

**ARTISTS' CAREERS AND THEIR LABOR MARKETS**

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# Artists' Careers and Their Labor Markets

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"It was time. It got to the point where you're just tired of being poor." Bassoonist Chad Alexander ten years after graduating from Juilliard who recently sold his bassoon to cover credit card bills and now works as an assistant insurance underwriter. (Wakin, New York Times, December 12, 2004)

## 1. Introduction

Economists' research into the economics of art and culture has a relatively short history. Baumol and Bowen's (1966) book, written less than forty years ago, is seen by many as the starting point of the economists' foray into this sub-discipline. Research on the artists' labor markets and their careers has even a shorter history. Its empirical roots lie in studies of single artistic occupations that are, for the most part, barely 30 years old.

As might be expected, these early studies were cross-sectional and provided important, but limited information on careers and labor market behavior. Economists learned a great deal from these studies, but they also raised a number of unanswered questions. Table 1 provides a list of some of the landmarks among the empirical studies of artists many of which are discussed in more detail below. The passage of time has allowed economists to enhance their knowledge through the use of increasingly available panel data of various types.

< Table 1 >

This paper starts with a description of a framework for categorizing and reviewing existing studies (Part II). This is followed by a review of some of the major studies in these categories (Part III) and concludes with two studies of our own. One will provide an overview of many major themes learned from the cross-sectional analysis by examining a quasi-panel for the U.S. (Part IV) based on the U.S. Census Bureau's Public Use Microdata Samples (PUMS) drawn from the U.S. decennial censuses for 1940 through 2000. The other (Part V) addresses some themes regarding the artists' careers and labor market experiences that cannot be answered by cross-sectional data through the use of the 1979 National Longitudinal Survey of Youth (NLSY79). The last part (Part VI) provides a summary, conclusions and suggestions for further research.

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## 2. A Classification Scheme for Studies of Artists' Careers

For the most part current research examining the careers' of artists can be placed into four categories. The one to receive the least attention in this paper develops theoretical models of artistic career processes. MacDonald (1988), for example, developed a two-period model of performers' behavior that predicts young performers will earn incomes that are less than what they could earn outside the arts. The three additional categories of current research relate to empirical research.

The second category utilizes existing information on a group of artists obtained from a variety of sources to develop an understanding of an aspect of artists' careers. Sometimes the data for this research is anecdotal, as in Richardson's (1980) study of opera singers. Other times it is much more quantitative as in Galenson's (2000a, 2000b, 2001, 2002) studies of painters' careers. Galenson uses auction transactions in order to identify at what point over their lifetimes artists produce their best work.

The third category is based on surveying artists and asking them to recreate their careers by responding to written questionnaires or personal interviews. There are two types of retrospective studies, one utilizing special surveys of artists and the other using surveys of a broader group, including the general population. Examples of the former include Montgomery and Robinson's (2000) study of dance majors and Stohs' (1989, 1990, 1991a, 1991b, 1992a, 1992b) study of graduates of the School of the Art Institute of Chicago. The research by Smith (2000) using the 1970 census for the U.S. and Alper and Wassall (1998) are examples of the latter.

The last category is based on panel data. There are very few examples of research on artists' careers based on true panel data. There are a number of studies that are what might be called "quasi-panels." They follow groups of artists, many of whom are likely to be the same from survey to survey over time rather than following the same group of people/artists from the start to the end of a multiyear period. Two examples of quasi-panel research are the studies of Bielby and Bielby (1987, 1989, 1993, 1998) based on the administrative records of the Writers Guild of America, west, the union for writers in the U.S. television and film industries, and the work of Throsby and his colleagues (1986, 1989, 1994, 1995, 2003) utilizing the four surveys of Australian artists for 1983, 1988, 1993 and 2002. The research on U.S. artists from 1940 to 2000 to be discussed later in this paper would also fit into this category.<sup>1</sup>

There appear to be only two true panel studies. One, by Rengers (2002), specifically targeted artists by following a group of 540 artists who graduated from several art schools in the Netherlands. The artists were surveyed twice over a six-year post graduation period. The first interview was approximately one and one-half years post graduation and the other was six years post graduation. The other by Alper and Wassall

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<sup>1</sup> Except for the works discussed in this paper or listed among the references, the authors were able to find little evidence of empirical research on artists in other countries. Most of the research not directly discussed in the paper is either simply cross-sectional or quasi-panel.

(2002), which will be presented in detail below, is a study of artists who were part of a panel survey of the U.S. population. It has followed essentially the same panel for more than twenty years. The former study is limited by the small number of years of information making it difficult to observe and examine the artists' career paths. The latter, while covering a significantly longer time period and thus potentially providing greater insights into artists' careers, was not specifically designed to examine issues that are unique to artists. It also suffers from being a survey designed to represent the general population and therefore includes relatively few artists.

There are a number of advantages to using panel data rather than cross-sectional data (Federal Committee, 1985) when studying artists. Perhaps most important is the reduced variability in the estimates of change when compared to the results from unrelated or pooled cross-sections taken over time. There is no need to control for as many factors related to the change that might impact the reasons for the observed patterns, because in each time period it is the same people being examined. For example there is generally no change in the composition of the sample related to gender, race or ethnicity, all of which can influence the phenomena being measured.

The reliability and accuracy of the information obtained is also another advantage of a panel survey. A panel survey is repeated on a regular basis, so the reference period is generally shorter resulting in less recall bias than a single retrospective survey. Trying to remember what one did over the last twelve months when asked about work activities is much easier than trying to recreate an entire working career that may extend 10, 15 or 20 or more years. Information on income, expenses, and the like, can be recalled for the last year or so, but certainly most people would find it difficult to recall much beyond that. In retrospective surveys, participants tend to selectively telescope, suppress or embellish events that happened to them in the more distant past.

A panel enables data to be collected in a clearly identified time sequence so the direction and causation of change can be more easily and reliably identified. For example, when examining the determinants of who becomes a successful artist it might be interesting to study how a young person's goals and attitudes towards work and his/her chosen profession influences his/her future success. Retrospective information on these issues may be influenced by events that have occurred while information collected at the time these goals and attitudes are being developed is unaffected by subsequent outcomes. Also, it might be useful to examine how attitudes toward the profession are developed over time and the relationship individual experiences have in this process.

The repeated nature of the panel survey, with a short time period between surveys, tends to lessen the burden on the respondents and therefore is likely to increase their willingness to participate and to provide accurate information. The amount of information that needs to be collected at each interview is less than for a single retrospective survey so the time commitment for each interviewee is reduced. Many questions would not need to be repeated and may simply be updated when necessary, so that new information can be obtained without increasing the respondents' burden. The total amount of information

collected through a panel is generally greater than what could be collected in a single retrospective survey.

This is not to say that panel studies do not have disadvantages and problems as well. Perhaps the most problematic is that the full set of benefits to be gained from panel surveys generally cannot be obtained for a number of years. While information from each cross-section can be very useful, the benefits from being able to measure change and long-term outcomes will take time. Participant attrition can lead to serious biases above the typical refusals of any cross-section survey. The cost of a panel survey is generally higher than a retrospective cross-section. For there to be significant value from a panel survey the original budget commitment must be for more than one survey.

Using a panel to study artists has an additional problem if it is not designed specifically for a sample of artists. In the U.S. artists comprise less than two percent of the U.S. labor force so that unless it is a large survey, the number of artists who are likely to be part of the sample is small making it difficult, if not impossible, to obtain reliable estimates. This is an especially difficult problem if there is an interest in exploring the differences among the various genres of artists.

### **3. Empirical Studies of Artists' Careers**

#### **3.1 Careers but not Longitudinal**

First is an examination of research on artists' careers based on data that are neither panel in nature nor based on surveys of artists. Examples that fit into this category are studies done by Galenson (2000a, 2000b, 2001 and 2002), Galenson and Weinberg (2001) and Richardson (1980).

Galenson is interested in determining at what point in the artist's career he/she is most productive. In particular he attempts to identify when artists, i.e., painters, produce their most valuable work and their best work. He is also interested in seeing whether this point in an artist's career has remained constant over time. He uses two sources of information. To determine value he uses data from art auctions. To determine quality he uses surveys of art history, texts and published monographs, and the paintings that are selected for retrospective exhibitions of the artists' works. He characterizes the authors of the surveys and the curators of the exhibitions as art experts who can provide quality assessments of the artists' works.

Galenson examined the careers of French artists born between 1796 and 1900 and American artists born 1870 to 1940. He found that both the artists' most valued works and their best works tended to occur at particular points in their careers and that these changed over time. For both the French and American artists he determined that the artists born at the beginning of each period produced their most valued and their best work at significantly later points in their careers than those born at the end of each period. His explanation for this result is that the two artist groups introduced innovations into their art

in very different ways. The younger artists were "conceptual innovators" who were quick to introduce new ideas into their paintings. As in many other fields requiring considerable amounts of intellect, e.g., physics and mathematics, the best years for what Galenson calls "radical conceptual innovation" tend to be early in a person's career and it is this innovation that makes the artist's product the most valued and his/her best work. The older artists, those born earlier in the periods, were "experimental innovators" who spent many years working to solve a single problem and thus produced a body of work that illustrated the evolution of the problem's solution they wanted to solve rather than a single, revolutionary work. Thus their most valued and best paintings tended to occur much later in their careers.

Richardson's (1980) work was primarily case studies of various American opera singers' careers. He noted that unlike other performers, opera singers cannot really start to train their voices until their late teens or early twenties and that it takes at least five years to develop the voice; the stamina needed to sing an entire opera; to learn to sing the repertoire and how to act it on stage. Opera singers continue to train throughout their careers. Even with constant training few opera singers continue to perform past their early fifties. For many years American opera singers, especially black Americans, had to go to Europe for experience and to develop a reputation and then they would be able to return to a successful career in the U.S.

### **3.2 Longitudinal via Retrospection**

Montgomery and Robinson (2003) studied the graduates of the Five College Dance Program.<sup>2</sup> The graduates were asked to recreate, through a retrospective survey, their post-graduation behavior. Those surveyed completed their undergraduate degrees over the 1970 to 1998 period. The vast majority (84 percent) worked in dance at some time during the post-graduation period but that proportion decreases quite rapidly over time. Of those who graduated post-1990, 78 percent were still involved in dance in 1998 with 41 percent dancing and an equal number teaching dance. Of those who graduated pre-1990, only 40 percent were still in dance with fewer than 20 percent indicating that they were dancers and about one-third identified themselves as dance teachers. The average number of years spent dancing, teaching dance or as a choreographer ranged from three to six years. One ramification of the career transition out of dance into other occupations Montgomery and Robinson found was that the program's graduates became more geographically mobile as they moved out of the dance occupations.

Stoh's (1989, 1990, 1991a, 1991b, 1992a, 1992b) studies of graduates of the School of the Art Institute of Chicago were more sociological and psychological than economic, but did identify some aspects of their careers that are of interest to economists. In 1981 she surveyed a group of students who had graduated in 1963. She categorized these artists as either fine artists, those who produce art products, or applied artists, those who produce art for commercial purposes. Stoh found that most of the fine arts majors left

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<sup>2</sup> The five colleges involved are: University of Massachusetts Amherst, Amherst College, Mt. Holyoke College, Hampshire College and Smith College.

the fine arts for advertising, teaching or a non-arts occupation. Only six percent of the fine arts majors were still supporting themselves in the fine arts 18 years after graduation, what she identifies as 'midlife', while almost half were doing so as young adults shortly after graduation.

Stoh characterized artistic careers based on the number of related job changes the artists made over their careers. Her characterization of a continuous career was one with three or fewer related job changes. An interrupted career was one with four or more job changes. Perhaps not surprisingly, she found that men were much more likely to experience careers that were steady with steady promotions than women. Two-thirds of the men and only one-quarter of the women had steady careers with promotions from young adulthood to midlife. Reflective of this difference, Stoh found that for almost three-quarters of the men and just over half the women their artistic work was proving to be their primary source of support. At midlife the female continuous career artists were found to have greater personal income, a higher occupational prestige and significantly fewer children than those with interrupted careers. In a study of a subset of male artists, Stoh found that fine artists were more likely to identify intrinsic motives to explain why they were artists than were the applied artists.

Smith (2000) used the question in the 1970 U.S. Census on the occupation held five years earlier and the respondent's occupation in 1970 to examine the movement of people into and out of artistic occupations. He found that slightly more than 70 percent of the artists in 1965 persisted as artists in 1970. Approximately one-third of those who were no longer artists were working in other professional occupations<sup>3</sup> in 1970 with the others distributed among the non-professional occupations. There were also new entrants into the arts over the five year period. They made up approximately 0.3 percent of those in non arts occupations in 1965. Almost 55 percent of those who were artists in 1970 had also been artists five years earlier. Almost one-quarter of the artists in 1970 had not been working at any job five years earlier.

