery states, but in this case the differences in lottery play by educational level are not as marked and do not attain significance.

Finally, we find that lottery play is significantly related to other forms of gambling (Table 24). Individuals who had engaged in some other form of gambling over the past year were much more likely to have ever purchased a lottery ticket than nongamblers (78% vs. 52%). This difference is somewhat less among those residing in lottery states, but the difference is still significant (70% of gamblers vs. 53% of nongamblers played their home state lottery in the last year). All of these relationships are statistically significant. Noticeably absent is a relationship between lottery play and race (Table 26). While a slightly larger proportion of whites (63%) to nonwhites (57%) had ever played a lottery, the difference lacks statistical significance.

LOTTERY EXPENDITURES: DEMOGRAPHIC CORRELATES

As mentioned previously, the average monthly expenditure on lottery games by national sample members who had played during the year preceding their interview was $14.14, representing 0.66% of lottery players' average family annual income of $25,740. Table 27 shows that the average amount of money spent per month on the lottery was not

Table 27

Players' Average Monthly Lottery Expenditures,
by Demographic Characteristics:
National Sample

a. Age	Mean Monthly Expenditure	N
18-25	$27.87	31
26-30	8.92	50
31-35	12.71	48
36-40	16.25	36
41-45	17.39	31
46-50	15.64	23
51-60	9.70	44
61-70	11.46	35
71+	12.66	12

b. Income	Mean Monthly Expenditure	N
Less than $10,000	$11.04	24
$10,000 to $19,999	10.95	41
$20,000 to $29,999	13.85	60
$30,000 to $39,999	14.11	68
$40,000 to $49,999	16.15	42
$50,000 to $59,999	31.69	26
$60,000 +	6.97	38

c. Gender	Mean Monthly Expenditure	N
Male	$16.79	154
Female	11.52	156

d. Race	Mean Monthly Expenditure	N
White	$13.72	275
Nonwhite	17.46	35

e. Education	Mean Monthly Expenditure	N
Less than high school	$24.70	28
High school or GED	21.62	65
Some college	7.89	72
Associate degree	13.43	56
College graduate	10.86	89

f. Marital Status	Mean Monthly Expenditure	N
Single	$15.66	56
Married	14.63	188
Divorced/ separated	11.00	17
Widowed	11.59	49

Note: Differences are not statistically significant.

significantly related to differences in age (27:a), family income (27:b), gender (27:c), race (27:d), education (27:e), or marital status (27:f)--that is, white and nonwhite players spent relatively similar amounts on the lottery, as did persons of different age groups, education levels, marital status, and income levels. Although the absence of a significant relationship between lottery expenditures and family income may seem surprising, it is consistent with our findings for Wisconsin players. Further, although average expenditures by those with annual incomes of $50-60,000 appear to be much higher than those of the remaining six groups, this value was markedly affected by one player who reported an average monthly expense of $600 on the lottery.[3] If we were to exclude this extreme case, the mean lottery expenditure for the remaining 25 individuals in the $50-60,000 income group would be $8.96 per month.

Unlike the findings for average dollars spent, we find significant relationships between the percentage of income spent on the lottery and two demographic factors: family income (Table 28:b) and educational level (Table 28:e). Individuals from families with low incomes and those with comparatively less education spent larger portions of income on the lottery. Since income and education are related to one another, the correspondence in findings is not surprising.

The findings for the national and Wisconsin samples reveal a form of regressivity resulting from lottery play in both the samples:

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[3]This individual is a 19-year-old single white male with a high school education.

Table 28

Percentage of Players' Income Spent on the Lottery, by Demographic Characteristics: National Sample

a. Age	% Income Spent	N
18-25	.88	30
26-30	.41	48
31-35	.42	47
36-40	.78	36
41-45	.68	30
46-50	.61	23
51-60	.46	41
61-70	.70	35
71+	1.10	9

b. Annual Family Income*	% Income Spent	N
Less than $10,000	1.33	24
$10,000 to $19,999	.88	41
$20,000 to $29,999	.66	60
$30,000 to $39,999	.48	68
$40,000 to $49,999	.43	42
$50,000 to $59,999	.69	26
$60,000 or more	.13	38

c. Gender	% Income Spent	N
Male	.63	148
Female	.59	151

d. Race	% Income Spent	N
White	.58	265
Nonwhite	.79	34

e. Education*	% Income Spent	N
Less than high school	1.52	26
High school graduate	.86	63
Some college	.34	69
2-year degree	.54	54
College degree	.41	87

f. Marital Status	% Income Spent	N
Single	.72	55
Married	.56	182
Widowed	.79	16
Divorced/ separated	.57	46

*Differences across groups are statistically significant.

although there is no significant difference in the amount of money spent per month on the lottery across income groups, there is a great disparity in the percentage of income this monthly amount represents.

LOTTERY PLAY: ATTITUDINAL CORRELATES

In examining the relationship between whether people play lotteries and their attitudes concerning them, we find no unexpected results (Table 29). Lottery play is directly related to approval of lotteries (29:d) and to the view that they are a harmless form of recreation (29:c); over three-fourths of respondents who strongly favor them and who strongly agree that they are harmless, play the lottery, and as positive perceptions decrease, so do the proportions of players.

Lottery players are significantly more likely to agree with the statement that a shortage of funds prevents them from playing as often as they would like (29:b).

Lottery play is not associated with the perception that respondents have a gambling problem (not shown on table), although this finding should be interpreted with caution, since only 3.3% (24 of 733) of the national sample conceded that they might have a problem with gambling, and half of these 24 respondents had never played a lottery.

