

NEA GUIDE TO THE U.S. ARTS AND CULTURAL PRODUCTION SATELLITE ACCOUNT

*INCLUDING A BLUEPRINT FOR
CAPTURING THE ECONOMIC VALUE OF ARTS AND
CULTURAL WORKERS AND VOLUNTEERS*



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Produced by the Office of Research & Analysis

Sunil Iyengar, Director

Bonnie Nichols, Research Analyst

Other staff contributors: Steven Shewfelt and Tamika Shingler

Editorial assistance by Don Ball and Rebecca Gross

Designed by Kelli Rogowski

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TABLE OF CONTENTS

Preface.....	v
PART I: Accounting for the Nation’s Arts and Cultural Industries: Why, What, and How?	1
Section 1. Why a Satellite Account on Arts and Culture?	1
Section 2. What Does the ACPSA Measure?	3
Section 3. How Were the ACPSA Commodities and Industries Selected?.....	9
Table 3. Commodities Included in the ACPSA.....	15
Section 4. Future ACPSA Products and Frequently Asked Questions.....	18
FAQs.....	20
PART II: Accounting for the Nation’s Arts and Cultural Workforce.....	22
Section 1. Adding Value to the Satellite Account: A New Taxonomy for Arts and Cultural Occupations	22
Section 2. Locating All Occupations (Arts and Non-Arts) Within Arts and Cultural Industries..	31
Section 3. Computing the Monetary Value of Arts and Cultural Volunteers.....	34
List of Tables Accompanying Part II and Online	37
Acknowledgements	38
APPENDIX A.	39
Understanding Industry Classifications	39
APPENDIX B.	40
Illustration of the Standard Occupation Classification System.....	40
References and Further Reading	42

PREFACE

In 2012, the National Endowment for the Arts (NEA) and the U.S. Department of Commerce's Bureau of Economic Analysis (BEA) agreed to devise a system for valuing arts and culture as a distinct sector of the nation's economy.

Thereafter, in consultation with the NEA, the BEA made arrangements to track a cohort of arts and cultural commodities and industries and compute their annual impact on gross domestic product (GDP). The result is the first-ever U.S. Arts and Cultural Production Satellite Account (ACPSA), preliminary estimates from which are being released with this guide.

The timing is propitious. In this year of the first release of ACPSA data, the BEA already has taken steps to account for arts and cultural contributions more comprehensively.

In the spring of 2013, the BEA announced that it would begin to consider spending on "artistic originals" (i.e., films, long-running TV shows, theatrical play scripts, books, music recordings, commercial stock photography, and greeting card designs) as capital assets rather than as expenses. In retrospect, the move added more than \$70 billion to the GDP in 2012. (This revision occurred outside the ACPSA development process, and while the result is not reflected in the account's preliminary estimates, it will show up in future iterations.)

Other countries also have shown the way. Economists in the UK, Canada, Australia, Spain, and Colombia, to name a few examples, have proposed or established arts-related satellite accounts for their countries—whether the organizing principle is creative production, cultural activity, or some hybrid of both concepts.

In working with the BEA staff to design the ACPSA framework, the NEA Office of Research & Analysis has taken every opportunity to avail of these resources. This white paper is partly an attempt to repay the debt, by taking the reader through the U.S. process for assigning economic value to industries and commodities.

The first part of this paper, then, explains what a satellite account is, what types of information it ultimately will provide, how the BEA and NEA tackled complex issues of definition, and which commodities, in whole or in part, are represented by existing data.

Midway through work on the satellite account, however, the NEA's research staff decided that the white paper could serve a second purpose. In conversations with multiple stakeholders about the ACPSA project, there frequently arose confusion—or, at any rate, unanswered questions—about how the choice of arts and cultural commodities might bear on future recognition of arts/cultural workers (and not just industries) as a critical component of economic value.

This line of inquiry led NEA researchers to advance a new taxonomy of arts and cultural occupations, to supplement use of the commodities that appear in the satellite account. This list stems from an evaluation of Bureau of Labor Statistics occupation codes, but it allows for individual and combined estimates of economic value—which, again, may be examined profitably alongside the ACPSA.

Another method presented here is more empirical. Instead of a top-down approach for determining which occupations merit inclusion in an arts/cultural workforce taxonomy, this method consists of analyzing the presence of all types of occupation within arts and cultural industries, and reporting financial data on the occupations that are the most highly represented within each industry.

This paper, therefore, serves jointly as a guide to the ACPSA in its first year and as a blueprint for building a comparable robustness in the methodology used to track arts and cultural occupations at the U.S. level. Likewise, a section on capturing the economic value of the nation's arts/cultural volunteers supports the NEA's long-term aim of more comprehensive accounting for this sector.

Economic outcomes from the arts fall into one domain of impacts under investigation by the NEA as part of its strategic plan and five-year research agenda. According to the plan, the NEA seeks to "advance public knowledge about the arts' contributions to American life."

Other research projects bid to achieve the following goals: to quantify audience members' levels of engagement with NEA-funded arts programming; to track the long-term relationship between the arts and livability in communities throughout the nation; evaluate the effects of creative arts therapies in military personnel experiencing psychological illnesses and mild traumatic brain injury; and to address knowledge gaps concerning the arts' link to human development at every stage of the lifespan. For many of these studies, the NEA is collaborating with one or more federal agencies to realize a shared objective. The BEA satellite account is a flagship instance of such ventures.

Finally, the length of this paper and the variegated ground it attempts to cover are testimony to the wide-ranging ambition behind satellite accounts in general. As the BEA has noted, they are regarded as laboratories for distilling fine-grained information about sectors that are treated more summarily in the main industry accounts. As the NEA embarks on the second year of this experiment with the BEA, we hope this white paper will illumine the factors and choices that informed the account's creation, even while we know that there will be ample scope for improvement in the months ahead.

Sunil Iyengar
Director, Research & Analysis
National Endowment for the Arts

PART I: ACCOUNTING FOR THE NATION'S ARTS AND CULTURAL INDUSTRIES: WHY, WHAT, AND HOW?

Section 1. Why a Satellite Account on Arts and Culture?

The Bureau of Economic Analysis (BEA), nestled within the U.S. Department of Commerce, produces a system of accounts that measure what the U.S. economy produces, how much is earned by that production, and how earnings are spent. The BEA's **national income and product accounts** (NIPAs) include **gross domestic product** (GDP)—which captures the final value of the goods and services produced in the United States over a given period—and **personal consumption expenditures** (PCE), which make up 70 percent of the total value of U.S. GDP.

Complementing the NIPAs are the BEA's **industry accounts**, which provide a framework to measure and analyze, by industry, the production of goods and services. These accounts depict the internal workings of the U.S. economy.

The BEA releases industry accounts in two main formats. The first are the annual industry accounts, which report estimates for 65 industries, and the second are the “benchmark” industry accounts, which are released every five years and contain data for 425 detailed industries. For example, the BEA's *annual* industry accounts show that the performing arts, spectator sports, and museums, combined, added \$83 billion to the U.S. economy in 2011. The more detailed *benchmark* accounts, by contrast, reveal that the performing arts, as distinct from sports and museum industries, contributed \$7.2 billion to GDP in 2002.

Despite the wealth of information available from the BEA's industry accounts, they do not visibly capture every aspect of the economy. **Satellite accounts**, alternatively, expand the capacity of the national accounting system. Linked to, but distinct from, the main industry system, they cut across sectors and arrange industry data to show detail without overburdening the main industry accounts. Because they are supplemental, satellite accounts also permit conceptual development—in effect, they can serve as laboratories for economic accounting.

The BEA, for example, produces a satellite account on travel and tourism (the Travel and Tourism Satellite Account, or TTSA)¹. Travel and tourism services are provided, in either large or small part, by a variety of industries spanning accommodation, transportation, entertainment, and retail sales. Consequently, the value of travel and tourism is not evident in the main system of accounts.

To illustrate: the BEA estimates that 75 percent of the services provided by the accommodations industry (e.g., hotels and B&Bs) relate to travel and tourism, while 13 percent of gas-station sales stem from

¹ In addition to the TTSA, the BEA has produced a satellite account on transportation (last updated in May 2000) and is in the midst of producing a satellite account on healthcare. For more information, see the References section for BEA's literature on these accounts.

travel and tourism. The TTSA teases out the portion of each relevant industry's travel and tourism production to arrive at a total for the sector—in 2011, travel and tourism added \$415 billion to the U.S. economy.

A Satellite Account on Arts and Cultural Production

Arts and cultural production is included in the GDP and in the BEA's central industry accounts. However, economic contributions specific to the arts are lost in the aggregated industry figures. To draw out these details for the production of arts and cultural goods and services, therefore, the NEA and the BEA agreed to develop an Arts and Cultural Production Satellite Account (ACPSA). This account will ensure, for example, that estimates for the performing arts are reported not only in aggregate, but also for specific commodities such as theaters, dance troupes, and symphony orchestras.

Moreover, there are a number of industries whose production is only partly related to arts and culture. To include the entire amounts produced by these industries would falsely inflate the economic value of the arts and culture, while excluding the industries in their entirety would result in underestimation.

To rectify this matter, the ACPSA, like the TTSA, includes only the share of production related to the arts. For example, the ACPSA includes only the percentage of software publishing related to computer games, computer-assisted design (CAD), and other arts-related software. Similarly, entries for computer design systems (a professional services industry) are restricted to production supporting the motion picture and sound recording industries. The ACPSA also includes fractional production by advertising services, educational services (e.g., colleges and universities), and printing, to name a few.

As a satellite account, the ACPSA has the flexibility to comprehensively measure arts and cultural production in the U.S., providing an unprecedented amount of detail about the economic value created by this sector.

Section 2. What Does the ACPSA Measure?

Before addressing the commodities and industries captured by the ACPSA, it is helpful to understand some of the inner workings of the account. This section summarizes the data sources used to generate the account. It introduces the concept of “I-O” tables and their resulting measures such as consumption and value added, which are part of the BEA’s framework for measuring economic activity.

At the time of producing this white paper, the NEA did not have access to the 2013 ACPSA, then in the final stages of preparation. The examples shown below, consequently, draw on figures for motion picture and sound recording industries reported in the BEA’s most recent 2011 *annual* industry accounts.

Data Sources

The BEA uses a wide range of data sources and methods to prepare the National Income and Product Accounts (NIPAs) and industry estimates. Data produced by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics are key data sources, as are government administrative data such as tax returns.

Because they do not interfere with the BEA’s main industry estimates, satellite accounts can also draw from less conventional data sources, including data collected by private industry.

Below is a partial summary of data sources the BEA used or accessed in preparing the ACPSA:

Data from the U.S. Census Bureau

Economic Census; Services Annual Survey (SAS); Non-Employer Statistics; Census of Governments

Among the most important data sources used by the BEA is the Economic Census,

which is conducted by the U.S. Census Bureau in years ending in “2” and “7.” The Economic Census provides the most comprehensive data available in terms of industry coverage and in the measurement of the economic units in those industries.