Smith's primary focus was the determinants of artists' earnings over their careers. He found that having been an artist in 1965 leads to significantly lower earnings (approximately 15 percent less) for people who were no longer artists in 1970. Overall work experience has the inverted 'U' shape effect on earnings for those former artists working in non arts jobs suggesting that the skills learned while working as an artist may not be readily transferable to non arts jobs. He found that experience in the arts and the apparent development of arts specific human capital had a positive and significant effect on arts earnings.

In a similar study, Alper and Wassall (1998) utilized the first round of the National Science Foundation's National Survey of College Graduates (NSCG) to examine the determinants of persistence in arts occupations. Like the census data used by Smith, the

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<sup>3</sup> The U.S. Census Bureau classifies the artist occupations among the professional occupation category. This category includes other professional workers such as doctors, lawyers and professors of economics.

information in the NSCG was collected in the first interview round as part of a retrospective survey. Information was obtained for 1988 and 1993. Data from the 1990 Census was also part of the NSCG data so that there were three observations on these individuals over this five year period. Those who had worked as artists in any of the three years were included in Alper and Wassall's study.

Over the five year period artists' careers were found to be not that much less stable, at least in terms of occupational changes, than many other occupations. Approximately three-quarters of the artists in 1988 were still artists five years later. This is slightly larger than what Smith found and may reflect that these were artists with at least bachelor's degrees. In the majority of the non arts occupations examined by Alper and Wassall, between 70 and 85 percent persisted in their occupations over the five year period.

When these artists did change occupations more than one-quarter entered managerial and executive occupations and fewer than two percent were working in food service occupations. An equal amount, approximately ten percent, worked in sales and clerical occupations. They also found a larger percentage of artists left for better pay/promotion or for a career change than did other professionals who left their jobs over the same time period.

There was a considerable inflow of people into the arts occupations over the five year period as well. Fully one-third of the artists in 1993 were not artists in 1988. Approximately one-third of the new entrants came from the stereotypical artists' non arts occupations, e.g., sales, clerical and food service. People were considerably more likely to indicate that they entered an arts occupation to change their career than were those who entered other professional occupations. There was a smaller, but still considerable, difference in the proportion of people entering arts occupations who indicated they did so to change their working conditions than among those who entered other professional occupations.

Alper and Wassall, using a probit model, examined the determinants of occupational persistence for artists over the 1988 to 1993 period. Several demographic characteristics, the artist's age and gender, were found to significantly impact persistence as an artist over the five year period. Male artists were more likely to persist than female artists. The likelihood of persisting tends to increase with age, but at a decreasing rate with artists older than 50 having an increasing likelihood of leaving the profession, perhaps into retirement. Neither the artist's race, ethnicity nor change in marital status had any impact on persisting as an artist. The only measure of human capital investments that significantly impacted persistence was experience. Whether the experience was fulltime or part-time did not matter, the more experience the greater the likelihood of persisting as an artist. There was no significant impact due to differences in the highest degree received or in being an art major. Even with only a limited number of identifiable artistic occupations in the NSCG data available for analysis, Alper and Wassall did find that being a post-secondary school teacher of art significantly decreased the likelihood of remaining an artist over this five year period. Other factors that had significant effects were having a

spouse who works part-time, which has a positive impact on persistence, and having a disability, which has a negative impact.

### 3.3 Quasi-Panel

Bielby and Bielby's (1987, 1989, 1993b, 1998) analysis of the Writers Guild of America, west (WGA) membership initially focused on issues related to gender, age and minority status. They started with data from 1982<sup>4</sup> and continue to study these authors today. Over time their focus shifted from analyzing earnings and employment conditions at a point in time to changes over time and the writers' careers.

The membership of the WGA, west, is inclusive of most authors who write for television and film.<sup>5</sup> The WGA's data on these writers is limited to a few basic demographic characteristics (age, gender and ethnicity) and to the earnings received in activities covered by the union's agreements with television and film producers. This limits the conclusions. Without a broader set of information, especially on their other income generating activities, the Bielbys only have a partial picture of what these writers are doing at any point in time and, therefore, over time as well. Since less than half the union's membership works in the industry in any given year, the absence of information on what they are doing when not employed in television or film is difficult to overcome. Therefore, the Bielbys pool the information on the annual panels of WGA members rather than follow the behavior of individual members over time.

In their earliest reports the Bielbys found that women and minorities were disadvantaged relative to the white male members of the WGA. This was true from both the perspective of earnings and employment. While this has changed over time, differences still exist. Throughout the 1980s they estimated that the earnings gap between all female and white male writers ranged between 25 and 40 percent. In the 1990s, through 1997, the gap narrowed to between 10 and 15 percent. The gaps were larger in film than in television. Minority earnings in the 1980s were approximately one-half the earnings of white males, but in the 1990s they were approximately the same. In recent work they found a much smaller gender gap in earnings between white male and female writers who are recent entrants into the occupation. The employment situation for female writers, as a percentage of total employment, has not changed much over the time period, especially in film and in television since the early 1990s. Minority employment in the industry increased by 66 percent during the 1990s, bringing it to seven percent of total employment.

Recently the Bielbys identified significant changes in the relationship between the writer's age and his/her likelihood of being employed as well as in the writers' age-earnings profiles. The biggest changes in the likelihood of employment occurred from the late

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<sup>4</sup> The first year the WGA, west computerized its data.

<sup>5</sup> Television writers do not include those who write for news, sports, other non-fiction shows, game shows and daytime dramas. Film writers do not include those who own the copyrights to their material.

1980s through 1997. The biggest change was the decreased likelihood of older writers finding employment. Between 1987 and 1997, the proportion of writers 51 to 60 years old employed decreased by one-third. For writers in the two older cohorts (61 to 70 and 71 to 80 years old) the proportion employed decreased by 50 percent. The writers in the 30 years old and under cohort were the only ones to see the likelihood of being employed increase.

The change in age-earnings profiles over the 1982 to 1997 period was most profound among writers employed in television and much more modest for those employed in film. For the television writers the transition was from the traditional inverted 'U' shape in 1982 with a peak for writers 51 to 60 years old, to an 'M' shape in 1987 with dual peaks for writers 31 to 40 and 51 to 60 years old, to a relatively flat inverted 'U' in 1991 with little difference in median earnings for writers in the three cohorts between 31 and 60 years old, and ended in 1997 with another highly peaked inverted 'U' shape, as in 1982, but with the peak earnings for writers who were 31 to 40. For writers in film the pattern of change was similar but did not reflect as much change in the age of the peak earners. In 1982 the inverted 'U' shape identified the film writers 41 to 50 years old as having the peak earnings while in 1997 it was those 31 to 40, with the writers in the 41 to 60 cohorts earning only slightly less.

The Bielbys examined various career related issues through the estimation of pooled earnings functions that followed the basic form:

$$\ln Y_{ict} = \alpha + \beta_1 X_i + \beta_2 W_{it} + \gamma_c + \delta_t + \varepsilon_{ict}$$

where  $Y_{ict}$  is the WGA earnings for the  $i^{\text{th}}$  artist who in the  $c^{\text{th}}$  cohort<sup>6</sup> in year  $t$ ,  $X_i$  are time invariant characteristics of the artist (e.g., gender),  $W_{it}$  are traits that vary for the  $i^{\text{th}}$  artist over time (e.g., experience),  $\gamma_c$  captures the effects that are unique to a specific cohort,  $\delta_t$  captures year specific effects (i.e., a vector of dummy variables for the year) and  $\varepsilon_{ict}$  is a vector of random errors (Bielby and Bielby, 1993a, 14). They found that, regardless of the writer's age, experience in the industry has a positive impact on earnings, but that having been recently employed in the industry (i.e., within the past three years) overwhelms the importance of overall experience in determining writers' earnings.

Third parties represent many writers, and other artists.<sup>7</sup> The Bielbys found that representation had a significant impact on both earnings and employment (through the estimation of a logit model for the probability of employment) and that the type of representation was also important. They separated "core" agencies<sup>8</sup> from all other agencies that represent writers and found that writers with "core" agency representation

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<sup>6</sup> Was admitted as a member of the WGA in year  $c$ .

<sup>7</sup> In the U.S. unionization is relatively common among the performing artists, such as actors and musicians, and very uncommon among most other artists.

<sup>8</sup> "They negotiate unique arrangements with the talent guilds and cultivate long-term relationships with those who finance, produce, and distribute new projects."

had an increased likelihood of being employed and significantly higher earnings than all other writers. When examining earnings data from 1982 to 1990 they also determined that the disadvantage faced by female writers was continuous over their careers at a constant differential and not cumulative.

Throsby and his colleagues (1986, 1989, 1994, 1995, 2003) have been studying Australia's artists through direct surveys since the early 1980s. The first survey was undertaken in 1983, was repeated in 1987, 1993 and 2002, but does not represent a true panel as each survey involved a different group of artists. Its advantage over the Bielby's research is that Throsby et al utilized a data collection instrument designed for artists. A considerably wider range of information tailored to the artists' activities, their earnings and work experiences was therefore obtained.

The findings from the surveys suggest some significant changes in Australia's artists and the career paths they have apparently taken. First and foremost there has been a considerable change in gender composition. In 1983 a bit more than one-third were female while in 2002 they were evenly split. Over the same twenty year period, the artists were getting older (mean age of about 46 years compared to 41.5) while the Australian labor force was staying about the same (37.5 years old in 2002 compared to 38.2 in 1983). They were also more likely to be native born Australians in 2002 than in 1983 (74 percent compared to 67 percent). In examining artists' training, an important aspect of the development of artists' careers, they found that the average time spent training went from about five years to slightly more than four (4.3) in 2002. While the time spent training showed a slight decline, the average age at which the artists start working as professional artists increased from 23 in 1983 and 27 in 1993 to 30 years old in 2002.

It appears that Australia's artists spent considerably more time working at their art in 1993 than they did in 1983. This includes working in their primary artistic occupation, in another arts field and in arts related work, a circumstance that is not unusual for many artists. The increase in hours was approximately 25 percent over the ten year period. This increase in hours working in the arts led to a change in the proportion of time working in the arts, as well, from just over 71 percent to slightly more than 82 percent in 1993. Over the 1993 to 2002 period the time spent in the arts declined by almost eight percent and the proportion of their total time spent working in the arts decreased slightly to 81 percent.

The artists' increased time and effort working apparently did not pay off in terms of earnings. Throsby (1986) reported that in 1983 artists' earnings from their art was approximately 60 percent of the earnings for all workers in Australia (full-time employees in their main jobs). In both 1993 and 2002<sup>9</sup> the artists' artistic earnings were only 40 percent of the earnings of all workers. If arts related earnings are included the difference was not

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<sup>9</sup> In general, financial information from surveys and censuses are for the year prior to the survey year. For Throsby's 2002 survey the financial year extended from July 1, 2000 to June 30, 2001. In general the survey or census year will be used to identify all the data collected at that time.

quite as large, 70 percent in 1983, 60 percent in 1993 and 57 percent of the average earnings for all workers in 2002, but it still shows a decline in the relative earnings of Australia's artists. A comparison of total earnings from all sources shows that in 1983 artists earned approximately six percent more than the average Australian worker; in 1993 they earned only 80 percent of the average Australian's mean earnings. The period from 1993 through 2002 saw a slight improvement in overall earnings to the point where artists' mean earnings were 87 percent of the average full-time Australian employees' earnings.

In Australia, as in much of the rest of the world, artists tend to hold more than one job during the year in order to earn the income needed to survive. The proportion of artists who were multiple jobholders, decreased from almost three-quarters (72 percent) of the artists in 1988 to under two-thirds (63 percent) in 2002.

As far as career development, Throsby et al. find that artists are starting their professional careers increasingly later in life. In 1983 the mean age for the start of their professional careers was 23. A decade later it was 27. In 2002 it is 30. The increase was not uniform across all arts occupations. The 'community artists/community cultural development workers' had the largest relative increase in the average age at which they started their careers. The 'crafts practitioners' had the smallest increase. Perhaps this reflects differences in the relative importance of the formal schooling and training needed to enter these professions. Throughout this 20 year period it was the dancers who started their professional careers at the youngest age (19 in 1983 and 24 in 2002) and the writers who started at the oldest age (28 in 1983 and 37 in 2002).

### **3.4 True Panel Data**

Rengers (2002) was interested in determining the best model to explain artistic careers. He compared the traditional human capital model, in which the artists' careers are affected by their intrinsic and learned qualities, to the winner-take-all model, in which the relative differences among artists are the most significant factor in explaining the differences in careers. He utilized data from several panels. One panel was comprised of 540 art college graduates in the Netherlands who entered the labor market between 1993 and 1995. Rengers had two observations on their activities. The first observation was approximately one and a half years after graduation and the second was six years later. Another panel represented all the visual artists in the Netherlands who had been surveyed annually starting in 1993. He used the results from four surveys of approximately 500 visual artists for the years 1993 through 1996. A third panel was comprised of 575 visual artists and covered the period 1980 to 1991. While Rengers' analysis was longitudinal in nature, his ability to generalize and fully explore artists' careers was limited because some panels only covered a short period of time while others were limited to one group of artists.