MONTHLY EXPENDITURES ON STATE LOTTERY: ATTITUDINAL CORRELATES

We earlier reported that none of the demographic attributes of the national sample members were found to be associated with monthly

Table 29

Percentage Who Have Ever Played a Lottery, by Attitudes and Opinions: National Sample

a. Lottery Is Easy Way to Make Money	Played Lottery	N
Strongly agree	47.1%	17
Agree	57.3	124
Disagree	64.8	384
Strongly disagree	64.9	191
b. Can't Play Lottery More Because Lack Extra Money*	**Played Lottery**	**N**
Strongly agree	77.8%	27
Agree	69.6	92
Disagree	68.8	356
Strongly disagree	53.1	226
c. Lottery Is Harmless Form of Recreation*	**Played Lottery**	**N**
Strongly agree	81.3%	64
Agree	74.9	331
Disagree	53.4	234
Strongly disagree	21.6	74
d. Attitude toward State Lotteries*	**Played Lottery**	**N**
Strongly in favor	81.9%	216
Somewhat in favor	69.4	297
Neutral	46.2	13
Somewhat oppose	50.0	74
Strongly oppose	20.6	107
e. Percentage of Dollars Wagered on Lottery Returned as Winnings	**Played Lottery**	**N**
25% or less	65.1%	304
26%-50%	73.8	149
Over 50%	71.7	46
f. Possible to Create a System to Improve One's Chances to Win Lotto	**Played Lottery**	**N**
Yes	61.6%	198
No	65.6	456

*Differences across groups are statistically significant.

expenditures on the lottery. We also found that the average amount of money people spend on the lottery per month was not significantly related to beliefs concerning whether or not lotteries are harmless, whether systems can be created to beat lotto games, estimates of the percentage of lottery revenues paid in prizes, the view that lotteries are an easy way to make money, or general approval of lotteries. These null findings (Table 30) are in contrast to those observed in Wisconsin, where general approval ratings and estimates of lottery revenues paid in prizes were significantly associated with lottery expenditures.

PERCENTAGE OF FAMILY INCOME SPENT ON LOTTERIES

In Table 31 we present data on the associations between attitudes and the percentage of family income spent on the lottery. Three of the associations are significant. Individuals who (1) favor lotteries, (2) who agree that gambling is a problem for them, and (3) who report they do not play lotteries as often as they would like due to a shortage of funds spend a higher percentage of their incomes on lotteries than (1) individuals with less favorable approval ratings, (2) those who do not believe gambling is a problem for them, and (3) those who disagree with the statement that shortage of funds prevents them from engaging in lottery play as often as they would like. Only the association between general approval ratings and percentage of income spent on lottery play corresponds to the results among Wisconsin sample members.

Table 30

Players' Average Monthly Expenditures on the Lottery, by Attitudes and Opinions: National Sample

a. Attitude toward the Lottery	Mean Monthly Expenditure	N
Strongly favor	$22.02	119
Favor	9.25	152
Neutral	4.25	4
Oppose	9.57	24
Strongly oppose	11.00	9

b. Percentage of Dollars Wagered on Lotteries Returned as Winnings	Mean Monthly Expenditure	N
25% or less	$17.47	128
26%-50%	12.31	80
Over 50%	10.53	24

Note: Differences not statistically significant.

Table 31

Percentage of Players' Income Spent on the Lottery, by Various Attitudes: National Sample

a. General Attitude toward Lotteries*

	% Income Spent on Lottery	N
Strongly Favor	.94%	116
Favor	.40	148
Neither	.13	4
Oppose	.39	23
Strongly Oppose	.73	6

b. Playing Lottery Is an Easy Way to Make Money

	% Income Spent on Lottery	N
Strongly Agree	.48%	1
Agree	.49	42
Disagree	.80	168
Strongly Disagree	.30	86

c. Percentage of Dollars Wagered on Lotteries Returned as Winnings

	% Income Spent on Lottery	N
0-25%	.62%	126
26-50%	.50	78
51%+	.44	22

d. Gambling Is a Problem for Me*

	% Income Spent on Lottery	N
Strongly Agree	.27%	2
Agree	2.95	5
Disagree	.77	151
Strongly Disagree	.36	141

e. Can't Play as Often as I Like due to Shortage of Funds*

	% Income Spent on Lottery	N
Strongly Agree	1.53%	16
Agree	.79	41
Disagree	.64	159
Strongly Disagree	.28	83

*Differences across groups are statistically significant.

ATTITUDES TOWARD LOTTERIES: DEMOGRAPHIC CORRELATES

We now examine the relationship between demographic attributes of our national sample members and four attitudinal variables:

1. Degree of approval of lotteries.
2. Whether it is possible to create a system to improve one's chances to win a lotto game.
3. Whether lottery play is a harmless form of recreation.
4. Beliefs regarding the percentage of money wagered on lotteries that is returned to winning players.

Approval of Lotteries

We earlier reported that almost 73% of the national sample members approved of lotteries. A closer look at the characteristics of those who do and do not approve (Table 32) indicates that widowed persons (32:a), those over 51 years of age (32:c), and those with less than a high school education (32:d) report significantly less approval for the lottery than other persons in the national sample. Absent, are any significant differences for gender.

Systems Can be Devised to Improve One's Chances of Winning Lotto

Over 27% of the national sample members believed that one could develop a method to improve ones' chances of winning a lotto game. Whereas analysis of the Wisconsin sample showed that nonwhite, single, and divorced persons are more likely to hold this belief, in the

Table 32

General Attitude toward the Lotteries,
by Demographic Characteristics: National Sample

a. Marital Status*	Belief Score[a]	N
Single	2.17	114
Married	2.36	403
Widowed	2.99	72
Divorced/separated	2.27	119

b. Annual Family Income	Belief Score[a]	N
Less than $10,000	2.45	104
$10,000 to $19,999	2.53	106
$20,000 to $29,999	2.39	131
$30,000 to $39,999	2.09	72
$40,000 to $49,999	2.19	41
$50,000 to $59,999	2.37	81
$60,000 or more	2.44	38

c. Age*	Belief Score[a]	N
18-25	1.92	76
26-30	1.99	92
31-35	2.29	95
36-40	2.20	85
41-45	2.32	69
46-50	2.24	51
51-60	2.71	92
61-70	2.53	80
71+	3.32	68

d. Education*	Belief Score[a]	N
Less than high school	2.82	91
High school graduate	2.01	142
Some college	2.25	160
2-year degree	2.56	113
College graduate	2.45	202