In addition to the five-year Economic Census, the BEA also draws from the Census Bureau’s annual surveys of business establishments. The Service Annual Survey (SAS) is sent to 72,000 service businesses (both taxable and tax-exempt) with paid employees. Many of the industries included in the ACPSA are service industries, including motion picture and sound recording, publishing, designer services, and the performing arts.

Workers in a number of arts and cultural occupations, however, report high rates of self-employment. For example, 68 percent of writers and authors are self-employed, as are 60 percent of photographers, art directors, and craft artists.

The ACPSA measures the production and earnings of the self-employed through the Census Bureau’s non-employer statistics, which are based, in turn, on Schedule C attachments to IRS Form 1040, U.S. Individual Income Tax Return. The Schedule C applies to the self-employed if the primary purpose of the work is to generate income or profit and the work is done regularly. If these criteria are met, Schedule C attachments are required of self-employed workers with business income of \$400 over and above expenses.

The ACPSA also includes arts and cultural production by government, including government-operated libraries and museums. Source data for these estimates includes the Census of Governments, which, like the Economic Census, is conducted by the Census Bureau every five years, for years ending in “2” and “7.”

Data from the U.S. Bureau of Labor Statistics and the U.S. Department of Labor

Quarterly Census of Employment and Wages; Consumer Expenditure Survey; LM2 Reports

The Quarterly Census of Employment and Wages (QCEW) program produces a comprehensive tabulation of employment and wage information for workers covered by unemployment insurance programs.² The QCEW program publishes employment and wage data down to the six-digit NAICS industry level, if disclosure restrictions are met.

Conducted by the Census Bureau for the BLS is the Consumer Expenditure Survey (CES), which consists of interview and diary components. The CES is the only federal survey to provide information on the complete range of consumers' expenditures and incomes.

The ACPSA includes estimates for arts-related unions such as organizations representing stage and screen actors. Labor organizations with \$250,000 or more in total annual receipts are required to file LM-2, the Labor Organization Annual Report, with the Office of Labor-Management Standards within the Department of Labor.

Data from Non-Government Sources

The ACPSA also draws on non-government source data. For example, the ACPSA includes the construction of educational and recreational buildings such as libraries and museums. These estimates were derived, in part, from data supplied by McGraw Hill Construction, part of McGraw Hill Financial.

As another example, detail within the architectural services industry was estimated using the Work-on-the-Boards

² Excluded from the QCEW are members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system.

Survey and Panel, which is conducted by the American Institute of Architects' Economics and Market Research Group.

NAICS Codes

Central to the workings of the ACPSA is the North American Industrial Classification System (NAICS), a two- through six-digit hierarchical classification system that groups business establishments (page 39) into industries according to similarity in the process used to produce goods and services. As explained by the U.S. Census Bureau, each digit in the NAICS code is part of a series of progressively narrower categories: more digits in the code mean greater classification detail.³

Additionally, NAICS definitions are revised and incorporated into the BEA's industry framework on a five-year basis. The current iteration of the ACPSA is measured using 2002 NAICS definitions, while the second wave of the account (planned for release in the fall of 2014) will reflect 2007 revisions.

Revised industry classifications update the accounts to more accurately portray the dynamic U.S. economy and permit better international comparisons with economic data from other countries. For example, the ACPSA includes "Internet publishing and broadcasting" among its arts and cultural industries. The 2002 reclassification better accounted for this industry than did the previous (1997) classification, which combined Internet publishing and broadcasting with other industries, such as newspapers and periodicals.

Appendix A illustrates the NAICS hierarchy for performing arts industries.

The Inner Workings of the ACPSA: I-O Accounts

While it is beyond the scope of this document to attempt to fully explain the

³ Please see Appendix A for an illustration of the NAICS hierarchy.

BEA's methods of calculating national income and product accounts (NIPA) and industry estimates, this section draws on the agency's annual industry accounts to highlight the ACPSA's inner workers through "input-output" (I-O) accounts.⁴

As a satellite account, the ACPSA expands on the BEA's main industry accounts, which, in turn, consist of the "input-output" (I-O) accounts that trace the flow of goods and services among industries in the production process.⁵ I-O accounts, as the BEA explains, show the interdependence among the producers and the consumers in the U.S. economy. Two main tables in the I-O accounts are the standard "make" and "use" tables.

The standard make table shows the value of commodities (e.g., goods, merchandise, or services) produced by each industry in a given year. For example, virtually all motion picture and sound recording merchandise and services are produced by motion picture and sound recording industries (NAICS 512)—\$102.7 billion in 2011.⁶

The standard use table, alternatively, is a matrix showing the use of commodities by industries as "intermediate inputs" and by "final users" in a given year.

Intermediate and Final Uses

Of the \$102.9 billion in motion picture and sound recording commodities produced in 2011, roughly 60 percent were purchased as intermediate inputs—i.e., the goods and services that are used in the production process to produce other goods and services.

The remaining 40 percent of motion picture and sound recording merchandise and services produced were bought by "final users," composed of: U.S. consumers, who make up a large majority of final users; U.S. businesses; and foreign purchasers (exports). In 2011, U.S. consumers purchased \$36 billion in motion picture and sound recording merchandise and services—86 percent of all final-use purchases. An additional \$11.1 billion was exported to foreign purchasers, while the U.S. imported \$5.2 million.

Change in private inventories shows that, in 2011, \$156 million more in motion picture and sound recording merchandise and services was sold than produced—businesses drew down their inventories. Selling more than what was produced in a given period, a year in this case, is a sign that motion picture and sound recording industries may step up production in the next year.

⁴ Readers interested in a full explanation of the BEA's methods of calculating NIPAs and industry estimates should refer to the bureau's technical documentation, shown in the references section of this document.

⁵ Because the I-O accounts drive the BEA's industry estimates, I-O accounts are also released on annual and five-year benchmark timeframes. The most recent annual I-O accounts report estimates for 2011, while the current benchmark I-O accounts are shown for 2002.

⁶ The BEA's make table reports that computer systems design industries and miscellaneous professional, scientific, and technical services industries produced \$481 million and \$156 million, respectively, in motion picture and sound recording commodities in 2011.

BUSINESS ESTABLISHMENTS VS. ENTERPRISES:

Madison Square Garden as an Example

The ACPSA measures arts and cultural production by business *establishments*. The U.S. Census Bureau defines a business establishment as a single physical location where business is conducted or where services or industrial operations are performed. An enterprise, on the other hand, may consist of more than one location performing the same or different types of economic activities.

As an illustration, the Madison Square Garden Company is a sports, media, and entertainment *enterprise*. Madison Square Garden *establishments* include Radio City Music Hall (home to the Rockettes), the Beacon Theater, the Chicago Theatre, the Forum, and the Madison Square Garden Arena. Each of these establishments falls into NAICS 71131, “promoters of performing arts, sports, and similar events, with facilities,” which is “partially” in scope of the ACPSA. (In other words, the ACPSA restricts production from this industry to the performing arts.)

The Madison Square Garden Company also owns and operates Fuse, a music television network within broadcasting, which is another industry captured by the ACPSA.

Because BEA’s 2011 annual tables were produced prior to the 2013 revisions to the national accounts, they do not capture artistic originals (e.g., movies and music recordings) as investments.⁷ Consequently, “private fixed investment,” in 2011, was zero for motion picture and sound recording commodities.

Key Measures of Arts and Cultural Production

Industry Output and Value Added

Two key measures provided by the ACPSA are “industry output,” and its closely related measure, “value added.”⁸ Industry output is the market value of the goods and services produced by an industry. Value added, alternatively, is gross domestic product by industry.

Industry output includes sales or receipts and other operating income, commodity taxes (e.g., sales and property taxes), and inventory change.⁹ Value added is industry output minus intermediate inputs (i.e., energy, raw materials, semi-finished goods, and purchased services)—i.e., value added is the industry’s contribution to the national GDP.

$$\begin{array}{r} \text{Industry Output} \\ - \text{Energy Costs, Raw Materials, etc.,} \\ \hline \text{Value Added} \end{array}$$

In 2011, industry output for motion picture and sound recording industries was \$103.6 billion. This figure, however, includes the goods and services used by motion pictures and sound recording, but not produced by

⁷ See the text box on artistic originals in Part I, Section 4.

⁸ In the BEA’s annual industry accounts, “industry output” is referred to as “gross output.”

⁹ Inventory change is the difference between last year’s ending inventory and the current year’s inventory.

USE OF MOTION PICTURE AND SOUND RECORDING COMMODITIES, 2011

(Millions of dollars)

Total motion picture and sound recording commodities produced	\$102,936
Uses:	
<i>Intermediate inputs</i>	\$61,167
<i>Final uses</i>	\$41,771
Personal consumption expenditures	\$36,014
Change in private inventories	-\$156
Private fixed investment	—
Exports	\$11,098
Imports	-\$5,185

Source: 2011 Use Table, U.S. Bureau of Economic Analysis

their own labor and capital. The electricity used by the industry was generated by the energy sector. Camera and sound-recording equipment and set lighting were made by the manufacturing sector.

Subtracting these kinds of intermediate costs from industry output yields \$60.2 billion in value added by motion picture and sound recording industries. In other words, using their own labor and capital, motion picture and sound recording industries contributed \$60.2 billion to U.S. GDP in 2011.¹⁰

Employment, Compensation, and Measures of Indirect Production

As part of the ACPSA, the BEA also estimates arts and cultural employment and employment compensation. In 2011, for example, motion pictures and sound recording industries staffed 371,000 (full- and part-time) employees; their compensation totaled \$28.9 billion.¹¹ The ACPSA also includes estimates of “direct” and “total” output, as well as “total commodity output multipliers.” While an in-depth discussion of these measures is beyond the scope of this document, it is worth noting simply that measures of direct and indirect output derive from I-O requirements tables.

¹⁰ Due to disclosure controls, industry output and value added reported in the ACPSA are aggregated. For example, industry output and value added by motion picture and sound recording industries are subsumed within the ACPSA’s industry aggregate titled “information, electronic.” However, industry output and value added for motion picture and sound recording industries can be calculated by combining data from the ACPSA with estimates reported in the Economic Census. For more information, go online to see the NEA’s arts data profile page about the ACPSA.

¹¹ Compensation of employees consists of wages and salaries in cash; wages and salaries in kind (e.g., transit subsidies); and supplements to wages and salaries such as employer contributions to pension, health, and unemployment insurance funds.

The BEA’s structure for measuring employment differs from that used by the BLS’s OES program, which is the subject of Part II of this document. For example, employment measured by the BEA includes self-employed workers, but it excludes estimates by occupation. Please see Part II of this document for more information.

The BEA reports direct and total requirements (the sum of direct and indirect requirements). If final demand for a commodity increases, there will be an increase in output of that commodity—sometimes called the *direct* effect. As producers of this commodity increase their production, there will also be an increase in the output of their suppliers—the *indirect* effect.

To illustrate direct and total requirements, assume that U.S. consumers (a component of final demand) increase their demand for motion picture and sound recording merchandise and services by \$1. In response, as reported in the BEA's 2011 industry requirements table, motion picture and sound recording industries increase their output by \$1.14.