The models estimated were for labor supply, as measured by hours of work, wages and gross earnings as well as for two nonmonetary measures of artistic achievement. Rengers' results provided mixed support for both models. He found that inequality in hours, wages and earnings diminished over time, which would be consistent with the human capital model not the winner-take-all model. He did not find any evidence that the

art school graduates who left the arts for non artistic occupations were penalized in terms of their earnings, as one might have suspected in the winner-take-all model. He did find that differences in school location and field of study, measures of signals apparently used by the market, were important in explaining the variation in wages and he believes this provides support for the winner-take-all model. Additionally, Rengers finds that the winner-take-all model better explains the variation in the nonmonetary measures he explores, one being the artist's assessment of his/her own reputation and the other a measure of whether the artist received the attention of the media.

Rengers also provides evidence from the Dutch artist samples for some overarching themes found in the literature on artists' careers. Dutch artists started their education and training at young ages, often outside formal schooling, and the vast majority received arts degrees (90 percent), but begin their arts careers relatively late in life because of the amount of education they receive. Their earnings early in their careers tend to be less than that of non-artists with the same amount of education because artists work fewer hours, not because they receive a lower wage. Characteristics of the artist's education were found to have little or no impact on the artist's career. Self-educated artists have the same earnings and the same supply behavior as those with formal arts education and the prestige of the arts college attended does not have long-lasting effects. Female artists' earnings are about one-third less than their male colleagues, a difference that is comparable to the non-arts labor market in the Netherlands. Six years after graduation approximately two-thirds of the artists work exclusively as artists and about an equal proportion work both in and outside the arts (approximately 13 percent). Both age and experience have positive impacts on a variety of measures of success including participation, wages, sales of art works, prices of art works and the frequency of exhibiting in art galleries. Receiving government grants has a positive impact on artists' earnings late in their careers.

Perhaps unique to the Dutch experience, Rengers identifies two distinct career paths for artists. One is the government market and the other is the private market. He finds that the majority of visual artists (approximately 60 percent) participate in both markets with the smallest proportion (approximately 15 percent) with earnings only from the public market and that getting established in a career in the private market takes longer than getting established in one in the public market but that in both markets success breeds greater success.

#### **4. An Empirical Investigation of Artists in the U.S.: 1940-2000**

This section analyzes the employment and earnings of American artists using decennial U.S. Census data from 1940 to 2000. Since it is based on seven unique cross-sections of U.S. artists it is most comparable to Throsby's work and can be categorized among those studies that are quasi-panels via separate cross-sections.

The information from the Census public use samples<sup>10</sup> will be used to examine various aspects of artists' employment patterns, earnings and earnings variability including the estimation of earnings functions for artists for census years between 1950 and 2000. The use of Census data over a 60 year time span provides a clearer perspective of three related issues that have been debated in the economics literature on artists: (1) As working professionals, to what extent have artists fared less well than comparably educated persons in other disciplines? (2) Has the oft-reported disparity in earnings between artists and comparably educated groups grown or shrunk over time? (3) Is this apparent "earnings penalty" due to the characteristics inherent in the nature of the artistic labor market? For example, are artists unusual risk-takers? Or are they unable to properly assess their likely outcomes in a job market increasingly dominated by "winner-take-all" characteristics? This section will not address a fourth important issue: the decision processes of those artists who routinely moonlight, both inside and outside the artistic profession.<sup>11</sup>

This section starts with (A) a discussion of the use of U.S. census data to study artists. It is followed by (B) an analysis of growth in the artist profession between 1940 and 2000, and (C) a summary of the labor market for artists over the same period. The last two sections examine (D) the level variability in artists' earnings, compared to other professionals, and (E) the determinants of their earnings, and the existence of an artistic earnings penalty.

#### **4.1 Using Census Data**

A major constraint facing social scientists who study artists is the paucity of labor market data bases containing sufficiently large numbers of them. The artist labor force is small, having grown from in the U.S. from 0.7 percent of the entire civilian labor force in

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<sup>10</sup> The U.S. Census Bureau as part of its decennial census collects detailed socioeconomic information from a sample of the population using the 'long-form questionnaire.' This information is made available to researchers through data sets that represent either 1 percent or 5 percent of the U.S. population. They are known as the Public Use Microdata Sample or PUMS. The Census Bureau first created PUMS data from the 1960 Census, a single one percent sample was generated. In 1970, six independent one percent samples were generated; three were based on a long-form that went to five percent of the population, and three were based on a long-form that went to fifteen percent. This study uses data from four of these one percent samples to calculate descriptive statistics. In the regression analysis, all three one percent samples from the five percent survey are used. In 1980, three samples were generated: a five percent sample, used in this study, and two one percent samples. In 1990 and 2000, two samples were generated: a five percent sample, used in this study, and a one percent sample.

Researchers at the Center for Demography and Ecology at the University of Wisconsin, in collaboration with the Census Bureau, reconstructed the one percent PUMS for 1940 and 1950.

<sup>11</sup> A detailed discussion of the multiple jobholding, moonlighting behavior of artists can be found in Alper and Wassall (2000).

1940 to over 1.4 percent in 2000 (Table 2). Of the cross-sectional and panel data bases available to researchers in the United States, only the decennial Census Public Use Microdata Samples (PUMS) are large enough to permit meaningful statistical analyses. As a consequence, the information on artists presented herein utilizes public use samples from the 1940 through 2000 censuses. The actual number of artists contained in these samples ranges from 3,863 in 1940 to 109,469 in 2000, but they represent the entire population of artists in each census year.

Extensive information on housing and personal characteristics of household members is contained in the samples. The information collected in each decade has changed somewhat; a few questions have been dropped or added, and the definitions of terms used in some continuing questions have been altered. Nevertheless, there remains a substantial core information base across all six decades that can be utilized for comparative analyses.

Defining who is an artist can be problematic. Until recently, the National Endowment for the Arts (NEA) used the following eleven Census occupations: (1) actors and directors, (2) announcers, (3) architects, (4) post-secondary art, drama and music teachers, (5) authors, (6) dancers, (7) designers, (8) musicians and composers, (9) painters, sculptors, craft artists and printmakers, (10) photographers, and (11) artists not elsewhere classified (nec). They were originally located within the category called “professional and technical workers.” Since the 2000 Census this category has been narrowed to “professional workers.” Also, after the 2000 Census the NEA changed its artist definition.<sup>12</sup> The eleven occupations now defined as artistic are: (1) actors, (2) announcers, (3) architects, (4) artists and related workers, (5) authors, (6) dancers and choreographers, (7) designers, (8) entertainers and performers, sports and related workers, (9) musicians, singers and related workers, (10) photographers and (11) producers and directors (U.S. Census Bureau, 2003). Appendix Table 1 provides a brief evolution of these categories, and reports on the sizes of the samples that were extracted for each artist category.<sup>13</sup>

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<sup>12</sup> The Census no longer separately identified post-secondary art, drama and music teachers, and the actors and directors occupation was separated into two groups, one for the actors and the other for the producers and directors. The painters, sculptors, crafts artists and printmakers occupation was subsumed into the new artists and related workers occupation which also includes some artists who were previously in the artists not elsewhere classified occupation. The artists nec has been replaced by the narrower entertainers and performers, sports and related workers nec occupation.

<sup>13</sup> The definitions of many of the artist occupational categories used by the Census underwent changes. The major changes were as follows. The category “showmen” appeared in the 1940 Census only. Directors were not lumped with actors until 1980 (and were mainly classified as managers, and not artists, prior to 1980) and in 2000 they were removed and placed in a separate category with producers, but the combined category was retained among the artist categories. Announcers was not a separate category until 1970; prior to that, they were not enumerated as artists at all. The category of art, drama and music teachers did not exist prior to 1970; before 1970, these artist/teachers were

The availability of Census public use samples to study the labor market behavior of artists is, however, a mixed blessing. Three principal issues arise from the Census data gathering methodology that affect the information published and its interpretation.<sup>14</sup>

One is that the Census artistic occupational categories used by the NEA and most researchers appear to be very inclusive. The Census dancer category incorporates ballet dancers, Las Vegas showgirls and barroom strippers, and the author category includes magazine feature writers as well as poets. The NEA definition of artists includes entire occupational categories that some would argue lie outside the fine arts, such as architects, designers, and radio and television announcers. However, in one respect, it might not be as inclusive as perhaps it should be. Prior to 2000, college and university teachers of artistic subjects were included among the artists, but not their counterparts at the elementary and secondary school levels; currently both groups are excluded from the definition. The eleven Census categories used by the National Endowment for the Arts define the artist profession in what follows.

The second and more critical issue is that the Census Bureau's methodology obscures important aspects of artists' occupational choices. The artistic occupation is unusual in that many of those in it also hold non-artistic jobs, i.e., they are multiple job holders. It has been frequently documented, using direct economic surveys of artists, that most artists report working in non-artistic jobs in a given year (e.g., Alper and Wassall, 2000; Kingston, et. al, 1981, 1986; Throsby, 2003; Wassall and Alper, 1984, 1985, 1990, 1992; Wassall, et. al., 1983). Those who report working in non-artistic jobs also report that a significant percentage of their time is devoted to working in these other occupations, and that a significant percentage of their total earnings, typically well over half, derives from this non-artistic work.<sup>15</sup> However, the Census requires that a person filling out its long

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classified with their artist counterparts (e.g., "musicians and music teachers"). In 2000 the post-secondary school teachers of art category was no longer separately identified and therefore could not be included in the artist definition. Prior to 1980 window dressers were a category separate from designers; in 1980 both were lumped into the designer category. Other artist occupations experienced small changes over this period. The sole exception is authors, whose definition remained unchanged over the period. Citro and Gaquin (1987) have estimated the total artist population for the census years of 1950 through 1980 using reconstructed artist occupational categories based on the 1980 definitions cited above. Their estimates of total artists in these years are slightly different from ours, which are directly projected from Census Public Use Microdata Samples.

<sup>14</sup> For a more exhaustive discussion of the strengths and weaknesses of census data on artists see McNertney and Waits (1989) and Wassall and Alper (1992).

<sup>15</sup> Kingston, et al (1981), in their survey of 2,241 American authors, report that while the median 1979 income from the writings of these authors was \$4,800, their median personal income from all sources was \$27,000. In a survey of 494 American composers, Felton (1978) reports a median family income of \$20,000 in 1974, but a median income of only \$168 from composing. Wassall, Alper and Davison (1983) asked 3,027 New England artists to classify their 1981 work time and earnings into artistic, arts-related, and non-arts-

form choose a single occupation. This choice is based on time spent at work during a single reference week. Once this occupational choice is made, all time spent working and all earnings in the year prior to the Census become attributed to that occupation.<sup>16</sup>

Nevertheless, the Census method of defining an occupation based on one's principal activity in a reference week is appealing to economists. As Filer (1988) notes, "a worker who spent 20 hours every week producing paintings and 30 hours a week teaching would be classified as a teacher. Conversely, a worker who spent 20 hours every week in the classroom and 30 at her easel would always be a painter...Census definitions result in a bias towards including only those who achieve the most success in their art form as artists."

The use of a market test to define who is an artist troubles some observers. Regardless of one's position on this issue, one must be aware that, when working with aggregated Census data on artists, unlike most other professions, an unknown but significant percentage of the reported work effort and earnings will be from other, non-artistic occupations. The dynamic choices members of this unique profession make in dividing their work time among diverse occupations cannot be observed using Census data.

The third issue is the Census policy of top-coding certain variables for reasons of confidentiality, including the individual's age and the individual's income and earnings. Most importantly, in the 2000 Census an individual's reported wage and salary earnings is

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related. With a definition of artistic occupations that was more narrowly defined than in the Census it was found that only 24 percent of the survey respondents held artistic jobs alone during the year. Of the artists who held other types of jobs as well, 52 percent held artistic and arts related jobs, 29 percent held artistic and non-arts related jobs and 19 percent held all three types of jobs. Of the artists' average labor earnings of \$14,079 in 1981, 46 percent was derived from artistic work, 34 percent from arts-related work and 20 percent from work which was neither artistic nor arts-related in nature. In this study teaching and coaching were defined as arts-related work.

Direct surveys of artists typically employ a more narrow definition of "artist" than the Census. While they contain a higher percentage of "traditional" artists, they incorporate some persons who spend little time and earn little money at their art, but who define themselves as artists. By defining artists' occupations more narrowly, these studies may also attribute a smaller percentage of their total earnings to their art work. Also, the low percentages of earnings from artistic work cited in the studies above are due in part to their not counting earnings from teaching in one's profession as part of artistic income.

