2009 SENATE FINANCE AND TAXATION

SB 2315

2009 SENATE STANDING COMMITTEE MINUTES

Bill/Resolution No. 2315

Senate Finance and Taxation Committee

☐ Check here for Conference Committee

Hearing Date: 01/26/2009

Recorder Job Number: 7683

Committee Clerk Signature

Minutes:

Chairman Cook: Opened the hearing on SB 2315.

Senator Tracy Potter, District 35: See attachment #1 for testimony in support of bill.

Chairman Cook: Do you know how many of the 45 states that impose a sales tax exempt books?

Senator Potter: I do not know that.

Vice Chairman Miller: When you are buying additional books such as Shakespeare as a textbook, is that not included?

Senator Potter: That is precisely my point; I do not believe it is. You shouldn't have to prove that you are a student, or have to have a school I.D. with you. This is a small amount of money we are talking about, and it is a critical human need for us to read.

Clay Jenkinson , Bismarck Resident, Humanity Scholar: Testified in support of the bill. I have some thoughts about this. The amount of money is not very great, and it would say something sweet and beautiful about North Dakota that we find books as a necessity of life and value them. It would have three great effects. It is a great signal to young people. It is also a signal to the larger community of the United States about North Dakota and to our school boards. We have a national reputation as a book banning state. The Drake incident

from 1973 still today marks that fact of North Dakota. It adds to the quality of life here. It is high here; people look for the culture or libraries, public schools, music, languages for a sign of quality of life. All studies we have say that communities that support libraries and book culture are better communities that don't. The crime rates are lower, drug use is lower. This would be a good modest way to promote culture here in North Dakota.

Brenna Daugherty, North Dakota Humanities Council: Testified in support of bill. See attached National Endowment for the Arts Study "To Read or Not to Read" and "Reading at Risk". Literacy tends to halt by teen years. The population will suffer economically due to lower literacy rates. One third of High School students in the United States drop out and it are closely tied to reading comprehension. It is a serious national problem. This is a call to action to Liberians, teachers, publishers, writers, and law makers. We are asking for a small thing. It will not reverse the decline in literacy, but it will send a strong message that North Dakota is dedicated to preserving the endangered cultural legacy of reading.

Chairman Cook: Do you believe that the sales tax that the state imposes on books is what is causing the literacy problem?

Brenna Daugherty: I do not believe it is a direct correlation. But I do think for the lower income families it would make an impact.

Senator Triplett: Can you leave copies of study with the clerk?

Brenna Daugherty: Yes.

Myles Vosberg, Tax Department: Answered some questions on bill.

Chairman Cook: You don't know how many states exempt books, do you?

Myles Vosberg: I do not. We can look into that.

Chairman Cook: Did we carve out a definition for books in sales tax?

Myles Vosberg: We did not, just the digital books we will deal with later. The way this is written, it is pretty clear.

Chairman Cook: So we can have our own definition, and can you explain what the international standard book number is?

Myles Vosberg: There is a number assigned to every book and published in all books, and that will assure it is talking about public books. So it is simple to administer.

Chairman Cook: So this would be in compliance?

Myles Vosberg: There is not compliance issue with streamline sales tax.

Vice Chairman Miller: In regards to textbooks, is that also exempt?

Myles Vosberg: Any book required under the school's curriculum that would be considered a textbook.

Senator Hogue: Could you give the committee an estimate of what amount of revenue the state surrenders by not taxing magazines?

Myles Vosberg: I don't know if the Red Book has that; I can do a follow up on that. But the magazines you buy over the counter are taxed, but magazine subscriptions are exempt.

Senator Oehlke: Are electronic books taxed?

Myles Vosberg: There has been some streamlining on that; currently we do not tax books that are downloaded electronically. We don't view that to be a piece of tangible personal property. There is some duplication in this bill and the other one being presented this session.

Chairman Cook: The intent of this bill, it would be accomplished if we put a period after standard book number?

Myles Vosberg: Yes.

Chairman Cook: Closed hearing on SB 2315.

2009 SENATE STANDING COMMITTEE MINUTES

Bill/Resolution No. SB 2315

Senate Finance and Taxation Committee

☐ Check here for Conference Committee

Hearing Date: 02/02/2009

Recorder Job Number: 8300

Committee Clerk Signature

Minutes:

Chairman Cook: Reopened hearing on SB 2315.

I asked Myles if he could tell me if all books have an International Standard Book Number. Maybe one of you knows that.

Senator Triplett: I would bet that they do.

Chairman Cook: Could you tell me what International Standard Book Number is?

Senator Triplett: It is to give a unique number to each book.

Vice Chairman Miller: That must be something relatively new. I think the Library of Congress used to do that, but I never heard of an international code word.

Chairman Cook: Do text books have them? Do Bibles have them?

Senator Triplett: I would think text books do. There are already special rules on Bibles already. I would think that the only ones that don't are the small self published ones.

Chairman Cook: I don't know where you are at, but sales tax exemption policy is going to come to a need to policy. I am reluctant. Policy wise I would rather see us expand our sales base and eventually lower the tax rate or lower other taxes.

Senator Triplett: I think we heard in the testimony that the sales tax exemption we provide for magazines is roughly equivalent to the sales tax exemption we are requested to do here. If

there is a concern about the fiscal impact, I would be willing to draft an amendment that say we expand the tax base by taxing magazines – it is certainly more frivolous than the information published in books. This is a bill that I like and we should try to tax something else, rather than this.

Chairman Cook: You are saying that we pass an exemption on the books, but tax magazines.

Senator Triplett: I like your idea about expanding the tax base; we can come up with something else.

Chairman Cook: Why don't we keep this and tax magazines?

Senator Triplett: No, I am happy to be even.

Senator Hogue: I want to be clear, if you subscribe to a magazine that is not taxed?

Chairman Cook: Right.

Senator Triplett: The ones through the mail by subscription are not taxed.

Chairman Cook: My guess is the reason we don't tax magazines through subscriptions is we have a little collection issue.

Senator Triplett: You are working on that.

Chairman Cook: Yes.

Senator Oehlke: I mentioned that someone gave me a kindle, and I can download any book electronically, and they don't have a way to tax that. I think that electronic media is getting bigger and bigger all the time, and if we don't have a vehicle to tax that, I think our tax on this is going to dwindle regardless. I think we ought to keep it.

Senator Triplett: I think that Senator Potter made a point that if we taxed Bibles that it may well not pass constitutional tests. I think by taking sales tax off all books, we would get past that issue. We could probably add to the last phrase of this to cover electronic books.

7.23 **Chairman Cook:** I do think that we do have to amend this on the last sentence. I have had some conversations with Myles Vosberg on this. We will see a bill later this morning on that same question of electronic products.

Chairman Cook: Myles is working on an amendment, and we will wait for that. Suspended discussion on bill.

2009 SENATE STANDING COMMITTEE MINUTES

Bill/Resolution No. SB 2315

Senate Finance and Taxation Committee

☐ Check here for Conference Committee

Hearing Date: 02/02/2009

Recorder Job Number: 8305

Committee Clerk Signature

Minutes:

Chairman Cook: Do we need to clarify the language on the last statement regarding any other format of a book? I believe Myles was going to talk to you about that.

Dan Rause, Tax Department Legal Council: He did not have a chance to. I would like that opportunity to do that.

Senator Dotzenrod: This reference in the bill to a valid international standard book number, are there some that are not valid?

Chairman Cook: Passes out Attachment #1 to answer questions regarding ISBNs from Myles Vosberg. Everything you wanted to know and more.

Senator Triplett: I believe we have the answer to our questions on the second page, the third full paragraph. Maybe the word "valid" is necessary than.

Dan Rause: We had a conversation about amending that, and I believe that that would clarify it. If you would like me to prepare, I can.

Chairman Cook: Our intern can take care of that.

2009 SENATE STANDING COMMITTEE MINUTES

Bill/Resolution No. SB 2315

Senate Finance and Taxation Committee

☐ Check here for Conference Committee

Hearing Date: 02/02/2009

Recorder Job Number: 8388

Committee Clerk Signature

Minutes:

Chairman Cook: Opened discussion on SB 2315.

Senator Triplett: Moved the amendments.

Senator Dotzenrod: Seconded the motion.

Chairman Cook: Discussion?

Senator Triplett: I think that your companion bill that you brought forward this morning provides considerably more technical detail in terms of defining electronic formats, and so I think because of that this is better here.

A voice vote was taken on the amendment. All were in favor.

Senator Triplett: Moved Do Pass as amended.

Senator Dotzenrod: Seconded the motion.

Senator Anderson: It reduces the state aid distribution; I plan to vote against it.

Senator Oehlke: I am trying to read this amendment into the bill, and it is confusing.

Senator Triplett: Clarifies reading. The argument in favor of it is that sales tax is a regressive tax and that we should be looking at things that remove the sales tax for the necessities of life, and certainly it can be argued that books are a necessity of life for at least the students. We want them to read outside of what is assigned to them in school.

In addition as I said this morning this bill does negate the possibility of their being any kind of a constitutional challenge in regards to Bibles. There are a couple of reasons for this. This has a relatively small fiscal impact in comparison to some of the others we are considering.

Chairman Cook: I understand sales tax is regressive in nature, but when we look at tax policy and trying to measure the burden that tax policy puts on our citizens whether they are low or high income or in between you have to look at the burden that is imposed on the citizens balancing all three taxes. As sales tax is the regressive tax, income tax is the progressive tax and then we have property tax which is the equalized tax. No matter what your income is, if you decide to take your income and buy a house worth x amount of dollars, it is going to be taxed twice as much as somebody else with a house worth half of that. I would like to think we balance the burden. Property tax is the one that poses an undue burden and that is the one we need to be focusing on.

Senator Anderson: I agree with Senator Triplett's views and I don't like this a little less than 50%.

Vice Chairman Miller: Made a comment on progressive tax vs. regressive tax. Sales tax is the only true fair tax. We do have libraries where books are free to read.

Senator Dotzenrod: In regards to book business, most of it I believe is online.

Chairman Cook: Amazon has physical presence in North Dakota, so their sales are taxed, but others are not.

Senator Dotzenrod: OK

Senator Hogue: I understand the prime sponsors rational for this bill. I to don't like the idea that we are taxing books but there are a lot of magazines out there that aren't being

taxed, as well as music downloads. But the bill before us is just to exempt books, and I have a hard time supporting this with this standing alone in a bill.

Chairman Cook: Discussion? We have a move for a do pass and refer to appropriations.

A Roll Call Vote was taken: Yea 2, Nay 5, Absent 0.

Motion failed.

Senator Miller: motioned for a Do Not Pass.

Senator Hogue: Seconded.

A Roll Call vote was taken: Yea 5, Nay 2, Absent 0.

Vice Chairman Miller will carry to the floor.

FISCAL NOTE

Requested by Legislative Council
01/21/2009

Bill/Resolution No.: SB 2315

1A. **State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2007-2009 Biennium		2009-2011 Biennium		2011-2013 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues			($2,870,000)	($250,000)		
Expenditures						
Appropriations						

1B. **County, city, and school district fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

2007-2009 Biennium			2009-2011 Biennium			2011-2013 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts

2A. **Bill and fiscal impact summary:** *Provide a brief summary of the measure, including description of the provisions having fiscal impact (limited to 300 characters).*

SB 2315 creates a sales tax exemption for books.

B. **Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

If enacted, SB 2315 is expected to reduce state general fund and state aid distribution fund revenues by $3.12 million in the 2009-11 biennium.

3. **State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*
   A. **Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

   B. **Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

   C. **Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation is also included in the executive budget or relates to a continuing appropriation.*

Name:	Kathryn L. Strombeck	**Agency:**	Office of tax Commissioner
Phone Number:	328-3402	**Date Prepared:**	01/23/2009

PROPOSED AMENEDEMENT TO SENATE BILL NO. 2315

Pg. 1, line 8, remove "whether the book is sold in paper, recorded,"

Pg. 1, line 9, replace "electronic, or any other" with "the"

Date: 02/02/09

Roll Call Vote #: 1

2009 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. : 2315

Senate Finance and Taxation Committee

☐ Check here for Conference Committee more Amendments

Legislative Council Amendment Number _____

Action Taken ☐Do Pass ☐Do Not Pass ☐Amended

Motion Made By Sen Triplett Seconded By Sen Dotzenrod

Senators	Yes	No	Senators	Yes	No
Sen. Dwight Cook - Chairman			Sen. Arden Anderson		
Sen. Joe Miller – Vice Chairman			Sen. Jim Dotzenrod		
Sen. David Hogue			Sen. Constance Triplett		
Sen. Dave Oehlke					
		All in Favor			

Total: Yes 7 No 0

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Date: 02

Roll Call Vote #: 2

2009 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. : 2315

Senate Finance and Taxation Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number

Action Taken ☒ Do Pass ☐ Do Not Pass ☒ Amended AS

Motion Made By Senator Triplett Seconded By Senator Dotzenrod

Senators	Yes	No	Senators	Yes	No
Sen. Dwight Cook - Chairman		✓	Sen. Arden Anderson		✓
Sen. Joe Miller – Vice Chairman		✓	Sen. Jim Dotzenrod	✓	
Sen. David Hogue		✓	Sen. Constance Triplett	✓	
Sen. Dave Oehlke		✓			

Total: Yes 2 No 5

Absent 0

Floor Assignment Senator

If the vote is on an amendment, briefly indicate intent:

Date: 02/02/09

Roll Call Vote #: 3

2009 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. : 2315

Senate Finance and Taxation Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number

Action Taken ☐ Do Pass ☒ Do Not Pass ☑ Amended AS

Motion Made By Senator Miller Seconded By Senator Hogue

Senators	Yes	No	Senators	Yes	No
Sen. Dwight Cook - Chairman	✓		Sen. Arden Anderson	✓	
Sen. Joe Miller – Vice Chairman	✓		Sen. Jim Dotzenrod		✓
Sen. David Hogue	✓		Sen. Constance Triplett		✓
Sen. Dave Oehlke	✓				

Total: Yes 5 No 2

Absent

Floor Assignment Senator Miller

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2315: Finance and Taxation Committee (Sen. Cook, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO NOT PASS** (5 YEAS, 2 NAYS, 0 ABSENT AND NOT VOTING). SB 2315 was placed on the Sixth order on the calendar.

Page 1, line 8, remove "whether the book is sold in paper, recorded,"

Page 1, line 9, replace "electronic, or any other" with "the"

Renumber accordingly

2009 TESTIMONY

SB 2315

#1

Testimony of Sen. Tracy Potter on SB 2315, Exempting Books from Sales Tax
January 26, 2009, Senate Finance and Tax Committee

Mr. Chairman, members of the Senate Finance and Tax Committee. SB 2315 will eliminate the sales tax on books in North Dakota, leaving approximately $1.5 million in the pockets of book buyers in North Dakota per year.

I believe there are two issues for me to address - why books? And can we afford it?

There are several very good reasons why books. First, it's easy to implement. The Tax Department says it has no administrative concerns with the bill. Two categories of books are already exempt: textbooks sold to students and bibles sold to private schools. Total impact on the budget of those exemptions is around a million dollars per biennium. Both of those categories of exempt books argue for exempting the rest of the books as well. Students are required to purchase far more other kinds of books than textbooks. Literature students buy Shakespeare and Dickens. In getting my history degrees, I suppose I read four textbooks and four hundred other books. The state has targeted help toward students, but it hasn't gone halfway there, yet.

The questionable constitutional implications of exempting bibles, hymnals, prayerbooks and textbooks for private schools evaporate if the state exempts all books for everyone.

But I think there is a deeper reason - a better answer to why books than avoiding constitutional pitfalls or even helping students finance their educations -

Sales tax is a regressive tax in that the poorer you are, the greater percentage of your income that must be spent, as opposed to saved or invested. It becomes less regressive when necessities of life are exempted. North Dakota exempts food, for instance, and prescription drugs.

Books are a necessity of life. Thomas Jefferson said so.

We exempt newspapers and magazines. The financial impact of the newspaper exemption is about equal with the tax on books. It's about the same for cable TV, bingo cards, and beauty and barber shops. I don't criticize any of those exemptions, but certainly books rank right up there in the hierarchy of needs of a literate citizenry.

Assuming we like the idea of tax free books, and agree that it is an appropriate exemption, can we afford it? This exemption amounts to about one third of one percent of the estimated surplus. So, instead of a surplus of $1.2 billion, the state will have $1.2 billion.

I recognize that there is a reluctance to spend the surplus - particularly on new programs. But 1/3 of one percent being left in North Dakota pockets, yes, we can afford that. We can sustain it. And, most importantly, back to the why books question - because it sends a message that North Dakota values literacy. Instead of stories about book banning, there will be stories about the Senate Finance and Tax Committee saying that books are important. With that, Mr. Chairman, I'll stand for questions.

#1

15

Frequently Asked Questions about the ISBN

What is an ISBN?

The International Standard Book Number (ISBN) is a 10-digit number that uniquely identifies books and book-like products published internationally.

What is the purpose of an ISBN?

The purpose of the ISBN is to establish and identify one title or edition of a title from one specific publisher and is unique to that edition, allowing for more efficient marketing of products by booksellers, libraries, universities, wholesalers and distributors.

What is the format of the ISBN?

Every ISBN consists of ten digits and whenever it is printed it is preceded by the letters ISBN. The ten-digit number is divided into four parts of variable length, each part separated by a hyphen.

Does the ISBN have any meaning imbedded in the numbers?

The four parts of an ISBN are as follows:
Group or country identifier which identifies a national or geographic grouping of publishers;
Publisher identifier which identifies a particular publisher within a group;,
Title identifier which identifies a particular title or edition of a title;
Check digit is the single digit at the end of the ISBN which validates the ISBN.

Why do some ISBNs end in an "X"?

In the case of the check digit, the last digit of the ISBN, the upper case X can appear. The method of determining the check digit for the ISBN is the modulus 11 with the weighting factors 10 to 1. The Roman numeral X is used in lieu of 10 where ten would occur as a check digit.

Who can assign ISBNs to a publisher?

There are over 160 ISBN Agencies worldwide, and each ISBN Agency is appointed as the exclusive agent responsible for assigning ISBNs to publishers residing in their country or geographic territory. The United States ISBN Agency is the only source authorized to assign ISBNs to publishers supplying an address in the United States, U.S. Virgin Islands,

Guam and Puerto Rico and its database establishes the publisher of record associated with each prefix.

Once an ISBN publisher prefix and associated block of numbers has been assigned to a publisher by the ISBN Agency, the publisher can assign ISBNs to publications it holds publishing rights to. However, after the ISBN Agency assigns ISBNs to a publisher, that publisher cannot resell, re-assign, transfer, or split its list of ISBNs among other publishers. These guidelines have long been established to ensure the veracity, accuracy and continued utility of the international ISBN standard.

As defined by the ISO Standard, the ISBN publisher prefix (or "root" of the ISBN) identifies a single publisher. If a second publisher subsequently obtains an ISBN from the assigned publisher's block of ISBNs, there will be no change in the publisher of record for any ISBN in the block as originally assigned. Therefore, searches of industry databases for that re-assigned ISBN will identify the original owner of that assigned prefix as the publisher rather than the second publisher. Discovering this consequence too late can lead to extensive costs in applying for a new prefix, re-assigning a new ISBN, and potentially leading to the application of stickers to books already printed and in circulation.