But as motion picture and sound recording industries increase output, their suppliers must increase their production as well. For example, the \$1 increase in consumer demand for motion picture and sound recording merchandise and services leads to a \$0.11 increase in output by “miscellaneous professional, scientific, and technical services” (e.g. electronic communication services, appraisal services), and nearly \$0.02 in production by the legal services industry. The \$1 increase in demand cascades through many industries, reaching \$1.71 in “total industry output requirement.”

USING EXPENDITURES TO MEASURE GROSS OUTPUT OF TAX-EXEMPT ARTS AND CULTURAL INDUSTRIES

Because motion picture and sound recording industries are predominantly for-profit and therefore taxable, measuring their industry output and value added can be accurately measured using revenue or sales. However, relying solely on revenue may understate the value of nonprofit tax-exempt business establishments. These institutions typically offer discounted or free services not captured by revenue or sales.

Consequently, the ACPSA draws on expenditures in addition to revenue to measure industry output and value added for educational services such as fine arts schools, performing arts companies, museums and historical sites, grant-making services, and business and labor organizations such as unions.

Section 3. How Were the ACPSA Commodities and Industries Selected?

The selection of commodities (i.e., goods and services) for the ACPSA, and, consequently, the selection of industries producing arts and cultural commodities, was based on three factors: (1) an overarching definition of arts and cultural commodities; (2) the construction of a basic framework for the account; and (3) examples of arts and cultural statistical frameworks formulated by other countries and international organizations.

This process led to the identification of 64 distinct arts and cultural commodities, shown in Table 3 in this chapter.¹² In addition to performing arts and museum commodities, the ACPSA includes goods and services that span sectors as varied as construction, manufacturing, professional services, and government.

The Definition of Arts and Cultural Commodities

The NEA's Office of Research & Analysis (ORA) collaborated with the BEA to select the detailed commodities to be included in the ACPSA. Commodities, or goods and services, are strongly linked to the industries producing them. For example, motion pictures, as a commodity, were selected for inclusion. The motion picture industry, consequently, became an ACPSA industry.

The first step in selecting commodities and industries for the ACPSA was to consider ORA's proposed definition:

Artistic and cultural commodities are those intended chiefly as a function of creative or cultural engagement, or are intended primarily to facilitate access to such commodities.

The ACPSA, therefore, includes not only commodities whose primary activities are arts and cultural, but also commodities and industries that support the production of arts and culture—i.e., the “creative chain.” For example, the ACPSA includes estimates for “symphony orchestras and chamber music organizations.” To reflect the production cycle of music performance, the ACPSA also includes musical instrument manufacturing, wholesale distribution of music supplies, and musical instrument stores.

As an additional example of the ACPSA's creative chain, consider that the account includes newspaper, periodical, and book publishing. However, printing is often necessary for publishing. Consequently, selected printing commodities and industries are also included as arts and cultural commodities and industries.

Determining the extent of the ACPSA's creative chain was in itself a highly selective, and to some extent, an idiosyncratic process. For example, the ACPSA includes jewelry design and jewelry manufacturing (an industry employing many jewelers and precious stone and metal workers), considered here as craft arts. However, the ties between cultural production and wholesale and retail sales of jewelry were thought to be tenuous and outside the scope of the account. Consequently, jewelry sales were excluded from the ACPSA.¹³

Similarly, the ACPSA includes fashion design, but excludes clothing manufacturing and apparel sales.

¹² Commodities are goods and services such as musical instruments (good) and dance performances (service).

¹³ Wholesale and retail jewelry sales margins are reflected in ACPSA supply, which measures commodities at the purchasers' value.

ACPSA Framework

The process of selecting arts and cultural commodities and industries was also aided by considering the BEA’s provisional framework for the ACPSA. Not all commodities fit neatly into the framework, and the reporting of ACPSA estimates is not organized within its domains.¹⁴ Nevertheless, the framework served as an early tool for choosing ACPSA commodities and industries.

The ACPSA framework is divided into three domains: core; applied arts and design services; and transversal. Each of these domains, in turn, is further partitioned into sub-domains.

Core Domains

A wide variety of ACPSA commodities fit into the following core sub-domains: museums, libraries, and cultural centers; live performance and music; visual arts; written works; and audio-visual and interactive media.

“Museums, libraries, and cultural centers” include museums, libraries and archives (including government-operated libraries), botanical gardens and zoos, and nature parks. The “transversal” ACPSA domain capturing governance also includes museums—specifically, government-operated museums.

Commodities falling under live performance and music include performing arts companies, such as music, dance, and theater groups, as well as goods and services supporting music such as sound recording, the manufacture of musical instruments, and music stores.

The visual arts sub-domain comprises a number of detailed manufacturing commodities representing craft arts. Examples include the manufacture of china and glass, jewelry and silverware, and custom architectural woodwork. The visual arts also contain several retail sales commodities including art dealers, florist shops, and camera and photographic supply stores, as well as commodities supporting the visual arts (i.e., the creative chain) such as lead pencils and art goods and photographic equipment.

CORE DOMAINS				
Museums, libraries, and cultural centers	Live performance and music	Visual arts	Written works	Audio-visual and interactive media
Applied Arts and Design Services Domains		Transversal Domains		
Advertising services	Other design services	Education	Governance, funding, and professional support services	Infrastructure

¹⁴ ACPSA commodities unaligned with the framework include electronic shopping for books and music and rentals of theatrical costumes and equipment.

Publishing (newspaper, periodical, and book), along with its supporting printing activities, make up the core sub-domain labeled “written works”; motion picture production and broadcasting feature prominently in “audio-visual and interactive media.”¹⁵

Applied Arts and Design Services

The applied arts and design services domain features advertising services. In order to emphasize creative production, advertising within the ACPSA excludes public relations, media buying, distribution, and sign painting.¹⁶

This domain also includes architectural services (including historical restoration services) related to arts and cultural structures, as well as all landscape architectural services.¹⁷

Additionally, this domain includes four design services: interior design services; industrial design services; graphic design services; and “other design services” such as jewelry and fur design. The ACPSA also reports estimates for fashion design, a detailed commodity within other design services.

Transversal Domains

There are three transversal ACPSA domains: education; governance, funding, and professional services; and infrastructure. Education includes “educational services,” which is restricted to fine arts, performing arts, and media arts (e.g., graphic design)

¹⁵ The ACPSA excludes sports from its estimates of publishing and broadcasting production.

¹⁶ Media-buying agencies purchase advertising time from media outlets and resell it to advertising agencies.

¹⁷ The first iteration of the ACPSA restricts architectural services to cultural institutional projects, which represent approximately 2 percent of all architectural services. An expanded measure of architectural services will be considered for the revised ACPSA planned for release in the fall of 2014.

departments of colleges and universities (including state colleges and universities), and fine arts schools such as ballet schools and music schools (except academic).

Governance, funding, and professional services feature art promoters and agents, arts-related granting organizations and unions, and government-operated museums and parks. (Non-government museums are included in the ACPSA’s core domain.)

The account’s transversal domain also includes the construction sector—specifically, construction related to new educational facilities such as museums and libraries, as well as selected amusement and recreational structures related to the arts (e.g., theaters, performing arts centers).

International Comparisons

Other arts and cultural satellite accounts have been produced by countries including Colombia, Spain, Finland, and, through its Department of Culture, Media & Sport, the United Kingdom.

Statistical frameworks (i.e., plans or outlines) for measuring arts and culture production have also been undertaken by a number of international organizations, including the World Intellectual Property Organization (WIPO); the Organization for Economic Cooperation and Development (OECD); and the United Nations Conference on Trade and Development (UNCTAD).

By country, or by organization, some accounts or frameworks emphasize *arts and culture*, while others accentuate *creative industries*. (The WIPO model, alternatively, is a copyright-based model.) That distinction, however, is based on perspective. For example, the performing arts, motion picture and sound recording, and publishing are included in most statistical models, whether framed as arts and cultural production or creative production.

Differences between models tend rather to be at the margins. In its seminal document, *Creative Economy Report 2010*, the UNCTAD writes: “There is no ‘right’ or ‘wrong’ model of the creative industries, simply different ways of interpreting the structural characteristics of creative production.”

The design of the ACPSA was guided, in part, by examples set by international models, particularly the arts and cultural frameworks designed by Statistics Canada, the Australian Bureau of Statistics, and the United Nations Educational, Scientific and Cultural Organization (UNESCO).¹⁸ There is broad alignment of the types of production selected for the ACPSA and those included in the international models. For example, the ACPSA and the three international models considered include performing arts, museums and libraries, motion pictures and sound recording, publishing, and architectural and design services.

However, differences tend to appear in the *production* cycles captured by the various models. For example, like the three international models considered here, the ACPSA includes music performance. As part of music’s creative chain, the ACPSA, along with the Australian and UNESCO models, includes the manufacture of musical instruments. The Canadian model does not. The Canadian framework restricts the production of musical instruments to the expenses incurred when performing music groups acquire musical instruments. In other words, under the Canadian model, the manufacture of musical instruments is reflected in the expenses borne by

performing music groups.¹⁹

Differences also appear in fashion and jewelry production. The ACPSA and the Canadian and UNESCO models include fashion design but exclude the manufacture of clothing and the wholesale and retail sales of clothes.²⁰ The Australian model, however, includes each of these in their production cycle of clothing.

The Australian model also includes the full production cycle of jewelry—design, manufacture, and sales. The ACPSA, on the other hand, includes jewelry design and the manufacture of jewelry, but excludes jewelry sales as a commodity. UNESCO does likewise, but the Canadian model is restricted to jewelry design.²¹

The inclusion of computer systems design also varies among the models considered. The ACPSA includes computer systems design, but it is restricted to custom web design and computer applications necessary to support motion picture and sound recording production. The Canadian framework also includes computer systems design, but it is limited to custom web design.

Alternatively, the Australian and UNESCO frameworks include all computer systems design production.

18 As of November 2013, Australian and Canadian satellite accounts were still under development. The Australian and Canadian frameworks discussed in this report may differ from the ultimate satellite accounts of each country.

19 In the ACPSA, expenses incurred by acquiring musical instruments are also reflected in the total production of performing music groups (e.g., symphony orchestras and chamber groups). But musical instruments are intermediate inputs to performing music groups.

20 Fashion and jewelry design are part of “other specialized design” within the ACPSA and the three international models considered.

21 Ibid.

Inclusion of Selected Industries (Yes/No) within the ACPSA and International Models

	U.S. ACPSA	Canada	UNESCO	Australia
Live performance of music	Yes	Yes	Yes	Yes
Manufacture of musical instruments	Yes	No	Yes	Yes
Fashion design	Yes	Yes	Yes	Yes
Clothing manufacturing	No	No	No	Yes
Wholesale/retail sales of clothing	No	No	No	Yes
Jewelry design	Yes	Yes	Yes	Yes
Jewelry manufacturing	Yes	No	Yes	Yes
Jewelry wholesale and retail sales	No	No	No	Yes
Computer systems design	Yes, partially in scope ¹	Yes, partially in scope ²	Yes, fully in scope	Yes, fully in scope

¹ Custom web design and applications supporting motion pictures and sound recording.

² Custom web design.