<sup>16</sup> An intriguing question is: What choice do artists make when confronted with the reference week work question? In direct surveys of artists, it is common that they signify being an artist is their principal profession despite little evidence of work time or of financial success. Their artistic occupation often is more prestigious than any other stated occupation(s). Do artists behave similarly when filling out the Census form, or do they answer the reference week work question literally?

capped (top-coded) at a maximum level of \$175,000.<sup>17</sup> All those individuals earning above this level are assigned the state's mean earnings for those earning above the top-code. For example, all Massachusetts residents who had wage and salary earnings in 1999<sup>18</sup> above \$175,000 would have their earnings reported as \$322,000. Thus the earnings of the highest paid members of any occupation may be underestimated. These earnings caps have risen from decade to decade. To a small but unknown extent, the stated mean earnings and degree of earnings inequality in the artistic (and any other) profession will be underestimated using Census data.

#### **4.2 Size and Growth of the Artist Profession, 1940-2000**

The growth in the artist labor force during the period 1940-2000 has been dramatic. In 1940, there were 386,000 artists in the U.S. labor force, or 0.7 percent of all its members. By 2000, the number of artists had increased fivefold to 1,931,000, or 1.4 percent of the labor force.<sup>19</sup>

During the post-World War II period, the growth of the civilian labor force was fueled by rapid growth of the service sector. Most professional workers, and most artists, work in service industries. A second trend abetting the post-war growth in the civilian labor force has been increasing labor force participation rates of women. The growth in both male and female professional and technical workers (and artists as well) substantially exceeded the growth in the labor force as a whole; part of this rapid growth reflects a higher proportion of women who work in these professions. Even though women have been disproportionately represented in the professions, professions other than artists have typically contained a higher proportion of women.

These trends are reflected in the relative growth rates of the three labor force categories in Table 2. Between 1940 and 2000, the civilian labor force grew by 166 percent. The professional labor force, however, grew at a rate of 542 percent over this period. The artist labor force increased by 400 percent, somewhat less than the professionals overall but considerably greater than the labor force. In recent years, the growth in artists has been more pronounced. Between 1980 and 2000, for example, the professional labor force increased at 103 percent while the rate of increase of the artistic labor force was 77 percent.

< Table 2 >

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<sup>17</sup> Earnings in each category are top-coded in every year: at \$5,000 for 1939, at \$10,000 for 1949, at \$25,000 for 1959, at \$50,000 for 1969, at \$75,000 for 1979, and at \$90,000 in 1989. In 1999 there were top-codes for each type of income with wage or salary income top-coded at \$175,000, self-employment income top-coded at \$126,000 and total earnings top-coded at \$310,000. Summing the categories to determine total earnings reduces the compression somewhat, but it is still true that actual means and standard deviations will be underestimated.

<sup>18</sup> U.S. Census data on earnings and time spent working are for the calendar year prior to the census year.

<sup>19</sup> Authors' calculations and Ellis and Beresford (1994, p.6).

The growth in artists is drawn from Census information published after each Census; thus they incorporate the differences in the definition of artists noted above and in Table 2. In the sections which follow, the implications of changing occupational definitions of artists over time are minimized primarily by analyzing all artists as one broad occupation. There still exist less important definitional changes which over time have added to or subtracted from the artistic labor force. These, noted above, primarily affect the number of directors and announcers enumerated as artists from 1960 to 1980. The exclusion of the post-secondary school teachers of art from the 2000 Census is likely to have an impact, but the extent is not clear.

### **4.3 Labor Supply and Labor Market Characteristics**

In examining the labor market outcomes of artists, some perspective can be gained by comparing them to an appropriate reference group of workers. Most Census-based studies have compared artists' labor market outcomes to a reference population. The choice of reference population has not been consistent, ranging from specific occupations with comparable educational attainment (Santos, 1976) to specific professional occupations (Waits and McNertney, 1980), to all workers (Filer, 1986), and to all managerial, professional, and technical workers (Filer, 1988, 1989).

This research lies in a similar vein. The conclusions drawn about artists are compared to those for all professional workers, excluding artists. All other professional workers were chosen as a reference group because (a) they possess similar demographic and socioeconomic characteristics, (b) they comprise the category in which artists were initially classified by the Census and (c) by choosing all other professional workers, one is unlikely to bias comparisons to artists as might occur by selecting specific occupations.

Some basic comparisons are shown in Table 3. In this table, labor force and socioeconomic characteristics of both artists and professional workers, excluding artists, are reported and compared.

<Table 3>

In many respects artists closely resemble members of other professions. Some distinctions, however, are apparent. Perhaps most important is the additional years of schooling that other professional workers have achieved relative to artists. This difference has narrowed from 2.5 years in 1940 to less than one year in 2000.<sup>20</sup> Another less obvious (and perhaps less expected) difference is that the artist labor force has, for almost

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<sup>20</sup> The comparison of educational levels for 1990 and 2000 to prior census years is weakened because since 1990 the Census has reported on highest degree or level of schooling completed and not years of schooling. Using data on both years of schooling completed and highest grade/degree completed for 1990 collected by the U.S. Census Bureau (Kominski and Siegel, 1993) the authors developed a method to convert highest grade/degree completed to years of schooling based on the average number of years it took to complete the grade/degree.

all the period, been composed of a higher percentage of men and whites than the other professions.

However, the most striking findings are related to the consistently poorer labor market outcomes of artists. Although the disparities between artists and other professional workers narrowed over the 1940-2000 period, they by no means disappeared. Across all seven census years, artists were more likely to be unemployed. Up to 1960, artist unemployment rates were at least three times that of other professional and technical workers; after 1960 artist unemployment rates were between two and three times greater. Artists also have consistently worked fewer weeks per year and fewer hours per week over this period. In each census year the proportion of artists working full-time, year-round (defined as working at least 50 weeks per year and 35 hours per week) was less than the proportion of professional workers. However, the gap between annual hours worked by artists and professional-technical workers fell over this period, with a difference of approximately 125 hours in 1999 down from 520 hours in 1939 and less than 200 hours in 1969. Similarly, the gap in percentage working full-time was lower between 1969 and 1999 than in earlier Census years.

Given that these labor market disparities persist across seven census years, any type of disequilibrium is unlikely to be the cause. Over a sixty year period, one would certainly expect any disequilibrium to have adjusted. This leads to a search for alternative explanations.

Several hypotheses have been advanced as to what characteristics make the artist labor market unique. First, it seems difficult to accept any explanation based on informational asymmetries; surely over sixty years artists and those training to become artists would recognize these disparities and alter their career choices.<sup>21</sup> It is possible that artists value leisure more highly than do members of other professional occupations. However, it seems unlikely that any single occupation would attract only those with a higher value for leisure. This “leisure theory” can be contrasted to Throsby’s “work preference” model of artist behavior (Throsby, 1994a), which postulates that the artist is driven to create, and will maximize time spent working as an artist subject to constraints of earning sufficient income, from either inside or outside the arts, to finance an acceptable level of consumption. On the one hand, this theory would imply that artists spend more time working than other workers who receive (greater) disutility from their work. This does not show up in the annual hours worked data. On the other hand, the theory also predicts that, for artists who supplement their arts earnings with jobs outside the arts, as wage rates for non-arts jobs rise, more time will be freed to create art. As the premium to a college or higher level education (which most artists possess) has risen over the last two to three decades, so has the gap in hours worked narrowed between artists and other professionals. This is consistent with artists being able to finance more creative time from higher non-artistic wage rates. Unfortunately, with all income attributed to the reported profession, it is impossible to test these relationships using Census data.

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<sup>21</sup> Compare this perspective to that of Towse (1992a), who argues that artists tend to enter the artistic labor market too frequently because they overestimate the likelihood of future success.

Another set of theories lies in the roles of risk-taking among artists and the rewards to those who rise to the top of their profession. Although these theories were mainly used to explain income distributions among artists, they also have implications for labor supply. This line of reasoning was initially raised by Santos (1976), who asserted that performing artists belong to a class of risk-taking workers who, unlike other workers, are willing to trade off a small chance at substantial financial rewards for a much larger chance of low earnings. Finding that artists' investments in training do not yield financial returns consistent with those in the labor market as a whole, he noted that "risk-preference and psychic income apparently prevail over financial considerations when considering the pursuit of a career in the performing arts" (p. 257). In a nutshell, too many persons pursue careers in the arts because of these two factors. Santos does not explain why artistic careers would disproportionately attract occupational risk-takers, however.

A related theory is found in the literature on the earnings of superstars (Rosen, 1981; Adler, 1985). The predicted effects of this theory on labor supply are more prominent in Frank and Cook (1995); they refer to superstar labor markets as "winner-take-all markets." They note that "market incentives lure too many contestants into winner-take-all markets, and too few into other careers" (p.103). They attribute this outcome in part to contestants' overestimates of their talent. However, they add that as long as market entrants base their decision on expected earnings rather than marginal earnings, the number of entrants will be greater than that what is socially optimal.

In somewhat different ways, both approaches imply that the nature of artistic labor markets will induce too many entrants. These arguments are consistent with the observed data on employment found in the Census.

Benhamou (2000) has an additional set of hypotheses that do not focus on the artist. One focuses on the behavior of the arts institutions and organizations that employ artists rather than the artists' choices. The other focuses on the public policies that support artists, especially those who choose to be self-employed.

Finally, it is worth noting that ease of entry into artistic occupations combined with greater loss of work time due to more frequent transitions from one job to another (both inside and outside their occupation) have also contributed to the consistently lower labor market participation experiences of artists. Thus artists would likely experience greater friction in moving among jobs and, even in a world of perfect information, would spend more time unemployed than members of other occupations. Given the unique extent of multiple job-holding among artists, these phenomena can be viewed as occupational hazards of working in the arts, which must be tolerated even if known in advance. As noted, this conclusion could not be drawn from an examination of Census data alone.<sup>22</sup>

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<sup>22</sup> Corroborating evidence may be found in Wassall, Alper and Davison (1983), who report that New England artists were unemployed more times in a year but for shorter durations than members of the labor force in general. It can also be found in Menger and Gurgand's (1996) study of performing arts in France. They document the role played by the French

#### 4.4 Earnings, Calculated Wage Rates, and Earnings Variability

As noted above, two principal issues have been raised in the literature on artists' earnings. One is the existence and extent of an earnings penalty facing artists, compared to other workers of comparable education and skills. The other is the existence of unusual earnings patterns in the artistic labor market, such as greater earnings uncertainty and variability, relative to other occupations. The availability of Census earnings data over a 60-year period enables an extended comparison of earnings, and thus of these two issues. In this section, we examine earnings variability. In the following section, the existence of an earnings penalty is investigated.

In Table 4 the current and real earnings (in 2004 dollars) and estimated hourly wages of artists and other professional workers are contrasted. Means as well as medians are reported since several categories have medians of zero.<sup>23</sup> We report wage and salary, self-employment, and total earnings separately.<sup>24</sup> The definition of labor earnings has remained consistent since the 1950 Census. In 1940, only wage and salary earnings were reported.

The information in Table 4 shows that artists have earned less than other professional workers throughout this period. Both mean and median annual earnings of other professional workers have been higher in every Census year. Unlike disparities in time worked, differences in earnings have not narrowed over time. The difference in median earnings was 33 percent in 1949, and 30 percent in 1999. It has ranged from a low of 14 percent in 1969 to a high of 45 percent in 1979. Although there is no clear cut trend, the largest percentage earnings differences occurred in 1979 and 1989. The differences in mean earnings over the same period are similar, though slightly less. They range from 12 percent in 1969 to 30 percent in both 1979 and 1989.

<Table 4>

A major part of the earnings differentials is attributable to artists working fewer hours per year. This is reflected in the generally smaller differentials in median wages between the two groups, and in the virtually equivalent mean wages. These figures suggest that a comparison of only full-time workers in the two groups would reduce

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unemployment insurance system in the pattern of performers' employment over their careers.

<sup>23</sup> A median of zero exists for self-employment earnings because the majority of artists and professional and technical workers are employees and not self-employed.

<sup>24</sup> In the Public Use Microdata Samples, labor earnings are composed of (1) wage or salary income, (2) non-farm self-employment income, and (3) farm self-employment income. From 1970 to 1990 earnings are reported separately in each of the above categories. From 1950 to 1960 and again in 2000 earnings from (2) and (3) were collapsed into one category. In 1940 only wage and salary earnings were reported.

earnings differences; in fact, it does.<sup>25</sup> This approach of limiting comparisons only to full-time workers is not pursued here, since a defining characteristic of artists' careers is that they work fewer hours per year than members of virtually all other professions.