If you are a new publisher, you should apply for your own ISBN publisher prefix and plan to identify and circulate your books properly in the industry supply chain. You may encounter offers from other sources to purchase single ISBNs at special offer prices; you should be wary of purchasing from these sources for the reasons noted above. There are unauthorized re-sellers of ISBNs and this activity is a violation of the ISBN standard and of industry practice. A publisher with one of these re-assigned ISBNs will not be correctly identified as the publisher of record in Books In Print or any of the industry databases such as Barnes and Noble or Amazon or those of wholesalers such as Ingram. If you have questions, contact the US ISBN Agency for further advice.

Who is eligible for an ISBN?

The ISBN Agency assigns ISBNs at the direct request of publishers, e-book publishers, audio cassette and video producers, software producers and museums and associations with publishing programs.

How long does it take to get an ISBN?

Allow 15 business days for non-priority processing from the time an ISBN application is received at the agency (not from the date sent by the publisher.) Priority processing is two business days from the time an application is received at the agency. Express processing is 24 business hours.

How much does it cost to get an ISBN?

There is a service fee to process all ISBN applications. Service fee information is contained on the application. Priority and Express processing involve an additional fee.

NOTE: The processing service charge is NON-REFUNDABLE.

What do I do when I receive the ISBN and where is it printed?

An ISBN should be assigned to each title or product, including any backlist or forthcoming titles. Each format or binding must have a separate ISBN (i.e. hardcover, paperbound, VHS video, laserdisc, e-book format, etc). A new ISBN is required for a revised edition. Once assigned, an ISBN can never be reused. An ISBN is printed on the lower portion of the back cover of a book above the bar code and on the copyright page.

How & where do I register my ISBN?

Once ISBNs have been assigned to products they should be reported to R.R. Bowker as the database of record for the ISBN Agency. Companies are eligible for a free listing in various directories such as Books in Print, Words on Cassette, The Software Encyclopedia, Bowker's Complete Video Directory, etc.

NOTE: Receiving just your ISBNs does **NOT** guarantee title listings. To ensure your titles get in the Books in Print database **you must submit your title information.**

Book titles should be registered with Books in Print at www.bowkerlink.com

Can a publisher have both an ISBN & an ISSN?

Both numbering systems are used for books in a series and with annuals or biennials. The ISBN identifies the individual book in a series or a specific year for an annual or biennial. The ISSN identifies the ongoing series, or the ongoing annual or biennial serial. If a publication has both, each should be printed on the copyright page.

How can I find an assigned ISBN?

The Publications (hard copy listings) in which the assigned ISBNs appear are Publishers, Distributors & Wholesalers of the United States, published by R.R. Bowker, and Literary Market Place, published by Information Today.

How are ISBNs used in a Bar Code & how do I obtain one?

The ISBN can be translated into a worldwide compatible bar code format. Publishers who wish to have their ISBNs translated into worldwide compatible bar codes can now make their request directly online at www.isbn.org or www.bowkerbarcode.com . Bar code scanning is a required step required by for many retailers in the sales transaction process for book publications and book-related items. We hope that offering this service will save you time and enable you to meet all of your transaction partners' requirements.

How do I select the correct amount of ISBNs?

ISBNs are sold in blocks of 10, 100, and 1000. When purchasing ISBNs, we recommend that you estimate the amount of publications you will be publishing within the next five years, and select the block that best suits your needs. It is always best to select the block that will last you for a few years because you will be able to maintain one publisher prefix, and minimize the unit cost per ISBN. When purchasing a larger block of ISBNs, the price per ISBN decreases.

What is the format of the new ISBN-13?

Every ISBN will consist of thirteen digits in 2007. The thirteen digit number is divided into five parts of variable length, each part separated by a hyphen.

Does the ISBN-13 have any meaning imbedded in the numbers?

The five parts of an ISBN are as follows:

1. The current ISBN-13 will be prefixed by "978"
2. Group or country identifier which identifies a national or geographic grouping of publishers;
3. Publisher identifier which identifies a particular publisher within a group;
4. Title identifier which identifies a particular title or edition of a title;
5. Check digit is the single digit at the end of the ISBN which validates the ISBN.

Bowker

National Endowment for the Arts

Reading At Risk:
A Survey of Literary Reading in America

Research Division Report #46

Research Division Report #46

June 2004

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Preface

Reading at Risk is not a report that the National Endowment for the Arts is happy to issue. This comprehensive survey of American literary reading presents a detailed but bleak assessment of the decline of reading's role in the nation's culture. For the first time in modern history, less than half of the adult population now reads literature, and these trends reflect a larger decline in other sorts of reading. Anyone who loves literature or values the cultural, intellectual, and political importance of active and engaged literacy in American society will respond to this report with grave concern.

Reading at Risk is not a collection of anecdotes, theories, or opinions. It is a descriptive survey of national trends in adult literary reading. Based on an enormous sample size of more than 17,000 adults, it covers most major demographic groups – providing statistical measurements by age, gender, education, income, region, race, and ethnicity. Conducted by the U.S. Bureau of the Census and spanning 20 years of polling, the Survey of Public Participation in the Arts, the data source for *Reading at Risk*, is as reliable and objective as any such survey can be. While not every measurement of reading was built into the study, the report provides so much data in such detail that it constitutes a comprehensive factual basis for any informed discussion of current American reading habits.

The key results of the survey are condensed in the "Executive Summary," which follows, but the report can be further summarized in a single sentence: literary reading in America is not only declining rapidly among all groups, but the rate of decline has accelerated, especially among the young. The concerned citizen in search of good news about American literary culture will study the pages of this report in vain.

Although the news in the report is dire, I doubt that any careful observer of contemporary American society will be greatly surprised – except perhaps by the sheer magnitude of decline. *Reading at Risk* merely documents and quantifies a huge cultural transformation that most Americans have already noted – our society's massive shift toward electronic media for entertainment and information.

Reading a book requires a degree of active attention and engagement. Indeed, reading itself is a progressive skill that depends on years of education and practice. By contrast, most electronic media such as television, recordings, and radio make fewer demands on their audiences, and indeed often require no more than passive participation. Even interactive electronic media, such as video games and the Internet, foster shorter attention spans and accelerated gratification.

Photo by Vance Jacobs

While oral culture has a rich immediacy that is not to be dismissed, and electronic media offer the considerable advantages of diversity and access, print culture affords irreplaceable forms of focused attention and contemplation that make complex communications and insights possible. To lose such intellectual capability – and the many sorts of human continuity it allows – would constitute a vast cultural impoverishment.

More than reading is at stake. As this report unambiguously demonstrates, readers play a more active and involved role in their communities. The decline in reading, therefore, parallels a larger retreat from participation in civic and cultural life. The long-term implications of this study not only affect literature but all the arts – as well as social activities such as volunteerism, philanthropy, and even political engagement.

What is to be done? There is surely no single solution to the present dilemma, just as there is no single cause. Each concerned group – writers, teachers, publishers, journalists, librarians, and legislators – will legitimately view the situation from a different perspective, and each will offer its own recommendations. The important thing now is to understand that America can no longer take active and engaged literacy for granted.

Reading is not a timeless, universal capability. Advanced literacy is a specific intellectual skill and social habit that depends on a great many educational, cultural, and economic factors. As more Americans lose this capability, our nation becomes less informed, active, and independent-minded. These are not qualities that a free, innovative, or productive society can afford to lose.

Dana Gioia

Dana Gioia
Chairman, National Endowment for the Arts

Executive Summary

Reading at Risk presents the results from the literature segment of a large-scale survey, the Survey of Public Participation in the Arts, conducted by the Census Bureau in 2002 at the request of the National Endowment for the Arts. This survey investigated the percentage and number of adults, age 18 and over, who attended artistic performances, visited museums, watched broadcasts of arts programs, or read literature. The survey sample numbered more than 17,000 individuals, which makes it one of the most comprehensive polls of art and literature consumption ever conducted.

Reading at Risk extrapolates and interprets data on literary reading and compares them with results from similar surveys carried out in 1982 and 1992. The survey asked respondents if, during the previous twelve months, they had read any novels, short stories, plays, or poetry in their leisure time (not for work or school). The report establishes trends in the number of adults reading, listening to, and writing literature by demographic categories of age, race, region, income, and education. This report also compares participation in literary activities with other leisure activities, such as watching movies and exercising.

Reading at Risk provides an invaluable snapshot of the role of literature in the lives of Americans. It comes at a critical time, when electronic media are becoming the dominant influence in young people's worlds. *Reading at Risk* adds new and distressing information to the discussion. It contains solid evidence of the declining importance of literature to our populace. Literature reading is fading as a meaningful activity, especially among younger people. If one believes that active and engaged readers lead richer intellectual lives than non-readers and that a well-read citizenry is essential to a vibrant democracy, the decline of literary reading calls for serious action.

10 Key Findings

1. The percentage of adult Americans reading literature has dropped dramatically over the past 20 years.

Decline in Literary Reading

	1982	1992	2002
% of U.S. Adult Population Reading Literature	56.9	54.0	46.7
Number of Literary Readers (in millions)	96	100	96

- Less than half of the adult American population now reads literature.
- The 10 percentage point decline in literary reading represents a loss of 20 million potential readers.
- Only the strong growth in overall U.S. population of nearly 40 million adults from 1982 to 2002 allowed the actual number of readers to remain flat at 96 million.

2. The decline in literary reading parallels a decline in total book reading.

Trends in Book and Literary Reading

	Percentage of U.S. Adult Population		Change, 1992 to 2002 Percentage Point (pp)	
	1992	2002	Difference	Rate of Decline
Read Any Book	60.9	56.6	-4.3 pp	-7%
Read Literature	54.0	46.7	-7.3 pp	-14%

- Total book reading is declining significantly, although not at the rate of literary reading.
- The percentage of the U.S. adult population reading any books has declined by -7 percent over the past decade.

3. The rate of decline in literary reading is accelerating.

Rates of Decline in Literary Reading

	1982	1992	2002
% of U.S. Adult Population	56.9	54.0	46.7
Percentage Point (pp) Decline	–	-2.9 pp	-7.3 pp
Rate of Decline	–	-5%	-14%

- The ten-year rate of decline has accelerated from -5 percent to -14 percent since 1992.

4. Women read more literature than men do, but literary reading by both groups is declining at significant rates.

Literary Reading by Gender

	Percentage by Group			Percentage Point (pp) Change	
	1982	1992	2002	1992-2002	1982-2002
Men	49.1	47.4	37.6	-9.8 pp	-11.5 pp
Women	63.0	60.3	55.1	-5.2 pp	-7.9 pp

- Only slightly more than one-third of adult American males now read literature.
- Reading among women is also declining significantly, but at a slower rate.

5. Literary reading is declining among whites, African Americans, and Hispanics.

Literary Reading by Race/Ethnicity

	Percentage by Group			Percentage Point (pp) Change	
	1982	1992	2002	1992-2002	1982-2002
White	59.8	58.0	51.4	-6.6 pp	-8.4 pp
African American	42.3	45.6	37.1	-8.5 pp	-5.2 pp
Hispanic	36.4	34.0	26.5	-7.5 pp	-9.9 pp
Other	50.2	42.7	43.7	+1.0 pp	-6.5 pp

6. Literary reading is declining among all education levels.

Literary Reading by Education

	Percentage by Group			Percentage Point (pp) Change	
	1982	1992	2002	1992-2002	1982-2002
Grade School	21.2	17.3	14.0	-3.3 pp	-7.2 pp
Some High School	38.8	34.5	23.3	-11.1 pp	-15.4 pp
High School Graduate	54.2	49.0	37.7	-11.3 pp	-16.5 pp
Some College	72.9	65.0	52.9	-12.1 pp	-20.0 pp
College Graduate/ Graduate School	82.1	74.6	66.7	-7.9 pp	-15.4 pp

- The higher the education level, the higher the reading rate, but reading among every group has declined over the past 20 years.

7. Literary reading is declining among all age groups.

Literary Reading by Age

	Percentage by Group			Percentage Point (pp) Change	
	1982	1992	2002	1992-2002	1982-2002
18-24	59.8	53.3	42.8	-10.5 pp	-17.0 pp
25-34	62.1	54.6	47.7	-6.9 pp	-14.4 pp
35-44	59.7	58.9	46.6	-12.3 pp	-13.1 pp
45-54	54.9	56.9	51.6	-5.3 pp	-3.3 pp
55-64	52.8	52.9	48.9	-4.0 pp	-3.9 pp
65-74	47.2	50.8	45.3	-5.5 pp	-1.9 pp
75 & Older	40.9	40.4	36.7	-3.7 pp	-4.2 pp

8. The steepest decline in literary reading is in the youngest age groups.

Literary Reading by Young Adults

	Percentage of Group			Rate of Decline
Age Group	1982	1992	2002	1982-2002
18-24	59.8	53.3	42.8	-28%
25-34	62.1	54.6	47.7	-23
All Ages	56.9	54.0	46.7	-18

- Over the past 20 years, young adults (18-34) have declined from being those most likely to read literature to those least likely (with the exception of those age 65 and above).

- The rate of decline for the youngest adults (18-24) is 55 percent greater than that of the total adult population (-28 percent vs. -18 percent).

9. The decline in literary reading foreshadows an erosion in cultural and civic participation.

Participation in Cultural and Social Activities

	Percentage of U.S. Adult Population	
	Literary Readers	Non-Literary Readers
Perform Volunteer and Charity Work	43.0	17.0
Visit Art Museums	44.0	12.0
Attend Performing Arts Events	49.0	17.0
Attend Sporting Events	45.0	27.0

- Literary reading strongly correlates to other forms of active civic participation.
- Literary readers are more likely than non-literary readers to perform volunteer and charity work, visit art museums, attend performing arts events, and attend sporting events.

10. The decline in reading correlates with increased participation in a variety of electronic media, including the Internet, video games, and portable digital devices.

- Literature now competes with an enormous array of electronic media. While no single activity is responsible for the decline of reading, the cumulative presence and availability of these alternatives have increasingly drawn Americans away from reading.
- Non-readers watch more television than do readers.
- In 1990, book buying constituted 5.7 percent of total recreation spending, while spending on audio, video, computers, and software was 6 percent. By 2002, electronic spending had soared to 24 percent, while spending on books declined slightly to 5.6 percent.
- A 1999 study showed that the average American child lives in a household with 2.9 televisions, 1.8 VCRs, 3.1 radios, 2.1 CD players, 1.4 video game players, and 1 computer.

Conclusion

Reading at Risk presents a distressing but objective overview of national trends. The accelerating declines in literary reading among all demographic groups of American adults indicate an imminent cultural crisis. The trends among younger adults warrant special concern, suggesting that – unless some effective solution is found – literary culture, and literacy in general, will continue to worsen. Indeed, at the current rate of loss, literary reading as a leisure activity will virtually disappear in half a century.

Reading at Risk is testimony that a cultural legacy is disappearing, especially among younger people. Twenty years ago, just after the NEA 1982 survey, the landmark study *A Nation at Risk* warned that "a rising tide of mediocrity" had overtaken the school system and threatened a generation of students. The report sparked a massive reform effort whose consequences are still evolving today. *Reading at Risk* reveals an equally dire situation, a culture at risk. The National Endowment for the Arts calls upon public agencies, cultural organizations, the press, and educators to take stock of the sliding literary condition of our country. It is time to inspire a nationwide renaissance of literary reading and bring the transformative power of literature into the lives of all citizens.

Chapter 1: Introduction

Who reads literature in America?

Novels, short stories, poetry, and plays have their own intrinsic value, as do all of the arts. Beyond the benefits of literature to the individual lie the benefits to a culture as a whole. Who reads literary works, what kinds, how often, and how much – all measure the well being of a culture. Do we value reading? Encourage it in our homes, schools, and the wider community?

The question of who reads is one of particular social importance. Reading is both a reflection of disparate education levels and a way of bridging the differences among them. Reading is obviously related to the literacy of a nation, which in turn is related to the quality of life of its citizens. If literacy is the baseline for participation in social life, then reading – and reading of literary work in particular – is essential to a sound and healthy understanding of, and participation in, a democratic society.

Levels of public participation in literature also matter to the economic vitality of the publishing industry – from publishers large and small, distributors, and bookstores to individual poets, dramatists, and fiction writers. Books are big business in the United States. In 2000, the book industry published 122,000 new titles and sold a total of 2.5 billion books, a number that has tripled over the past 25 years.[1] Given these figures, some have expressed the opinion that there is currently an "explosive growth in America's book culture."[2]

Research into the habits of readers is important to provide information about the state of literature and literacy, to examine the market for books, and to assess the relationship of literature to other areas of arts and culture. Although this monograph cannot explore all of these issues, it examines a number of demographic, lifestyle, and other factors that may influence literature participation. In particular, the Survey of Public Participation in the Arts allows us to examine whether literary reading varies based on demographic (e.g., gender, ethnicity, race, education, and age), socioeconomic (e.g., family income, employment status, and occupation), and geographic (e.g., regions and states) factors.

Data Collection

The 2002 Survey of Public Participation in the Arts (SPPA) was conducted as a supplement to the U.S. Census Bureau's Current Population Study (CPS), which scientifically selects households to represent the socio-economic characteristics of the U.S. population. The Census Bureau also conducted arts participation surveys in 1982 and 1992.

In the 2002 SPPA, 17,135 adults, age 18 and older, were interviewed, primarily by telephone. Demographic data including gender, income, educational level, age, and race/ethnicity were used in weighting the survey data so that the results match characteristics of the total U.S. adult population. The Census Bureau determined the weight for each survey record.

Interviewed in August 2002, survey respondents were asked about their arts participation activities in the prior 12 months. The response rate to the survey was 70 percent, similar to the rate in the second half of the 1992 survey (68 percent). Appendices A and B provide background information and data collection procedures for both the SPPA and CPS.

Literature vs. Books

The SPPA investigates arts participation in a variety of art forms, including attendance at live concerts, plays, and dance performances; visits to art museums and historic sites; and participation through broadcasts, recorded media, and the Internet. This monograph focuses on the survey's questions related to reading literature, listening to readings or recordings of literature, and creative writing activities.

The 2002 SPPA asked respondents if, during the past 12 months, they had read any novels or short stories, plays, or poetry. A positive response to any of

[1] See Gayle Feldman, *Best and Worst of Times: The Changing Business of Trade Books, 1975-2002*, Columbia University's National Arts Journalism Program, (2003).
[2] J. Peder Zane, "America the Literate," newsobserver.com, Dec. 15, 2002.

those three categories is counted as reading literature, including popular genres such as mysteries, as well as contemporary and classic literary fiction. No distinctions were drawn on the quality of literary works.

In addition to the three questions pertaining to literature, the SPPA asked respondents if they had read any books, and, if so, how many. The distinction between reading literary works and reading any books is important to the analysis presented in this report. Books can be of any type and cover a vast array of subjects, literary and non-literary alike, and for the purposes of the survey, the respondents need to have read as a leisure time activity, not for work or school.

Literature, of course, can be found in sources other than books. Poetry, drama, and fiction can be read in magazines and literary journals, even on subway and bus placards. The Poetry Society of America, for example, provides poetry to transit authorities throughout the country, including Los Angeles, New York, Philadelphia, Chicago, and Dallas.