NESTA'S MAPPING OF THE U.K.'S CREATIVE INDUSTRIES

A number of models have been developed to provide a systematic understanding of the structural characteristics of arts and culture industries. Chief among these are the “concentric circles model” and the “WIPO copyright model.” The concentric circles model, authored by Australian economist David Throsby, argues that the more pronounced the cultural content of a particular good or service, the stronger is the claim for inclusion of the industry reporting it. Within the ACPSA, for example, motion pictures were selected as an arts and cultural commodity. The motion picture industry, consequently, became an ACPSA industry.

The WIPO (World Intellectual Property Organization) model, alternatively, captures industries that produce or distribute copyrighted goods. ACPSA industries matching the WIPO model include advertising, motion pictures, sound recording, publishing, design, and television and radio broadcasting. The ACPSA does not, however, include WIPO-model industries such as the manufacture and sales of toys and consumer electronics.

Recently, a new method of classifying “creative” industries was developed by Nesta, the U.K.’s nonprofit innovation foundation. The Nesta method emphasizes “creative intensity,” which refers to the share of total employment within an industry that is engaged in creative occupations. Within the Nesta model, occupations are scored on a grid of five criteria: (1) process novelty; (2) resistant to mechanization; (3) non-repeating output; (4) creative function in process; and (5) interpretation not transformation. An occupation’s creative intensity is the composite of these scores.

Compared with the ACPSA and other international models, particularly the creative industries defined by the U.K.’s Department of Culture, Media & Sport, which Nesta targeted for its analysis, the Nesta model results in a different set of industries. One difference is printing. Because the occupation of printers did not score highly on Nesta’s grid, printing industries are excluded from its list of creative industries. The ACPSA, alternatively, includes printing associated with newspapers, periodicals, books, and art reproductions.

A more pointed difference is the ACPSA’s inclusion, and Nesta’s exclusion, of florist shops. The decision to include “retail sales, florists” in the ACPSA stemmed from the industry’s principal occupation—floral designers. Data issued by the U.S. Bureau of Labor Statistics show that in 2012 nearly half of the workers employed by florist shops were floral designers, an occupation classified among “art and design workers” within the Standard Occupation Classification (SOC) system.

However, “floral arrangers” earned a low score of two on Nesta’s creative grid. Florist shops, consequently, are excluded from Nesta’s definition of creative industries.

ACPSA Commodities

Table 3 shows the arts and cultural commodities defined by the ACPSA.

Table 3. Commodities Included in the ACPSA

COMMODITY	NOTES
Arts and entertainment	
Theater	
Dance	
Opera	
Symphonies	<i>Includes chamber music groups</i>
Circuses	
Other	<i>Includes other music groups and artists (including jazz, rock, and country bands and performers) and magic shows and carnivals</i>
Independent artists, writers, and performers	
Museums (art)	
Museums (botanical and zoological)	
Museums (children's)	
Museums (historical sites)	
Museums (history)	
Museums (natural history)	
Museums (nature parks)	
Museums (science)	
Museums (other)	
Arts education	
Fine arts	<i>Includes music schools and dance schools</i>
Other	<i>Non-government college and university arts departments and performing arts centers</i>
Information	
Motion picture and video	<i>Includes movie production, post production, and distribution; music video production; movie theaters and film festivals</i>
Sound recording	<i>Record production; sound recording studios; music publishers</i>
Broadcasting	<i>Radio and television broadcasting</i>
Telecommunications	<i>Cable TV production and distribution; includes selected TV show production</i>

COMMODITY	NOTES
Internet publishing and broadcasting	<i>Web broadcasts; Internet game sites; Internet radio</i>
Other information services	<i>News syndicates</i>
Publishing:	
Newspapers and periodicals	
Cards, calendars, and related publishing	
Books:	
Education (K-12)	
Higher education	
Professional	
Scholarly	
All other professional, technical, and scholarly books, in print	
Adult fiction	
Adult nonfiction	
Juvenile fiction	
Juvenile nonfiction	
Religion	
All other adult trade books	
Children's books	
All other books	
Software publishing	<i>Includes video games; photo-processing software; CAD software</i>
Professional services	
Interior design services	
Industrial design services	
Graphic design services	
Fashion design services	
All other design services	<i>Includes jewelry and fur design</i>
Architectural services, historic restoration	<i>Restricted to the architectural designs of cultural structures</i>
All other architectural services	<i>Restricted to the architectural designs of cultural structures</i>
Landscape architectural services	
Computer systems design	<i>Related to motion picture and sound recording applications</i>
Advertising	<i>Excludes public relations agencies; media-buying representatives; material distribution (e.g., fliers); and sign-painting</i>
Photography services	

COMMODITY	NOTES
Photofinishing	<i>Excludes one-hour photo</i>
Other services	
Grant-making and giving services	<i>Arts-related</i>
Unions	<i>Arts-related</i>
Other commodities	
Manufacturing (printing)	<i>Lithographic, gravure, screen, digital printing of magazines, newspapers, calendars, and art works; book printing; letterpress; and binding and pre-press services</i>
Manufacturing (jewelry and silverware)	
Manufacturing (other)	<i>Musical instruments; china and glass; custom architectural woodwork; lead pencils and art goods; basketwork and wickerwork; custom non-upholstered wood furniture; Christmas tree ornaments</i>
Wholesale trade	<i>Photographic equipment; books, magazines, newspapers; musical instruments; music recordings</i>
Retail trade	<i>Art dealers; photographic supply stores; music stores; book stores; florist shops; art supply stores; music and books electronic shopping</i>
Construction	<i>Construction of selected new educational structures, amusement and recreational structures</i>
Government	<i>Selected items for museums; parks; state colleges and universities; and government libraries</i>
Rental and leasing	<i>Wardrobe rental; motion picture and theatrical equipment rental; pre-recorded video tape and disk rental</i>

Section 4. Future ACPSA Products and Frequently Asked Questions

The current ACPSA is the first effort by the federal government to measure and document U.S. arts and cultural production and its effect on the national economy. In FY 2014, the ACPSA is subject to further revisions stemming from the NEA's Office of Research & Analysis in consultation with various stakeholders, including members of the arts community, cultural researchers, and international colleagues who themselves are producing satellite accounts on arts and culture.

The revised ACPSA estimates are planned for release in the fall of 2014.

While the current ACPSA reflects 2002 NAICS (North American Industrial Classification System) codes, the 2014 ACPSA will draw on 2007 definitions of the NAICS. All revisions to the 2014 ACPSA will be carried out for the full time series of 1998-2012. Additionally, the 2014 estimates will include investment from "artistic originals" (see text box below).²²

Moreover, the revised ACPSA will be featured in a fall 2014 article in the BEA's *Survey of Current Business*.

THE CAPITALIZATION OF ENTERTAINMENT, LITERARY, AND OTHER ARTISTIC ORIGINALS

Typically conducted at five-year intervals, comprehensive revisions of the industry economic accounts allow the BEA's estimates to better reflect the evolving nature of the U.S. economy. These revisions also facilitate international comparisons with economic data available from other countries. The most recent of these revisions, scheduled for release in December 2013, will include the "capitalization" of entertainment, literary, and other artistic originals. Under this new treatment, long-lived artwork produced by artists, studios, and publishers will be capitalized; that is, production of long-lived artwork will be treated as an investment, adding to the U.S. capital stock.

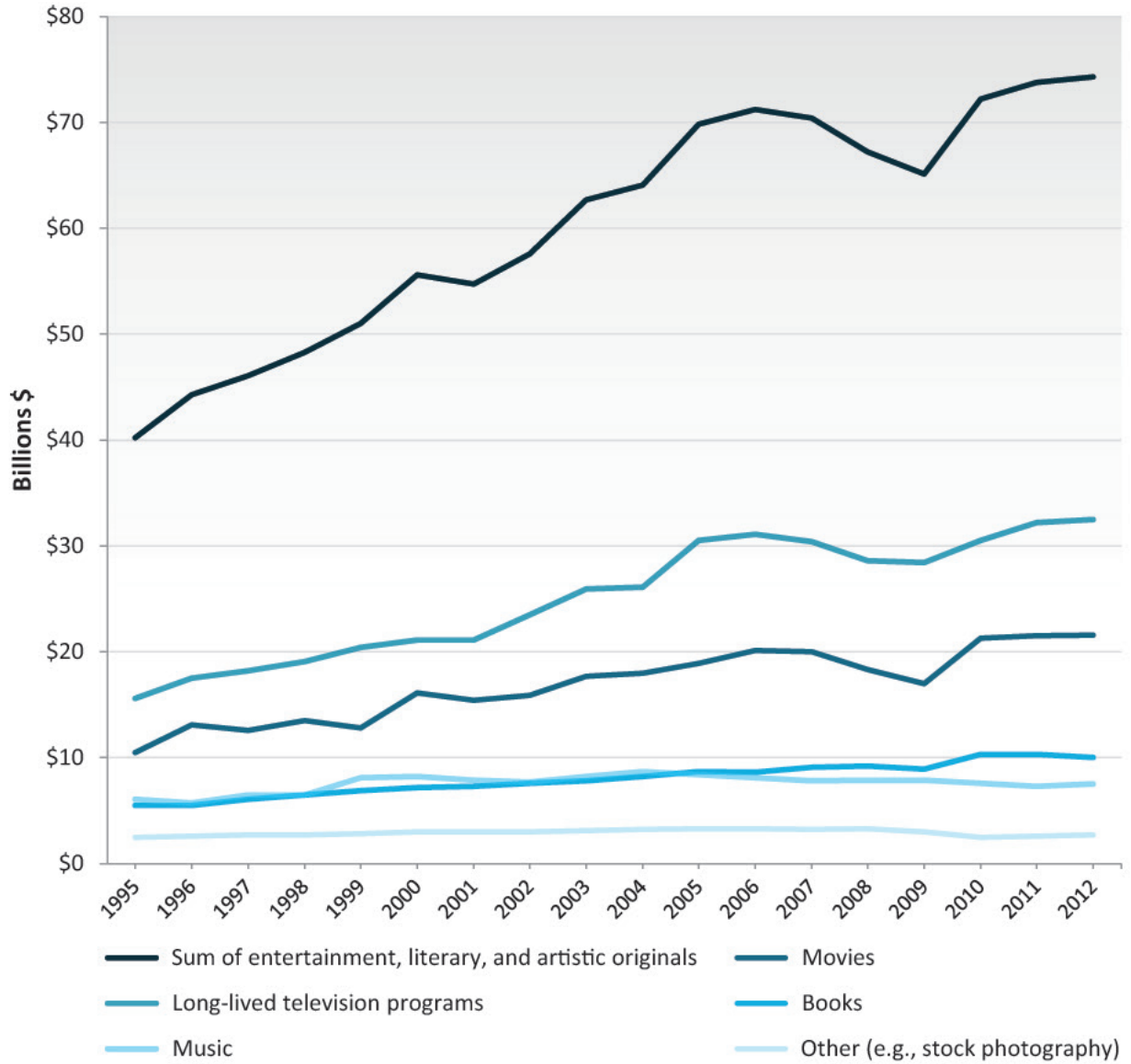
The BEA defines long-lived art works, or artistic originals, as theatrical movies, recorded music, books, television programs, and "miscellaneous artworks" such as play scripts, greeting card designs, and stock photography. Prior to the December 2013 revisions, artistic production costs were treated as current expenses, much like advertising or shipping costs, and therefore had a limited role in the calculation of GDP.