Real earnings of artists and other professional workers increased from 1939 through 1969. The decade of the 1970s was a period of high inflation so by 1979 the real earnings of the artists and other professionals had decreased considerably. Unlike the other professions whose real 1999 wage and salary earnings were thirteen percent higher and whose real total earnings were five percent higher, the real earnings of artists, regardless of source, had still not reached their 1969 levels thirty years later. In fact their 1999 wage and salary earnings were two percent lower than in 1969 and their total earnings were three percent lower.

The other issue raised above addresses the question of a possible relationship between the poorer labor market outcomes that artists experience and greater earnings variability among artists than other professions. In the previous section, we reviewed two explanations of such a relationship. Santos' (1976) theory of artists as risk-takers suggests that artistic careers should be characterized by earnings with lower means and greater variability than those in comparable occupations inhabited by risk-averse workers. In fact, he presents evidence from the 1960 Census that the earnings of dancers and singers had higher coefficients of variation than other workers with the same amount of education.

Rosen's (1981) superstar theory also implies greater variability in earnings. However, it further implies that the distribution of income will become more skewed as (1) improvements in technology make it increasingly possible for the top superstars in each field to reap relatively greater rewards, due to the joint consumption characteristics of their product (book publishing and recordings, e.g.), and (2) the number of consumers or the intensity of their demands increases. Both these conditions appear to hold across artistic professions.<sup>26</sup> The superstar model does not predict that mean earnings will necessarily be lower than in comparable occupations without superstar characteristics, however.

Surprisingly few attempts have been made to test these hypotheses. Filer (1989) tested extensively for the presence of greater earnings inequality among artists in the 1980 Census. Using several measures of inequality, he found that "there is greater dispersion of incomes among artists than among the entire work force, or among managers, professionals, and technicians," but that "this difference does not appear to be large"

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<sup>25</sup> For example, the median earnings of full-time year-round professional and technical workers were the same as those of artists in 1969, but exceeded artists' earnings by 15.2 percent in 1979, by 16.5 percent in 1989 and by 15.4 percent in 1999. The pattern of differences in mean earnings between the two groups was similar over the same time period.

<sup>26</sup> Frank and Cook put it like this (p. 121): "The growing importance of winner-take-all markets thus implies a change in the pattern of incomes observed in the economy. More specifically, it implies that even if we control for age, education, experience, ability, and other individual characteristics thought to influence productivity and hence income, we should see greater income variability now than in the past."

(Filer, 1989, p. 72). This difference in inequality seems attributable to two factors. One is the greater variability in annual hours worked for artists compared to the above reference groups. Differences in inequality were less when only full-time, year-round workers were compared. They were also less when artists were compared to selected, narrowly-defined occupations. Looking at three-digit occupations, he found that measures of earnings inequality "for occupations where individual talent and performance are important determinants of earnings tend to be similar to those for artists" (p. 74).

To address this issue more comprehensively, in Table 5 we compare various measures of earnings variability by comparing artists to other professionals from 1940 to 2000. In Table 6, we make similar comparisons among selected occupations at the three-digit level using 2000 Census data. Any comparisons using Census data are subject to some degree of bias because of the Census practice of top-coding all income categories. In both tables, earnings at the high and low ends of the distribution are examined, and two measures of earnings inequality are provided, the coefficient of variation and the ratio of median to mean. The initial comparison is limited to all artists and all professional workers.

The data in Table 5 show that earnings inequality among artists was greater than among other professional workers in all seven census years. Excluding 1939, the year in which self-employment earnings were not reported, both the coefficient of variation and mean/median measures show increases in inequality over time for both artists (as predicted by Rosen) and other professional workers. Earnings inequality among artists has grown at a faster rate than for other professional workers. In terms of the size of the tails of the earnings distribution, artists were more likely in every year to have total earnings (net of expenses) of zero or less than the other professional workers. The likelihood of having total earnings at the maximum or top-coded level in each year was roughly equal for the artists and the other professionals.

<Table 5>

To account for the possibility that non-earnings sources, such as royalty income, further contributed to inequality, the pattern of income from all sources was examined. This made little difference in the results. The same tests were further performed on full-time year round workers (not shown). Not surprisingly, the difference in inequality between artists and professional and technical workers narrows but does not disappear when only full-time, year-round workers are compared.

A detailed examination of the fifteen professional occupations with the greatest earnings inequality in 1999 is shown in Table 6. The occupations were ranked using the mean/median and the coefficient of variation.

<Table 6>

Although there are 123 professional occupations, nine of the eleven artist occupations show up in the top fifteen when ranked by coefficient of variation, and seven show up when ranked by median/mean. Regardless of the measure, actors have the

greatest variation in total earnings. The three artist occupations with lowest earnings inequality, regardless of measure, are dancers, designers and architects. It is also true that within this group of high variance occupations the arts occupations generally have the largest percentage of members with earnings of \$0 or less in 1999 and the largest percentage with earnings above the Census established top-code (\$310,000).

It is also interesting to note the nature of the non-artistic occupations found in Table 6. They do not generally correspond to ones expected to be listed among those in superstar or winner-take-all markets. Perhaps the sole exception is athletes, which ranked second using either variability measure.

#### **4.5 Earnings Functions**

To gain a deeper understanding of whether, how and why artists are different from other workers, and to more accurately determine any earnings penalty from being an artist, earnings functions for artists and for other professional and technical workers are estimated.

This is by no means the first use of earnings functions to explore possible differences in the rewards to education, training and other labor market attributes between artists and a reference group. Using 1980 U.S. Census data Filer (1986) compared the earnings of artists to those of the general work force. Filer (1990), using the same data source, focused on the return to years of education among artists. Also, Withers (1985) compared the earnings of artists (collected from a special survey of artists) to the earnings of the general work force (using Australian Census data). In addition, this approach has been used to examine artists' earnings recorded in special surveys, as in Snooks (1983), Wassall and Alper (1984), Montgomery and Robinson (1993) and Throsby (1992, 1996).

In the earnings studies comparing artists to a reference group, some consistent findings emerge. Artists do not seem to fit the standard earnings model as well as other workers, and earnings functions for them have poorer goodness-of-fit (Filer 1986). The return to education for artists is lower (Filer, 1986 and Withers, 1985), or even negative (Withers, 1985 and Throsby, 1992).

As discussed in previous sections, what makes this research unique is the estimation of earnings functions from a consistent data source over a period of sixty years. Earnings functions for artists and other professional workers are compared using samples from the 1950 through 2000 Census years.<sup>27</sup> Selected results from these sets of earnings functions are presented in Table 7 and the definitions for the variables in the model are presented in Table 8. In each census year, identical functions for artists and for professional and technical workers are constructed. Across census years, the variables in

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<sup>27</sup> Earnings functions for 1940 are not presented. The failure of the Census to collect information on self-employment income in 1940 biases results for those professions with substantial income from this source; prominent among such professions are most artistic disciplines.

these functions are essentially the same; however, some variables were not available in all six census years.<sup>28</sup>

<Table 7>

<Table 8>

In general, the earnings function coefficients are consistent both across census years and between the two occupational groups. Conventional wisdom and prior research suggests that the determinants of success for artists should be harder to quantify, and this is confirmed here. In four of the six census years the goodness-of-fit for the estimated equation (as measured by adjusted  $R^2$ ) of the professional and technical workers earnings function is greater than that of the artist earnings function, but not that different.

Consistent with results from other studies, the return to an extra year of education is found to be greater for professional and technical workers in all years except for 1949. The interpretation of this result, based on Wassall and Alper (1984), Towse (1992a) and Rengers and Madden (2000), is that since Census data mixes artistic and non-artistic earnings in reported total earnings of artists, the resulting coefficient of years of education in the earnings function reflects no or negative correlation of education with artistic earnings and a positive correlation with non-artistic earnings.<sup>29</sup> This was also observed by (Montgomery and Robinson, 1993) using data from a different survey. The relative difference in 1999 is among the largest it has been.<sup>30</sup>

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<sup>28</sup> Other independent variables not reported in Tables 7 and 8 include whether the artist was: a member of another ethnic group (not for 2000); in school at time of the census; a veteran; a federal, state or local government employee. It also included regional and occupational dummy variables.

<sup>29</sup> Using the New England artist data, it was found that years of schooling was significantly and negatively correlated with artistic earnings, but significantly and positively correlated with arts-related earnings and with non-arts related earnings (Wassall and Alper, 1984). The finding of a significant negative relationship between years of schooling and artistic earnings may overstate the adversity of this relationship. Presumably artists are maximizing earnings at the margin among all jobs; those who are better educated receive a higher return per extra hour worked in non-artistic jobs, so they reduce their artistic labor supply and thus their artistic incomes. Little or no correlation between education and artistic earnings is consistent with the notion that artistic talent is innate and cannot be enhanced by general education.

<sup>30</sup> U.S. Census data does not provide information that allows the researcher to control for an individual's mental abilities, though there are controls for physical abilities in the data and model. This is likely lead to an upward bias in the estimated coefficients and therefore on the estimated returns to formal schooling (Angrist and Krueger, 2001; Griliches and Mason, 1972). It also is not possible to control for artistic ability, but the impact of this is unknown.

Until 1999 both estimated earnings functions for the artists and the reference group of professionals showed the usual adverse effects on earnings of being a woman or a member of most minority groups. In 1999 the difference in earnings associated with the artists' race and ethnicity seems to have disappeared, not so for their professional peers. The difference between male and female artists' earnings is still significant, as it is for the other professionals. This difference has shown little change since 1989 and is still considerable. In 1989 black professionals' earnings were not significantly different from their white peers' earnings, and in 1999 they were actually earning significantly more than white professionals.

Being a head of household affects artists' earnings with a larger positive affect than it does for professional and technical workers in general. Being married has a larger positive affect on professional and technical workers' earnings than on the artists' earnings for the entire period.

Using these earnings functions, the return to an extra year of education can be observed (at mean values) for both groups. This is shown in Table 9. As noted, in all years but 1949, the return to an extra year of education is greater for professional and technical workers.<sup>31</sup>

<Table 9>

The earnings functions can also be used to estimate a more sophisticated version of the earnings penalty associated with being an artist, referred to earlier. This is accomplished by comparing the predicted earnings of an artist possessing average levels of all characteristics used as explanatory variables in the earnings function to what that artist would earn, with the same average levels of all characteristics, as a professional or technical worker (i.e., using the estimated coefficients from the professional and technical worker earnings function)

Using this technique, the earnings penalty to artists is estimated to be less than that revealed by the direct comparisons of earnings in the previous section. In 1959, an artist with average characteristics is estimated to have earned 25 percent more as a professional or technical worker. In 1969, an artist with average characteristics would have earned 33 percent more as a professional or technical worker. In 1979, an artist with average characteristics would have earned 51 percent more as a professional or technical worker. In 1989 the calculated difference was only six percent. Most recently, in 1999, the calculated difference in the predicted earnings of the average artist in a professional or technical job is eight percent more than they would have earned as a professional or technical worker.

In comparison, Filer (1986, p. 72) calculated, using the same method, the earnings penalty to artists relative to members of the general work force. He finds that an artist with

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<sup>31</sup> Though not reported because of possible bias due to missing self-employment income, the calculated return to an extra year of education for artists in 1939 was also (2.3 percent versus 4.2 percent) less than that for other professional and technical workers.

average characteristics would have earned 10.3 percent more as a member of the general work force. He was subsequently criticized by several authors for comparing artists to the general work force. Clearly one would expect a larger earnings penalty to be calculated if artists were simulated as members of occupations where more education is required and returns to additional education are greater. This is consistent with these findings.

Filer (1986) dismisses the notion that artists have a lifetime earnings penalty because the penalty, calculated at the mean, is offset over one's work years by the steeper age-earnings profile of artists than those for the general work force.<sup>32</sup> In this paper a larger earnings penalty is found to exist in each census year when artists are compared to professional and technical workers. Further, since artists' returns from extra years of experience are comparable to that for the overall professional and technical work force, this argument becomes moot when a more appropriate reference group is used.

## **5. U.S. Artists' Careers: 1979-1998**

In the United States several nationally representative panel surveys have been in existence for some time. Perhaps the best known is the U.S. Department of Labor's National Longitudinal Survey of Youth. Initiated in 1979, it was designed to follow a sample of young people from high school throughout their working careers. Alper and Wassall (2002) utilized these surveys to examine issues of longevity and career change among artists in the U.S.

The survey participants were 14 to 22 years of age when first interviewed in 1979. Two additional panels were added over the years to make the sample more representative of the population. One panel was a military sample that was later dropped. The other was a group of economically disadvantaged youth, some of whom were later dropped as well. In total 12,686 individuals were part of the survey at some point during the more than 20 years it has been in existence. The participants were interviewed annually from 1979 through 1994 and every other year thereafter. The number of artists in the survey is not large enough to provide detailed information by type of artist. Therefore, the artists are grouped into four artistic occupations: performers, architects and designers, visual artists and 'other' artists.