In several sections of this monograph, literary readers will be classified in terms of how many books of any type that they have read. This measure of book-reading frequency is used to investigate broad characteristics of literary readers. For example, Table 5 (shown in Chapter 2) shows the percentage of adults who volunteered or did charity work. About 17 percent of those who did not read literature did charity work; more than 43 percent of literary readers did. Almost half of literary readers who also read 50 or more books in 2002 (i.e., "avid readers") did charity work. Therefore, the number of books read is used to investigate how literary readers spend their time, and how their time usage differed from those who did not read literature.

Throughout this monograph, information from the SPPA will be supplemented with information on literature from a range of sources, including research reports, essays, newspaper articles, and books.

The rest of this monograph is organized as follows:

- Chapter 2 summarizes the participation in literary activities in 2002;
- Chapter 3 analyzes factors affecting literature participation in 2002;
- Chapter 4 examines trends in literature participation between 1982 and 2002; and
- Chapter 5 provides a summary and conclusion for the monograph.

Chapter 2: Literature Participation in 2002

Americans participate in a wide range of literary activities, including book reading, listening to recorded literary readings or attending live readings, and pursuing their own creative writing. The 2002 Survey of Public Participation in the Arts (SPPA) asked people 18 years of age or older a series of questions about their literary activities. This chapter highlights findings from the SPPA on general levels of participation in literary activities; numbers of books read; and literature participation compared with other cultural and leisure activities. The SPPA shows the levels of "crossover" participation, that is, the number of literary readers who also participate in a range of additional cultural and leisure activities. Finally, levels of literature participation in the U.S. are compared with literature and reading surveys in other countries. Unless otherwise noted, all information in this chapter refers to SPPA respondents' activities during the one-year period between August 2001 and August 2002. For simplicity, this time period will be referred to throughout this report as 2002.

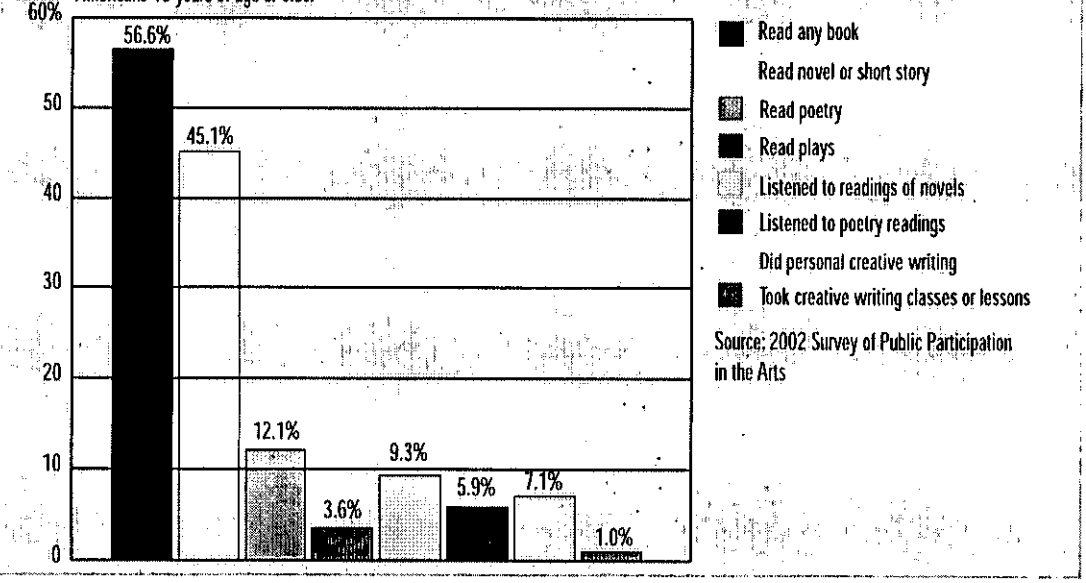
Figure 1 and Table 1 summarize responses to a range of literature participation questions. These graphics show that over one-half of respondents (57 percent) indicated that they read at least one book in 2002 (not counting books required for work or school).[3] This amounts to about 117 million people 18 years of age or older. The SPPA also asked about the types of literature read.

The most common types of literature read were novels or short stories (45 percent of adults or 93 million people).[4] Poetry was read by 12 percent of adults, or 25 million people.[5] A smaller number of adults (4 percent or 7 million people) indicated that they read a play during the previous year.[6]

Grouping novel, short story, poetry, and play readers into a single category of *literary readers* shows that just under one-half of all adults (47 percent) read literature in 2002. This represents 96 million people and forms the group that is the principal focus of this monograph. The definition of literature used in this report encompasses any type of fiction, poetry, and plays that the SPPA respondents felt should be included and not just what literary critics might consider literature. Respondents were not asked what genre of works they read, nor were they asked whether they read literary non-fiction such as criticism, commentary, and essays. By this definition,

Figure 1: Participation in Literary Activities, 2002

Americans 18 years of age or older



Source: 2002 Survey of Public Participation in the Arts

[3]The wording of the question asked is: "With the exception of books required for work or school, did you read any books during the last 12 months?"
[4]"During the last 12 months, did you read any novels or short stories?"
[5]"During the last 12 months, did you read any poetry?"
[6]"During the last 12 months, did you read any plays?"

if the proportion of those reading literary works is subtracted from the total number of people who read at least one book of any kind, about ten percent of the population read *only* non-literary books.

The SPPA results also reveal that just less than one in ten people (9 percent) listened to live or recorded readings of novels or books in the previous year.[7] This amounts to 19 million people. A smaller number (6 percent or 12 million people) listened to live or recorded readings of poetry.[8]

Seven percent of adults (or 15 million people) indicated that they did some creative writing during 2002.[9] For most, this activity appears to be done more for personal fulfillment than for income or public enjoyment, as only 1 percent (or 2 million people) had a work published.[10]

Respondents were also asked whether they took creative writing classes or lessons, and 13 percent of adults (or 27 million people) indicated that they had taken a class at some point in their lives.[11] Most respondents indicated that the classes were taken while they were in elementary or high school. Only a small percentage (1 percent or 2 million people) indicated that they took creative writing classes or lessons during the survey year.[12]

Given the increasing importance of the Internet as a tool for the arts, the 2002 SPPA asked respondents whether they use the Internet to learn about, read, or discuss topics related to literature. About 9 percent of adults (or 19 million people) said they had.[13]

Table 1
U.S. Adult Participation in Literary Activities in the 12-Month Period Ending August 2002

	% of population	Millions of people
Read any book	56.6%	117
Read literature	46.7	96
Including:		
Read a novel or short story	45.1	93
Read poetry	12.1	25
Read a play	3.6	7
Listened to live or recorded readings of novels or books	9.3	19
Read or listened to poetry	14.3	30
Including:		
Read poetry	12.1	25
Listened to live or recorded readings of poetry	5.9	12
Did personal creative writing	7.0	14
-published	1.0	2
-unpublished	6.1	13
Took creative writing classes or lessons		
-in past year	1.0	2
-ever	13.3	27
Used Internet to learn about, read or discuss topics related to literature	9.2	19

Number of Books Read

The 2002 SPPA asked all respondents how many books they read in 2002.[14] Respondents who answered affirmatively indicated that they read approximately six books. Extrapolated for the population as a whole, this means Americans read about 2.1 billion books in the survey year.[15]

The general book-reading habits of literary readers vary widely. Readers of literary works can be divided into four categories: "light" readers (1-5 books during the year, both literary and non-literary), "moderate" readers (6-11 books per year, both literary and non-literary), "frequent" readers (at least one book every month, i.e., 12-49 books per year, both literary and non-literary), and "avid" readers (about one book every week, i.e., 50 or more books per year, both literary and non-literary). The percentage of people in each category is as follows: light readers 21 percent, moderate readers 9 percent, frequent readers 12 percent, and avid readers 4 percent. In other words, about one in six people reads 12 or more books in a

[7] "During the last 12 months, did you listen to a reading of novels or books, either live or recorded?"
[8] "During the last 12 months, did you listen to a reading of poetry, either live or recorded?"
[9] "With the exception of work or school, did you do any creative writing such as stories, poems or plays during the last 12 months?"
[10] "Were any of your writings published?"
[11] "Have you ever taken lessons or classes in creative writing?"
[12] "Did you take any of these lessons or classes in the past year?"
[13] "Do you use the Internet to learn about, read or discuss topics related to literature - novels, poetry or plays?"
[14] The number of books read includes all books read (outside of work or school), not just novels, short stories, poetry, and plays.
[15] This median number of books read (6) is the point where half of all readers read more books and half read less. The mean (commonly called "average") number of books read was 18.5. (The mean is much higher than the median because of the impact of those readers who indicated that they read a very large number of books.) The total books read estimate of 2.1 billion is a product of the number of readers (117 million) times the mean number of books read (18).

year (just fewer than 17 percent are in the "frequent" or "avid" reader categories).

Comparison of Literature Participation with Other Cultural and Leisure Activities

How does literary reading compare to other cultural, sports, and leisure activities? Literary reading is clearly an important component of Americans' leisure activities. The data in Table 2 demonstrate that the proportion of people reading literature is higher than participation in most cultural, sports, and leisure activities. In fact, of the activities included in the 2002 SPPA, only TV watching, moviegoing, and exercising attract significantly more people than reading literary works. Literary reading is much more popular than attending sporting or performing arts events or visiting art museums or galleries. In 2002, about the same percentage of people read literature as watched an average of three or more hours of TV per day.

Table 2 also shows that, with about 93 million readers, novels and short stories have a significant audience in the U.S. Poetry, with 25 million readers, is about as popular as attendance at performances of jazz, classical music, or non-musical plays. About as many people – 7 million – read plays as attend live opera or ballet.

Table 2
U.S. Adults Participation in Cultural, Sports, and Leisure Activities in the 12-Month Period Ending August 2002

	% of population	Millions of people
Watch at least one hour of TV per day (on average)	95.7%	197
Go out to movies	60.0	124
Jog, lift weights, walk or other exercise program	55.1	113
Work with indoor plants or do any gardening (for pleasure)	47.3	97
Read literature	46.7	96
Including:		
Read novel or short story	45.1	93
Read poetry	12.1	25
Read play	3.6	7
Watch 3 or more hours of TV per day (on average)	46.2	95
Make repairs or improvements on home	42.4	87
Go to amusement/theme park or carnival	41.7	86
Attend amateur or professional sports (excluding youth sports)	35.0	72
Visit art or craft festival or fair	33.4	69
Attend any of 7 live performing arts activities (except school performances)	31.8	65
Including:		
Musical stage play or operetta	17.1	35
Non-musical stage play	12.3	25
Classical music	11.6	24
Jazz	10.8	22
Other dance	6.3	13
Ballet	3.9	8
Opera	3.2	7
Visit historic park or monument / Tour historic buildings or neighborhoods	31.6	65
Do outdoor activities, such as camping, hiking or canoeing	30.9	64
Participate in any sports activity	30.4	63
Do volunteer or charity work	29.0	60
Attend art museum or gallery	26.5	55

Participation of Literary Readers in Other Cultural and Leisure Activities

Readers are highly social people, frequently engaged in the arts, sports, and community life. Analysis of the 2002 SPPA data in Tables 3 through 7 show that people who read literature are active, attending a variety of arts events, volunteering in their communities, and participating in sports. In fact, literary readers are much more likely to participate than those who do not read. For example, literary readers are nearly three times as likely to attend a performing arts event, almost four times as likely to visit an art museum, over two-and-a-half times as likely to do volunteer or charity work, over one-and-a-half times as likely to attend sporting events, and over one-and-a-half times as likely to participate in sports activities. In fact, people who read larger numbers of books tend to have the highest levels of participation in other activities, especially arts activities.

The first row of Table 3 shows that, in 2002, 32 percent of people attended a performing arts event (including jazz, classical music, opera, musical and non-musical plays, ballet, and other dance performances). The second and third rows of Table 3 show that the performing arts attendance rates of literary readers and those who did not read are strikingly different: 49 percent of literary readers attended a performing arts event, compared to 17 percent of those who did not read literature during the year. Literary readers are

Table 3
Performing Arts Attendance by U.S. Adults, 2002

	% Attending	Number of Attenders (millions)
All adults	31.8%	65
Did not read literature	16.7	18
Read literature	49.0	47
*Light book readers (1-5 books)	41.2	18
*Moderate book readers (6-11 books)	51.9	10
*Frequent book readers (12-49 books)	57.0	14
*Avid book readers (50 books or more)	58.2	5

*Note: Books can be of any type, literary and non-literary

nearly three times as likely to attend performing arts events.

The last four rows of Table 3 show that performing arts attendance rates are highest for those who have read the most books. Moreover, the 47 million literary readers who attended a performing arts event in 2002 account for nearly three-quarters (72 percent) of all attendees.

Table 4 shows that 26 percent of people visited an art museum in 2002. Literary readers are much more likely to visit art museums (44 percent) than non-readers are (12 percent). Art museum attendance rates are highest for those who have read the most books. The 42 million literary readers who visited an art museum in 2002 comprise over three-quarters (77 percent) of the total art museum visiting public.

Table 4
Art Museum Attendance by U.S. Adults, 2002

	% Attending	Number of Attenders (millions)
All adults	26.5%	55
Did not read literature	11.6	13
Read literature	43.5	42
*Light book readers (1-5 books)	34.9	15
*Moderate book readers (6-11 books)	47.2	9
*Frequent book readers (12-49 books)	53.1	13
*Avid book readers (50 books or more)	50.9	5

*Note: Books can be of any type, literary and non-literary

Literary readers are also engaged citizens. Table 5 shows that 29 percent of all survey respondents did volunteer or charity work in 2002. As with the findings noted above for performing arts and art museum attendance, there is a striking difference between the rates of volunteer or charity work of literary readers (43 percent) and non-readers (17 percent). Frequent readers are most likely to have volunteered or done charity work in 2002.

Table 5
Volunteer and Charity Work by U.S. Adults, 2002

	% Volunteering	Number of Volunteers (millions)
All adults	29.0%	60
Did not read literature	16.6	18
Read literature	43.3	42
*Light book readers (1-5 books)	36.5	16
*Moderate book readers (6-11 books)	45.9	8
*Frequent book readers (12-49 books)	51.1	13
*Avid book readers (50 books or more)	49.2	5

*Note: Books can be of any type, literary and non-literary

Readers of literary works attend sporting events and participate in sporting activities themselves at rates higher than non-readers. The first row in Table 6 shows that 35 percent of all adults attended an amateur or professional sporting event (excluding youth sports) in 2002. Sports attendance was much more common among literary readers (45 percent) than non-readers (27 percent). Sports attendance does decrease somewhat for avid readers, but still remains above the sports attendance rate of those who do not read literary works.

In terms of active sports participation, Table 7 shows that 30 percent of all adults participated in a sports activity in 2002. Again, literary readers are more likely to participate in sports (38 percent) than non-readers (24 percent). Sports participation is somewhat lower for readers of 50 books or more than for less-frequent readers. Still, the sports participation rate of avid readers (31 percent) is higher than the participation of people who do not read literary works (24 percent).

Table 6
Sporting Events Attendance by U.S. Adults, 2002

	% Attending	Number of Attenders (millions)
All adults	35.0 %	72
Did not read literature	26.7	29
Read literature	44.5	43
*Light book readers (1-5 books)	43.2	19
*Moderate book readers (6-11 books)	46.9	9
*Frequent book readers (12-49 books)	47.5	12
*Avid book readers (50 books or more)	37.7	3

*Note: Books can be of any type, literary and non-literary

Table 7
U.S. Adults Playing Leisure Sports, 2002

	% Participating	Number of Participants (millions)
All adults	30.4 %	63
Did not read literature	23.9	26
Read literature	37.9	36
*Light book readers (1-5 books)	36.1	16
*Moderate book readers (6-11 books)	41.7	8
*Frequent book readers (12-49 books)	40.8	10
*Avid book readers (50 books or more)	31.1	3

*Note: Books can be of any type, literary and non-literary

International Comparisons

A survey similar to the SPPA was conducted in Canada in 1998. In response to a question about their reading habits, two-thirds of Canadians (15 years of age or older) indicated that they read a book during the survey year.[16] The most comparable figure from the U.S. survey would be the overall book reading rate (outside of work and school) among Americans 18 years of age or older. This figure is 57 percent, markedly lower than the Canadian percentage of 67 percent.

A recent study reported that the overall book reading rate in 15 European countries was 45 percent (15 years of age or older).[17] Like the Canadian figure reported above, this amount includes reading any type of book outside of work or school, not just novels, short stories, plays or poetry. The most comparable U.S. figure (57 percent) is quite high compared to the overall European average, and is similar to the reading rate in a number of European countries (Luxembourg 56 percent, Denmark 55 percent, and the Netherlands 53 percent). The highest European reading rates are in Sweden (72 percent), Finland (66 percent), and the United Kingdom (63 percent), and the lowest rates are in Belgium (23 percent) and Portugal (15 percent).

The European study also defined "strong readers" as those who read eight or more books during the year. Overall, about 37 percent of Europeans fall into this category, with a high of 52 percent in the U.K. to a low of 15 percent in Portugal. A recalculation of the American figures shows that about 24 percent of Americans read eight or more books in 2002. The percentage of "strong readers" in the U.S. falls in the bottom third of the 15 European countries surveyed.

Summary of Literature Participation in 2002

The results from the 2002 Survey of Public Participation in the Arts show that literary reading is a popular but declining leisure activity, reaching about one-half of the adult population (47 percent), or 96 million people.

Among readers of literary works, the most popular category is fiction, with 45 percent of the population reading novels and/or short stories. About 12 percent read poetry, while about 4 percent read plays.

In terms of the frequency of reading, during the survey year, for literary readers:

[16] Calculations by Hill Strategies Research Inc. from Statistics Canada's *General Social Survey 1998*. This figure is based on the population 15 or older. The question asked was: "During the past 12 months, as a leisure activity (not for paid work or studies) did you read a book?"

[17] The percentages reported here reflect the percentage of respondents (15 or older) indicating that they read a book for reasons other than work or study in the survey year (2000/01). The figures are taken from *Key Figures on Cultural Participation in the European Union*, a presentation by Michael Skahotis to the International Symposium on Culture Statistics, Montreal, October 2002. Available at www.readingeurope.org/observatory.nsf/InternationalSurvey.A?OpenPage.

- About one in five (21 percent) read 1 to 5 books;
- About one in 11 (9 percent) read 6 to 11 books;
- Almost one in eight (12 percent) read 12 to 49 books; and
- Approximately one in 25 (4 percent) read 50 books or more.

The SPPA results reveal that almost one in ten people (9 percent) listened to live or recorded readings of novels or books and 6 percent listened to poetry readings during the survey year. About 7 percent wrote creative works of their own, and 9 percent used the Internet to learn about, read, or discuss topics related to literature.

An examination of literary readers' participation in other cultural and leisure activities clearly shows that literary readers are active and social. The high degree of crossover attendance indicates that book marketing directed at arts attenders may be effective. This also means that arts organizations could target literary readers in order to increase attendance. The high level of volunteer participation by literary readers suggests that organizations trying to develop their volunteer base should target literary readers.