However, artistic originals can continue to earn revenue for decades after production. (They are, therefore, "long-lived.") As noted by the BEA, capitalizing artistic originals is an important step toward fully recognizing the contribution of intellectual property products to economic growth. Recent estimates show that the capitalization of entertainment, literary, and artistic originals added \$73.8 billion to the U.S. economy in 2011.

²² The inclusion of artistic originals as investment spending was part of the BEA's recently released comprehensive revisions to the national income and product accounts. These revisions were not available for the 2013 iteration of the ACPSA.

Capitalization of Entertainment, Literary, and Artistic Originals

Additions to Gross Private Domestic Investment, and to GDP



Source: U.S. Bureau of Economic Analysis

FAQs

What timeframe does the ACPSA reference?

The ACPSA features a full time series of estimates. For the current iteration of the ACPSA, estimates are provided for the years spanning 1998 to 2011. The revised ACPSA, planned for release in the fall of 2014, will contain estimates for 1998 through 2012.

Does the ACPSA include work done by self-employed artists?

Yes. Self-employed workers, or “sole proprietors,” are required to attach a Schedule C (or Schedule C-EZ) to their IRS Form 1040 individual tax return if their work meets certain requirements. First, the primary purpose for engaging in the activity must be for the purpose of generating income or profit. Second, the self-employed work must be done regularly.

If these criteria are met, Schedule C attachments are required of self-employed workers with business income of \$400 over and above expenses.

The Schedule C requires self-employed filers to indicate the industry of their principal business (self-employed workers engaged in more than one business must attach multiple Schedules). The industries listed on the Schedule C are in four-digit NAICS codes. Examples include: “independent artists, writers, and performers” (NAICS 7115); “promoters of performing arts, sports, and similar events” (NAICS 7113); and “agents and managers for artists, athletes, entertainers, and other public figures” (NAICS 7114).

The U.S. Census Bureau calculates “non-employer” statistics using IRS Schedule C filings. In 2011 (the most recent year for which non-employer statistics are available), the bureau reported 987,714 individual proprietorships in “performing arts, spectator sports, and related industries”

(NAICS 711). Of those, 704,356 (more than 70 percent) were “independent artists, writers, and performers.”

The BEA draws on the Census Bureau’s non-employer statistics to calculate NIPAs and industry accounts, including the ACPSA. Notably, the BEA adjusts the non-employer data it uses in its accounts to reflect IRS estimates of Schedule C noncompliance.

Does the ACPSA capture independent musicians who work on contract?

As discussed above, the ACPSA includes production by self-employed workers, including musicians and other artists. Within the NAICS system, freelance musicians are included in NAICS 71113, “musical groups and artists.”

Are there special considerations for tax-exempt arts organizations?

For many of the arts and cultural industries included in the ACPSA, output and value added are based on the industries’ revenues (i.e., sales). However, basing production on the revenue of tax-exempt organizations would likely understate that value. Tax-exempt performing arts groups and museums, for example, often provide special discounted or free services, resulting, naturally, in lower revenue.

To correct for this potential under-estimation, expenditures in addition to revenues are used to measure the production of tax-exempt arts and cultural organizations.

Are there special considerations for museums and museum workers?

Within NAICS, the museum industry (NAICS 71211) excludes college and government-operated museums. Rather, production by colleges and government are represented

by their respective sectors—educational services (NAICS 61) and government, which has no official NAICS code.²³

What is value added?

The value added of an industry, also referred to as the industry’s gross domestic product, is the contribution of a private industry or government sector to overall GDP. Value added equals the difference between an industry’s output and the cost of intermediate inputs such as energy costs and the costs of raw materials, semi-finished goods, and services.

To illustrate, the output of dance companies includes the cost of pointe shoes (the shoes worn by ballet dancers when dancing en pointe). The value added of dance companies excludes the cost of pointe shoes, which were produced by other industries such as shoe manufacturers.

What is final demand?

The ACPSA draws on “inter-industry” or I-O analysis, which, in turn, comprises “make” and “use” tables. The make table shows the production of commodities (i.e., goods and services), while the use table shows the uses of commodities by intermediate and final users, or final demand.

Final demand consists of the transactions that make up the final-expenditure components of GDP: personal consumption expenditures; private fixed investment; change in private inventories; exports and imports; and government. Put simply, final demand measures the amount of arts and cultural production purchased by U.S. households (personal consumption); businesses (private fixed investment and change in private inventories); foreign purchases (exports); and government.

Imports are U.S. purchases of foreign-produced arts and cultural commodities, and are subtracted from GDP.

Are the ACPSA estimates adjusted for inflation?

The current ACPSA estimates, and those planned for release in the fall of 2014, are not adjusted for inflation. Moreover, because the BEA’s process for generating “real” estimates is complex, the agency warns against deflating ACPSA figures by applying broad indexes such as the Gross Domestic Product Deflator or the Consumer Price Index. Attempts to deflate ACPSA estimates will likely result in more distortion than is present in current-dollar ACPSA estimates.

Can I use the ACPSA to generate measures of arts and cultural production for my state or metro area?

Current ACPSA estimates (and the revised ACPSA estimates planned for the fall of 2014) are national calculations and do not reflect regional arts and cultural production. Because the BEA has access to data and methodologies unavailable to the public, national ACPSA estimates cannot be modified by users to capture accurate regional production.

²³ Estimates for the government sector draw heavily from the Census of Governments, which, like the Economic Census, is conducted by the U.S. Census Bureau every five years.

PART II: ACCOUNTING FOR THE NATION'S ARTS AND CULTURAL WORKFORCE

Section 1. Adding Value to the Satellite Account: A New Taxonomy for Arts and Cultural Occupations

A comprehensive measure of arts and cultural production would include not only commodities and industries, but also the work done by arts and cultural workers, regardless of the industries employing them. The ACPSA, for example, measures employment in performing arts industries. In 2012, the performing arts employed 22,500 musicians and singers. However, the ACPSA excludes religious organizations (e.g., churches, synagogues, missions), an industry that employed more than 8,000 musicians in that year.

This section outlines the occupational dimension to arts and cultural production using data from the Occupational Employment Survey (OES), produced by the U.S. Bureau of Labor Statistics (BLS). Unlike the ACPSA, which captures arts and cultural

production by sole proprietors (i.e., non-employers), the OES excludes self-employed workers. It does, nonetheless, provide employment and earnings data for detailed occupations by industry. Consequently, the OES is well-suited to examining arts and cultural workers and the industries in which they are employed.

This section presents three tiers of arts and cultural occupations: (1) core arts and cultural occupations; (2) technical and supporting occupations; and (3) managers working in arts and cultural industries. Including all three tiers of arts and cultural occupations reveals the share of the labor force directly responsible for the production of arts and cultural goods.

Page 37 lists the data tables that accompany Part II of this document.

OCCUPATION EMPLOYMENT STATISTICS

Occupation Employment Statistics (OES) is a collaborative program between the BLS and state workforce agencies. The OES surveys 200,000 non-farm establishments every six months, taking three years to fully collect the sample of 1.2 million establishments. OES data are used to report employment and wage estimates for about 800 occupations at national, state, metropolitan, and non-metropolitan levels.

The OES also reports employment and wage estimates by industry. At the national level, estimates are reported for 450 industries, which are categorized by the North American Industry Classification System (NAICS).

Tier 1. Core Arts and Cultural Occupations

In accordance with the approach used by Statistics Canada, the identification of U.S. arts and cultural occupations was guided by asking if the considered occupation would cease to exist if the tasks and responsibilities of creative work were removed. Answering this question yielded the three tiers of arts and cultural occupations discussed below.

Workers in core arts and cultural occupations are responsible for the creative element of arts and cultural products, whether produced by an arts and cultural industry or not. This tier includes 39 distinct occupations—in 2012, employment in core arts and cultural occupations totaled 1.5 million wage and salary workers, while annual median earnings ranged from \$80,880 for art directors to roughly \$24,000 for floral designers.

Occupations included in Tier 1 span jobs as varied as architects and designers, reporters and photographers, and multimedia artists and jewelry makers. Nearly three out of four occupations on this list are grouped under the major occupation group labeled “arts, design, entertainment, sports, and media occupations,” or major standard occupation code 270000.²⁴ This major occupation group is divided into several broad occupation groups comprising core arts and cultural occupations. Drawing on OES data for wage and salary workers in 2012, core occupations in the major groups are summarized below.

As noted above, the OES excludes self-employed workers from its datasets. Therefore, recognizing that self-employed workers make up a large portion of the U.S. arts workforce, this section uses another data source (the Current Population Survey)

²⁴ Please see Appendix B for a discussion on standard occupation codes.

to estimate the percentage of self-employed workers within each occupational category described below.

Artists and Related Workers (i.e., Visual Artists)

Art directors; craft artists; fine artists; multimedia artists and animators; artists and related workers, all others (e.g., calligraphers, tattoo artists)

Main industries: advertising and public relations; publishing; independent artists, writers, and performers; motion pictures

Art directors make up the greatest number of workers in this occupation group (31,570), while “other artists,” such as calligraphers and tattoo artists, are the smallest (6,850). Art directors are also the best paid, earning an average annual salary of \$80,880 in 2012; earnings are lowest for craft artists, whose annual salaries averaged \$29,600.

Among core arts and cultural workers, artists and related workers hold some of the highest rates of self-employment. In 2010, nearly 60 percent of the artists in this group were self-employed.

The industries employing the greatest numbers of salaried artists and related workers include: advertising and public relations; independent artists, writers, and performers; and motion pictures.²⁵ In 2012, for example, advertising and public relations firms employed 11,110 art directors—more than one-third of all salaried art directors. Of the 29,270 salaried multimedia artists and animators, 9,130 (30 percent) worked in the motion picture industry.

²⁵ The U.S. Census Bureau defines “independent artists, writers, and performers” (NAICS 71151) as freelance individuals primarily engaged in performing in artistic productions, in creating artistic and cultural works, or in providing technical expertise necessary for these productions. The independent artists, writers, and performers shown here refer to business establishments with workers on payrolls.

Designers

Fashion designers; floral designers; graphic designers; interior designers; merchandise displayers and window trimmers; set and exhibit designers; designers, all other (e.g., jewelry and fur designers)

Main industries: specialized design services; publishing; manufacturing; retail sales

In this group, graphic designers number the largest. In 2012, 191,440 salaried graphic designers were employed. Alternatively, set and exhibit designers and designers classified as “other,” (e.g., jewelry and fur designers) make up the smallest number of workers in this group—roughly 8,000 employed in both occupations.

Among design professionals, fashion designers and industrial designers earn the highest annual salaries—\$62,860 and \$59,610, respectively, on average, in 2012.

Like visual artists, high percentages of designers are self-employed—about 30 percent of each design occupation. However, among salaried workers in this group, industries employing the greatest numbers vary by type of designer. Specialized design companies (companies that specialize in graphic, industrial, and fashion design), manufacturing, and publishing industries employ significant numbers of designers. In 2012, for example, publishing industries staffed roughly 25,000 graphic designers (nearly the same number staffed by specialized design companies); florists shops, under retail sales, employed 31,220 floral designers—more than 65 percent of the salaried workers in that occupation.