What follows presents a sampling of what can be learned about artists' careers through the use of panel data. It starts by examining the stock and flow of people into and through arts occupations (Sect. A). Then there is a brief discussion of who they are at the start of their artistic careers (Sect. B). The next section examines the transitions that occur during artistic careers with respect to the artistic and non-artistic jobs they held (Sect. C). The last two sections describe who permanently leaves the arts (Sect. D) and what they do afterwards (Sect. E).

### **5.1 Flow and Tenure**

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<sup>32</sup> Filer (1988) does not calculate an earnings penalty in his 1988 paper.

Clearly evident from this panel survey is the fact that many people explore the arts as an occupation but very few remain as artists for significant periods of time. When comparing the number of people who indicated that they were artists in any given year, i.e., the stock of artists, to the total number of people who moved into and out of artistic occupations over the survey's 19 years, i.e., the flow of artists, a significant difference in these numbers is found. Throughout the period 766 of the 12,686 people indicated that they had worked as artists at some point in time. This is more than five times the number of people who were artists in any given year (Table 10).

<Table 10>

Of those who were part of the artist population at some point over this period, almost fifty-seven percent were male. This is slightly greater than the overall male representation in the survey of just under fifty-one percent, suggesting that over their careers men are more likely to explore the arts as a means of earning income than women.

The average time spent working as an artist was only 2.2 of the survey years. In comparison, people who had been artists at some time during the survey period also worked at non-arts jobs in approximately 10.2 of the 16 survey years. The number of survey years working as an artist was slightly, but not significantly, higher for men than women (2.3 years versus 2.1 years). Almost 60 percent of those who worked as artists worked as artists in only one of the survey years. In comparison, more than 98 percent of those who were artists at some point during the period also spent time in more than one year employed in non-arts jobs. Just slightly more than two percent of those who were artists at some point were artists in 10 or more years while more than 60 percent worked in 10 or more years at non-arts jobs. The female artists' behavior was not that different from the male artists. Only 1.5 percent of the female artists worked as artists in 10 or more survey years, while 2.5 percent of the male artists did the same.

## 5.2 The Start

Artists started working as artists, on average, at just about 25 years of age (Table 11). The difference between starting ages for men and women (approximately a half year) was not statistically significant.<sup>33</sup> Only for the visual artists was the difference in starting age significant (marginally), with women starting to work as painters and sculptors two years later than men.

<Table 11>

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<sup>33</sup> It is likely that the true average age at which these artists started working as artists is somewhat lower. Some of the artists were 14 years of age at the first interview and were not likely to have worked at all prior to their participation in the survey, while others were as old as 22 at the first interview. Those who were older may well have already been working as artists by the time they were first interviewed.

Overall there is a significant difference in the ages at which the artists started working in their arts occupations when comparing across their first arts occupations. The average age for the architects and designers was significantly greater than any other artist group. This probably reflects the additional years of formal schooling required to become an architect.

### 5.3 The Transition

An examination of those employed in the arts at some time during any given year reveals that the proportion that had an arts occupation as their primary occupation tended to diminish over time. This was determined by looking at the employed artists' current occupations at the time of the interview.<sup>34</sup> While the decline in the proportion with their primary occupations being arts occupations is not constant as artists mature, the trend is clearly in the downward direction. It was at the time of the fourth round of interviews (1982), when the artists were 18 to 26 years old, that the largest proportion of people employed as artists reported having an arts occupation as their primary occupation. Almost 85 percent were working as artists (Table 12). By 1998, the proportion had decreased to approximately 70 percent.

<Table 12>

A transition that occurred over the period is the change in variety of artists' non-arts primary work activities.<sup>35</sup> In 1979, the year in which the artists were the youngest, approximately 17 percent of those artists whose primary occupations were not in the arts were working in some other professional or managerial occupation and about one-half were working in sales and clerical occupations. By 1998 more than two-thirds of the artists with primary occupations not in the arts were working in other professional and managerial jobs while fewer than ten percent were working in sales and clerical jobs. Additionally, 17 percent were working in service occupations at the beginning of the survey period, all in food service, but by 1998 only five percent were doing so, none in food service.

There were transitions among the arts activities the artists participated in as their current or primary occupation. They may reflect factors including changes in the artists' labor markets, changes in the markets for their art, the end result of a search process for the "right" arts occupation or the completion of the requisite education and training. For example, in 1979 approximately 22 percent of the employed artists had occupations among the "not elsewhere classified" group. By 1998 the proportion had dropped to fewer than 15 percent. The performer occupations were the most popular for most of the early part of the period. They were replaced by people transitioning into the architect and

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<sup>34</sup> When the artist indicated that s/he was working at more than one occupation, then the one in which s/he worked the most hours was determined to be his/her primary occupation.

<sup>35</sup> This was determined by looking at the primary work activities at the time of the interview for those who indicated that they had worked as artists within the last 12 months but did not indicate that they were working as artists at the time of the interview.

designer occupations during the latter part of the period probably reflecting the time required to become trained as an architect.

An examination of the non-arts occupations held by the artists in the years they did not work as artists provides some insights into what the artists were doing to survive and what they do as they stop exploring the possibility of an artistic career. In part reflective of the ages and educational backgrounds of those surveyed in 1979, almost 30 percent of those people who did not work as artists were working at sales or clerical jobs with another 30 percent working in service jobs (Table 13). The proportion working at sales or clerical jobs peaked in 1982, when they were between 18 and 26 years old, and declined throughout the remainder of the period. There was an even greater decline in the proportion working in the service occupations. By 1998 only seven percent held service jobs. The greatest growth in employment was found in the other professional and the managerial occupations with the proportion increasing fourfold over the period. This change is reflective not only of the artists aging, but in the investments they made in education and training.

<Table 13>

#### **5.4 The Leavers**

Push and pull factors are both important in the decision to leave the arts as it is for any occupation. By 1998 only 42 percent of those who indicated that they had worked as artists at some time during the period were still working, to some degree, as artists.<sup>36</sup> This means that either the person's current job was among the arts occupations or one of the five other jobs they could have possibly held during the time since the previous interview was in the arts. Almost half were no longer working at all as artists. The status of the remaining 10 percent was not known.<sup>37</sup>

Based on their first-arts occupation, the architects and designers were the most likely to still be working as artists in 1998. Approximately 53 percent were still working in the arts (Table 14). Fewer than forty percent of those in the performing arts occupations (actor, dancer, musician, composer and announcer) were still artists. The proportion is basically the same for visual artists. The artists who started out in the 'other' arts occupations were somewhat less likely to still be artists than performers and visual artists.

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<sup>36</sup> Those who had been artists but who were no longer working as artists were anyone who did not report that s/he worked as an artist for at least three consecutive years. This definition was used to examine the former artists' post-artist careers and to assist in developing a better understanding of the factors that may have enticed them to leave the arts.

<sup>37</sup> After the 1990 survey a portion of the people who had been in the supplemental samples was dropped. Included among them were the economically disadvantaged non-black, non-Hispanic males and females who were part of the supplemental sample. They also included those who were lost due to natural attrition.

<Table 14>

For the most part artists who stopped working as artists did so from the same arts occupation that they had started in. By comparing the first-arts occupation to the last-arts occupation for those who were no longer working as artists, it was found that the vast majority were participating in the same occupation at both points in time (Table 15). Architects and designers were the most likely to have persisted in the same occupation. Visual artists were second while the performers and 'other' artists were the least likely to persist in their starting occupations indicating that these artists have experimented the most in the arts.

<Table 15>

### **5.5 The Post Artist Period**

On average, the age at which artists stopped working in the arts was 24 (Table 16). This estimate, like the age at which artists started working, is not likely to be representative of all artists. In fact it is likely to be an underestimate of the actual age since the oldest members of the sample were only 41 years old at the time of the last survey, and the youngest were 33. Without observing the artists over their entire lifetimes, the estimate is smaller than the true value. The variation in the age at which artists stopped working as artists related to gender was not significant.

<Table 16>

For the most part, those people who had been working as artists but who stopped working in the arts continued to work (Table 17). Almost three-quarters were still employed. Another ten percent were still part of the civilian labor force but were unemployed in the year immediately following the year in which they last worked as an artist. The remainder dropped out of the civilian labor force with almost seven percent attending school, nearly four percent "keeping house" and almost two percent joining the armed forces. The remaining five percent were doing something else or were unable to work for some unspecified reason. Some differences were found in what the male and female former artists were doing after leaving the arts.

<Table 17>

Post-artist employment status did vary with the last-arts occupation. Architects and designers were the most likely to still be employed in the year after they stopped working as artists. The artists who comprised the 'other' category were the least likely to continue working in the year after they stopped working as artists. Those former artists in the 'other' group of arts occupations were the most likely to be unemployed. Unemployment rates for the former performers and visual artists were essentially the same. The visual former artists were the most likely to be "keeping house" in the year post art work. Those who

were most likely to stop working as artists to attend school were the artists in the 'other' arts group.

There were also differences in the post-arts jobs associated with the former artists' gender (Table 18). There was little difference between the proportion male and female former artists whose post-arts employment was in a non-arts professional or managerial occupation. A major difference in post-arts employment was the proportion of female artists working in sales or clerical occupations. The female former artists were almost twice as likely as their male peers to be working in these occupations. Females were also 50 percent more likely to be working in service occupations than males. Males were considerably more likely to have post-arts jobs in the craft, operative and laborer occupations than their female colleagues.

<Table 18>

Reflective of many factors, including their education, training, and prior work experience, the former artists' post-arts occupations varied by their last-arts occupation. Those who had been architects and designers were by far the most likely to be working in non-arts professional and managerial occupations. Those who had been visual artists were the least likely to be working in professional and managerial occupations. The "other" artists, who include college art-teachers and authors, and performers were between the other two groups in the proportion working in professional and managerial occupations. Overall, almost 25 percent of the former artists were working in either sales or clerical occupations with the former visual artists most likely to be doing so. Overall, almost 15 percent were working in service occupations with the visual former artists most likely to be doing so. Relatively few former artists worked in the crafts, operatives (including transportation) and laborer occupations.

## **6. Summary, Conclusions and Future Research**

The survey and research presented here is a continuation of the ongoing work of economists, and others, on artists' labor markets and their careers. It highlights the use of a quasi-panel obtained from census data to examine the employment and earnings of artists and compares them to those of all other professional and technical workers. It also provides a glimpse of what can be learned about artists' careers from a study of artists based on true panel data that follows the same individuals over a period of time.

The quasi-panel of data from the seven U.S. censuses, along with research from other countries such as Throsby's work in Australia, provides a reasonably consistent set of findings in each census year. Artists work fewer hours, suffer higher unemployment and earn less than members of the reference group. Over the sixty year period, disparities in unemployment and annual hours worked shrink somewhat, but disparities in earnings do not. Artists earn less across all years even when only members working full-time year-round of each group are compared. The earnings of artists display greater variability than those of other professional and technical workers. The greater earnings inequality of artists is reduced when only full-time year-round workers from each group are compared.

Evidence on earnings and earnings distributions give credence to theories of artists as risk-takers and as participants in winner-take-all markets. Earnings inequality measures for artists (as well as for the general work force) increased over the 1949-1999 period. However, the consistently lower mean and median earnings of artists compared to their reference group over the 1939-1999 period is more in line with a risk-taking theory of artist behavior than one of superstardom, which does not predict that mean earnings should suffer.

Earnings functions for artists and for professional and technical workers are estimated for six of the seven census years. It is shown that the return to years of schooling is lower for artists in all but one year. This is consistent with findings by several authors that education does not significantly increase artistic earnings but does increase their non-artistic earnings.

Earnings penalties that artists face because of their career choices are found to be quite large, varying from 6 to 51 percent of annual artistic earnings across the six census years. In all but one year, the estimated earnings penalty is as great as or greater than the actual observed earnings difference.

The panel data that covers almost twenty years in the artists' lives provides a limited set of insights into their behavior. It does suggest that many people participate in the artistic labor market, but that few succeed to the point that enables them to develop a career in the arts. In part due to their relatively high educational levels, artists are able to transition from their forays into arts occupations to jobs in other professional and managerial occupations, not into service occupations as the 'mythology' of the arts might suggest. It is true that when they are young and struggling to make it as artists they do work in various service occupations that tend to provide greater work schedule flexibility.

There are a number of questions which are not addressed in this paper. Does the greater amount of multiple job-holding by artists, both inside and outside their artistic occupation, explain some or all the observed differences in annual hours worked and unemployment rates? To what extent does holding jobs outside the artistic profession reduce risk and thus earnings inequality as well as supplement earnings? What triggers the artists' decision to leave the arts for good? How does the allocation of an artist's time to various income generating activities change over his/her career?