While no direct comparisons are available for literary reading, the SPPA and other research indicate that the U.S. falls behind Canada and several European nations in overall reading rates.

Chapter 3: Factors in Literary Reading

A number of demographic, lifestyle, and other factors influence literature participation. Knowledge of these factors is important both to understand current readership and to develop readers in different demographic groups. On one hand, statistics demonstrate that literary reading varies significantly by gender, ethnicity, race, education, and other variables. On the other hand, literary reading varies somewhat less by age and family income.

In addition to the literary reading inquiries presented in this chapter, two statistical models were created in order to identify the factors most closely associated with literary reading and frequent literary reading. The statistical models help establish an association between certain demographic characteristics and literary reading rates. In particular, the models give estimates of the likelihood of someone in a particular group (e.g., men) reading literature, compared to others (e.g., women), accounting for the fact that men and women do not necessarily have the same levels of education, income, or other characteristics that can lead to higher rates of literary reading. The major findings of the statistical models are highlighted throughout the chapter, and Appendix C to this monograph provides more information about the models.

Demographic and Geographic Factors in Literary Reading

Table 8 summarizes the estimates of literary reading rates of Americans in various demographic groups based on the 2002 Survey of Public Participation in the Arts. Overall, 47 percent of adults, about 96 million people, read literature during the survey year. This reading rate provides a benchmark measure for all other estimates. That is, any group with a literary reading rate lower than 47 percent can be considered underrepresented among literary readers, and any group with a rate over 47 percent can be thought of as overrepresented.

More women read literature than men. The survey found that, in 2002, 55 percent of women read literature vs. 38 percent of men. This gap is supported

Table 8
Demographic Characteristics of U.S. Adults Reading Literature in the 12-Month Period Ending August 2002

Demographic characteristics	% reading literature	Number reading literature (millions of adults)
Overall population	46.7 %	96
Gender		
Female	55.1	59
Male	37.6	37
Ethnicity and race		
Hispanic	26.5	6
White	51.4	77
African American	37.1	9
Other	43.7	4
Age		
18 to 24	42.8	11
25 to 34	47.7	18
35 to 44	46.6	21
45 to 54	51.6	20
55 to 64	48.9	13
65 to 74	45.3	8
75 or older	36.7	6
Education		
Grade school	14.0	2
Some high school	23.4	5
High school graduate	37.7	24
Some college	52.9	30
College graduate	63.1	23
Graduate school	74.3	13
Family income		
$9,999 or less	32.1	5
$10,000 to $19,999	37.5	8
$20,000 to $29,999	37.5	9
$30,000 to $39,999	44.1	11
$40,000 to $49,999	47.9	8
$50,000 to $74,999	52.3	18
$75,000 or more	60.8	28
Income not reported	39.8	9

by the statistical model, which found that men were less than half as likely as women to read literature, once differences in education, income, and other demographic and economic factors were accounted for.

Literary reading is also unequal among different ethnic and racial groups.[18] White Americans have the highest literature participation rate (51 percent), much higher than that of African Americans (37 percent) and Hispanic Americans (26 percent). The statistical model of literary reading shows that, compared to Hispanic Americans, white Americans are almost twice as likely to read literature, even keeping other factors constant, such as the higher overall levels of education among white Americans. African Americans are about 30 percent more likely than Hispanic Americans to read literature.[19]

A percent distribution of literary readers by ethnicity and race shows that 80 percent are white, 9 percent are African American, and 6 percent are Hispanic American. A more in-depth focus on ethnicity and race is provided later in this chapter.

Age

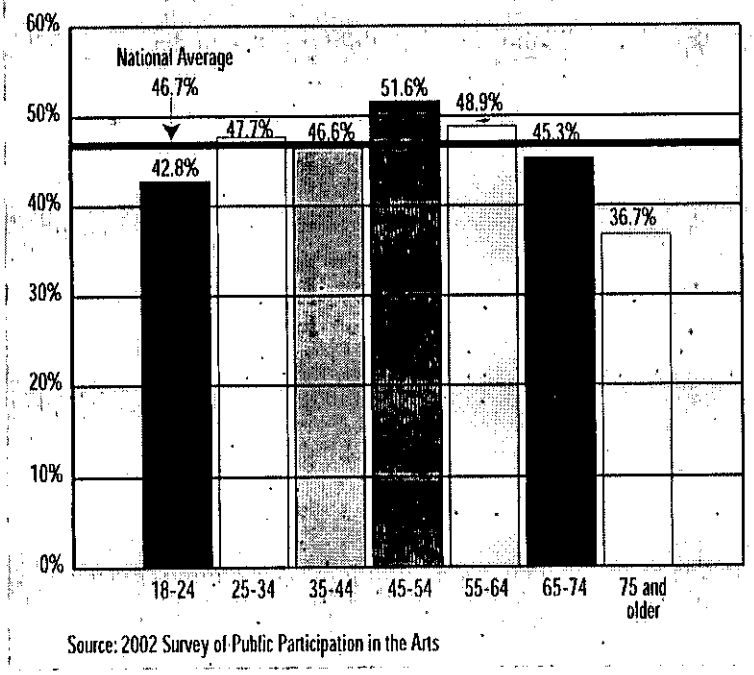
In contrast to the distinct differences in literary reading by gender and ethnic or racial background, Figure 2 shows that literary reading is reasonably consistent between people in different age ranges, with the exception of a very low reading rate among those 75 or older. The next lowest literary reading rate is among young adults aged 18-24 years (43 percent), while the highest rate is for those between 45-54 years (52 percent). All of the age groups (below 75) fall within this reasonably narrow range of participation rates. In fact, the percentage of literary readers in every age group is only a percentage point or two different from each age group's share of the overall population. The report of the *2001 Consumer Research Study on Book Purchasing* confirms the SPPA findings by stating that "books appeal to consumers of all ages."[20]

In the statistical model of literary reading, the only age group that was found to be a significant factor in literary reading is the youngest age group (18- 24). Accounting for differences in education, income, and other socioeconomic factors, people in this age group were about 15 percent less likely than others to read literature.

Despite the relative consistency in reading among the different age groups, the fact that the youngest age group has the lowest literary reading rate raises

Figure 2: Literary Reading Rates by Age, 2002

Americans 18 years of age or older



Source: 2002 Survey of Public Participation in the Arts

[18] The ethnic and racial groups examined include Hispanic Americans (of any race), non-Hispanic white Americans (referred to as simply "white Americans" in this monograph), non-Hispanic African Americans (referred to as simply "African Americans"), and Other ethnic or racial groups.

[19] The SPPA literature questions did not specify the language of books read.

[20] *2001 Consumer Research Study on Book Purchasing*, Book Industry Study Group, p. 64.

questions about the future of literary reading in America. Is this an indication of a decline in reading, possibly due to competition from TV, videogames, movies, and the Internet? Or is it simply a "natural" function of the fact that younger people are temporarily preoccupied with other types of reading (textbooks and coursework) or other leisure activities? Will those in the youngest age group read more as they age? Chapter 4 looks at trends in literary reading since 1982, including an analysis of trends in literary reading for specific age groups.

Table 9
Literary Reading by Race and Ethnicity, U.S. Adults in the 12-Month Period Ending August 2002

Demographic characteristics	Hispanic Americans (% reading literature)	African Americans* (% reading literature)	White Americans* (% reading literature)
Overall literature reading rate	26.5%	37.1%	51.3%
Gender			
Male	18.4	29.8	41.4
Female	34.1	42.9	60.7
Age			
18 to 24	21.6	34.8	48.6
25 to 34	31.9	43.8	51.7
35 to 44	24.5	43.7	51.3
45 to 54	28.7	35.9	56.8
55 to 64	32.2	32.8	53.1
65 to 74	14.3	27.0	50.5
75 or older	17.7	16.7	40.3
Education			
Grade school	11.7	6.5	19.2
Some high school	19.9	22.2	14.0
High school graduate	28.7	29.3	40.4
Some college	34.0	45.8	55.6
College graduate	52.2	58.6	66.1
Graduate school	57.0	59.9	76.1
Family income			
$9,999 or less	19.5	26.9	38.6
$10,000 to $19,999	26.8	33.5	41.6
$20,000 to $29,999	21.9	33.4	42.4
$30,000 to $39,999	25.4	38.4	48.9
$40,000 to $49,999	23.4	45.7	50.3
$50,000 to $74,999	37.1	45.6	54.9
$75,000 or more	39.6	51.8	62.8
Income not reported	22.7	30.2	44.5

*Not including Hispanics

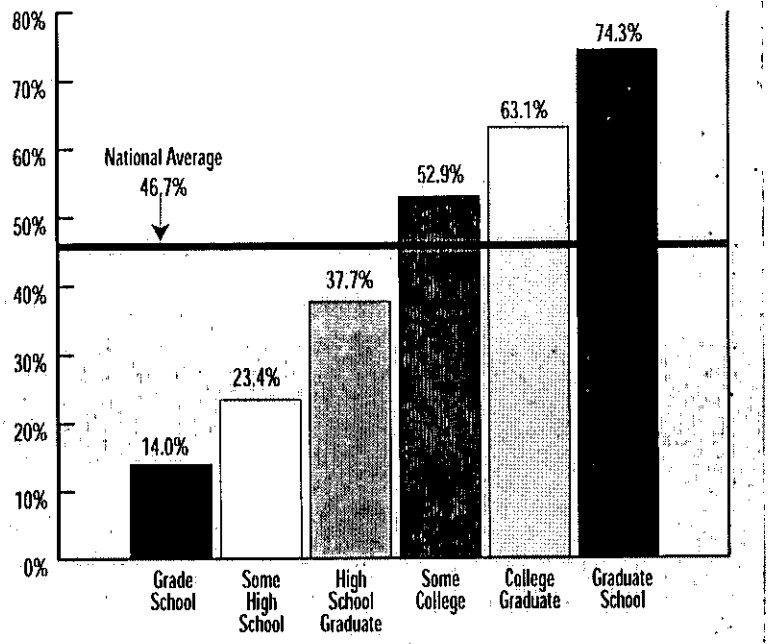
Ethnicity and Race

Literary reading rates differ among ethnic and racial groups in America, due in part to differences in culture, language, socioeconomics, education, and other factors outside the scope of the SPPA. Table 9 gives a breakdown of literary reading rates by gender, age, education, and income for people in each of these ethnic and racial groups. Some interesting differences emerge from the data in Table 9. For instance, an examination of literary reading rates by gender shows that women have much higher literary reading rates than men in all ethnic and racial groups. In addition, the data show that the lowest literary reading rate is among male Hispanic Americans (18 percent), followed by male African Americans (30 percent), and female Hispanic Americans (34 percent). Male white Americans and female African Americans read literature in similar proportions (41 percent and 43 percent, respectively). Female white Americans have by far the highest literary reading rate – 61 percent.

There are also interesting age-related differences in literary reading habits among people in different ethnic and racial groups. For white Americans, literary reading is fairly evenly distributed by age. This is less true for African Americans, for whom literary reading is most common among younger age groups (25 to 34 and 35 to 44). This is undoubtedly related to higher education levels among younger African Americans. There is no consistent pattern of literary reading by Hispanic Americans. The highest reading rates are for those in the 25 to 34 and 55 to 64 age groups.

The data in Table 9 show that literary reading is strongly related to education levels in all ethnic and racial groups. Those with college education have much

Figure 3: Literary Reading Rates by Education, 2002
Americans 18 years of age or older



Source: 2002 Survey of Public Participation in the Arts

higher literary reading rates than those with high school education or less. The literary reading rates in all three ethnic and racial groups increase as family income increases. A close examination of the figures shows that the differences in literary reading between the higher and lower income groups are larger for Hispanic and African Americans than for white Americans.

Education

Both the literary reading rates and the statistical model of literary reading show that the most important factor is educational attainment. Figure 3 shows that only 14 percent of those with grade school education read novels, short stories, poetry, or plays in 2002. Those with a graduate school education are more than five times (74 percent) more likely to read literary works. In between these two extremes, literary reading increases consistently at every educational level, with literature participation rates for those with various levels of educational attainment.

The statistical model shows that, compared to high school graduates:

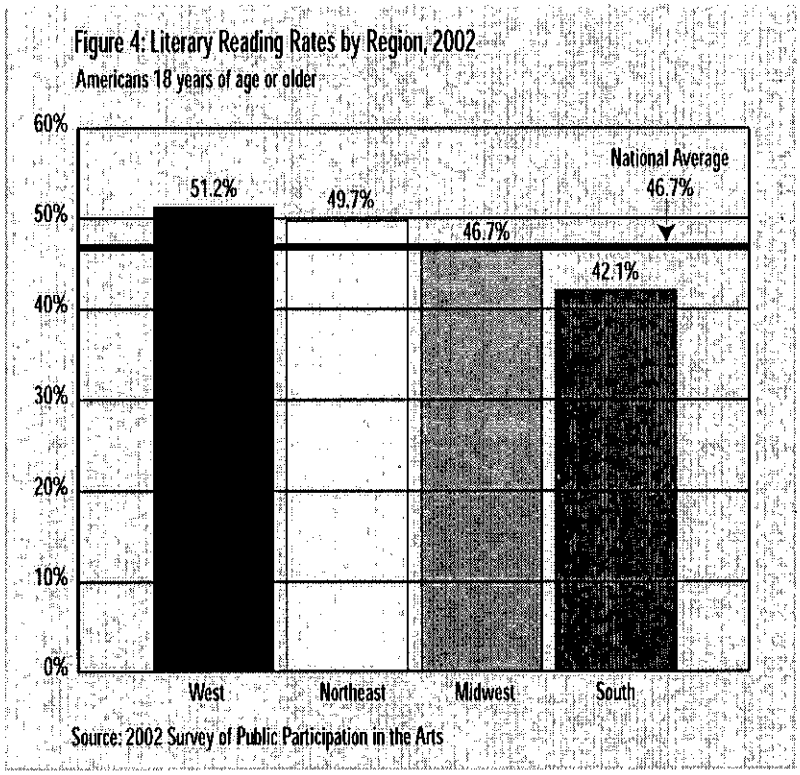
- those with a grade school education are almost 60 percent less likely to read literature;
- those with some high school education (but no diploma) are about a third less likely (35 percent) to read literature;
- those with some college education (but no degree) are about 35 percent more likely to read literature;
- those with a college degree are about 75 percent more likely to read literature; and
- those with a graduate school degree are 240 percent more likely to read literature.

Research into consumers' book purchases confirms the SPPA findings that highly educated people are overrepresented among book readers. Data from the *2001 Consumer Research Study on Book Purchasing* indicate that, while 27 percent of all adults have at least a college degree, 39 percent of books for adults are bought by those with at least a college degree.[21]

Family Income

The literary reading rate does not vary as strongly based on family income as it does for education, although literature participation does increase fairly steadily for each increase in family income (see the figures in Table 8). About one-third of the lowest income group (those with family income under $10,000) read literature during the survey year compared to 61 percent of the highest income group (those with family incomes of $75,000 or more). The statistical model shows that having a low family income (or not reporting the family income level) is associated with low literary reading rates. Those with low family incomes and those who did not report their income level are about 17 percent less likely to read literature as those in other income levels (after adjusting for other factors, such as the fact that those

[21] *2001 Consumer Research Study on Book Purchasing*, p. 35.



with lower family incomes often have lower education levels).

Higher income people are overrepresented among those who buy books. While 23 percent of people have household incomes of $75,000 or more, 33 percent of books are bought by those with household incomes in this range.[22]

Geographic Areas

Figure 4 shows that literary reading is most popular in the Western states (51 percent), followed by the Northeast (50 percent), Midwest (47 percent) and South (42 percent). (See Table 10 for a list of the states included in each of these regions.) After accounting for regional differences in education, income, etc., the statistical model shows that, compared with residents of the Northeast, residents of the West are 14 percent more likely to read literature, while residents of the Midwest and South are less likely to read literature (13 percent and 20 percent less likely, respectively).

Table 10 lays out the literary reading rates by region and in sub-regional groupings of states. The data in Table 10 show that, of nine sub-regional groupings of states, literary reading is most common in the two sub-regions of the West (Mountain – 53 percent and Pacific – 50 percent) and least common in the three sub-regions of the South (South Atlantic – 43 percent, West South Central – 41 percent, and East South Central – 41 percent). The sub-regions of the Northeast (New England and Mid-Atlantic – both 50 percent) and the Midwest (West North Central – 50 percent and East North Central – 45 percent) rank in the middle of regional participation in literature.[23]

In addition to these regional differences, the SPPA found several other differences. People who live in the suburbs are more likely to be readers than either those who live in the city or the country. The literary reading rate for rural residents is 41 percent, compared with 47 percent for central-city dwellers and 49 percent for those who reside in the suburbs of metropolitan areas.

Employment and Occupation

Employed people are most likely to have read literature in 2002. Indeed, 49 percent of employed people did so, compared to 41 percent of those unemployed. Of those people who are not in the labor force (including retired and disabled Americans as well as those not looking for a job), some 43 percent read literary works in the survey year. People in managerial, professional, and technical occupations are more likely to read literature than those in other occupation groups. Table 11 shows a breakdown of literature participation in four broad occupation groups.

Parents Education Level

Survey respondents were also asked about their parents' education levels. Table 12 shows that reading varies strongly based on parents' education levels,

[22] *Ibid.* p. 35.

[23] Because of the small number of survey respondents in some states, literary reading rates are not reported on a state-by-state basis.

Table 10
Literary Reading by Region, U.S. Adults, 2002

Region (% reading literature)	Sub-region (% reading literature)	States included in sub-region
West (51.2%)	Mountain (53.4%)	Arizona
		Colorado
		Idaho
		Montana
		Nevada
		New Mexico
		Utah
		Wyoming
	Pacific (50.4%)	Alaska
		California
		Hawaii
		Oregon
		Washington
Northeast (49.7%)	New England (50.0%)	Connecticut
		Maine
		Massachusetts
		New Hampshire
		Rhode Island
		Vermont
	Mid-Atlantic (49.7%)	New Jersey
		New York
		Pennsylvania
Midwest (46.7%)	West North Central (49.9%)	Iowa
		Kansas
		Minnesota
		Missouri
		Nebraska
		North Dakota
		South Dakota
	East North Central (45.5%)	Illinois
		Indiana
		Michigan
		Ohio
		Wisconsin
South (42.1%)	South Atlantic (43.3 %)	Delaware
		District of Columbia
		Florida
		Georgia
		Maryland
		North Carolina
		South Carolina
		Virginia
		West Virginia
	West South Central (40.9%)	Arkansas
		Louisiana
		Oklahoma
		Texas
	East South Central (40.9%)	Alabama
		Kentucky
		Mississippi
		Tennessee

Table 11
Literary Reading by Occupation Group, U.S. Adults, 2002

Occupation groups	% reading literature
Managerial, professional, technical and support occupations	58.8%
Sales occupations	40.5
Service occupations	39.9
Production, craft, repair, operator occupations	27.7

undoubtedly due to the fact that better educated parents are more likely to read to their children and encourage children to read when they are young.[24] An earlier SPPA survey asked respondents about the encouragement to read that they received from their parents. A summary of the results from the 1982 survey indicated that "the relationship between parental encouragement to read and adult literary reading was quite strong, stronger even than the relationship between the respondent's education level and literary reading."[25] The statistical model of literary reading based on the 2002 SPPA survey shows that respondents whose mothers had attended college are nearly 50 percent more likely than others to read literature in 2002.