Performing Artists

Actors; producers and directors; dancers; choreographers; music directors and composers; musicians and singers; other entertainers (e.g., comedians, jugglers, acrobats)

Main industries: performing arts; motion pictures; educational services; broadcasting

In 2012, salaried actors numbered 70,540, and producers and directors numbered 87,010. Employment for salaried dancers and choreographers was lower—11,390 and 7,400, respectively. Musicians and singers totaled 42,100, while music directors and composers were 24,940 in number. In 2012, 16,630 wage and salary workers were employed as “other entertainers.”

Due to disclosure concerns, OES data omit earnings for many of the performing arts occupations in this group. Of those tracked, however, producers and directors earn the highest salaries—annual median earnings of \$71,350 in 2012.

Among performing artists, rates of self-employment range from a high of about 43 percent of musicians and other entertainers, to a low of 9-10 percent of dancers and choreographers.

Not surprisingly, the performing arts industry hires many performing artists. However, motion pictures, schools, broadcasting, and even religious organizations factor in, too. In 2012, for example, almost 80 percent of salaried choreographers were employed by “other private schools,” an industry that includes fine arts and dance schools.

The motion picture industry employs more producers and directors than any other industry—nearly 35,000 in 2012. Ranking a close second, however, is radio and television, which staffed roughly 20,000 producers and directors. And of the 42,100 salaried musicians in 2012, half were

employed by performing arts companies, but another 20 percent were on staff at religious organizations such as churches and synagogues.

In 2012, motion pictures and the performing arts, combined, employed roughly three in five salaried actors. However, a sizable number of actors, 15,400 in 2012, are employed by “accounting, tax preparation, bookkeeping, and payroll services.” This result, seemingly unusual at first glance, reflects theatrical production concerns forming separate companies to carry out their payroll functions, including paying engaged actors.

Announcers

Radio and television announcers; public address system and other public announcers

Main industries: radio and television broadcasting; drinking places (i.e., bars); independent artists, writers, and performers

Although radio and television announcers far outnumber public address and other public announcers (31,340 vs. 8,120), earnings among workers in these occupations are comparable, with radio and television announcers earning an average salary of \$28,020 in 2012, and public address announcers earning \$26,230. Additionally, 35 percent of workers in both occupations are self-employed.

Differences exist, however, in the industries employing the two occupations. Most radio and television broadcasters work in radio, rather than television broadcasting (25,440 announcers in 2012), while most public address system announcers (which includes disc jockeys at weddings, parties, and other public events) work in drinking places, i.e., bars (2,590), and in the industry labeled independent artists, performers, and writers (1,970).

Media Occupations

Broadcast news analysts; reporters and correspondents; editors; writers and authors; photographers

Main industries: newspaper publishers; television broadcasting; photographic services

Of the media occupations included in Tier 1, editors number the largest—99,000 salaried workers in 2012. Next in employment rank are photographers (56,140); reporters and correspondents (45,570); writers and authors (41,990); and broadcast news analysts (5,170).

Editors, writers and authors, and broadcast news analysts all earn roughly \$54,000 to \$55,000, annually, on average, while photographers earn an average of \$28,490. Photographers also have high self-employment rates (almost 63 percent in 2012), compared with self-employment rates of 14-16 percent of reporters and correspondents and of editors.

Among all workers in arts and cultural occupations, writers and authors have the highest self-employment rate—68 percent in 2012.

Among wage and salary media workers, however, newspaper publishing is a main employer. In 2012, newspaper publishers staffed 25,980 reporters and correspondents and 21,760 editors. Although newspaper publishers hire writers and authors (3,550 in 2012), salaried workers in this occupation are also likely to be employed by advertising and public relations firms (6,190), motion picture industries (3,300), and independent artists, writers, and performers (3,060).

In 2012, newspaper publishers staffed 3,480 photographers. However, most salaried photographers (37,560) work in photographic services, which includes portrait and commercial photography studios.

Education and Library Occupations

Art, drama, and music teachers, postsecondary; English language and literature teachers, postsecondary; communications teachers, postsecondary; archivists; curators; audio-visual and multimedia collection specialists; librarians

Main industries: colleges and universities; elementary and secondary schools; government; museums and historical sites

Among this group of core arts and cultural occupations, librarians and postsecondary art and drama teachers number the largest. In 2012, librarian employment totaled 140,280 and college art teachers totaled 92,570.²⁶ Postsecondary art, drama, and music teachers, however, are better paid, earning an annual average of \$62,160 in 2012 compared with average annual earnings of \$55,370 for librarians.

The postsecondary education occupations included here also include English language and literature teachers and communications teachers, and architecture teachers, numbering 72,680, 30,030, and 7,290 workers, respectively, in 2012. In that same year, postsecondary teachers in English and in communications earned between \$60,000 and \$62,000, on average; architecture teachers earned an average annual salary of \$71,610.

In 2012, salaried curators numbered 10,370, while archivists numbered roughly half that number (5,640). Employment among audio-visual and multimedia collection specialists totaled 8,690 in 2012. Average annual earnings for workers in these occupations ranged from \$49,590 for curators and \$47,340 for archivists, to \$43,350 for audio-visual and multimedia collection specialists.

Few workers in education and library occupations are self-employed—virtually no

librarians and only 2.6 percent of curators are self-employed. Rather, governments employ many of the people in these professions. For example, local governments (including public libraries and public elementary and secondary schools) staffed 96,700 librarians, or almost 70 percent of workers in the occupation. Government, state governments to be specific, also employs many curators (1,500 in 2012). However, curators are more commonly employed by museums and historical sites—5,660 in 2012.

Architects

Architects; landscape architects

Main industries: architectural and engineering services; government

Measuring salaried workers, the OES reports 82,720 architects and 15,750 landscape architects in 2012. Annual median earnings for the two occupations were \$73,090 and \$64,180, respectively.

Roughly one-quarter of workers in both occupations are self-employed. But among salaried architects and landscape architects, most work in architectural and engineering services (an industry that includes architectural services firms). In 2012, architectural and engineering services employed 71,160 architects (86 percent of the salaried profession) and 9,090 landscape architects (58 percent of salaried landscape architects).

Agents and Business Managers of Artists, Performers, and Athletes

Main industries: agents and managers for artists, entertainers, athletes, and other public figures; promoters of performing arts, sports, and similar events

Half of all agents and business managers are self-employed. However, the OES reported 11,770 salaried workers in this occupation

²⁶ Includes design and craft teachers and art history professors.

in 2012; their average annual salary was \$63,370.

Most salaried agents and managers of artists, performers, and athletes work in the industry producing their services, “agents and managers for artists, athletes, and other public figures,” or in “promoters of performing arts, sports, and similar events.” In 2012, these two industries employed 7,320 and 1,000 agents and managers, respectively.

Jewelers and Precious Stone and Metal Workers

Jewelers and precious stone and metal workers, a specialized type of craft artist, numbered 22,060 in 2012—their average annual earnings were \$35,350.

Most jewelers and precious stone/metal workers are employed by jewelry, luggage, and leather goods stores (10,700) or by manufacturers of jewelry and silverware (6,930).²⁷

Tier 2. Technical and Supporting Occupations

While the occupations listed in Tier 1 represent the primary source of arts and cultural creativity, the technical and supporting occupations in Tier 2 are required to assemble and distribute arts and cultural products. This tier comprises 23 occupations spanning jobs as varied as library technicians, printers, and forest conservationists. Employment in salaried technical and supporting occupations totaled 715,700 in 2012, and median annual wages for workers in these occupations ranged from a high of \$64,450 (theatrical and performance make-up artists) to a low of \$18,750 (models).

Rates of self-employment fluctuate among technical and supporting occupations. For example, roughly one-third of film and video editors and camera operators are self-employed. Alternatively, self-employment rates are virtually zero among library technicians, costume attendants, and print binders.

The following summarizes the technical and supporting occupations in Tier 2.

Museum and Library Technicians

Main industries: museums; government

Library technicians—100,230 employed in 2012—largely work in local government (i.e., local government libraries) and in local government schools. Museum technicians and conservators—10,430 employed in 2012—generally work in the industry labeled “museums, historical sites, and similar institutions,” and for the federal government.

Workers in both occupations earned median annual salaries of roughly \$30,000 to \$38,000; few library or museum technicians are self-employed.

²⁷ Most OES statistics by occupation are reported at the four-digit industry level. “Jewelry, luggage, and leather goods stores,” NAICS 4483, includes the more detailed industry, “jewelry stores,” NAICS 44831. Most jewelers working in this retail trade industry are likely employed by jewelry stores, rather than by luggage or leather goods stores.

Media and Communication Equipment Workers

Audio and video equipment technicians; broadcast technicians; radio operators; sound engineering technicians; camera operators, television and motion picture; film and video editors

Main industries: motion pictures; broadcasting

Among media and communication equipment workers, audio and video technicians are the most prevalent—54,310 salaried workers in this occupation in 2012. Broadcast technicians, who set up and operate the electronic equipment used to transmit radio and television programs, numbered 31,640. Film and video editors, though fewer in number, are the best paid media and communication equipment workers—in 2012, workers in this occupation earned an annual average of \$51,300.

Motion picture and video industries (NAICS 5121) are a major employer of media and communication equipment workers. In 2012, for example, this industry staffed 13,280 film and video editors and 7,350 audio and video equipment technicians. Broadcasting, too, employs media and communication equipment workers—three out of four salaried broadcast technicians works in the radio and television broadcasting industry (NAICS 5151).

Personal Care and Service Occupations

Motion picture projectionists; costume attendants; makeup artists, theatrical and performance

Main industries: motion pictures; performing arts

In 2012, employment numbered 8,030 motion picture projectionists; 5,660 costume attendants; and 1,950 makeup artists. Although small in number, makeup

artists earn the most among the personal care and service occupations on Tier 2—\$64,450, on average, in 2012; makeup artists are also more likely to be self-employed.

Motion picture and video industries employ 90 percent of motion picture projectionists and more than 50 percent of theatrical and performance makeup artists. Costume attendants also work in motion pictures and videos (about 20 percent of wage and salary attendants), but they are more likely to work for performing arts companies, who staff more than 35 percent of costume attendants.

Installation, Repair, and Maintenance Occupations

Camera and photographic equipment repairers; musical instrument repairers and tuners

Main industries: professional and commercial equipment supplies merchant wholesalers; sporting goods, hobbies, and musical instrument stores; personal and household goods repair and maintenance

Wage and salary employment among camera and photographic equipment repairers and musical instrument repairers and tuners totaled 2,590 and 7,130, respectively, in 2012.

Roughly 13 percent of workers in both occupations are self-employed. Among wage and salary workers, however, camera and photographic equipment repairers generally work in wholesale trade of commercial equipment and supplies (i.e., photographic equipment and supplies). Musical instrument repairers and tuners tend to work in music stores (part of the industry labeled “sporting goods, hobbies, and musical instrument stores”) and personal and household goods repair and maintenance, an industry that includes musical instrument repair shops.