These and other questions raised in this paper can best be answered using more detailed data on the careers of artists. There is clearly a need for additional survey-based panel data on artists. The existing national panel surveys in the U.S., like the NLSY79, are too small. The sample of artists from these data sources are not large enough to provide reliable empirical models of their behavior without aggregating to a level where disparate types of artists are grouped together. Additionally, the information collected, while quite extensive in most cases, is not tailored to unearth information about the unique labor market activities of many artists, especially their multiple jobholding behavior, sources of

earnings, allocation of time and costs of producing their art. While a great deal has been learned, there is a great deal more to learn.

## REFERENCES

Adler, M. (1985), "Stardom and talent," *American Economic Review* 75:208-212.

Alper, N. and G. Wassall (1998), "Artists' labor market experiences: a preliminary analysis using longitudinal data," in: M. Heikkinen and T. Koskinen, eds., *Economics of Artists and Arts Policy* (Arts Council of Finland, Helsinki).

Alper, N. and G. Wassall (2000), *More Than Once In a Blue Moon: Multiple Jobholdings by American Artists* (National Endowment for the Arts, Washington, D.C.).

Alper, N. and G. Wassall (2002), "Artists' careers-preliminary analysis from longitudinal data for the U.S.," Rotterdam: 12<sup>th</sup> International Conference on Cultural Economics.

Angrist, J. and A. Krueger (2001), "Instrumental variables and the search for identification: from supply and demand to natural experiments," *Journal of Economic Perspectives* 15,4:69-86.

Baumol, W. and W. Bowen (1966), *Performing Arts: The Economic Dilemma* (Twentieth Century Fund, New York).

Benhamou, F. (2000) "The opposition between two models of labour market adjustment: the case of audiovisual and performing arts activities in France and Great Britain over a ten year period," *Journal of Cultural Economics* 24:301-319.

Bielby, D. and W. Bielby (1993a), "The Hollywood 'Graylist'? audience, demographics and age stratification among television writers," in: M. Cantor and C. Zollars, eds., *Current Research on Occupations and Professions (Creators of Culture)*, Vol. 8. (Jai Press, Greenwich, Ct.).

Bielby, W. and D. Bielby (1987), *The 1987 Hollywood Writers' Report: A Survey of Ethnic, Gender and Age Employment Practices* (Writers Guild of America, west, Los Angeles).

Bielby, W. and D. Bielby (1989), *The 1989 Hollywood Writers' Report: Unequal Access, Unequal Pay* (Writers Guild of America, west, West Hollywood).

Bielby, W. and D. Bielby (1993b), *The 1993 Hollywood Writers' Report: A Survey of the Employment of Writers in the Film, Broadcast, and Cable Industries for the Period 1987-1991* (Writers Guild of America, west, West Hollywood).

Bielby, W. and D. Bielby (1998), *The 1998 Hollywood Writers' Report: Telling All Our Stories* (Writers Guild of America, west, Los Angeles).

- Citro, C. and D. Gaquin (1987), *Artists in the Workforce, 1950 to 1965* (National Endowment for the Arts, Research Division, Washington, D.C.).
- Ellis, D. and J. Beresford (1994), *Trends in Artist Occupations, 1970-1990* (National Endowment for the Arts, Research Division, Washington, D.C.).
- Federal Committee on Statistical Methodology (1985), *Statistical Policy Working Paper 13 – Federal Longitudinal Surveys* (Washington, D.C.).
- Felton, M. V. (1978), "The economics of the creative arts: the case of the composer," *Journal of Cultural Economics* 2:41-61.
- Filer, R. K. (1986), "The 'Starving Artist' - myth or reality? Earnings of artists in the United States," *Journal of Political Economy* 94:56-75.
- Filer, R. K. (1988), *Labor Market Earnings of American Artists in 1980* (National Endowment for the Arts, Washington, D.C.).
- Filer, R. K. (1989), "The economic condition of artists in America," in: D. V. Shaw, et al., eds., *Cultural Economics 88: An American Perspective* (Association for Cultural Economics, Akron, Oh.).
- Filer, R. K. (1990), "Arts and academe: the effect of education on earnings of artists," *Journal of Cultural Economics* 14:15-38.
- Frank, R. H. and P. J. Cook (1995), *The Winner-Take-All Society* (The Free Press, New York).
- Galenson, D. (2000a), "Age and the quality of work: the case of modern American painters," *Journal of Political Economy* 108:761-777.
- Galenson, D. (2000b), "The careers of modern artists: evidence from auctions of contemporary art," *Journal of Cultural Economics* 24:87-112.
- Galenson, D. (2001), *Painting Outside the Lines* (Harvard University Press, Cambridge, Ma.).
- Galenson, D. (2002), "Quantifying artistic success: ranking French painters-and paintings-from impressionism to cubism," *Historical Methods*, Vol. 35, No. 1: 5-19.
- Galenson, D. and B. Weinberg (2001), "Creating modern art: the changing careers of painters in France from impressionism to cubism," *American Economic Review* 91:1063-1071.
- Greffe, X. (2002), *Arts and Artists from an Economic Perspective* (UNESCO Publishing, Paris).

Griliches, Z. and W. Mason (1972), "Education, income and ability," *Journal of Political Economy* 80,3: S74-103.

Jeffri, J. (1988), *Information on Artists* (Columbia University, Research Center for Arts and Culture, New York).

Kingston, P. and J. R. Cole (1986), *The Wages of Writing: Per Word, Per Piece, or Perhaps* (Columbia University Press, New York).

Kingston, P., J. R. Cole and R. K. Merton (1981), "The Columbia economic survey of American authors: a summary of the findings" (Columbia University Center for Social Science, New York).

Kominski, R. and P. Siegel (1993), "Measuring education in the Current Population Survey," *Monthly Labor Review*, September.

MacDonald, G. (1988), "The economics of rising stars," *American Economic Review* 78:155-166.

McNertney, E. and C. R. Waits (1989), "The incomes of cultural providers: a review of current research," in: D. V. Shaw, et al, eds., *Cultural Economics 88: An American Perspective*. (Association for Cultural Economics, Akron, Oh.).

Menger, P. (1999), "Artistic labor markets and careers," *Annual Review of Sociology* 25:541-574.

Menger, P. (2001), "Artists as workers: theoretical and methodological challenges," *Poetics* 28:241-254.

Menger, P. (2005), "Contingent work, excess supply and occupational risk management," in Ginsburgh and Throsby, eds., *Handbook of the Economics of Art and Culture* (Elsevier, Amsterdam).

Menger, P. and M. Gurgand (1996), "Work and compensated unemployment in the performing arts. exogenous and endogenous uncertainty in artistic labour markets," in: V. Ginsburgh and P. Menger, eds., *Economics of the Arts: Selected Essays* (Elsevier North-Holland, Amsterdam) 347-381.

Montgomery, S. and M. Robinson (1993), "Visual artists in New York: what's special about person and place?," *Journal of Cultural Economics* 17:17-39.

Montgomery, S. and M. Robinson (2003), "What becomes of undergraduate dance majors?," *Journal of Cultural Economics* 27:57-71.

National Endowment for the Arts (1981), *Artists Compared by Age, Sex and Earnings in 1970 and 1976*, Research Division Report No. 12 (Publishing Center for Cultural Resources, New York).

Rengers, M. (1998a), "The careers of visual artists: a longitudinal analysis," 10<sup>th</sup> International Conference on Cultural Economics.

Rengers, M. (2002), *Economic Lives of Artists: Studies into Careers and the Labour Market in the Cultural Sector* (Utrecht University, Interuniversity Center for Social Science Theory and Methodology, Utrecht).

Rengers, M. and Christopher Madden (2000), "Living art: artist between making art and making a living," *Australian Bulletin of Labour* 26:325-354.

Rengers, M. and G. Ramakers (nd.), "A random walk? Careers of graduated artists in the Netherlands." Xerox.

Richardson, J. (1980), "Career patterns of American opera singers," in: W. Hendon, et. al., eds., *Economic Policy for the Arts* (Abt Books, Cambridge, Ma.) 176-183.

Rosen, S. (1981), "The economics of superstars," *American Economic Review* 71:845-858.

Santos, F. P. (1976), "Risk, uncertainty and the performing artist," in: M. Blaug, ed., *The Economics of the Arts* (Westview Press, Boulder, Co.).

Smith, T. (2000), "Longitudinal analysis of the earnings of artists," 11<sup>th</sup> International Conference of Cultural Economics.

Snooks, G. (1983), "Determinants of earnings inequality amongst Australian artists," *Australian Economic Papers* 22:322-332.

Stohs, J. (1989), "Factors affecting the career patterns of male fine and applied artists," *Journal of Social Behavior and Personality* 4:327-346.

Stohs, J. (1990), "Young adult predictors and midlife outcomes of male fine art careers," *The Career Development Quarterly* 38:213-229.

Stohs, J. (1991a), "Young adult predictors and midlife outcomes of 'Starving Artists' careers: a longitudinal study of male fine artists," *Journal of Creative Behavior* 25:92-105.

Stohs, J. (1991b), "Moving beyond women's career choices: factors associated with career continuity among female former art students," *Journal of Career Development* 18:123-138.

Stohs, J. (1992a), "Intrinsic motivation and sustained art activity among male fine and applied artists," *Creativity Research Journal* 5:245-252.

Stohs, J. (1992b), "Career patterns and family status of women and men artists," *Career Development Quarterly* 40:223-233.

Throsby, D. (1986), *Occupational and Employment Characteristics of Artists* (Australia Council, Sydney).

Throsby, D. (1992), "Artists as workers," in: R. Towse and A. Khkee, eds., *Cultural Economics* (Springer-Verlag, Berlin/Heidelberg).

Throsby, D. (1994a), "A work-preference model of artist behaviour," in: A. Peacock and I. Rizzo, eds., *Cultural Economics and Cultural Policies* (Kluwer Academic Publishers, Boston, Ma.) 69-80.

Throsby, D. (1996), "Disaggregated earnings functions for artists," in: V. Ginsburgh and P. Menger, eds., *Economics of the Arts: Selected Essays* (Elsevier, North-Holland, Amsterdam) 331-346.

Throsby, D. and B. Thompson (1994), *But What Do You Do For a Living?* (Australia Council, Sydney).

Throsby, D. and B. Thompson (1995), *The Artist At Work* (Australia Council, Sydney).

Throsby, D. and D. Mills (1989), *When Are You Going to Get a Real Job?* (Australia Council, Sydney).

Throsby, D. and V. Hollister (2003), *Don't Give Up Your Day Job: An Economic Study of Professional Artists in Australia* (Australia Council for the Arts, Sydney).

Towse, R. (1992a), "The earnings of singers: an economic analysis," in: R. Towse and A. Khkee, eds., *Cultural Economics* (Springer-Verlag, Berlin/Heidelberg).

Towse, R. (2005), "Human capital and artists' labour markets," in Ginsburgh and Throsby, eds., *Handbook of the Economics of Art and Culture* (Elsevier, Amsterdam).

U.S. Census Bureau (2003), *Public Use Microdata Sample-2000 Census of Population and Housing: Technical Documentation* (Washington, D.C.).

Waits, C. R. and E. M. McNertney (1980), "Uncertainty and investment in human capital in the arts," in: William S. Hendon, et al., eds., *Economic Policy for the Arts* (Abt Associates, Cambridge, Ma.).

Wakin, D. (2004), "The Juilliard effect: ten years later," *The New York Times* (December 12).

Wassall, G.H. and N. O. Alper (1984), "Determinants of artists' earnings," in: W. S. Hendon, et al, eds., *The Economics of Cultural Industries* (Association for Cultural Economics, Akron, Oh.).

Wassall, G. H. and N. O. Alper (1985), "Occupational characteristics of artists: a statistical analysis," *Journal of Cultural Economics* 9:13-34.

Wassall, G. H. and N. O. Alper (1990), "When is an artist an artist?," *Journal of Arts Management and Law* 19:37-50.

Wassall, G. H. and N. O. Alper (1992), "Toward a unified theory of the determinants of the earnings of artists," in: R. Towse and A. Khakee, eds. *Cultural Economics* (Springer-Verlag, Berlin/Heidelberg).

Wassall, G. H., N. O. Alper and R. Davison (1983), *Art Work: Artists in the New England Labor Market* (New England Foundation for the Arts, Cambridge, Ma.).

Withers, G. (1985), "Artists' subsidy of the arts," *Australian Economic Papers* 24:290-295.

## APPENDIX

### OTHER REFERENCES

These references were used for background. For the most part, they are not explicitly included in the paper because they are primarily based on cross-sectional data.

Abbing, H. (2002), *Why Are Artists Poor? The Exceptional Economy of the Arts* (Amsterdam University Press, Amsterdam).