Replies scored as follows:
- Strongly favor.....1
- Somewhat favor.....2
- Neutral.....3
- Somewhat oppose.....4
- Strongly oppose.....5

*Differences across groups are statistically significant.

national sample neither gender, race, nor marital status was significantly related to this opinion (Table 33). However, national sample members who were younger and who had smaller family incomes were more likely to agree that such a system could be created (33:c,d). As noted in our analysis of Wisconsin lottery play, we did not pursue the type of systems that people believed could be devised.

Lotteries Are a Harmless Recreation

Among national respondents, 56.2% believed that playing the lottery was a harmless form of recreation. Although this belief was not significantly related to gender, race, or education, we found significant, although small, associations with marital status, age, and family income (Table 34). Respondents who were widowed or older than 51 were those least likely to agree that lottery play is harmless (34 a and b). The relationship by income categories is somewhat more complex (34:c). Those with annual incomes of less than $20,000 or more than $60,000 were less likely than those incomes between these amounts to agree with the statement that the lottery is harmless. As noted in the discussion of the Wisconsin sample, there is an obvious relationship with age and the likelihood of being widowed, but the income findings are a bit more elusive. It is not surprising that a significant proportion of those in the lower income categories believe that lotteries are harmful, since they are also least likely to have played a lottery; but this is not the case for those with incomes over $60,000. At present we can offer no explanation for this result.

Table 33

Belief that a System Can be Devised to Improve One's Chances to Win Lotto, by Demographic Characteristics: National Sample

a. Race	Belief Score[a]	N
White	1.70	571
Nonwhite	1.65	83

b. Marital Status	Belief Score[a]	N
Single	1.62	110
Married	1.71	377
Widowed	1.70	63
Divorced/separated	1.72	104

c. Age*	Belief Score[a]	N
18-25	1.53	73
26-30	1.60	91
31-35	1.66	90
36-40	1.77	78
41-45	1.80	61
46-50	1.75	48
51-60	1.74	82
61-70	1.71	70
71+	1.77	61

d. Family Income*	Belief Score[a]	N
Less than $10,000	1.67	90
$10,000 to $19,999	1.63	102
$20,000 to $29,999	1.64	132
$30,000 to $39,999	1.69	121
$40,000 to $49,999	1.81	69
$50,000 to $59,999	1.84	37
$60,000 or more	1.76	78

[a]Replies scored as follows:
Yes.....1
No.....2

*Differences across groups are statistically significant.

Table 34

Belief that Lottery Is a Harmless Recreation, by Demographic Characteristics: National Sample

a. Marital Status*	Belief Score[a]	N
Single	2.33	116
Married	2.49	401
Widowed	2.65	68
Divorced/separated	2.35	118

b. Age*	Belief Score[a]	N
18-25	2.34	76
26-30	2.12	92
31-35	2.36	96
36-40	2.44	84
41-45	2.41	68
46-50	2.22	49
51-60	2.69	93
61-70	2.69	77
71+	2.78	68

c. Family Income*	Belief Score[a]	N
Less than $10,000	2.52	100
$10,000 to $19,999	2.50	105
$20,000 to $29,999	2.47	143
$30,000 to $39,999	2.28	131
$40,000 to $49,999	2.32	74
$50,000 to $59,999	2.33	40
$60,000 or more	2.60	81

Replies are scored as follows:

Strongly agree lottery play is harmless.....1
Agree that lottery play is harmless.....2
Disagree lottery play is harmless.....3
Strongly disagree lottery play is harmless.....4

*Differences across groups are statistically significant.

Proportion of Wagered Money that Is Returned to Lottery Winners

In contrast with the Wisconsin sample, among national respondents we find no significant associations between the perceived percentage of money returned by the state in the form of prize winnings and educational attainment, age, or marital status (Table 35). We do find, however, that whites (35:e) and men (35:d) are significantly more likely to report higher percentage of wagered money returned.

Table 35

Percentage of Lottery Revenues Returned as Winnings to Lottery Players, by Respondents' Demographic Characteristics: National Sample

a. Education	Estimate of Return to Players	N
Not high school graduate	24.49%	35
High school graduate or GED	28.46	96
Some college, no degree	23.18	116
Associate arts degree	26.14	80
College graduate	25.47	172

b. Age	Estimate of Return to Players	N
18-25	26.08%	64
26-30	28.58	73
31-35	24.66	68
36-40	26.58	66
41-45	26.71	45
46-50	29.61	38
51-60	23.65	62
61-70	19.79	43
71+	22.98	40

c. Marital Status	Estimate of Return to Players	N
Single	26.81%	97
Married	26.90	276
Widowed	20.90	40
Divorced/separated	21.94	86

d. Gender*	Estimate of Return to Players	N
Male	29.68%	260
Female	21.06	239

e. Race*	Estimate of Return to Players	N
White	26.31%	446
Nonwhite	19.11	53

*Differences across groups are statistically significant.

CHAPTER 5

COMPARING THE WISCONSIN AND NATIONAL SAMPLES

The responses of the Wisconsin and national sample members are in substantial agreement. In terms of lottery play, 58.1% of the Wisconsin sample members had played lottery games in the state within the year preceding the survey, and 60.4% of national sample members who resided in states with lotteries had played in their states within the same period. The median monthly expenditure on in-state lottery games by members of both samples corresponded exactly: $4.60.