Table 12
Literary Reading by Parents' Education Levels, U.S. Adults, 2002

Education levels of father or mother	Father's education (% reading literature)	Mother's education (% reading literature)
Grade school	37.0%	34.2%
Some high school	44.6	43.6
High school graduate	49.2	49.8
Some college	60.1	63.4
College graduate	63.1	65.2
Graduate school	73.4	76.0

Impact of Television

Does TV watching affect literary reading? This is a key question posed by many who feel that today's frequent TV watchers may not read as much as previous generations have. The 2002 SPPA data show

[24] Statistics on the topic of parental involvement in reading can be found through the National Household Education Survey. A summary is available on the National Institute for Literacy's website, www.nifl.gov.

[25] Nicholas Zill and Marianne Winglee, *Who Reads Literature?*, National Endowment for the Arts Research Report #22, 1990. Questions about parental encouragement were not asked in the 2002 SPPA.

that literary readers watch an average of 2.7 hours of TV per day, while people who do not read literary works watch an average of 3.1 hours of TV per day.[26] Not surprisingly, a statistical model created to analyze frequent readers found that watching four hours or more of TV per day had a negative impact on the chances of someone reading 12 books or more per year. Watching no TV had a positive impact on the probability of someone reading 12 books or more. Overall, however, frequent readers watch only slightly less TV per day than infrequent readers.

Table 13
Average Number of Hours Per Day Watching TV, U.S. Adults, 2002

	Average Hours Per Day
All adults	2.9
Did not read literature	3.1
Read literature	2.7
*Light book readers (1-5 books)	2.8
*Moderate book readers (6-11 books)	2.6
*Frequent book readers (12-49 books)	2.4
*Avid book readers (50 books or more)	2.6

*Note: Books can be of any type, literary and non-literary

The SPPA results cannot show whether people who never read literary works would do so if they watched less TV, or whether they would use this extra time in other ways. A 2001 Gallup survey of 512 people showed that regular computer users spent 1.5 hours per day using the Internet and 1.1 hours reading books. However, those who did not regularly use a computer also spent 1.1 hours per day reading a book.[27]

In some cases, TV watching may have a positive impact on literary reading. Authors regularly appear on TV to promote their books, and some TV book clubs have been extremely popular. In fact, in the spring of 2002, most book publishers were very disappointed when Oprah Winfrey cancelled the book club related to her talk show.[28] The effects of mass media, particularly television, movies, and the Internet, merit further scrutiny and research.

Literacy

Although 46.7 percent of the adult population read literature in 2002, a comparable percentage of adults may not have been capable of reading and understanding most novels, short stories, poetry, or plays. A 1995 report from the National Center for Education Statistics (NCES) shows that 45 percent of adults read at "prose literacy levels" one and two.[29] Rather than reporting a single illiteracy rate, NCES classifies adults into five levels of literacy. People scoring at levels one and two probably do not have the skills necessary to read many types of literature.

Participation of Literary Readers in Other Cultural and Leisure Activities

Previous research into performing arts and art museum attendance has shown that attendance at one type of arts activity is strongly related to attendance at other types of activities.[30] The 2002 SPPA data show that literary reading is also strongly related to participation in other arts activities. For example, 77 percent of art museum visitors read literature in 2002, and 72 percent of people who attend performing arts events also read literary works. Those who participate in any of the arts are likely to participate in more than one form. Some people appear to be predisposed to partake in a wide range of arts activities, while others choose not to participate in any artistic activities at all. Arts participation, once begun, tends to become a habit.

In the statistical model of literary reading, attendance at art museums and performing arts events is shown to be a significant factor in predicting literary

[26] These figures were calculated from responses to the question "Approximately how many hours of television do you watch on an average day?"
[27] *Gallup Poll Tuesday Briefing*, "Does reading still stack up?" September 3, 2002.
[28] Oprah's book club has been reinstated with a focus on classic literary works rather than contemporary books. A recent selection, for example, is *East of Eden* by John Steinbeck.
[29] NCES Fast Facts, National Center for Education Statistics, at www.nces.ed.gov/fastfacts.
[30] See, for example, two reports by Hill Strategies, *Performing Arts Attendance in Canada and the Provinces and Museum and Art Gallery Attendance in Canada, 2003*, available from www.hillstrategies.com. For more information about crossovers between disciplines, see 2002 www.hillstrategies.com. For more information about crossovers between disciplines, see 2002 Survey of *Public Participation in the Arts, Report #45*, National Endowment for the Arts, April 2004. Also see Timothy Fisher and Stephen Preece, "Evaluating Performing Arts Audience Overlap" in *International Journal of Arts Management*, vol. 4, no. 3, Spring 2002.

reading, even controlling for education, ethnicity, race, and other factors. Respondents who attended both an art museum and a performing arts event are nearly six times as likely to read literature as those who participated in neither of these arts activities. Those who visited an art museum or attended a performing arts event are over twice as likely to read literature as those who participated in neither of these arts activities.

Demographic Characteristics of Frequent Readers

Of those who read any literary works in 2002, 17 percent are classified as frequent readers (12 or more books in the survey year). Women are much more likely than men to be frequent readers: 22 percent of women, compared to 11 percent of men. Frequent readers among racial and ethnic groups break down into these percentages: 20 percent of white Americans, 9 percent of African Americans, and 5 percent of Hispanic Americans. Those between 45 and 74 years of age tend to read the most books in a year. About one in five people in this age group is a frequent reader, compared to only one in ten people under 25. Frequent readers also tend to have high levels of education and family income. The West, Midwest and Northeast regions of the country have similar proportions of frequent readers (just under one in five residents of each of these regions), while the South has the lowest proportion of frequent readers (about one in seven residents).

Art museum and performing arts attenders are much more likely than non-attenders to be frequent readers. In fact, 33 percent of art museum visitors (compared to 11 percent of non-visitors) read 12 or more books during the year. Similarly, 30 percent of performing arts attenders (compared to 10 percent of non-attenders) read 12 or more books in 2002.

The regression model (see Appendix C) shows the demographic patterns of frequent book readers who reported reading literature. This model demonstrates that:

- men are 37 percent less likely than women to be frequent readers (12 or more books of any kind per year);
- white Americans are 63 percent more likely than people from other ethnic and racial groups to be frequent readers;
- those under 45 years of age are 36 percent less likely to be frequent readers;
- those with at least some college education are 28 percent more likely than those without any college education to be frequent readers;
- those respondents whose mothers had at least some college education are 19 percent more likely to be frequent readers than are those whose mothers had no college education;
- those who are not in the labor force are 17 percent more likely than others to be frequent readers;
- those who visit an art gallery and attend a performing arts events in a year are more than 250 percent more likely to be frequent readers than those who did only one or neither of these arts activities;
- those who did charity work are 26 percent more likely to read 12 or more books per year than those who did not;
- those who did not watch TV in a typical day are 48 percent more likely to be frequent readers than are those who watched one to three hours of TV per day; and
- those who watched four or more hours of TV in a typical day are 12 percent less likely to be frequent readers than are those who watched one to three hours of TV per day.

Readers of Novels, Short Stories, Poetry, and Plays

The 2002 SPPA included questions regarding three types of literature: novels or short stories (a single question), poetry, and plays. Novels or short stories were by far the most popular types of literature, with 45 percent of the survey respondents indicating that they had read novels or short stories in the survey year. In comparison, 12 percent read poetry and 4 percent read plays.

Many demographic patterns are consistent among readers of the different types of literature examined in the SPPA. For all three types of literature:

- women read more than men;
- white Americans are more likely than any other racial or ethnic group to read literature;
- reading varies slightly across age groups, with the exception of a drop for those 75 or older and a declining rate for 18-24 year olds;
- reading rates increase strongly with education levels, with college graduate rates more than 50 percent higher than the overall reading rate for poetry or plays and more than one-third higher for novels or short stories;
- reading rates also increase with income levels, with people with family incomes under $40,000 reading at rates below the overall average, and those with family incomes of $40,000 or more exceeding average reading rates;
- the West and Northeast regions of the country have the highest reading rates.

There are some differences in the reading rates of different types of literature for non-white ethnic and racial groups. The gap between white Americans – the group with the highest reading rates for all types of literature – and African or Hispanic Americans varies between the different types of literature. For example, there is a large gap between the novel or short story reading rates of white Americans (50 percent), African Americans (35 percent), and Hispanic Americans (25 percent.) In contrast, African Americans and white Americans have similar rates for poetry (12 percent and 13 percent). Hispanic Americans are only somewhat less likely than white Americans to read plays (3.1 percent and 3.8 percent).

Listening to Live or Recorded Readings of Novels or Poetry

In addition to reading books, many people enjoy listening to literary readings, either in person or

Table 14
Demographic Characteristics of U.S. Adults That Read Novels or Short Stories, Poetry, or Plays in the 12-Month Period Ending August 2002

	% reading novels or short stories	% reading poetry	% reading plays
Overall reading rate	45.1%	12.1%	3.6%
Sex			
Male	36.1	7.8	3.0
Female	53.4	16.0	4.1
Ethnicity and race			
Hispanic	24.8	6.7	3.1
White	50.0	13.1	3.8
African American	34.7	11.8	2.8
Other	42.3	9.8	3.1
Age			
18 – 24	40.7	13.9	5.9
25 – 34	45.8	10.9	3.5
35 – 44	45.1	10.9	3.4
45 – 54	50.2	14.2	3.7
55 – 64	47.9	12.4	2.5
65 – 74	43.8	11.9	2.5
75 or older	35.4	9.4	3.2
Education			
Grade school	13.4	2.5	1.1
Some high school	22.7	5.1	1.5
High school graduate	36.5	6.8	1.6
Some college	51.1	14.3	3.9
College graduate	60.7	18.0	6.4
Graduate school	72.3	26.1	8.2
Family income			
$9,999 or less	29.6	10.0	3.4
$10,000 to $19,999	36.2	10.4	3.1
$20,000 to $29,999	36.2	9.2	2.5
$30,000 to $39,999	42.5	11.0	2.8
$40,000 to $49,999	46.4	12.7	4.1
$50,000 to $74,999	50.7	12.9	3.8
$75,000 or more	59.4	16.0	4.9
Income not reported	38.0	9.5	2.8
Region			
West	49.5	15.4	4.8
Northeast	48.3	11.9	3.9
Midwest	45.5	10.8	2.8
South	40.5	10.8	3.2

through recordings. The 2002 SPPA asked respondents whether they listened to live or recorded readings of novels[31] or poetry.[32] Just over 9 percent said that they listened to live or recorded readings of novels or other books, and about 6 percent indicated that they listened to poetry readings during the survey year.

Table 15 provides a detailed demographic breakdown of those who listened to novels or poetry in 2002. Women are more likely than men to listen to novels or poetry. While white Americans are most likely to listen to book readings, African Americans are most likely to listen to poetry readings. This may be due, in part, to the popularity of dub and slam poetry readings in the U.S.[33] Although readings of both novels and poetry are most commonly attended by those between 45 and 54, there is decidedly younger audience listening to poetry readings. The second-most likely age group to attend poetry readings is 18-24 year olds, while 55-64 year olds are most likely to listen to a reading of a novel or other literary work.

There is a strong connection between education and listening to both novels and poetry; college graduates are more than 50 percent more likely than the average person to listen to novels or poetry. The rates of listening to novel or poetry readings also increase with income. As was the case with literary reading, the West has the highest rates of listening to novels or poetry of all regions of the country.

Personal Creative Writing

The third major set of questions dealt with personal creative writing,[34] and about one in 14 people (7 percent) said that they wrote creative works during the survey year. As is the case with all facets of literary reading and writing,

Table 15
Demographic Characteristics of U.S. Adults Listening to Live or Recorded Readings of Novels or Poetry, 2002

	% listening to novels or other books	% listening to poetry
Overall rate	9.3 %	5.9 %
Sex		
Male	7.9	4.8
Female	10.6	6.8
Ethnicity and race		
Hispanic	5.6	3.4
White	10.3	5.9
African American	7.4	8.6
Other	6.6	5.1
Age		
18 – 24	5.6	6.2
25 – 34	7.7	5.8
35 – 44	10.5	5.8
45 – 54	12.1	7.1
55 – 64	10.9	5.9
65 – 74	9.3	4.8
75 or older	6.2	3.8
Education		
Grade school	2.6	1.3
Some high school	3.6	2.9
High school graduate	5.4	2.8
Some college	9.7	7.3
College graduate	15.3	9.1
Graduate school	20.9	12.4
Family income		
$9,999 or less	6.1	4.6
$10,000 to $19,999	4.9	4.5
$20,000 to $29,999	5.9	4.7
$30,000 to $39,999	8.5	6.4
$40,000 to $49,999	8.3	6.7
$50,000 to $74,999	11.8	6.1
$75,000 or more	14.0	7.2
Income not reported	7.7	4.9
Region		
West	11.7	7.3
Northeast	8.8	6.6
Midwest	9.7	5.6
South	7.8	4.7

[31] "Did you listen to a reading of novels or books, either live or recorded during the last 12 months?"
[32] "Did you listen to a reading of poetry, either live or recorded during the last 12 months?"
[33] Dub poetry is an oral presentation of poetic works usually combined with music (often drumming).
[34] "With the exception of work or school, did you do any creative writing such as stories, poems or plays during the last 12 months?"

Table 16
Demographic Characteristics of U.S. Adults Doing Creative Writing, 2002

	% doing creative writing
Overall rate	7.0 %
Sex	
Male	5.8
Female	8.2
Ethnicity and race	
Hispanic	4.0
White	7.6
African American	7.4
Other	5.3
Age	
18 – 24	12.7
25 – 34	7.9
35 – 44	6.7
45 – 54	6.8
55 – 64	5.0
65 – 74	4.1
75 or older	3.7
Education	
Grade school	1.0
Some high school	2.8
High school graduate	4.1
Some college	9.1
College graduate	10.6
Graduate school	12.7
Family income	
$9,999 or less	7.8
$10,000 to $19,999	5.5
$20,000 to $29,999	5.6
$30,000 to $39,999	7.6
$40,000 to $49,999	7.4
$50,000 to $74,999	7.0
$75,000 or more	8.5
Income not reported	5.9
Region	
West	8.3
Northeast	7.3
Midwest	7.5
South	5.9

women are more likely than men to pursue creative writing. Similarly, creative writing is most popular among those with high education levels and among residents of the western region of the country.

However, an analysis of creative writers shows some differences between the demographic characteristics of creative writers and literary readers (see Table 16). Interestingly, creative writing does not increase consistently by income levels. Low- and middle-income people are about as likely to write creative works as those with high incomes. Other comparisons of the data show that African Americans are as likely as white Americans to do creative writing. In addition, creative writing is most common among those under 25.

Summary of Factors in Literature Participation

With nearly one-half of Americans participating, literary reading is clearly one of the nation's favorite pastimes. But the pleasures of reading literature are not shared by all. Educational attainment is the most important factor in literature participation. Highly educated people read literature much more than those with lower levels of education. This chapter has also shown that reading and listening to literature are consistently higher for women, urban residents, and, generally, those with higher family incomes. White Americans have the highest participation rates of any ethnic or racial group in almost all literature-related activities, except for the high participation rate of African Americans listening to poetry and doing creative writing. Literature participation is fairly consistent between those in different age ranges, with the exception of the youngest and oldest people. Literary activities are most popular in the West, followed by the Northeast, Midwest, and South.

It is not clear from the SPPA data how much influence TV watching has on literary reading. People who read literary works, even frequent book readers, watch slightly less TV each day than those who do not read at all. A statistical model created to analyze

frequent book readers found that watching four hours or more of TV per day had a negative impact on the chances of someone reading 12 books or more per year, while watching no TV had a positive impact on the probability of someone reading 12 books or more. The SPPA results cannot show whether people would read more if they watched less TV, or whether they would use this extra time in other ways.

The 2002 SPPA data show that one of the most important factors in literary reading is participation in other arts activities. Art museum and performing arts attendance are significant factors in literature participation, even adjusting for education, ethnicity, race and other factors. The book industry might target arts participants in their marketing in the future.

Chapter 4: Trends in Literature Participation, 1982-2002

Over the past 20 years, the U.S. has experienced significant demographic change. The population has grown considerably since 1982 and is becoming increasingly racially and ethnically diverse. Recent waves of immigration have come from a wide range of countries. The Census Bureau noted in a recent report that "the minority population grew 11 times more rapidly as the white non-Hispanic population between 1980 and 2000."[35] The changing demographics of the United States ensure continued change in literary and artistic circles and in public participation in literature and the arts.

Myriad other social and economic transformations have also taken place since 1982. For example, technological change has increased in intensity over the past 20 years. In 1982, personal computers were a relatively new phenomenon, and the Internet was a small network. Now, computers and the Internet are readily available in many homes and in most workplaces. Videogames have also proliferated since the early 1980s, a time when Atari sets were fairly new. These changes, along with the growth in network, cable, and satellite television and the advent of video rentals, have had a significant impact on people's time use over the past 20 years. As early as the 1980s, fears were expressed that the U.S. was becoming a "nation of watchers" rather than a "nation of readers."[36] In the late 1990s, the Center for the Book in the Library of Congress chose "Building a Nation of Readers" as its National Reading Promotion Campaign theme. By the time of the 2002 SPPA, public participation in literature faced very real challenges born out by the Survey's findings.

This chapter examines changes in literary reading in the 1982, 1992, and 2002 Surveys of Public Participation in the Arts, and relates these changes to literary, social, and cultural trends in American society. Results from statistical tests (chi square) are also presented in this chapter in order to examine whether the changes in literary reading between 1982, 1992, and 2002 are statistically significant.[37]

Changes in Literature Participation

Literary reading in America has not grown since 1982. In fact, it is the strong growth in the population that has allowed the overall number of people reading literature to remain stable at about 96 million between 1982 and 2002.[38] Along with these figures, Table 17 shows that there has been a substantial decrease in the percentage of people reading literature, from 57 percent in 1982 to 47 percent in 2002, a decline of 10 percentage points.

Table 17
Literary Reading, U.S. Adults, 1982, 1992, and 2002

	1982	1992	2002	Change 1982 to 2002
Number reading literature (in millions)	95.6	100.3	96.2	0.6
American population 18 or older (in millions)	168.0	185.8	205.9	37.9
% reading literature	56.9%	54.0%	46.7%	−10.2

Changes in Poetry Reading and Listening

During the 1990s, the growth in popularity of live readings, poetry slams, and other forms led some to speculate about a revitalization of poetry in America.[39] If such revitalization is occurring, it is not apparent in the figures from the 1982, 1992, and 2002 Surveys of Public Participation in the Arts. A comparison of the poetry readers and listeners in these years (see Table 18) shows that, despite significant population growth, the number of people reading poetry or listening to a poetry reading decreased from about 34 million in 1982 to just under 30 million in 2002. This amounts to a loss of more

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[35] *Demographic Trends in the 20th Century*, Census 2000 Special Report issued November 2002.