Production Occupations

Printing press operators; print binding and finishing workers; etchers and engravers; pre-press technicians and workers; photographic process workers; molders, shapers, and castors (i.e., manufacturing potters)

Main industries: printing; manufacturing; warehouse clubs and supercenters

The production occupations included in Tier 2 are jobs related to printing, as well as photographic process workers and manufacturing potters. By far, printing press operators number the largest—173,010 in 2012—and are among the better-paid production occupations listed in Tier 2—average annual salary of \$34,690 in 2012. Other printing-related occupations included here are print binding and finishing workers (52,960 employed), etchers and engravers (8,610 employed), and pre-press technicians and workers (41,420 employed).²⁸

With the exception of etchers and engravers, who have a self-employment rate of about 26 percent, few workers in production occupations are self-employed. Printing industries employ many production workers. For example, in 2012, 100,810 printing press operators (almost 60 percent of the profession) worked in the industry labeled “printing and related support activities” (NAICS 323100). The percentage working in printing is even larger (82 percent) among print binding and finishing workers.

Manufacturing potters (i.e., molders, shapers, and castors) are similarly concentrated in the manufacture of nonmetallic mineral products (e.g., clay)—60 percent of the occupation, while photographic processing workers are likely to be employed in general merchandise

stores and in photo-finishing shops. General merchandise stores (e.g., warehouse clubs and supercenters) employed 18,630 photographic processing workers in 2012.

Other Technical and Supporting Occupations

Forest and conservation technicians; models; desktop publishers

Main industries: government; clothing and clothing accessory stores; publishing

Four other occupations round out the list of arts and cultural technical and supporting occupations: forest and conservation workers, tour guides, models, and desktop publishers. Forest and conservation technicians, an occupation category that includes forest rangers, predominately work in government, the federal government, in particular. In 2012, there were 31,720 employed forest and conservation technicians. Of these, 30,220 worked in government—23,460 in federal government. In 2012, annual median earnings for forest and conservation technicians was \$33,920.

In 2012, tour guides numbered nearly 35,500, and many (12,280 in 2012) worked in museums and historical sites.

The OES reports 4,330 employed wage and salary models in 2012; their average annual earnings were \$18,750. Most models work in clothing and clothing accessory stores, though 14.5 percent are self-employed.

Among desktop publishers, 9 percent are self-employed. Salaried desktop publishers, numbering 15,960 in 2012, earned an annual average of \$37,040, and many (5,320 in 2012) work in publishing.

²⁸ “Pre-press technicians and workers” format and proof text and images submitted by designers and clients into finished pages that can be printed. Digital and photo type-setting is part of this work.

Tier 3. Management Occupations

Not specific to arts and cultural industries, but required for their production, are management occupations. Using the OES, Tier 3 combines management occupations and selected industry data to enumerate arts and cultural managers.²⁹

The OES does not provide the level of detail reported in the ACPSA. For example, the ACPSA includes advertising agencies among its arts and cultural commodities and industries. The ACPSA, however, excludes public relations firms, media-buying agents, and direct mail advertising (i.e., coupons and fliers). The finest level of industry detail available from the OES, alternatively, aggregates each of these industries into NAICS 5418, “advertising, public relations, and related services.”

Consequently, the management occupations listed in Tier 3 relate to 16 broadly defined arts and cultural industries. The ACPSA, alternatively, delineates roughly 69 industries. Even so, Tier 3 provides an ample picture of the contributions of arts and cultural managers.

In 2012, the arts and cultural industries presented in Tier 3 employed nearly 153,000 managers. Advertising and public relations (and related services) staffed the greatest number of managers (48,300), followed by newspaper, periodical, book and directory publishers, with 32,310 managers in 2012.³⁰ Combined, these two industries staffed 50 percent of all the managers employed by the arts and cultural industries captured in Tier 3.

Advertising and public relations also employ the best-paid managers included in Tier 3. Among all management workers

in advertising and public relations (and related services), annual earnings averaged \$127,940 in 2012. Notably, this high average was propelled by the industry’s 4,000 marketing managers earning an average of \$134,080 in 2012.

Managers working in television broadcasting and motion picture industries also earned comparatively high salaries—averaging roughly \$118,000 in annual earnings for managers in both industries. Television broadcasting employed 300 marketing managers (earning an average of \$136,930), and motion picture industries staffed 1,090 marketing managers (earning an average of \$132,740).

Managers working in the performing arts and in museums and historical sites, alternatively, are among the lowest paid. In 2012, management earnings in the arts and museums averaged \$73,510 and \$79,740, respectively.

Training and development managers, though few in number, are among the best paid managers working in the performing arts. In 2012, training managers, an occupation that includes the title of “education director,” numbered only 30 in the performing arts. Their earnings, however, averaged \$102,680 in 2012, an amount second only to the earnings reported for the 360 chief executives working in the performing arts, and who earned an average salary of \$157,660.

In 2012, the museums and historical sites industry employed 1,610 “operations and specialty managers,” a management-occupation group that includes managers of computer and information systems, and of finance. With the exception of chief executives, computer and financial managers are the industry’s best paid management workers, earning an annual average of \$95,690 and \$92,710, respectively, in 2012.

²⁹ The managers reported in Tier 3 are represented by SOC code 11-0000, a broad category that includes chief executives, marketing managers, and human resource managers.

³⁰ The ACPSA excludes directory publishers.

Section 2. Locating All Occupations (Arts and Non-Arts) Within Arts and Cultural Industries

Section 1 examined arts and cultural occupations, and their associated industries, in core, technical and supporting, and management categories. This section further sifts through OES data to show the wider occupational range of workers employed in arts and cultural industries. These tabulations show that arts, design, and media occupations rank first in employment in many, but not all, arts and cultural industries.

OES data are used to examine the occupations employed by 12 selected arts and cultural industries. These selections represent some of the main industries within the ACPA. They include: performing arts; independent artists, writers, and performers; museums, historical sites and similar institutions; motion picture and video industries; sound recording; radio and television broadcasting; publishing; specialized design; photographic services; bookstores and news dealers; florists; and jewelry and silverware manufacturers.

Table A is a summary of the top occupation groups employed by the broadly defined arts and cultural industries captured by the OES. Tables B-M show 2012 occupations ranked by number of employees. For example, “arts, design, entertainment, sports, and media occupations” (SOC 27-0000) rank first in employment in 8 of the 12 arts and cultural industries considered. This occupation group contains many of the visual and performing artists, designers, and media occupations (e.g., reporters, photographers, editors) discussed above in Tier 1 and Tier 2 occupations.

However, arts, design, and media occupations are only part of the occupational profile of arts and cultural industries. Workers in computer occupations, food preparation and serving jobs, and office and administrative-

support positions, to name just a few, are also employed by arts and cultural industries.

The following are highlights from Tables B-M.

Performing Arts Companies

- ▶ Arts occupations such as actors and musicians compose the largest number of workers employed by the performing arts industry (56,370 workers in 2012). But the performing arts industry also employs almost 11,000 office and administrative-support occupations (e.g., bookkeepers and secretaries) and nearly 10,000 personal care and service occupations (e.g., ushers and ticket-takers).
- ▶ In 2012, the performing arts employed 8,400 food preparation and serving-related workers (e.g., cooks, bartenders, waitresses).

Independent Artists, Writers, and Performers

- ▶ Arts, design, and media occupations rank first in employment by independent artists, writers, and performers—30,410 workers in 2012. Ranking second and third, however, are office and administrative support positions (7,110 workers) and business and financial operations occupations (2,560 workers).

Museums, Historical Sites, and Similar Institutions

- ▶ Of the selected arts and cultural industries considered here, museums, historical sites, and similar institutions employ workers from the widest variety of jobs—22 different occupation groups in 2012.

- ▶ Service occupations, including tour guides, account for the largest number of jobs in this industry (25,370 jobs), while education and library occupations rank second (20,430).
- ▶ In 2012, museums, historical sites, and similar institutions (e.g., nature parks) employed 7,850 protective service occupations (including fish and game wardens) and 1,860 life, physical, and social science occupations (including zoologists and wildlife biologists).

Motion Picture and Video Industries

- ▶ In addition to employing 146,000 arts and design workers (such as multimedia artists, actors, and producers and directors), motion picture and video industries employed 44,770 food preparation and serving-related workers such as cooks, bartenders, and waitresses.

Sound Recording

- ▶ In 2012, the sound recording industry employed 6,070 workers in arts and design professions such as producers and directors and public relations specialists. However, the industry employed nearly the same number of office and administrative support occupations and business and financial operations occupations. Combined, sound recording industry workers employed in these two occupation groups numbered 6,130 in 2012.

Radio and Television Broadcasting

- ▶ While occupations such as radio and television announcers and reporters number greatly in television and radio broadcasting, this industry also employs 31,330 workers in sales occupations—mainly advertising sales agents.

- ▶ Advertising sales agents and other sales workers employed by the industry earned an average annual salary of \$45,570 in 2012.

Publishing

- ▶ Computer occupations rank first in employment in the publishing industry. In 2012, publishing employed 164,030 workers in this occupation group, software developers and computer support specialists, in particular.
- ▶ The publishing industry's computer workers are also among the best-paid workers in arts and cultural industries, earning a median annual salary of \$85,700 in 2012.

Specialized Design Services

- ▶ Occupations such as designers and art directors make up the majority of workers employed by specialized design businesses. In 2012, however, this industry also employed 18,930 office and administrative support workers, and 8,160 workers in production occupations such as printing workers and assemblers and fabricators.

Photographic Services

- ▶ Workers in arts and design occupations (mostly photographers and designers) are also prevalent in the photographic services industry—40,570 employed in 2012. However, the industry also employs 12,270 office workers and 4,560 production workers—mainly photographic processing workers.
- ▶ Photographers/designers and photographic processing workers employed by the photographic services industry generally earn the same annual wages—\$25,800 and \$25,900, respectively, in 2012.

Book Stores and News Dealers

- ▶ Sales occupations such as retail sales workers and cashiers make up the largest occupation group employed by book stores and news dealers—77,790 workers in 2012.

Florists

- ▶ While 46 percent of all wage and salary workers in florists shops are floral designers, this industry also employs sizable numbers of retail sales workers and transportation workers, such as light truck and delivery-service drivers. In 2012, florist shops employed 15,690 and 12,080 workers in those occupations, respectively.

Jewelry and Silverware Manufacturing

- ▶ Of the 28,820 jewelry and silverware manufacturing workers in 2012, more than half were employed as production workers—namely jewelers and precious stone and metal workers, tool-cutting setters, and assemblers.

KEY DIFFERENCES IN MEASURING EMPLOYMENT: ACPSA VS. OES

Arts and Cultural Production Satellite Account (Source: BEA)

- ▶ The ACPSA includes self-employed workers.
- ▶ The ACPSA distinguishes between all workers employed by a particular industry from workers engaged in the production of arts and cultural commodities. For example, the ACPSA identifies the number of workers employed in creative advertising, a separate count from all workers employed by the advertising industry as a whole.
- ▶ The ACPSA excludes employment by occupation.