Respondents' attitudes and beliefs regarding lotteries are also generally similar in the two samples:

1. A majority of respondents in both samples approved of lotteries, even though substantial minorities (42% in Wisconsin, 44% nationally) did not agree with the statement that lottery play is a harmless form of recreation.
2. A large minority of respondents in each sample (34% in Wisconsin, 30% nationally) believed that a system could be developed to improve players' odds of winning lotto games.
3. Substantial majorities in both samples underestimated the percentage of money wagered on lotteries that is returned in the form of prizes.
4. Very few players in the two samples (4% in Wisconsin, 3% nationally) believed that lottery play adversely affected their household finances; and few (5% in Wisconsin and nationally) responded that they or their "spouses" (in the case of sample

members who lived with partners) regarded gambling as a personal problem.

The major dissimilarities across the Wisconsin and national samples are found in the associations between sample members' lottery behavior, their demographic characteristics, and their attitudes regarding lotteries: that is, significant associations in one sample are not always observed in the other. The following section summarizes these findings. We focus on in-state lottery play, since play among Wisconsin residents is the primary concern of this report.

CORRELATES OF LOTTERY PLAY

Demographic and Behavioral Correlates

Three demographic and behavioral attributes of respondents are associated with in-state lottery play in both the Wisconsin and national samples: age, family income, and involvement in other forms of gambling. In each sample, members who were older, had higher incomes, and engaged in other forms of gambling were significantly more likely to report that they had played the lottery in their home state.

We also found, in the Wisconsin sample, that widowed respondents and those at either end of the educational-attainment ladder--those lacking a high school diploma, and those who were college graduates--were significantly less likely than other sample members to have played lotteries in the last year. These associations were not found to be statistically significant in the national sample, although the trends were in the same direction. In contrast, we found that men in the

national sample were significantly more likely to play in-state lotteries than were women, whereas there was no difference in lottery play by gender in the Wisconsin sample. Finally, in both the Wisconsin and the national samples, race was not significantly associated with lottery play.

Attitudinal Correlates

Six of the seven lottery-related attitudes we investigated were significantly associated with lottery play in Wisconsin. Four of these attitudes were also significantly associated with in-state lottery play among national sample members: respondents who (1) strongly approve of lotteries, (2) believe that lotteries are an easy way to make money, (3) regard lotteries as a harmless recreation, and (4) report that they cannot play more because they lack extra money are more likely to play lotteries than those who hold contrasting views. Two attitudes which are significant only among Wisconsin sample members deal with lottery payoffs and the merits of lottery betting systems: those who (1) believe that betting systems can be devised to increase the likelihood of winning lotto games and who (2) believe lottery payoffs are relatively high are more likely to have played the lottery in the last year.

CORRELATES OF LOTTERY EXPENDITURES AMONG PLAYERS

Demographic Correlates

The most important finding with regard to lottery expenditures among players is that, with but one exception, there were no significant variations by demographic characteristics. The exception is that, in the Wisconsin sample, men who play spend a significantly higher amount of money on the lottery per month than do women who play. Although a similar relationship exists in the national sample, the difference was not statistically significant.

Attitudinal Correlates

Only two of the seven attitudes were significantly associated with lottery expenditures in the Wisconsin sample; none had significant association in the national sample. In Wisconsin, those who (1) believed that lottery payoffs are greater and (2) generally favored lotteries spent significantly more money on the lottery than other Wisconsin sample members. That this is not the case for those in the national sample may be due to the fact that they had been exposed to state lotteries for longer periods of time--that is, the relatively new quality of the Wisconsin lottery may have motivated players, especially those who approved of the lottery and believed the payoff was substantial, to spend more money than their counterparts in the national sample.

CORRELATES OF THE PROPORTION OF INCOME SPENT ON LOTTERY PLAY

Demographic and Behavioral Correlates

In the national and Wisconsin samples of players, family income and education were significantly and inversely related to the percentage of family income spent on lotteries. Those individuals who had not completed high school and who had annual family incomes below $10,000 spent a significantly higher percentage of their pretax annual income on the lottery. Two additional significant associations were found in the Wisconsin sample: (1) men and (2) widowed or divorced/separated players spent substantially higher percentages of their respective incomes on the lottery than did (1) women or (2) those who were single or married.

Attitudinal Correlates

In both samples, those who approved of lotteries spent a higher percentage of their annual family income on the lottery. Additional findings for the Wisconsin sample were that the percentage of income spent on the lottery increased as players' perceptions of the probability of winning a prize increased, and those who regarded the lottery as an easy way to make money also spent a higher percentage of their income on the lottery.

National sample members who agreed with the statements that they could not play the lottery as much as they would like owing to a shortage of funds and that gambling was a personal problem also reported that they spent a significantly larger percentage of their family income on the lottery than people who disagreed with these statements. The

proportion of the national sample members who agreed with either statement was, however, relatively small.

MULTIVARIATE ANALYSES OF IN-STATE LOTTERY PLAY

The cross-sample comparisons summarized above, and the analyses presented in the preceding chapters of this report, indicate that a number of demographic and attitudinal attributes of respondents in the Wisconsin and national samples are associated with in-state lottery play. The associations cannot, however, be taken to imply clear causal relations, since some of the associations may be spurious and the time ordering of correlated events is not always clear.[1] We attempt to deal with the problem of spuriousness by examining simultaneously, in statistical equations (i.e., regression analyses), the relationships between lottery play and the attributes of sample members which our earlier analyses suggest may be causal in nature. This procedure enables us in each equation to examine the net effect on lottery play of each attribute when we control for (hold constant) the effects on lottery play of other attributes. Our interest is in those relationships which remain significant under these conditions. We attempt to deal with the problem of time ordering by employing for each of our two samples a series of three equations in which the first equation for each sample examines the effects on lottery play of those events and experiences we assume to precede all others; namely, the

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[1]By "spurious" we meant that the statistically significant relationship may actually be the result of some other characteristic that was not measured in the analysis.

demographic attributes of sample members--i.e., race, gender, age, marital status, and education.[2] The second equation adds to these a single variable which we assume follows in time--i.e., reported gambling activities. The final equation includes all of the preceding variables plus payoff and belief variables, which we assume are the most recently experienced phenomena to influence sample members' lottery play. By estimating the equations in this fashion we are able to test whether the introduction of additional variables significantly improves our knowledge of what motivated people to play the lottery in their home state within the last year. We can also determine whether the introduction of the new variables changes the observed effects of variables included in preceding equations. Such changes give us information on the causal chains that may be involved and that affect lottery play. These ideas will become more clear as we detail our findings.