[36] See, for example, President Reagan's Radio Address on Education, September 8, 1984, available at http://www.reagan.utexas.edu/resource/speeches/1984/90884a.htm

[37] The chi-square statistic can be used to test whether the literary reading rates of Americans in various groups (e.g., men, women, Hispanic Americans, white Americans, etc.) are independent of the year the sampling was done. Within each group, a statistically significant chi-square statistic would indicate that the literary reading rates were significantly different between the years tested.

[38] In 1982, only one question was asked regarding literary reading: "During the last 12 months, did you read novels, short stories, poetry or plays?" In 1992 and 2002, three separate questions were asked: "During the last 12 months, did you read any plays?"; "During the last 12 months, did you read any poetry?"; and "During the last 12 months, did you read any novels or short stories?" Respondents who said "yes" to any of these three questions in 1992 or 2002 are included in Table 17. In all three years, a statistically representative sample of Americans was surveyed. In 1982 and 2002, there were about 17,000 survey respondents, compared to about 13,000 in 1992. It should be noted that the estimate of 96 million literary readers differs from the 93.3 million estimate that appears on page 2, Table 1, of *Research Report #45, 2002 Survey of Public Participation in the Arts*, because it is based on the revised estimate of the 1982 adult population, 168 million, and not the 164 million originally provided by the Census Bureau.

[39] See, for example, "10 Years After, Poetry Still Matters" in *The Chronicle of Higher Education*, September 27, 2002.

than 4 million people, or 13 percent of the 1982 audience for poetry.[40] The percentage of people reading poetry or listening to poetry decreased substantially, from about 20 percent of adults in 1982 and 1992 to 14 percent in 2002.

Table 18
Reading or Listening to Poetry, U.S. Adults, 1982, 1992, and 2002

	1982	1992	2002	Change 1982 to 2002
Number reading or listening to poetry (in millions)	33.8	38	29.5	-4.3
% reading or listening to poetry	19.8 %	20.5 %	14.3 %	-5.5

Changes in Personal Creative Writing

Contrary to the overall decline in literary reading, the number of people doing creative writing – of any genre, not exclusively literary works – increased substantially between 1982 and 2002. In 1982, about 11 million people did some form of creative writing. By 2002, this number had risen to almost 15 million people (18 or older), an increase of about 30 percent.[41]

The percentage of people doing creative writing increased by a much smaller amount, from just fewer than 7 percent of adults in 1982 to just greater than 7 percent in 2002. Table 19 shows the trends in creative writing activity.

Table 19
Creative Writing, U.S. Adults, 1982, 1992, and 2002

	1982	1992	2002	Change 1982 to 2002 *
Number doing creative writing (in millions)	11.5	13.7	14.4	2.9
% doing creative writing	7.0%	7.4%	7.1%	0.1

* The amounts in the change column are calculated from non-rounded figures. Because of rounding, the amounts in this column may not equal the difference between the figures in the other columns.

Changes in Creative Writing Classes or Lessons

Table 20 shows that the number of people who indicated that they had ever taken a creative writing class or lesson decreased from 30 million in 1982 to 27 million in 2002.[42] The percentage of people taking creative writing classes or lessons at some point in their lives also decreased, from 18 percent of adults in 1982 to 13 percent in 2002.

Table 20
Creative Writing Classes or Lessons, U.S. Adults, 1982, 1992, and 2002

	1982	1992	2002	Change 1982 to 2002
Number ever taking creative writing classes or lessons (in millions)	29.5	29	27.3	-2.2
% ever taking creative writing classes or lessons	18.0%	15.6%	13.3%	-4.7

Factors in the Changes in Literature Participation

Due to higher overall levels of education in America over the past 20 years and the correlation between literature participation and education, one might think that there would have been an increase in the popularity of literature since 1982. However, an analysis of the demographic characteristics of literary readers in 1982, 1992, and 2002 shows a widespread decline in the literary reading rates of people from a range of demographic backgrounds. In fact, literary reading rates decreased for men, women, all ethnic and racial groups, all education groups, and all age groups.

[40] In 1982, only one question was asked regarding poetry reading and listening: "During the last 12 months, did you read, or listen to a reading of, poetry?" In 2002, two separate questions were asked: "During the last 12 months, did you read any poetry?" and "During the last 12 months, did you listen to a reading of poetry, either live or recorded?" Respondents who said "yes" to either of these questions in 2002 are included in Table 18.

[41] The creative writing question asked did not vary much between 1982 and 2002. In 1982, the wording was: "During the last 12 months, did you work on any creative writings such as stories, poems, plays and the like? Exclude any writing done as part of a course requirement." In 1992 and 2002, the wording was: "With the exception of work or school, did you do any creative writing such as stories, poems or plays during the last 12 months?"

[42] The question regarding creative writing lessons or classes did not change between 1982 and 2002. In all three years, the wording was: "Have you ever taken lessons or classes in creative writing?"

The results of the statistical test (chi square) confirm the significance of the widespread decline in literary reading. The statistical test shows that, between 1982 and 2002, there were statistically significant decreases in literary reading for the following demographic groups:

- men and women;
- Hispanic Americans, white Americans, African Americans and other ethnic groups;
- people in all categories of educational attainment; and
- the three age groups under 45 (18-24, 25-34, and 35-44).

There are some differences in the rates of decline among different demographic groups. For example, the decrease in literary reading was more pronounced among men than among women. Figure 5 illustrates a decrease in the male literary reading rate from 49 percent to 37 percent, a drop of 12 percentage points.[43] In contrast, the female literary reading rate decreased from 63 percent to 55 percent, a drop of 8 percentage points. Figure 5 also illustrates the overall decline in literary reading, from 56 percent in 1982 to 47 percent in 2002.

Gender

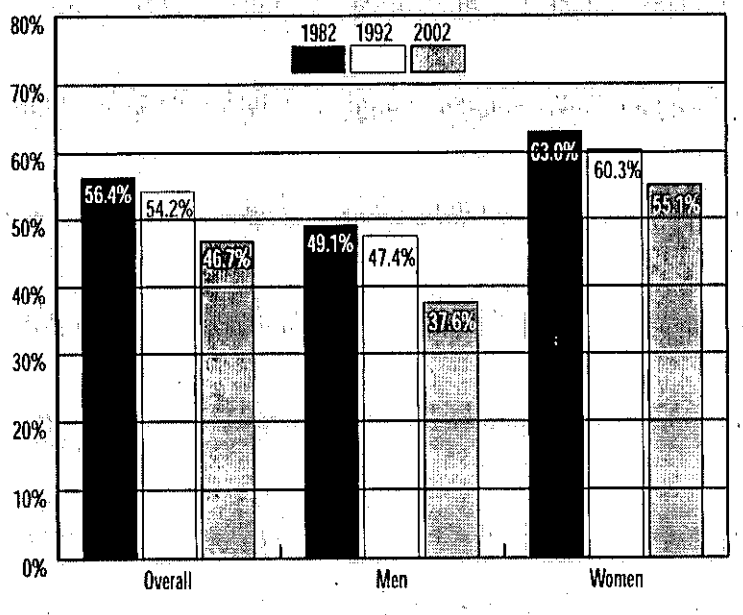
The gap in the literary reading rates between women and men increased between 1982 and 2002. In 1982, the literary reading rate among women (63 percent) was 14 percentage points higher than the rate among men (49 percent). The difference increased to 17 percentage points in 2002, with 55 percent of women and 38 percent of men reading literature. Changes in the *number* of people reading literature depend on two main factors: changes in the literary reading rate and changes in population. Because of the overall 21 percent increase in the population (18 years of age and older), the trends in the number of people reading literature were not as strongly downward as the changes in the literary reading rates.

Different demographic groups saw varying rates of population growth and differing changes in literary reading rates between 1982 and 2002. Consequently, changes in the number of people reading literature varied between demographic groups. Table 21 shows

Table 21
Literary Reading by Gender, 1982, 1992, and 2002
(Millions of U.S. Adults)

	1982	1992	2002	Change	% change
Men	39.5	42.2	36.9	-2.6	-6.6%
Women	56.8	58.5	59.1	2.3	4.0%

Figure 5: Literary Reading Rates by Gender, 1982, 1992, and 2002
Americans 18 years of age or older



Source: 2002 Survey of Public Participation in the Arts

43 This drop in percentage points should not be confused with the "percentage decrease." The drop in percentage points is simply the difference between the literary reading rates in 1982 and 2002. The percentage change relates the difference in rates to the initial reading rate. The percentage change in the proportion of men reading literature was 24 percent between 1982 and 2002, while the percentage change was 13 percent for women.

that the number of male literary readers decreased slightly, from 39 million in 1982 to 37 million in 2002. The number of American women reading literature increased slightly, from 57 million to 59 million between 1982 and 2002.

Race and Ethnicity

Among all four ethnic and racial groups examined, the literary reading rate decreased most strongly among Hispanic Americans. At 36 percent, the literary reading rate of Hispanic Americans was the lowest of all ethnic and racial groups in 1982. This rate decreased by 10 percentage points to 26 percent in 2002. Figure 6 shows that there were significant, but lower, rates of decline in literary reading among white Americans (-8.4 points), African Americans (-5.2), and people of Other ethnic and racial origins (-6.5).

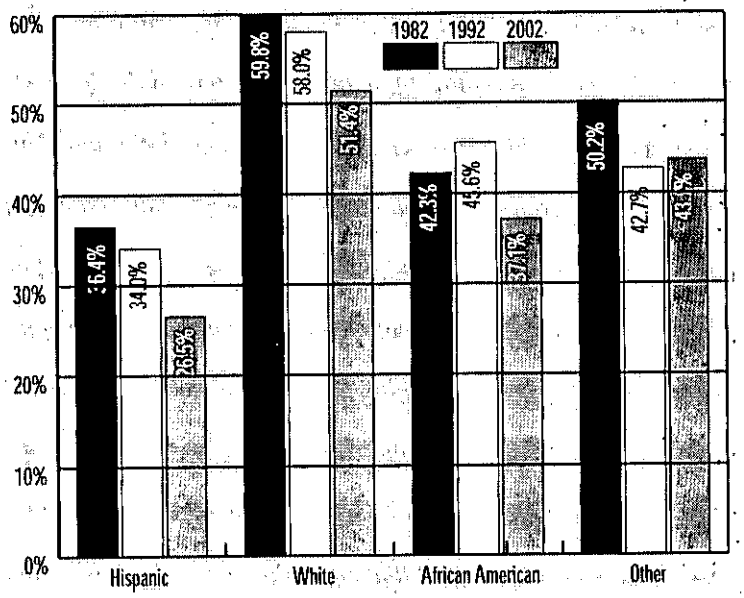
The gap between the literary reading rates of white and Hispanic Americans increased slightly between 1982 and 2002. In 1982, 60 percent of white Americans and 36 percent of Hispanic Americans read literature, for a difference of about 23 percentage points. In 2002, the difference was 25 percentage points.

The gap between the literary reading rates of white and African Americans decreased slightly, from 17 percentage points in 1982 to 14 percentage points in 2002. The gap between the literary reading rates of white Americans and people from other ethnic groups also decreased slightly between 1982 and 2002. In 1982, the gap was nearly 10 percentage points; in 2002, the gap was 6.5 percentage points.

Table 22
Literary Reading by Ethnicity and Race, 1982, 1992, and 2002
(Millions of U.S. Adults)

	1982	1992	2002	Change	% change
Hispanic	3.4	5.2	6	2.6	74.7 %
White	83.3	83.5	77	-6.2	-7.5
African American	7.6	9.5	8.8	1.2	15.4
Other	2	2.4	4.1	2.2	111.5

Figure 6: Literary Reading Rates by Ethnicity And Race, 1982, 1992, and 2002
Americans 18 years of age or older



Source: 2002 Survey of Public Participation in the Arts

At the same time as the literary reading rate decreased very strongly among Hispanic Americans, there was also a sharp increase in the Hispanic American population. Given this population increase, the number of Hispanic Americans reading literature increased by nearly 3 million between 1982 and 2002. This increase, which amounts to nearly 75 percent of the number of Hispanic American literary readers in 1982, is the largest increase in the number of readers from any ethnic or racial group.

There was also significant growth in the African American population and in the population from other ethnic groups. Because of these important demographic shifts, the number of readers from African

American and other backgrounds increased between 1982 and 2002. In contrast, the number of white Americans reading literature fell by more than 6 million between 1982 and 2002. In summary, because of the changing demographics of the U.S., there was an increase in the number of literary readers from all ethnic and racial groups *except* white Americans.

These changes in the number of literary readers are highlighted in Table 22. White Americans represented 80 percent of literary readers in 2002, down from 87 percent in 1982. African Americans constituted 9 percent of literary readers in 2002, a slight increase from 8 percent in 1982. Hispanic Americans comprised 6 percent of literary readers in 2002, up from 4 percent in 1982. Finally, Americans from other ethnic and racial groups represented 4 percent of literary readers in 2002, an increase from 2 percent in 1982.

Education

Figure 7 illustrates that the literary reading rate decreased significantly for people with all levels of educational attainment. In fact, the literary reading rate decreased by 15 percentage points or more for those in all except the lowest education group (grade school only).

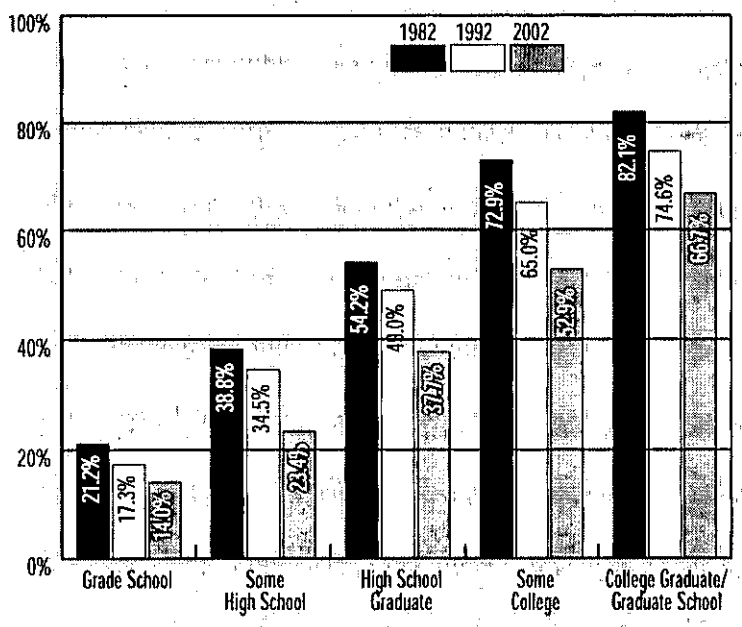
Table 23
Literary Reading by Education, 1982, 1992, and 2002
(Millions of U.S. Adults)

	1982	1992	2002	Change	% change
Grade school	4.2	2.4	1.6	-2.5	-60.9%
Some high school	9.9	7.6	4.7	-5.2	-52.6
High school graduate	33.1	32.6	24	-9.1	-27.5
Some college	26.1	27.2	30	4	15.2
College graduate / Graduate school	23.5	31.1	35.6	12.2	52.0

The gap between the literary reading rates of college graduates and high school graduates remained large but stable between 1982 and 2002. In 1982, the difference between the reading rates of college graduates (82 percent) and high school graduates (54 percent) was about 28 percentage points. By 2002, after a significant drop in the literary reading rates of both groups, the gap was 29 percentage points.

Despite the sharp decreases in literary reading at all education levels, rising levels of education in American society led to an increase in the number of literary readers who had some college education or a college degree. Table 23 shows that the number of readers with a college degree or graduate education increased by about 12 million. The number of literary readers with some college education increased by about 4 million. There were decreases in the number of literary readers at the three other education levels. In particular, the number of literary readers with a high school education decreased by 9 million.

Figure 7: Literary Reading Rates by Education, 1982, 1992, and 2002
Americans 18 years of age or older



Source: 2002 Survey of Public Participation in the Arts

Age Groups

Although literary reading rates decreased between 1982 and 2002, the only statistically significant decrease was for those 18 to 44 years of age. While all three age groups under age 45 dropped in percentage, for those adults 18 to 24 years of age, the literary reading rate decreased from nearly 60 percent in 1982 to 43 percent in 2002 – a drop of 17 percentage points.

Young adults are reading much less than they used to. Making literary reading appeal to teenagers also appears to be a significant problem. Long-term reading assessments, summarized by the National Institute for Literacy, show that:

- a smaller percentage of 13- and 17-year-olds read for fun daily in 1999 than in 1984;
- a smaller percentage of 17-year-olds saw adults reading in their homes in 1999 than in 1984; and
- a greater percentage of 17–year-olds were watching three or more hours of television each day in 1999 than in 1978.[44]

For those in the 25 to 34 age group, literary reading decreased by more than 14 percentage points, from 62 percent in 1982 to 47 percent in 2002. The literary reading rate among those 35 to 44 years of age decreased by 13 percentage points, from 60 percent in 1982 to 47 percent in 2002.

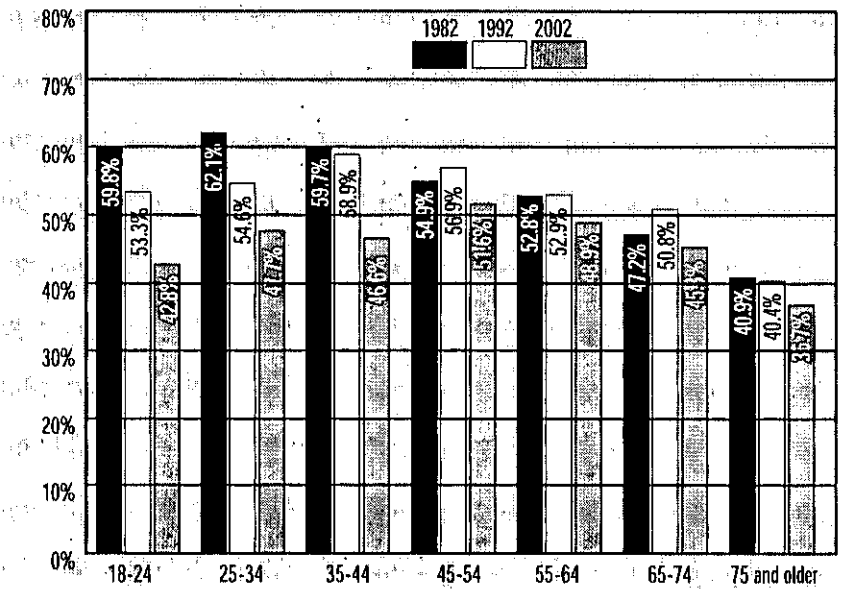
A close examination of Figure 8 also reveals a shift in the popularity of literary reading between 1982 and 2002, especially among the younger age groups. In 1982, the 25 to 34 age group had the highest literary reading rate (62 percent), followed by the 18 to 24 and the 35 to 44 age groups (each 60 percent). In 2002, the literary reading rate of people under 45 did not rank as highly among the seven age groups. In 2002, the 18 to 24 age group had a literary reading rate (43 percent) that placed it sixth among the seven age groups. The 48 percent literary reading rate of those between 25 and 34 ranked third among all age groups, while the 47 percent rate for people between 35 and 44 ranked fourth. People between 45 and 54 had the highest literary reading rate in 2002 (52 percent). For people between 55 and 64, the literary reading rate of 49 percent placed this group second among the seven age groups. The literary reading rates of those between 65 and 74 (45 percent) and people 75 and older (37 percent) ranked these groups fifth and seventh respectively.