Occupation Employment Statistics Program (Source: BLS)

- ▶ The OES Program excludes self-employed workers.
- ▶ The OES reports counts of workers for broad industry categories.
- ▶ The OES contains detailed estimates of employment by occupation.

Section 3. Computing the Monetary Value of Arts and Cultural Volunteers

The ACPSA, following from the national income and product accounts, excludes production by volunteer workers—volunteers are not compensated, so no monetary transaction is recorded. In response to this limitation, this section estimates the value of volunteer hours by arts and cultural volunteers—volunteers with arts and cultural organizations and volunteers performing music and other arts for non-arts groups such as religious organizations.

Although it is difficult to assign a dollar value to volunteer time, the estimates presented here were based on the wages associated with the specific kinds of work performed by arts and cultural volunteers, such as performing office work or fundraising. Based on that method, the NEA Office of Research & Analysis estimates the value of work donated by arts and cultural volunteers at \$13.1 billion in 2012.

Data Sources

In addition to being derived from OES data, the value of arts and cultural volunteer work was estimated using data from the 2012 Volunteer Supplement. The Volunteer Supplement is conducted each September as a supplement to the Current Population Survey, and is sponsored by the U.S. Bureau of Labor Statistics and the Corporation for National and Community Service. The 2012 Volunteer Supplement obtained interviews with 54,000 U.S. housing units. Those interviews, in turn, show that 64.5 million people, ages 16 and older, volunteered through or for an organization at least once between September 2011 and September 2012.

Volunteers with Arts and Cultural Organizations

In 2012, 2.2 million people volunteered 210 million hours with arts and cultural organizations. To value these hours in dollars, it is first necessary to examine the kind of work volunteers perform for arts and cultural organizations.

As shown below, the most common type of work offered by volunteers with arts and cultural organizations is management services, including serving on a board or committee. In 2012, 21.3 percent of volunteers for arts and cultural groups did this type of work. An additional 13 percent perform music and other arts, and nearly the same share, 12.8 percent, do general office work.

Nearly 8 percent of volunteers with arts and cultural organizations tutor or teach, and 5 to 6 percent serve as ushers and greeters or do fundraising. Another 2 percent collect, make, or distribute clothing, crafts, or other goods, and almost 1 percent prepare or serve food. The remaining 31.9 percent perform a variety of duties such as general labor and transportation and other tasks not specified by the Volunteer Supplement.

VOLUNTEERS WITH ARTS AND CULTURAL ORGANIZATIONS

Percent Performing Various Activities, 2012

Management	21.3%
Music and performance	13.0%
General office work	12.8%
Teach	7.7%
Usher or greeter	5.8%
Fundraise	4.8%
Distribute goods	2.1%
Serve food	0.7%

All others¹ **31.9%**

¹ Examples include general labor and transportation, providing medical care and protective services, mentoring youth and coaching sports, and other services not specified in the Volunteer Supplement.

Data Source: 2012 Volunteer Supplement, U.S. Census Bureau

The value of work donated by volunteers with arts and cultural organizations was calculated by distributing the total number of hours donated (210 million) in accordance with the share of tasks performed, multiplied by the hourly wage associated with that work.

For example, 21.3 percent of volunteers with arts and cultural groups perform management work. Applying that share to the 210 million hours yields 44.8 million hours. This figure is then multiplied by \$50.57, which reflects the median hourly wage paid to management workers in 2012 (\$45.15), plus an additional 12 percent to capture benefits.³¹ In other words, the management work donated by volunteers with arts and cultural organizations is valued at \$2.3 billion in 2012. Or, as an

³¹ Adding 12 percent to the base median wage is recommended by Independent Sector to incorporate the value of non-wage “fringe” benefits.

alternative interpretation, arts and cultural organizations would need to pay \$2.3 billion for the management services supplied by their volunteers.

This same procedure was applied to the other tasks performed. For example, the wage earned by office clerks was applied to the share of office work hours donated, and wages earned by retail sales people and by food and beverage-serving workers were assigned to the hours tallied for distributing goods and serving food, respectively.

Volunteer hours spent fundraising and ushering were valued at \$27.29 and \$10.09, respectively, to reflect wages earned by workers in these occupations.

A slightly modified treatment, however, was applied to hours spent teaching and “other” tasks, and to hours spent playing music or performing other arts. The OES does not report hourly wages for teachers, and the other tasks performed represent a variety of services such as general labor and transportation and other work not specified by the Volunteer Supplement. The dollar value of hours spent teaching and providing other services was calculated by applying a general wage of \$22.14, which represents the hourly wage earned by all production and non-supervisory workers on payrolls in 2012, and is the value assigned to total volunteer hours by Independent Sector.³²

The OES shows that the median hourly wage earned by musicians and singers was \$23.50 in 2012. It is assumed, however, that the value of the hours spent by volunteers performing music and other arts is somewhat below the wages typically earned by professional musicians. Therefore, the hourly value assigned to this volunteer work is \$9.87—the hourly tenth percentile wage earned by musicians and singers in 2012, plus 12 percent in benefits.

³² The \$22.14 value used by Independent Sector includes the 12-percent benefits premium.

In total, it is estimated that **the national value of volunteer time with arts and cultural organizations was \$5.2 billion in 2012.**

Volunteers Performing Music and Other Arts for Non-Arts and Cultural Groups

In addition to the 2.2 million volunteers with arts and cultural organizations, the 2012 Volunteer Supplement identifies nearly 5.1 million volunteers who perform music and other arts, but for organizations that are not arts or cultural. In fact, volunteers performing music with religious organizations compose the largest share of this group—three million or almost 60 percent of volunteers performing music and other arts for non-arts groups.

Valuing the hours volunteers spend performing music and other arts for non-arts groups was calculated by multiplying the hourly tenth percentile wage earned by musicians and singers, plus 12 percent in benefits, to the 792.2 million hours donated in 2012. By this calculation, **the hours volunteers spent playing music or performing other arts for non-arts groups in 2012 is valued at \$7.8 billion.**

Total Value of Arts and Cultural Volunteers

The total value of time donated by arts and cultural volunteers is the sum of the value of hours donated by volunteers with arts and cultural organizations (\$5.2 billion) and the value of hours by volunteers performing with non-arts groups (\$7.8 billion). As summarized in Table N, **the dollar value of all arts and cultural volunteers is estimated at \$13.1 billion in 2012.**

LIST OF TABLES ACCOMPANYING PART II

(AVAILABLE ON THE ACPA DATA PROFILE PAGE ON THE NEA'S WEBSITE.)

Section 1. Adding Value to the Satellite Account: A New Taxonomy for Arts and Cultural Occupations

- Tier 1. Core Arts and Cultural Occupations, 2012
- Tier 2. Technical and Support Occupations, 2012
- Tier 3. Management Occupations for Arts and Cultural Industries, 2012

Section 2. Locating All Occupations (Arts and Non-Arts) Within Arts and Cultural Industries

Employment by Occupation Group, 2012:
(Occupations are ranked by number of employees.)

- Table A. Top Occupation Groups Employed by Arts and Cultural Industries
- Table B. Performing Arts Companies
- Table C. Independent Artists, Writers, and Performers
- Table D. Museums, Historical Sites, and Similar Institutions
- Table E. Motion Picture and Video Industries
- Table F. Sound Recording
- Table G. Radio and Television Broadcasting
- Table H. Publishing
- Table I. Specialized Design
- Table J. Photographic Services
- Table K. Bookstores and News Dealers
- Table L. Florists
- Table M. Jewelry and Silverware Manufacturing

Section 3. Computing the Monetary Value of Arts and Cultural Workers

- Table N. Estimated Value of Arts and Cultural Volunteers, 2012

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APPENDIX A.

Understanding Industry Classifications

As reported by the U.S. Census Bureau, the North American Industry Classification System (NAICS) is used by federal statistical agencies in classifying business establishments for the collection, tabulation, and presentation of statistical data describing the U.S. economy. The NAICS structure is hierarchical and begins at the two-digit level, which represents the industry sector, and expands to five or six digits of industry classification detail.³³

For example, the performing arts is part of *sector 71*, “arts, entertainment, and recreation” and *subsector 711*, “performing arts, spectator sports, and related industries.” The performing arts is the *industry group* that comprises the industries of theater companies and dinner theaters; dance companies; musical groups and artists; and “other performing arts companies” such as circuses and magic acts.

NAICS CODES FOR PERFORMING ARTS INDUSTRIES

Sector 71: Arts, entertainment, and recreation

Subsector 711: Performing arts, spectator sports, and related industry

Industry group 7111: Performing arts companies

Industry 71111: Theater companies and dinner theaters

Industry 71112: Dance companies

Industry 71113: Musical groups and artists

Industry 71119: Other performing arts companies

³³ The five-digit NAICS code is the level at which there is comparability in code and definitions for most of the NAICS sectors across the three countries participating in NAICS (the United States, Canada, and Mexico). The six-digit level allows for the United States, Canada, and Mexico each to have country-specific detail. A complete and valid NAICS code contains six digits.

Any codes greater than six digits are “NAICS-based codes” and are reported only in the Economic Census.

APPENDIX B.

Illustration of the Standard Occupation Classification System

As reported by the U.S. Bureau of Labor Statistics, the Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers and jobs into occupational categories for the purpose of collecting, calculating, analyzing, or disseminating data.³⁴

The SOC is designed to reflect the current occupational structure of the United States, and it classifies all occupations in which work is performed for pay or profit. The organizing principle of the SOC system is work performed rather than job title, so there are fewer occupation codes in the SOC than jobs in the economy.

The SOC is organized in a tiered system with four levels ranging from major groups to detailed occupations. Under the current, 2010 SOC system there are 23 major groups, broken into 97 minor groups. Each minor group is broken into broad groups, of which there are 461. There are, at the most specified level, 840 detailed occupations.

Major group SOC codes end with “0000,”³⁵ while *minor* groups generally end with “000.” *Broad* occupations end with “0,” and *detailed* occupations end with a number other than 0.

Below is a schematic of SOC codes related to visual artists. It begins with the major group 27-0000, “arts, design, entertainment,

SOC CODES FOR VISUAL ARTS OCCUPATIONS

27-0000 Arts, design, entertainment, sports, and media occupations

27-1000 Art and design workers

27-1010 Artists and related workers

27-1011 Art directors

27-1012 Craft artists

27-1013 Fine artists, including painters, sculptors, and illustrators

27-1014 Multimedia artists and animators

27-1015 Artists and related workers, all others

³⁴ All U.S. federal agencies that publish occupational data for statistical purposes are required to use the SOC to increase data comparability across federal programs.

³⁵ The exceptions are minor groups 15-1100, computer occupations, and 15-5100, printing workers.

sports, and media occupations.” This is followed by the minor group, 27-1000, “art and design workers,” and next by the broad occupation, 27-1010, “artists and related workers.”

The detailed occupations under “artists and related workers” include art directors (27-1011); craft artists (27-1012); fine artists, including painters, sculptors, and illustrators (27-1014); multimedia artists and animators (27-1014); and artists and related workers, all others (27-1015), a residual SOC code that includes calligraphers and tattoo artists.

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