For several reasons we restricted our investigation of lottery play to the dichotomous (yes-no) variable of in-state lottery play. First, we did not request information about a continuous (over time) variable regarding individual frequency of play, because this may have involved difficulty of recall and erroneous or inflated perceptions of play, and because the distribution of results would have been highly skewed owing to the fact that a significant number of people never had played while a small minority of others played more than one hundred times per month.

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[2]Note that in Table 36 we have combined the educational categories "less than high school and high school graduates" into a single category which is used as the comparison group for the remaining educational categories.

Second, in contrast with Wisconsin sample members, approximately 30% of those in the national sample resided in states that did not have lotteries. This differential access to the opportunity to play a lottery would confound our results. To remedy this situation we restricted our analysis of the national sample to only those individuals (N=507) who resided in states with lotteries, and we only investigated the home-state play of these individuals.

In Table 36 we present in each of the three equations noted above (technically termed logistic equations) the maximum likelihood coefficients predicting in-state lottery play among the national and Wisconsin sample members. In the first equation predicting such play (columns 1 and 4), we see that effects for the national and state samples are quite similar. In both we find that people are less likely (negative coefficients) to report playing the lottery as they get older. This finding is particularly significant for those persons over 60 years of age as compared to the excluded category representing individuals between the ages 18 to 35. We also find in both samples effects of education and income on lottery play--lottery play is inversely related to education, but positively related to income. Note, however, that although positively associated with lottery play, income is not a statistically significant predictor of lottery participation. This finding coincides with the bivariate relationships we described earlier in this study. The inverse relationship between lottery play and education is also similar to that which we have previously reported. Specifically, as compared to persons with a high school education or less, college graduates are significantly less likely to play the

Table 36

Maximum Likelihood Coefficients for Logistic Regressions of In-State Lottery Play: Relationships between Lottery Play and Attributes of Sample Members

	National Sample			Wisconsin Sample		
	Played In-State Lottery Last Year, 1 = yes, 0 = no			Played Wisconsin Lottery Last Year, 1 = yes, 0 = no		
	(1)	(2)	(3)	(4)	(5)	(6)
Male dummy	.4330	.3662	.5015	-.0344	-.2310	-.3699
	(.2542)	(.2580)	(.2975)	(.2565)	(.2683)	(.3196)
Aged 36-60	-.1267	-.1055	-.1174	-.5264	-.4418	-.5935
	(.2878)	(.2904)	(.3244)	(.2927)	(.3015)	(.3613)
Aged 61+	-.9809*	-.9321*	-.6327	-1.501***	-1.521***	-.4495
	(.4134)	(.4166)	(.4701)	(.4430)	(.4580)	(.5582)
Race dummy	-.5213	-.5760	-.5933	1.035	.9121	.9963
1 = white	(.4464)	(.4493)	(.4928)	(.5409)	(.5625)	(.6536)
Single dummy	-.0120	.0183	-.0541	.6490	.5449	.4300
	(.3464)	(.3510)	(.3841)	(.3799)	(.3892)	(.4526)
Widow dummy	-1.337*	-1.437*	-1.268*	-.3133	-.3568	-1.062
	(.5675)	(.5726)	(.6443)	(.6643)	(.6976)	(.8280)
Divorce dummy	-.4049	-.3989	-.6019	-.0951	-.1120	-.8659
	(.3376)	(.3390)	(.3739)	(.3847)	(.3992)	(.4610)
Some college	-.4478	-.4760	-.2277	-.3624	-.0399	-.1334
	(.3441)	(.3482)	(.3834)	(.3039)	(.3098)	(.3674)
College	-.7889*	-.8385*	-.7456	-.8159*	-.7784*	-.6828
graduate	(.3632)	(.3675)	(.4025)	(.3538)	(.3627)	(.4413)
Family income	.1014	.1008	.1126	.0901	.0441	.1275
	(.0817)	(.0820)	(.0900)	(.0839)	(.0864)	(.1059)
Other gambling		.4881	.1285		1.049***	.5307
		(.2544)	(.2821)		(.2668)	(.3150)
Attitude toward			-.4972***			-.8001***
lottery			(.1229)			(.1581)
Harmless			-.4768*			-.2914
recreation			(.2137)			(.2267)
Easy money			.1669			-.1187
			(.2171)			(.2554)
Can't play because			-.0806			-.6504**
lack funds			(.1966)			(.2217)
Percentage returned			.0489			.2314
as prizes			(.2128)			(.2535)
Can create system			-.3714			.5349
to win			(.3170)			(.3391)
Gambling			-.0453			-.4896
problem			(.2567)			(.3253)
-Log likelihood	-194.89	-193.03	-170.69	-188.17	-180.17	-140.40
-2 Log likelihood	389.78	386.06	341.38	376.34	360.34	280.80
df		1	7		1	7
L^2		3.72	44.68***		16.00***	79.54***

Note: Standard errors in parentheses. *Statistically significant at the 5% level. **Statistically significant at the 1% level. ***Statistically significant at the .1% level.

lottery, whereas the play of those with either a two-year degree or some college experience are not clearly distinguishable from the high school-or-less group. Finally, our findings indicate that respondents in the national sample who are widowed are less likely to play the lottery than are married individuals.