In 1982, reading literature peaked between ages 18 and 34, gradually falling off as readers aged. In 2002, fewer younger people are reading literature; the peak age group is 45-54, with sloping off rates at both ends of the spectrum.

Population growth and aging led to increases in the number of people reading literature in all age

Figure 8: Literary Reading Rates by Age, 1982, 1992, and 2002

Americans 18 years of age or older



Source: 2002 Survey of Public Participation in the Arts

[44] See the National Institute for Literacy's online *Reading Facts* available at www.nifl.gov.

groups 35 or older. The increase in the number of literary readers was largest for those between the ages of 45 and 54 (this age group encompasses the largest share of the baby boomer cohort). There were more than 7 million more literary readers in this age category in 2002 than in 1982. This is about double the increase in the number of literary readers between the ages of 35 and 44. For those 55 and older, the increase in the number of literary readers was fairly small. There were significant decreases in the number of literary readers in the 18 to 24 and 25 to 34 age groups. Not only have the percentages fallen for young adults, but the actual numbers of young readers have fallen, despite overall population grown. See Table 24 for full details.

An important question about literary reading concerns trends in age cohorts over time. This section compares the literary reading rates by age in 1982 with the age groups to which those people would belong in 2002. As an example, the literary reading rate of 25 to 34 year olds in 1982 was 62 percent. In 2002, this group of people would have been between 45 and 54. The literary reading rate of this group in 2002 was under 52 percent, a decrease of more than 10 percentage points. Table 25 shows that there has been a substantial decrease in literary reading between 1982 and 2002 for every age cohort. In fact, all of the age cohorts have seen decreases of about 10 percentage points or more since 1982.

Other Leisure Activities

A comparison of the 1982, 1992, and 2002 Surveys of Public Participation in the Arts shows that time spent watching TV has remained stable for those 18 and older. In 1982 and 1992, the average amount of TV watched per day was 3.0 hours. This decreased slightly to 2.9 hours per day in 2002. These figures suggest that TV watching may not be an important factor in the overall decrease in literary reading.

Movies are a popular leisure activity in the United States, but the percentage of people going to at least one movie in a year decreased slightly over the past 20 years, from 63 percent in 1982 to 60 percent in 2002. Although this seems to show that literary reading is not being replaced by moviegoing, it should be noted that it is possible that those who went to the movies in 2002 may have gone to more movies per year (than moviegoers in 1982), leaving them with less time to read literature.

Watching movies at home is also very popular, with many people setting up full "home theaters" to watch movies acquired through satellite or cable connections or the rental of videotape and digital video disks. In 1982, videocassette recorders were just starting to achieve widespread home popularity. Between 1985 and 2000, annual consumer spending on television, radios, and sound equipment increased by 68 percent, from $371 per household in 1985 to $622 in 2000. In comparison, annual spending on reading increased by only 4 percent, from $141 per household in 1985 to $146 in 2000.[45]

Table 24
Literary Reading by Age, 1982, 1992, and 2002
(Millions of U.S. Adults)

	1982	1992	2002	Change	% change
18 to 24	17.8	12.9	11.4	-6.3	-35.7%
25 to 34	24.9	23.1	17.6	-7.3	-29.2
35 to 44	17	23.4	20.5	3.5	20.7
45 to 54	12.7	15.8	20.1	7.4	58.4
55 to 64	12	11.3	12.6	0.6	5.0
65 to 74	7.8	9.3	8	0.2	2.5
75 and older	4.1	5	5.7	1.6	39.3

Table 25
Literary Reading by Age Cohort, 1982 and 2002
(Millions of U.S. Adults)

	1982	2002	Change
18 - 24 in 1982 / 35 - 44 in 2002	59.8%	46.6%	-13.2
25 - 34 in 1982 / 45 - 54 in 2002	62.1	51.6	-10.5
35 - 44 in 1982 / 55 - 64 in 2002	59.7	48.9	-10.8
45 - 54 in 1982 / 65 - 74 in 2002	54.9	45.3	-9.6
55 - 64 in 1982 / 75 and older in 2002	52.8	36.7	-16.1

[45] U.S. Census Bureau, *Statistical Abstract of the United States: 2002*, Table 1212, p. 748.

Summary of Trends in Literature Participation

The statistics presented in this chapter clearly demonstrate that there has been a widespread decline in literary reading over the past 20 years. There were significant decreases in the literary reading rates of Americans from a wide range of demographic groups, including:

- men and women;
- people from all ethnic and racial groups;
- people with all levels of educational attainment; and
- those under age 45.

Poetry suffered between 1982 and 2002 with fewer people reading poetry or listening to live poetry readings or recordings. Creative writing is one of the few literary activities in which a higher percentage of people participated in 2002 than in 1982.

Although nearly half of Americans read literature in 2002, literary participation is clearly less popular than it used to be, possibly due to competition for entertainment time and money from a range of other options, including videogames, movies, and the Internet. Consumer spending data show a significant increase in spending on television, radios, and sound equipment between 1985 and 2000. Because of the overall increase in the population between 1982 and 2002, the trends in the number of people reading literature were not as strongly downward as the changes in the literary reading rates.

For all who are interested in reading habits in America – from the book industry, literacy organizations, and arts funders to governments and businesses that depend on a well-educated, literate workforce – the trends presented in this chapter point to the importance of attracting and exciting readers from a broad range of demographic groups.

Chapter 5: Summary and Conclusions

In a recent essay, "What use is literature?," Myron Magnet stated that "data are meaningless until we can articulate a story that makes sense out of them, and literature makes sense out of the data of human experience."[46]

Who Reads Literature?

Data from the 2002 Survey of Public Participation in the Arts (SPPA) demonstrate that many people enjoy literature. Novels, short stories, poetry, and plays attract almost one-half of those 18 or older (47 percent or about 96 million people). Each part of the literary puzzle examined in this monograph – novels, short stories, poetry, and plays – attracts a significant number of people. Poetry (read by 25 million adults) is about as popular as attendance at jazz performances or at classical music events. About as many people read plays (7 million) as attend live opera or ballet. Novels and short stories have an audience (93 million) that is larger than almost any other cultural or leisure pursuit. A number of people have a particularly strong attachment to books; about one in six literary readers (17 percent) read 12 or more books in 2002.

Americans participate in literature in a variety of other ways. Almost one in ten (9 percent) listened to live or recorded readings of novels or books, and 6 percent listened to poetry readings during the survey year. About 7 percent wrote creative works of their own, and 9 percent used the Internet to learn about, read, or discuss topics related to literature. Most literary readers are active in a wide range of other cultural and leisure pursuits.

Factors in Literature Participation

Those with high levels of education are much more likely to read literature than those with lower levels of educational attainment. Reading and listening to literature are consistently higher for women, urban residents, and, generally, people with higher family incomes. Non-Hispanic white Americans have the highest participation rates of any ethnic or racial group in almost all literature-related activities. One exception to this is the high participation rate of non-Hispanic African Americans listening to poetry.

The pleasure of literature participation appears to be shared fairly equally among those in different age ranges, although the youngest and oldest age groups have the lowest participation rates.

Literary activities are most popular in the West, followed by the Northeast, Midwest and South.

It is not clear from the SPPA data how much influence TV watching has on literary reading. Not surprisingly, a statistical model created to analyze frequent readers found that watching four hours or more of TV per day had a negative impact on the chances of someone reading 12 books or more per year.[47] Watching no TV had a positive impact on the probability of someone reading 12 books or more. Literary readers watch slightly less TV each day than non-readers, and frequent readers watch only slightly less TV per day than infrequent readers. The SPPA results cannot show whether non-readers would read more if they watched less TV, or whether they would use this extra time in other ways.

Literacy rates and levels (see Literacy on page 15) have a significant impact on literature participation. More research into the leisure time habits of well-educated non-readers would be required in order to determine ways of raising literacy in the U.S., although it is evident that people have more arts and entertainment options competing for their leisure time than ever before.

Participation in Other Arts Activities

The 2002 SPPA data show that one of the most important factors in literary reading is participation in other arts activities. Art museum and performing arts attendance are significant indicators for literature participation, even adjusting for education, ethnicity, race, and other factors.

[46] In *City Journal*, Summer 2003, www.city-journal.org.

[47] The details of the statistical models created for this report are included in Appendix C.

Trends in Literature Participation

The percentage of U.S. adults reading literature dropped from 56.4 percent in 1982 to 46.7 percent in 2002 – a decline of almost 10 percentage points. This may indicate a downward trend over the past two decades, but it is important to note that the SPPA is not conducted on a yearly basis. This monograph looks at the surveys held in 1982, 1992, and 2002 – ten-year snapshots. No information is available for non-SPPA years, and it is possible that the 2002 drop is a short, one-year change.

If the 2002 data represent a declining trend, it is tempting to suggest that fewer people are reading literature and now prefer visual and audio entertainment. Again, the data – both from SPPA and other sources – do not readily quantify this explanation.

As discussed in Chapter 3, television does not seem to be the culprit. In 2002, those who do read and those who do not read literature watched about the same amount of TV per day – three hours' worth. The Internet, however, could have played a role. During the time period when the literature participation rates declined, home Internet use soared. According to a 2000 Census Bureau report, 42 percent of households used the Internet at home – up dramatically from 26 percent in 1998, one of the earliest years of the Bureau's tracking.[48] By contrast, literary reading rates reported in 1982 and 1992 were virtually identical in a period before the Internet was widely available. It was not until 2002 that the reported percentage of adults reading literature dropped considerably.

Also, home Internet users have a similar profile to literary readers. They are likely to be well educated (bachelor's degree or higher) and belong to the age group whose reading rates show the greatest percentage drop. Home Internet use was the greatest (50.2 percent) for people ages 25-44. However, this pattern of falling literary reading rates timed with rising home Internet use may only be coincidental. The SPPA did not ask if people substituted Internet surfing for reading literary works.

Demographic factors may have also contributed to the overall decline in literary reading rates. Over the 20-year span of this analysis, Hispanics doubled their share of the total U.S. population, rising from 6.4 percent of the total in 1980 to 12.5 percent in 2003.[49] At the same time, the 2002 SPPA reports that the literary reading rate for Hispanics was only half that of non-Hispanic whites. So, the dramatic population growth of Hispanics may have contributed to lower literary reading rates for the adult population as a whole.

But this assumption has shortcomings. If Hispanic populations were a significant reason for falling rates of literary reading, presumably the SPPA would have reported heavier decreases in literary reading by adults with lower levels of education (given that education levels are lower for Hispanics). Instead, the survey reports that literary reading fell among all education levels. Still, population growth for this ethnic group is considerable. For this reason alone, arts agencies and policy makers may want to target Hispanics for programs to raise literary reading rates.

These are only two factors of many that could have contributed to the drop in the share of adults reading literature in 2002. Newspaper and magazine articles about post-September 11 developments and the war in Afghanistan may have hindered literary reading during the survey year.

Additional data and research are needed to explain why literary reading fell in 2002 and if indeed there is a pattern of decline over time. More research is needed to complete the portrait of the reader of literary works. Some questions for a research agenda and a national conversation on literature participation might include:

- How does literature, particularly serious literary work, compete with the Internet, popular entertainment, and other increased demands on leisure time?

[48] U.S. Department of Commerce, U.S. Census Bureau, "Home Computers and Internet Use in the United States: August 2000," *Current Population Report*, P23-207, September, 2001.
[49] U.S. Department of Commerce, U.S. Census Bureau, "The Hispanic Population," *Census 2000 Brief*, May 2001.

- How do parents, communities, schools, and the education system respond to illiteracy and aliteracy?

- Have changes in the ways publishers choose and market books had any effect on literature participation?

- If education levels are the surest predictor of literature participation, what can be done to increase the reading level by less educated adults?

- What factors are at work in the decline in reading literary works among people ages 18 to 45? Are we losing a generation of readers?

The National Endowment for the Arts and other organizations involved with literature can look forward to future arts participation surveys (the next SPPA is scheduled for 2007) to further investigate who reads literature.

Appendix A

Survey of Public Participation in the Arts Background and Methodology

In 1982, the National Endowment for the Arts (NEA) initiated the Survey of Public Participation in the Arts (SPPA) to examine the public's involvement in a variety of arts and art forms. The survey examines general participation in the performing arts, visual arts, historic site visits, music, and literature.

1982 and 1985 Surveys of Public Participation in the Arts

The U.S. Census Bureau administered the first SPPA in conjunction with the 1982 National Crime Survey, which surveyed over 72,000 individuals. More than 17,000 respondents over 18 years of age were interviewed for the SPPA.

The survey concentrated primarily on live arts participation, consisting of ten questions. The survey asked the live arts questions of all survey respondents. On a rotating basis, it asked questions pertaining to arts education, non-arts leisure activities, arts facilities, music preferences, arts creation and other participation, media engagement, and barriers to attending live performances categories. As a result, the sample sizes for the latter questions were smaller than for the live arts category. Approximately 25 percent of the interviews were completed by phone.

In 1985, the NEA sponsored a second SPPA through the U.S. Census Bureau as part of the newly named National Crime Victimization Survey. It was nearly identical to the 1982 survey.

1992 Survey of Public Participation in the Arts

The third SPPA, conducted in 1992, surveyed 12,736 individuals over 18 years of age and followed the same format as previous surveys. However, questions about arts education, non-arts leisure activities, etc. were asked throughout the year, thereby providing a larger sample size for these questions than in the 1982 survey. Additionally, the NEA refined the survey instrument by adding, omitting, and modifying various questions and sections. For example, the arts education category includes new questions about the location of arts education and if survey respondents had taken arts education lessons in the last year. The survey dropped questions about craftwork lessons. Some questions concerning live attendance, recreation lifestyle, music preferences, arts creation, and media participation were also modified.

1997 Survey of Public Participation in the Arts

From June to October of 1997, the NEA conducted a fourth edition of the SPPA. This survey was not administered through the U.S. Census Bureau's National Victimization Survey. Instead, the NEA retained Westat Corporation of Rockville, Maryland, a private research firm, to conduct a stand-alone telephone survey. Using a random-digit-dial telephone survey plan, more than 12,000 individuals over 18 years of age were interviewed. However, due to the considerable differences in survey methodologies, the 1997 telephone survey produced results that are not comparable to previous or subsequent surveys. The 1997 survey can only be analyzed as a stand-alone, point-in-time survey, and not in an SPPA historical analysis.

2002 Survey of Public Participation in the Arts

In 2002, the NEA sponsored its fifth and most recent SPPA. For the first time, the 2002 SPPA was implemented as a supplement to the U.S. Census Bureau's Current Population Survey (CPS), a research instrument issued monthly to approximately 60,000 households throughout the nation for use by the U.S. Bureau of Labor Statistics. The U.S. Census Bureau weighted each survey record so that the survey sample would reflect the nation's estimated demographic and geographic profile.

A total of 17,135 respondents in the August 2002 CPS participated in the 2002 SPPA. Respondents were asked all of the 2002 SPPA questions, resulting in an

overall sample size applicable to the entire survey.

In general, the 2002 survey instrument followed that used in the 1992 SPPA, only incorporating slight modifications. For instance, the media engagement category added a video (DVD) discs option to questions about watching arts programs via television. The music preferences category added and omitted various music categories, and two new sections were added to the end of the survey. The first new section asked about trips away from home to attend arts events or art museums, and the second new section asked the individual's frequency of reading about, discussing, or accessing information about the arts via the Internet.

Appendix B

Data Collection

Basic CPS

The basic Current Population Survey (CPS) collects primary labor force data about the civilian noninstitutional population. Interviewers ask questions concerning labor force participation about each member 15 years and older in every sample household.

The 2002 monthly CPS sample was selected from the 1990 Decennial Census files with coverage in all 50 states and the District of Columbia. The sample is continually updated to account for new residential construction. To obtain the sample, the United States was divided into 2,007 geographic areas. In most states, a geographic area consisted of a county or several contiguous counties. In some areas of New England and Hawaii, minor civil divisions are used instead of counties. These 2,007 geographic areas were then grouped into 754 strata, and one geographic area was selected from each stratum.

About 60,000 occupied households are eligible for interview every month out of the 754 strata. Interviewers are unable to obtain interviews at about 4,500 of these units. This occurs when the occupants are not found at home after repeated calls or are unavailable for some other reason.

Each month's sample is composed of eight rotation groups that rotate on a schedule of four months in sample, eight months out, and four months back again.

August 2002, Survey of Public Participation in the Arts (SPPA) Supplement

In addition to the basic CPS, interviewers asked supplementary questions on public participation in the arts. Households in the outgoing rotation groups are eligible sample households for the supplement; therefore only 25 percent of the basic CPS households were sampled. The SPPA supplement attempted to obtain self-responses from household members ages 18 and over. Proxy responses were allowed if attempts for a self-response were unsuccessful.

The supplement contained questions about the household member's participation in various artistic activities from August 1, 2001 to August 1, 2002. It asked about the type of artistic activity, the frequency of participation, training and exposure, music preferences, length of travel for trips to artistic events, school-age socializations, and computer usage related to artistic information. Interviews were conducted during the period of August 18-24, 2002.

Appendix C

The main source of information for this research monograph is the 2002 Survey of Public Participation in the Arts (SPPA), conducted in August 2002 by the Census Bureau on behalf of the National Endowment for the Arts. More than 17,000 people 18 years of age or older responded to the SPPA's questions about participation in the arts, including questions about the number and types of books they read. Respondents were asked to respond to the survey questions based on their activities during a 12-month period leading up to August 2002. The response rate to the SPPA was 70 percent.

This appendix provides an overview of two statistical models that were created in preparing this monograph:

1. a model of factors that can be used to predict literary reading in 2002; and
2. a model of factors that can be used to predict frequent reading in 2002
(i.e., reading 12 books or more).

Variables and statistical considerations common to the two models will be discussed first.

Variables

To predict whether or not a person will read literature, some basic background knowledge is required. These basic facts are known as independent variables (conventionally known as x variables) and often include items such as a person's age, gender, ethnic background, education, etc. These examples represent several different types of independent variable; identification of each variable type is pertinent since it determines the statistical technique(s) available. Age could be treated as a continuous variable since it is quantifiable and can be any conceivable value within a specific range (e.g. 45.6667 years old), but is more commonly identified as an interval variable where the difference between each value is measurable and constant (e.g. 44, 45, 46 years old). Ethnic background and gender are examples of categorical variables and measure qualitative characteristics that cannot be quantified. Ethnic background is a typical categorical variable where there are a number of categories with no intrinsic order. Gender is a particular type of categorical variable known as a dichotomy since it can equal only one of two possible values. Similarly, whether a person has read literature could be described as a dichotomous variable (i.e. person has read literature/person has not read literature). In the analysis reported here, whether a person has read literature is also the dependent variable (conventionally known as 'Y') since it is the outcome to be predicted based on a set of independent variables.

Mathematical and Statistical Considerations

The following mathematical and statistical discussion has been derived from Logistic Regression Using the *SAS System: Theory and Application* by Paul D. Allison (1991). Further review can be obtained from Pampel (2000) and Wright (1995) as listed in the References section at the end of this appendix.

Ordinary least squares (OLS) regression or linear regression is the most common statistical technique employed to predict the value of a dependent variable based on a given set of independent variables. In OLS regression, independent variables can be continuous, categorical, or interval. However, if OLS is used to predict the value of a dichotomous dependent variable such as 'literary reading,' violations of the statistical assumptions of ordinary linear regression and a conceptual problem occur. As a result, OLS regression is not suitable to an analysis of literary reading. A demonstration of the conceptual problem can be obtained by setting Y equal to '1' (read literature) or '0' (did not read literature) and then attempting to predict the expected value of Y using a set of dependent variables. Since 0 and 1 are the only possible values for Y, the expected value of Y is equivalent to the probability that Y is equal to 1 (i.e. the probability that a given person read literature).

This can be seen in the following equations where E(Y*i*) is the expected value of Y for any given *i* person:

E(Y*i*) = 1 x Probability (Y*i*=1) + 0 x Probability (Y*i*=0),

and substituting pi = Probability (Y*i*=1)

we obtain E(Y*i*) = p*i*.

Furthermore, application of the statistical assumptions that the error in the expected value of Y does not vary with *x* and that Y is a linear function of *x*, we obtain in its simplest form what is called the linear probability model:

Equation 1

$p_i = \alpha + \beta x_i$.

where α is the Y intercept and β is the regression coefficient or slope. This equation says that the probability that Y=1 is a linear function of *x*. If *x* happens to be a continuous variable that has no upper or lower bound it is theoretically possible to obtain values of Y which are less than 0 or greater than 1. Since linear functions are by nature unbounded, and probabilities by definition cannot exceed 1 or fall below 0, a nonsensical situation with little predictive value arises.

Logistic regression (also called logit analysis) has been developed to address statistical and conceptual issues that arise from the use of OLS with dichotomous dependent variables. Logistic regression can also be used with quantitative and/or categorical independent variables making it an optimal method for social sciences data analyses.

One of the key concepts of logistic regression is the relationship between probability and odds. Odds are commonly used by gamblers and refer to the ratio between the expected number of times an event will occur to the expected number of times an event will not occur. For example, if the odds are 5 to 1 then we expect the event to occur 5 times as many times as not and if the odds are 1/5 then we would expect the reverse. The relationship between probability and odds can be shown as:

Equation 2

O = p/1-p = probability of event/probability of no event

and be rearranging the terms,
p = O/1+O

or more explicitly in the following table:

Probability	Odds
0.1	0.11
0.2	0.25
0.3	0.43
0.4	0.67
0.5	1.00
0.6	1.50
0.7	2.33
0.8	4.00
0.9	9.00

It is clear from the table that if the probability of an event occurring is less than 0.5 that the odds are less than 1. Furthermore, from equation 2 it can be seen that while there is no upper boundary on odds, the lower boundary is still 0. However, by taking the logarithm of the odds the lower boundary can be removed. Starting with the linear probability equation discussed above (Equation 1), followed by changing probabilities to odds (Equation 2) and then taking the logarithm of these odds, we obtain the logit model as shown in the equation below (from Allison, 1991):

Equation 3

$\log (p_i/1-p_i) = \alpha + \beta x_{i1} + \beta x_{i2} + \ldots + \beta k x_{ik}$

where *k* refers to the number of independent variables, $i = 1,\ldots, n$ individuals, and p_i is the probability that Y=1. The term 'log (p_i/1-p_i)' is also known as the logit or log-odds. Natural logarithms tend to be used by most researchers although base-10 logarithms may be used as well.

Multiple Logistic Regression Model to Predict Literary Reading in Adults

Prior to the development of the model, the unweighted 2002 SPPA dataset was examined for trends and correlated variables. The dependent variable was "literary reading in adults" and this was scored as '1' if the respondent had reported reading literature in the previous 12 months and '0' if they did not. The frequency distribution of literary readers and non-readers was investigated for survey responses and lead to the identification of trends and a subset of independent variables most likely to explain whether people read literature or not. These variables were then subjected to a multiple correlation analysis to determine if any were correlated with each other (also called collinear or multicollinear analysis). The independent variables were also correlated with the dependent variable 'literary reading' to further determine which were likely to play the largest role in the prediction of literary reading. Collinearity analyses were performed primarily to eliminate correlated independent variables in the regression model since highly correlated independent variables may result in inflated standard errors and unstable regression coefficients. For example, the education levels of the mothers and fathers of respondents were found to be highly correlated ($r=0.724, p<.001$). At the same time, the mother's education was found to be more highly correlated with literary reading in respondents compared to the father's education. As a result, the father's education variable was eliminated from the final model. Each potential independent variable was examined in this manner prior to construction of the regression model.

Following preliminary exploration of the 2002 SPPA data, the maximum-likelihood estimation method in the PROC LOGISTIC program of the SAS version 8.02 statistical software package was used to develop the logistic regression model. Multicollinearity of independent variables was checked for the variables in the final model using the PROC REG program with the TOL and VIF options. The TOL and VIF options indicate the level of inflation in the variance of each coefficient compared which what it would be if the variable was uncorrelated with any other variable in the model (Allison, 1991).

Table 1 summarizes the results of the final multiple logistic regression to determine statistically significant ($p<0.05$) demographic predictors of literary reading in adults. Table 3 shows the partial correlation coefficients of all significant independent variables for the literary reading and frequent/avid reader logistic regression models. The partial correlation coefficient or r gives a measure of the degree of correlation (positive or negative) between each independent variable and the dependent variable while excluding the effects of all the other variables. The ranking for each variable indicates the relative order of the correlation of each independent variable to the dependent variable.

Coding of Independent Variables

Specific levels of the independent variables within the broad groups of education, gender, ethnicity and race, region, age, annual family income, mother's education, and attendance at an art museum and/or performing arts in the previous 12 months were determined to be statistically significant ($p<0.05$) predictors of literary reading in adults. The variables and their corresponding reference variables are shown in Table 1. Only variables that were statistically significant were included in the model and as a result some levels were grouped together.

All levels of respondent education were found to be statistically significant predictors of literary reading and, as shown in Table 1, were broken into several dummy variables corresponding to grade school only, some high school, some college, college graduate, and graduate school. Each survey respondent was assigned a '1' for the highest education level achieved and a '0' for all other education levels. High school graduation was used as the reference variable for odds ratio interpretation.

Gender was coded '1' for male and '0' for female and by default female was the reference variable (for

dichotomous variables the reference variable is the one coded as '0'). Ethnicity and race were initially divided into 'Hispanic,' 'non-Hispanic white,' 'non-Hispanic African American,' and 'other' ethnic groups. In the final analysis, cases belonging to the 'other' ethnic category were eliminated since this category was not found to be statistically significant. 'Hispanic' was set as the reference variable. The remaining respondents were coded as '1' for the ethnicity and race category to which they belonged and '0' for all others.

Respondents were also divided into Northeast, Midwest, South, and West depending on the region of residence. Northeast was set as the reference variable and respondents were coded as '1' depending on residence and coded as '0' for all other regions.

Since the only age group found to be a significant predictor of literary reading was the 18-24 group, the variable age was set so that correspondents were given a score of '1' if they were aged 18-24 and a score of '0' if they were aged 25 or over.

Similarly, income was broken into two categories; respondents were coded as '1' if their income was less than $10,000 or if they did not report their income, otherwise they were coded as '0'.

The respondent's mother's education variable was scored as '1' if the respondent's mother attended at least some college and as '0' if she did not.

The arts attendance variable was broken into three dummy variables. Attendance at either an art museum or a performing arts event in the previous year resulted in a score of '1' for the first variable. Attendance at both an art museum and a performing arts event in the previous year was scored as '1' for the second variable. Otherwise respondents were coded as '0'. The variable 'attended neither' was used as the reference variable for odds ratio interpretation.

Interpretation of Regression Coefficients, Standard Error and Odds Ratios

Table 1 illustrates the regression coefficients, the standard error associated with each coefficient, and the odds ratios including the 95 percent confidence interval for each statistically significant predictor of literary reading in adults. The regression coefficient for each variable measures the effect of that particular variable alone on the log-odds that a person read literature, given that all other variables are equal. Examination of the predictor variable 'Graduate school' reveals that the coefficient for the regression model is 0.8725 which is the logged odds that a person with this education level read literature (see equation 3) with all other factors held constant. By taking the inverse of the natural log of this coefficient ($e^{0.8725}$) we obtain the odds ratio point estimate of 2.393. This means that, everything else being equal, the odds of a person who went to graduate school reading literature is more than twice that of a person whose education ended with high school graduation. (High school graduation is the reference variable for the odds ratios for all education variables in this model.). Put another way, the odds of a person who graduated from high school (and didn't continue to college) reading literature is 0.4178 or 42 percent of the odds of a person who went to graduate school (i.e. 1/2.393) reading literature. The interpretation of the odds ratios for dichotomous variables such as 'gender' is identical. In this case, the chances of a male reading literature (net of the effects of all other predictor variables) are less than half (0.431) of the chances of a female reading literature. For each odds ratio point estimate the corresponding 95 percent confidence limit was calculated using the standard error for the regression coefficient and outlines the degree of sampling variability in that coefficient.

At the bottom of Table 1 the proportion of correctly identified cases, false positives and false negatives at the 0.500 probability level is given for the regression model. These statistics give the proportion of observed cases which would be classified correctly using the set of independent variables identified in the given model when the calculated probability of being a literature reader is 0.500 or higher. These statistics also estimate the proportion which would be classified as literary readers when they were not (false positives),

and the proportion classified as non-literary readers when in fact they did read literature (false negatives).

Multiple Logistic Regression Model to Predict Reading of 12 or More Books Per Year in 2002

("Frequent" and "avid" readers)

The goal of the second statistical model is to predict whether literature-reading adults were likely to read 12 or more books based on the same set of demographic predictor variables as in the previous analysis. Prior to the construction of the logistic regression model based on the unweighted 2002 SPPA dataset, all data from respondents who did not read literature in the previous year were eliminated. The dependent variable was 'frequent/avid reader' and the remaining respondents were given a score of '1' if they reported reading 12 or more books in the previous year and '0' if they had not.

The maximum likelihood estimation method within the PROC LOGISTIC program was used to construct the logistic regression model as previously described. Multicollinearity of independent variables within the final model was analyzed as in the previous model.

Table 2 provides a summary of the final multiple logistical model containing the statistically significant ($p<0.05$) predictors of readers of 12 or more books per year. The regression coefficients, standard errors, p values and reference variable interpretation are as before. The odds ratio point estimates (with 95 percent confidence intervals) give the odds of being a frequent/avid reader for each particular variable, all other variables being equal. The multiple correlation analysis of the predictor variables is shown in Table 3.

Coding of Independent Variables and Interpretation of Odds Ratios

Specific levels of the independent variables (education, gender, ethnicity and race, television viewing habits, age, employment, mother's education, participation in charity/volunteer work, and attendance at art museums and performing arts events) were shown to be significant ($p<0.05$) predictors of whether or not an adult read 12 or more books in the previous 12 months. As before, only variables that were statistically significant were included in the model. The results are summarized in Table 2.

Respondents with at least some college (coded as '1') were predicted to be nearly 28 percent more likely to be a frequent/avid reader (everything else being equal) than those with a high school diploma or less (coded as '0').

Gender of the correspondent was coded as '1' if male and '0' if female. Analysis of the odds ratios suggested that males are 0.633 times as likely as females to read 12 or more books in a year.

Analysis of the ethnicity and race variables indicated that within this category, only the non-Hispanic white group was a statistically significant predictor of frequent/avid reading. As a result, respondents were scored as '1' if they were non-Hispanic white Americans and '0' if they were Hispanic Americans, non-Hispanic African Americans, or from another ethnic or racial group. The logistic regression analysis suggested that non-Hispanic white people were 1.6 times as likely to fall into the frequent/avid reader group compared with all the other ethnic and racial groups.

Television viewing habits were broken into three dummy variables: 0 hours of television watching per day, 1-3 hours per day, and 4 or more hours per day. The group corresponding to 1-3 hours of television per day was set as the reference variable and respondents were scored as '1' for the television viewing class to which they belonged and '0' for all others. Examination of the odds ratios reveals that people who watch no television are 1.475 times as likely to read 12 or more books in a year than those who watch 1-3 hours per day. Alternatively, those who reported watching 4 or more hours of television per day would be expected to be only 88 percent as likely to read 12 or more books compared with those in the 1-3 hour reference group.

The variable 'age' was divided into two groups representing respondents less than 45 years old (scored as '1') and those aged 45 or older (scored as '0'). The logistic regression model predicts that respondents

under the age of 45 were only 63 percent as likely to be frequent/avid readers compared with those aged 45 or greater.

Respondents who were not in the labor force were given a score of '1' while those who were in the labor force (unemployed or employed) were scored as '0'. The odds ratio analysis suggested that respondents who were not in the labor force were more likely (17 percent) to be frequent/avid readers than those who self-identified as being in the labor force.

The respondent's mother's education variable was scored as '1' if the mother attended at least some college and as '0' if she did not. Respondents whose mothers attended college were nearly 20 percent more likely to be frequent/avid readers than those whose mothers had a high school diploma or less.

The variable 'charity work' was scored as '1' if respondents reported participation in volunteer or charity work in the previous year and as '0' if they did not. Participation in charity work is associated with a 26 percent increase in the odds of being a frequent/avid reader compared to those who did not perform volunteer or charity work.

Attendance at both an art museum and a performing arts event was a significant predictor of reading 12 or more books in a year. Respondents were scored as '1' if they attended both an art museum and performing art event, and '0' if they only attended one or didn't attend either in the previous year. Respondents who attended both were 2.6 times as likely to be a frequent/avid reader compared with those who attended one or neither activity.

References

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Appendix Table 1
Summary of Multiple Logistic Regression Predicting Whether Adults have Read Literature (n=16,183).

Variable		Regression Coefficient	Standard Error	p value
	Intercept	-0.8747	0.0843	<0.0001
Education	Grade school	-0.8454	0.1029	<0.0001
	Some high school	-0.434	0.0707	<0.0001
	Some college	0.3279	0.0456	<0.0001
	College graduate	0.5652	0.0574	<0.0001
	Graduate school	0.8725	0.078	<0.0001
Sex	Male	-0.8423	0.0369	<0.0001
Ethnicity & Race	Non-Hispanic white	0.6186	0.0711	<0.0001
	Non-Hispanic African American	0.2701	0.0913	0.0081
Region	Midwest	-0.1434	0.053	0.0068
	South	-0.2264	0.0516	<0.0001
	West	0.1296	0.0557	0.02
Age	Young (under 25)	-0.1599	0.0635	0.0118
Income	Low or not reported	-0.1813	0.0494	0.0002
Mother's Education	At least some college	0.3871	0.0482	<0.0001
Arts Attendance	Art museum OR performing arts	0.9654	0.0437	<0.0001
	Art museum AND performing arts	1.7851	0.058	<0.0001

At the 0.5000 probability level, the proportion of cases correctly classified with the model above is 71.3%; the false positive rate is 26.8%; and the false negative rate is 30.2%.

Odds Ratios			
Reference Variable	Point Estimate	Lower 95% Con. Limit	Upper 95% Con. Limit
High school graduate	0.429	0.351	0.525
as above	0.648	0.564	0.744
as above	1.388	1.269	1.518
as above	1.76	1.572	1.97
as above	2.393	2.054	2.788
Female	0.431	0.401	0.463
Hispanic	1.856	1.615	2.134
as above	1.31	1.095	1.567
Northeast	0.866	0.781	0.961
as above	0.797	0.721	0.882
as above	1.138	1.021	1.27
Age 25+	0.852	0.753	0.965
Reported income > $9,999	0.834	0.757	0.919
High school or less	1.473	1.34	1.619
Attended neither	2.626	2.41	2.861
Attended neither	5.96	5.32	6.677

Appendix Table 2
Summary of Multiple Logistic Regression Predicting Whether Adults have Read 12 or More Books (n=7,555)

Variable		Regression Coefficient	Standard Error	p value
	Intercept	-0.9113	0.0915	<0.0001
Education	At least some college	0.2432	0.0577	<0.0001
Sex	Male	-0.4575	0.0517	<0.0001
Ethnicity & Race	Non-Hispanic white	0.4898	0.0725	<0.0001
TV Viewing (hours/day)	none	0.3889	0.114	0.0006
	4 or more hours	-0.1273	0.061	0.0369
Age	<45 years old	-0.4538	0.052	<0.0001
Employment	Not in Labor Force	-0.1599	0.0569	0.005
Mother's Education	At least some college	0.177	0.0554	<0.0014
Charity Work	Some volunteer/charity work	0.2337	0.0501	<0.0001
Arts Attendance	Art museum AND performing arts	0.3738	0.0542	<0.0001

At the 0.5000 probability level, the proportion of cases correctly classified with the model above is 62.3%; the false positive rate is 42.7%; and the false negative rate is 36.4%.

Reference Variable	Odds Ratios Point Estimate	Lower 95% Con. Limit	Upper 95% Con. Limit
High school or less	1.275	1.139	1.428
Female	0.633	0.572	0.7
African American, Hispanic and other	1.632	1.416	1.881
1-3 hours	1.475	1.18	1.845
as above	0.88	0.781	0.992
Age 45+	0.635	0.574	0.703
In Labor Force (Unemployed or employed)	1.173	1.05	1.312
High school or less	1.194	1.071	1.33
No volunteer/charity work	1.263	1.145	1.394
Attended only one or didn't attend either	1.453	2.41	2.861

Appendix Table 3
Correlation Analysis of Predictor Variables in the Literature Reading and Frequent/Avid Book Reading, Logistic Regression Models

Independent Variable		y*	Rank
Education	Grade school	-0.159	6
	Some High School	-0.155	8
	Some College	0.072	14
	College Graduate	0.167	5
	Graduate School	0.168	4
Sex	Male	-0.179	3
Ethnicity & Race	Non-Hispanic White	0.156	7
	Non-Hispanic African American	-0.077	12
Residence	Midwest	-0.008	16
	South	-0.084	11
	West	0.073	13
Age	Young	-0.034	15
Income	Low/Not Reported	-0.093	10
Mother's Education	At least some college	0.207	2
Arts Attendance	Art museum OR Performing Arts	0.155	9
	Art museum AND Performing Arts	0.327	1

* indicates the partial coefficient ('r) and is a measure of the degree of correlation between the independent variable and the dependent variable excluding the effects of all the other variables. All pa reading correlation (this variable was statistically significant in the regression model, see Appendix Table 1).

Independent Variable		y*	Rank
Education	At least some college	0.084	6
Charity Work	Volunteer or Charity Work	0.103	3
Sex	Male	-0.101	5
Ethnicity & Race	Non-Hispanic White	0.104	4
Television Viewing	None	0.047	9
	4+ hours/day	-0.047	10
Age	<45	-0.113	2
Employment	Not in labor force	0.048	7
Mother's Education	At least some college	0.056	8
Arts Attendance	Art museum AND Performing Arts	0.129	1

ıtial correlation coefficients are statistically significant at the $p<0.001$ level with the exception of the variable "Midwest" in the literature