We also find different effects by race and gender. In the Wisconsin sample, whites are more likely than nonwhites to have played the lottery in the past year; nationally, no racial effects are observed. Men in the national sample are more likely than women to have played the lottery in the preceding year; in the Wisconsin sample, no gender effects are observed.[3]

In columns 2 and 4 we include in our equation a variable representing whether sample members reported involvement in any other forms of gambling during the past year. These activities, ranging from playing cards for money to casino gambling, are condensed into a dichotomy (1=yes for any of the several activities, 0=no). In Table 36 we see that the signs preceding this coefficient are positive for both the national and state samples, suggesting that persons who are involved in other forms of gambling are also more likely to have played the lottery over the last year. However, this finding is statistically significant only in the Wisconsin sample. The introduction of this variable did not significantly reduce or alter two effects we previously discussed: individuals over 60 years of age and college graduates still

[3]Owing to the fact that none of these results are statistically significant, we would caution against any attempt to infer that lottery play differs by gender or race in either sample.

are less likely to have played the lottery in comparison to those individuals who are younger than 36 and who have a high school education or less. On the other hand, the introduction of the "other forms of gambling" variable did reduce to nonsignificance the effect of the race variable on lottery play among Wisconsin respondents.

In the final model (columns 3 and 6) we include seven attitudinal variables concerning general approval of the lottery and other lottery-related beliefs. We see in both samples that the introduction of these items into the equation significantly improves the "fit" of the model, as evidenced by the log-likelihood statistics and two significant individual coefficients. The general attitude toward the lottery was measured on a scale from 1, indicating strong approval of the lottery, to 5, indicating strong opposition to the lottery. We thus interpret the negative coefficients to mean that the more one approves of the lottery, the more likely one is to play the lottery. Similarly, the more one views the lottery as a harmless recreation, the more likely one is to have played the lottery in the last year, although this is significant for the national sample only. For the Wisconsin sample, we find that the more one perceives lottery play to be limited by available funds, the more likely one is to have played the lottery in the last year. The result is similar for the national sample, but does not attain statistical significance. For the remaining attitudinal variables we see a general correspondence in effects across both samples, although these effects are not significantly distinguishable from zero.

The most important finding in this final equation is that for both samples the previous behavioral and demographic effects are drastically reduced. In fact, with the exception of the coefficient for those widowed in the national sample, none of the effects remain significant. We interpret this to mean that one's general approval or opposition to the lottery is more important, and mediates the effects of demographic characteristics, when predicting whether one participates in playing the lottery.

SUMMARY AND CONCLUSIONS

Although there are some differences between the national and Wisconsin samples, we have found strong similarities in propensity to play the lottery, attitudes toward the lottery, and expenditures on the lottery.

First, the median gross monthly amount spent on the lottery was exactly the same in both groups ($4.60), while the average amount was somewhat higher in the national sample ($14.14) than in the Wisconsin sample ($10.57), largely because eight players in the national sample reported spending in excess of $100 dollars per month on the lottery, whereas in Wisconsin only five players made the same claim. The close correspondence in lottery expenditures across the two samples was replicated in the percentage of family income spent on the lottery.

Second, similar proportions of the national and state samples approved of lotteries (about 72%) and thought they were a harmless form of recreation (58% in Wisconsin, 56% nationally). Consistent with these

views, among those who had played the lottery, less than 4% of the respondents in either sample believed that such play adversely affected their household expenses, and among individuals in partnered relationships (married or cohabitating) very few perceived that lottery play created problems for themselves or their partner.

Third, the majority of respondents (60%) in each sample underestimated their chances of winning lotteries, implying that the general population is unaware or fails to understand the true probabilities of winning lotteries.

Fourth, across our two samples there were similar relationships of demographic characteristics to lottery play, lottery expenditures, and attitudes toward lotteries. We found that lower-income, older, less educated, and widowed persons reported the lowest approval rate of lotteries in general. These same groups, on average, also were less likely to play the lottery, but if they did, they spent a greater percentage of their family income on the lottery, owing to the fact they had lower levels of income. The fact that we find so many similarities in the two samples is all the more striking since the results for the Wisconsin sample were elicited from respondents who had not yet been exposed to an in-state lotto game.

Fifth, with the exception of gender (relevant for the Wisconsin sample only) none of the demographic attributes of players were significantly associated with monthly dollar expenditures on lotteries: the expenditures of whites and nonwhites, poor and wealthy, married and otherwise, were approximately the same. On the other hand, when we examined the demographic factors associated with the percentage of

monthly income spent on lotteries, the picture changed dramatically. In both the national and Wisconsin samples this variable was significantly associated with family income and education. The seemingly discrepant findings for these expenditure criteria are probably due to the different character of the two dependent measures, absolute versus proportional expenditures. Even though there is not much difference in the absolute dollar expenditures by families on lotteries, there are great differences in the incomes of these families. Because poor families spend about the same magnitude of dollars on lotteries as wealthier families, they spend a significantly larger share of their incomes on these games. Further, since education is closely related to income (families with higher education tend to have a higher income) this variable is also negatively associated with the percentage of income spent on lotteries.

The divergent findings for monthly expenditures and percentage of income raise the question of which dependent measure is the better criterion for interpreting expenditure patterns reported by lottery players. A critical consideration in weighing these alternatives has to do with whether money used for lottery play should be thought of as coming from a discretionary (or recreational) fund, or from a fund earmarked for basic consumption needs. In view of the relatively low median monthly expenditures on lotteries by players in our two samples, and the very low proportions of players in the samples who believe their lottery play drains household expenses, there appears to be some justification to the argument that the criterion "percentage of income

expended on lotteries" may exaggerate family financial problems as a result of lottery play.

Finally, while we have noted several discrepancies in the patterns of lottery play in Wisconsin and nationally, some of these may be largely due to the relative newness of the Wisconsin lottery. Past literature on lottery participation, for example, consistently reports that men play the lottery significantly more frequently than do women. While we corroborate this result in our national sample, this was not the case in Wisconsin. The different results may be due to the novelty of lottery play in Wisconsin's first year of operation. If so, as time passes a lower participation rate in lottery play among Wisconsin women can be expected. Second, among Wisconsin sample members, as approval of the lottery increases so does the mean gross expenditure per month on the lottery. While the general approval level toward lotteries in the Wisconsin sample is similar to that reported by national sample members, approval of lotteries in the national sample is not related to the amount of money expended on the lottery. Again, it is possible that the Wisconsin sample result is largely due to the novelty of such betting opportunities. That is, more approval may signify more enthusiasm for play and perhaps more hope of winning. If so, with time we would expect that while the approval of lotteries will change very little, such approval will no longer be significantly associated with lottery expenditures.

APPENDIX A: LOTTERY QUESTIONNAIRE SUPPLEMENT

Over the past several years a number of states have begun making certain forms of gambling legal. The following questions ask your opinion regarding one such form which has gained widespread use: state run lotteries.

Option A: asked of respondents who live alone or some form of apartment sharing.
Option B: asked of respondents living in a (married, cohabiting) relationship.

A-B1.) Of the following which best represents your overall attitude toward state lotteries?

a.) Strongly in favor _____
b.) Somewhat in favor _____
c.) Somewhat oppose _____
d.) Strongly oppose _____
e.) Neutral _____
f.) None of these (only if volunteered) _____

A-B1b.) Do you live in a state which runs a lottery?

a.) Yes _____
b.) No _____
c.) Don't Know _____
d.) Refused _____

A2.) Have you ever played a lottery either in your own or other states?

a.) Yes_____ (skip to A3)
b.) No_____ (skip to A11)

B2.) Have you ever played a lottery either in your own or other states?

a.) Yes_____ (After PART2-B2, go to B3)
b.) No_____ (Ask only partner questions)

PART 2-B2.) Has your (partner) ever played the lottery in your own or other states?

a.) Yes_____
b.) No_____ (Discontinue partner questions)
(If no for both parts of question 2, go to B11)

A3.) Which statement best describes the frequency with which you now play the lottery in your home state?

a.) Once a week or more _____ (skip to PART3)
b.) Once a month _____ (skip to PART3)
c.) Less than once a month _____ (skip to PART3)
d.) Never Play _____ (answer PART2)

PART2-A3.) In the past was there a time when you regularly played the lottery in your home state?

a.) Yes _____(Ask questions 4 thru 10)
b.) No _____(After PART3-A3,Skip to A11)

PART3-A3.) The present frequency of your play in other states?

a.) Once a week or more _____
b.) Once a month _____
c.) Less than once a month _____
d.) Never Play _____

B3.) Which statement best describes the frequency with which you now play the lottery in your home state?

a.) Once a week or more _____ (skip to PART3)
b.) Once a month _____ (skip to PART3)
c.) Less than once a month _____ (skip to PART3)
d.) Never Play _____ (answer PART2)

PART2-B3.) In the past was there a time when you regularly played the lottery in your home state?

a.) Yes _____(Ask questions 4 thru 10)
b.) No _____(After PART3-B3, Ask only partner questions until B11)

PART3-B3.) The present frequency of your play in other states?

a.) Once a week or more _____
b.) Once a month _____
c.) Less than once a month _____
d.) Never Play _____

PART4-B3.) The frequency with which your (partner) now plays the lottery in your home state?

a.) Once a week or more _____ (skip to PART6)
b.) Once a month _____ (skip to PART6)
c.) Less than once a month _____ (skip to PART6)
d.) Never Play _____ (answer PART5)
e.) Don't Know _____ (answer PART5)

PART5-B3.) In the past was there a time when your (partner) regularly played the lottery in your home state?

a.) Yes _____(Ask partner questions 4 - 10)
b.) No or Don't Know _____(discontinue partner questions after PART6-B3)

PART6-B3.) The present frequency of their play in other states?

a.) Once a week or more _____
b.) Once a month _____
c.) Less than once a month _____
d.) Never Play _____
e.) Don't Know _____

FOLLOWING QUESTIONS PERTAIN TO IN-STATE LOTTERY UNLESS OTHERWISE NOTED:

A4.) Approximately how many months ago did you first play the lottery in your state? (0 denotes they first played within the last month)

_____months

B4.) Approximately how many months ago did you first play the lottery in your state? (0 denotes they first played within the last month)

_____months

PART2-B4.) Approximately how many months ago did your (partner) first play the lottery in your state? (0 denotes they first played within the last month)

_____months

A-B5.) Over the past 12 months how much money would you estimate you have spent on your state's lottery tickets during a typical month?

$_____

PART2-B5.) How much would you estimate your (partner) spent on your state's lottery tickets during a typical month?

$_____

A6.) I often spend more on the lottery than I can afford.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART2-A6.) Playing the lottery reduces the amount of money I spend on other forms of gambling.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART3-A6.) Playing the lottery reduces the amount of money I spend on household expenses.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

B6.) I often spend more on the lottery than I can afford.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART2-B6.) My partners often spends more on the lottery than they can afford.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART3-B6.) Playing the lottery has been a source of disagreement between me and my partner.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART4-B6.) Playing the lottery reduces the amount of money I spend on other forms of gambling.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART5-B6.) Playing the lottery reduces the amount of money I spend on household expenses.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART6-B6.) Playing the lottery reduces the amount of money my partner spends on other forms of gambling.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART7-B6.) Playing the lottery reduces the amount of money my partner spends on household expenses.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

A7.) Overall, during the past year would you say that you have lost money, broke even, or won money playing the lottery?

a.) Lost _____
b.) Broke even _____
c.) Won _____
d.) Don't Know _____
e.) Refused _____

A8.) In the last year what is the largest amount you have won playing the lottery?

$_____

PART2-A8.) How did you use the money that was won?

_____

_____

PART3-A8.) Have you ever won more than this playing any lottery?

a.) Yes_____

b.) No_____ (Skip to A13)

PART4-A8.) How much money did you win?

$_____

PART5-A8.) What year was this?

19__

PART6-A8.) How did you use the money that was won?

_____

_____

B7.) Overall, during the past year would you say that you have lost money, broke even, or won money playing the lottery?

a.) Lost _____

b.) Broke even _____

c) Won _____

d.) Don't Know _____

e.) Refused _____

PART2-B7) Overall, during the past year would you say that your partner has lost money, broke even, or won money playing the lottery?

a.) Lost _____

b.) Broke even _____

c) Won _____

d.) Don't Know _____

e.) Refused _____

B8.) In the last year what is the largest amount you have won playing the lottery?

$_____

PART2-B8.) How did you use the money that was won?

_____

_____

PART3-B8.) Have you ever won more than this playing any lottery?

a.) Yes_____

b.) No_____ (If answering partner question skip to PART7-B8, else skip to B9)

PART4-B8.) How much money did you win?

$_____

PART5-B8.) What year was this?

19__

PART6-B8.) How did you use the money that was won?

_____

_____

PART7-B8.) In the last year what is the largest amount your (partner) has won playing the lottery?
$_____

PART8-B8.) How did they use the money that was won?
_____
_____

PART9-B8.) Has your (partner) ever won more than this playing any lottery?
a.) Yes _____
b.) No or Don't Know _____ (Skip to B13)

PART10-B8.) How much money did they win?
$_____

PART11-B8.) What year was this?
19__

PART12-B8.) How did they use the money that was won?
_____
_____

A9.) Which statement most closely describes your typical lottery ticket purchases over the past year?
a.) I set aside a certain amount of money each week to play _____
b.) I usually play on the spur of the moment _____
c.) Neither (only if they refuse to choose above) _____
d.) Don't Know _____
e.) Refused _____

B9.) Which statement most closely describes your typical lottery ticket purchases over the past year?
a.) I set aside a certain amount of money each week to play _____
b.) I usually play on the spur of the moment _____
c.) Neither (only if they refuse to choose above) _____
d) Don't Know _____
e.) Refused _____

PART2-B9.) Which statement most closely describes your (partner's) typical lottery ticket purchases over the past year?
a.) They set aside a certain amount of money each week _____
b.) They usually play on the spur of the moment _____
c.) Neither (only if they refuse to choose above) _____
d.) Don't Know _____
e.) Refused _____

A10.) Lottery tickets are available in many different places, in the last 12 months have you purchased tickets at? (check all that apply)
a.) Convenience Stores _____
b.) Grocery Markets _____
c.) Liquor Stores _____
d.) Gas Stations _____
e.) Bars _____
f.) Other (specify) _____

(if more than one is checked, probe in PART2-A10 for the typical location)

PART2-A10.) Of these where do you typically buy tickets most often?
_____

B10.) Lottery tickets are available in many different places, in the last 12 months have you purchased tickets at? (check all that apply)

a.) Convenience Stores _____
b.) Grocery Markets _____
c.) Liquor Stores _____
d.) Gas Stations _____
e.) Bars _____
f.) Other (specify) _____

(if more than one is checked, probe in PART2-B10 for the typical location)

PART2-B10.) Of these where do you typically buy tickets most often?

PART3-B10.) Of these where do you think your (partner) typically buys lottery tickets most often?

A11.) There are many ways in which people wager or gamble. If you have participated in any of the following activities in the past 12 months please tell me how many times you might have done so.

a.) Played cards for money _____
b.) Bet on horse races _____
c.) Bet on dog races _____
d.) Bet on sport pools _____
e.) Played the numbers _____
f.) Casino gambling _____
g.) Other gambling (specify)_____

B11.) There are many ways in which people wager or gamble. If you have participated in any of the following activities in the past 12 months please tell me how many times you might have done so.

a.) Played cards for money _____
b.) Bet on horse races _____
c.) Bet on dog races _____
d.) Bet on sport pools _____
e.) Played the numbers _____
f.) Casino gambling _____
g.) Other gambling (specify)_____

PART2-B11.) To the best of your knowledge what was the frequency of your (partners) participation in any of the following activities in the past 12 months?

a.) Played cards for money _____
b.) Bet on horse races _____
c.) Bet on dog races _____
d.) Bet on sport pools _____
e.) Played the numbers _____
f.) Casino gambling _____
g.) Other gambling (specify)_____

A-B12.) Playing the lottery is a harmless form of recreation.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

A-B12.) Playing the lottery is an easy way to make money.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

A-B13.) I can't play the lottery as often as I would like because I don't have the extra money.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

A-B14.) Gambling has often been a problem for me.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

PART2-B14.) Gambling has often been a problem for my partner.

a.) Strongly agree _____
b.) Agree _____
c.) Disagree _____
d.) Strongly Disagree _____
e.) Don't Know _____
f.) Refused _____

A-B15.) Some people think that it is possible to create systems that would improve their chances of winning games such as the LOTTO, in which you pick 5 or more numbers. If the numbers you select are correct, you can win a million dollars or more.

How about you, do you think it is possible to create systems that would improve the chances of winning such a game?

a.) Yes _____
b.) No _____
c.) Don't Know _____
d.) Refused _____

A-B16.) Out of every 100 dollars people spend on the lottery how much money do you think is returned in winnings to ticket purchasers?

$_____

A-B17.) A portion of the money people spend on the lottery is retained by your state, how do you think the state spends that money?

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