Alper, N. and A. Galligan (1999), "Recession to renaissance: a comparison of Rhode Island artists 1981 and 1997," *Journal of Arts Management, Law and Society* 29:178-204.

Alper, N. and G. Wassall (1984), "Performing artists and their unions," Tenth Annual Convention of the Eastern Economic Association.

Alper, N., et al. (1996), *Artists in the Work Force: Employment and Earnings, 1970 to 1990* (National Endowment for the Arts, Research Division, Washington, D.C.).

Bardez, C. and D. Throsby (1997), *Similarity and Difference: Craftspeople and Visual Artists in Australia* (Australia Council, Sydney).

Bielby, W. and D. Bielby (1996), "Women and men in film: gender inequality among writers in a culture industry," *Gender and Society* 10:248-270.

Bielby, W. and D. Bielby (1999), "Organizational mediation of project-based labor markets: talent agencies and the careers of screenwriters." *American Sociological Review* 64:64-85.

Bielby, W. and D. Bielby (2001), "Audience segmentation and age stratification among television writers," *Journal of Broadcasting and Electronic Media* 45:391-412.

Bradshaw, T. (1984), "An examination of the comparability of the 1970 and 1980 census statistics on artists," in: W. S. Hendon, et al, eds., *The Economics of Cultural Decisions* (Association of Cultural Economics, Akron, Oh.).

Burke, A. (1994-95), "Employment prospects in the Irish popular music industry." *Journal of the Statistical and Social Inquiry Society of Ireland* 27:93-114.

Cerf, J. G., et al. (1982), *Craft Artists in the United States* (Mathematica Policy Research, Princeton, N.J.).

Chartrand, H. (1994), *Architecture & Design Arts Occupations, 1940-1990* (National Endowment for the Arts, Research Division, Washington, D.C.).

Chung, K. and R. Cox (1994), "A stochastic model of superstardom: an application of the Yule distribution," *The Review of Economics and Statistics* 76:771-775.

Cowen, T. (1996), "Why women succeed, and fail, in the arts," *Journal of Cultural Economics* 20:93-113.

Cowen, T. and A. Tabarrok (2000), "An economic theory of avant-garde and popular art, or high and low culture," *Southern Economic Journal* 67:232-253.

Cowen, T. and R. Grier (1997), "Do artists suffer from cost-disease?" in: R. Towse, ed., *The Arts, the Heritage and the Media Industries* (Elgar, Cheltenham) 371-390.

Dowd, T. and M. Blyler (2002), "Charting race: the success of black performers in the mainstream recording market, 1940 to 1990," *Poetics* 30:87-110.

Ekelund, R., et al. (2000), "The 'Death-Effect' in art prices: a demand-side exploration," *Journal of Cultural Economics* 24:283-300.

Faine, H. R. (1972), "Unions and the arts," *American Economic Review* 62(2):70-77.

Galligan, A. and N. Alper (1998), "Characteristics of performing artists: a baseline profile of sectoral crossovers," *Journal of Arts Management, Law and Society* 28:155-177.

Galligan, A. and N. Alper (2000), "The career matrix: the pipeline for artists in the United States," in: J. Cherbo and M. Wyszomirski, eds., *The Public Life of the Arts in America* (Rutgers University Press, New Brunswick, N.J.).

Galloway, S., R. Lindley, R. Davies and F. Scheibl (2002), *A Balancing Act: Artists' Labour Markets and the Tax and Benefit Systems* (Arts Council of England, Research Report 29, London).

Goldin, C. and C. Rouse (2000), "Orchestrating impartiality: the impact of 'Blind' auditions on female musicians," *American Economic Review* 90:715-741.

Grant, D. (1990), "Artists' consensus is they don't count," in: *Boston Herald*, March 27:46.

Gray, C. M (1984), "Nonpecuniary rewards in the performing arts labor market: a case study of dancers and choreographers," in: W. S. Hendon, et al., eds., *The Economics of Cultural Industries* (Association for Cultural Economics, Akron, Oh).

Gray, L. and R. Seeber, eds. (1985), *Under the Stars: Essays on Labor Relations in Arts and Entertainment* (Cornell University Press, Ithaca, N.Y.).

Hansmann, H. and M. Santilli (2001), "Royalties for artists versus royalties for authors and composers," *Journal of Cultural Economics* 25:259-281.

Heckathorn, D. and J. Jeffri (2001), "Finding the beat: using respondent-driven sampling to study jazz musicians," *Poetics* 28:307-329.

Heikkinen, M. (1995), "Evaluating the effects of direct support on the economic situation of artists," *Journal of Cultural Economics* 19:261-271.

Heikkinen, M. (1995), *The Nordic Model for Supporting Artists: Public Support for Artists in Denmark, Finland, Norway and Sweden* (The Arts Council of Finland, Research Report no. 26, Helsinki).

Heikkinen, M. and P. Karhunen (1993), "The focus and functions of public support for artists in Finland," *Conference on Social Theory, Politics and the Arts*.

Heikkinen, M. and P. Karhunen (2000), "The importance of public support for creative and performing artists: a case study of authors and actors," 11<sup>th</sup> International Conference on Cultural Economics.

Heilbrun, J. and C. M. Gray (2001), *The Economics of Art and Culture, Second Edition* (Cambridge University Press, Cambridge).

Hill Strategies (2004), "A statistical profile of artists in Canada, statistical insights on the arts," Vol. 3, No. 1 (Hamilton, Canada).

Horowitz, H. (1983), "Work and earnings of artists in the media fields," *Journal of Cultural Economics* 7:69-89.

Horowitz, H. (1993), "The status of artists in the U.S.A," *Journal of Cultural Economics* 17:29-48.

Jeffri, J. (1999), "The playwright's the thing!," *Conference on Social Theory, Politics and the Arts*.

Jeffri, J. (2003), *Changing the Beat: A Study of the Work Life of Jazz Musicians* (National Endowment for the Arts, Washington, D.C.).

Jeffri, J. and D. Throsby. "Professionalism and the visual artist," *European Journal of Cultural Policy* 1.

Karhunen, P. (1996), "The interaction between artists' professional training and employment in the field of Finnish theatre," *Journal of Cultural Economics* 20:165-175.

Karhunen, P. (1998a), "Labour market situation of graduated artists," in: M. Heikkinen and T. Koskinen, eds., *Economics of Artists and Arts Policy* (Arts Council of Finland, Helsinki).

Karhunen, P. (1998b), "A portrait of a woman as an artist," 10<sup>th</sup> International Conference on Cultural Economics.

Karhunen, P. and K. Rensujeff (2002), "Preliminary results for a survey on the economic and labour market situation of Finnish artists," 12<sup>th</sup> International Conference on Cultural Economics.

Karttunen, S. (1993), "How to identify an artist," Conference on Social Theory, Politics and the Arts.

Karttunen, S. (1998a), "How to identify artists? Defining the population for 'Status-of-the-Artist' studies," *Poetics* 26:1-19.

Karttunen, S. (1998b), "Profile of the artistic labour force in Finland based on the population censuses 1970-1995," 10<sup>th</sup> International Conference on Cultural Economics.

Karttunen, S. (2001a), "How to make use of census data in status-of-the-artist studies: advantages and shortcomings of the Finnish register-based census," *Poetics* 28:273-290.

Karttunen, S. (2001b), *Cultural Employment in Finland 1970-1999* (Statistics Finland [in Finnish with English summary], Helsinki.).

Kaun, D. (1991), "Writers die young: the impact of work and leisure on longevity," *Journal of Economic Psychology* 12:381-399.

Landes, W. (2001), "What has the visual Artist's Rights Act of 1990 accomplished?," *Journal of Cultural Economics* 25:283-306.

Laplante, B., B. Hébert and P. Menger (nd.), "Collective and individual action on a labor market: the case of new French actors" (University of Quebec, Montreal).

McLain, J. J. (1978), "The income of visual artists in New Orleans," *Journal of Cultural Economics* 2:63-76.

Nagel, J. J. (1987), "An examination of commitment to careers in the musical performing arts: implications for alienation from vocational choice," in: D. Shaw, et. al., eds., *Artists and Cultural Consumers* (Association for Cultural Economics, Akron, Oh.) 101-109.

Nagel, J. J. (1988), "Identity and career choice in music," *Journal of Cultural Economics* 12:67-76.

Netzer, D. and E. Parker (1993), *Dancemakers* (National Endowment for the Arts, Washington, D.C.).

Nichols, B. (2004), "Artist labor force by state, 2000" (National Endowment for the Arts, Research Note #85, Washington, D.C.).

Nixon, L. and M. Robinson (1992), "The earnings of male and female artists," Eastern Economics Association.

O'Brien, J. (nd.), "Professional status as a means of improving visual artists' incomes" (Arts Council of England, London).

O'Brien, J. and A. Feist (1997), *Employment in the Arts and Cultural Industries: An Analysis of the Labour Force Survey and Other Sources* (The Arts Council of England, London).

Rengers, M. (1998b), "Visual artists in the Netherlands: civil servants, self-employed or both?," in: M. Heikkinen and T. Koskinen, eds., *Economics of Artists and Arts Policy* (Arts Council of Finland, Helsinki).

Rengers, M. and E. Plug (2001), "Private or public? How Dutch visual artists choose between working for the market and the government," *Journal of Cultural Economics* 25:1-20.

Rensujeff, K. (2003), *The Status of the Artist in Finland – Report on Employment and Income Formation in Different Fields of Art* (Arts Council of Finland, Research Report no. 27 [in Finnish with English summary], Helsinki).

Robinson, M. and S. Montgomery (1993), "The earnings and labor supply of artists: the 'Myth of the Starving Artist' revisited" (Xerox).

Robinson, M. and S. Montgomery (2000), "The time allocation and earnings of artists," *Industrial Relations* 39:525-534.

Rottenberg, S. (1997), "The remuneration of artists," in: R. Towse, ed., *The Arts, the Heritage and the Media Industries* (Elgar, Cheltenham) 590-594.

Rushton, M. (2001), "The law and economics of artists' inalienable rights," *Journal of Cultural Economics* 25:243-257.

Ruttenberg, Kilgallen, Gutchess and Associates (1981), *A Survey of Employment, Unemployment and Underemployment Among Performing Artists, 1980* (Labor Institute for Human Enrichment, Washington, D.C.).

Singer, L. (1981), "Supply decisions of professional artists," *American Economic Review* 71:341-346.

Stoyle, J. (1970), *Economic and Demographic Characteristics of Actors' Equity Association Membership* (Temple University, Philadelphia, Pa.).

Summerton, J. (1999), *Artists at Work, 1999* (Southern Arts Board, U.K.).

Throsby, D. (1994b), "The production and consumption of the arts: a view of cultural economics," *Journal of Economic Literature* 32:1-29.

Throsby, D. (1997), "On the economic survival of actors and musicians," *Revista Economica de Catalunya* 31:71-75.

Throsby, D. (2001), "Defining the artistic workforce: the Australian experience," *Poetics* 28:255-271.

Throsby, D. and R. Towse (1994), "On labor markets in the arts: some unresolved issues," *American Economic Association*.

Towse, R. (1992b), "The labour market for artists," *Ricerche Economiche* XLVI:55-74.

Towse, R. (1992c), "Market value and artists' earnings," *International Center for the Arts*.

Towse, R. (1993), *Singers in the Marketplace: The Economics of the Singing Profession* (Oxford University Press, Oxford).

Towse, R. (1996a), *The Economics of Artists' Labour Markets* (The Arts Council of England, London).

Towse, R. (1996b), "Economics of training artists," in: V. Ginsburgh and P. Menger, eds., *Economics of the Arts: Selected Essays* (Elsevier, North-Holland, Amsterdam) 303-329.

Towse, R. (1999), "Copyright, risk and the artist: an economic approach to policy for artists," *International Journal of Cultural Policy* 6.

Towse, R. (nd.), "Survey of artists in Wales: Econometric Results" Xerox.

Waits, C. R. and E. M. McNertney (1984), "An economic model of artistic behavior," *Journal of Cultural Economics* 8:49-60.

Waits, C. R. and E. M. McNertney (1989), "The incomes of cultural providers: a review of current research," in: D. V. Shaw, et al, eds., *Cultural Economics 88: An American Perspective* (Association for Cultural Economics, Akron, Oh).

**TABLE 2**  
**GROWTH IN ARTISTS VS. GROWTH IN THE CIVILIAN LABOR FORCE**  
**AND ALL PROFESSIONAL WORKERS, 1940-2000**  
(Numbers in thousands)

<b>CATEGORY</b>	<b>1940</b>	<b>1950</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>% Change 1940-2000</b>
<b>Civilian labor force</b>	51,742	58,999	67,378	79,802	104,058	122,473	137,669	166.1
<b>Professionals</b>	3,879	5,081	5,543	8,800	12,275	16,648	24,905	542.0
<b>Artists</b>	386	441	492	737	1,086	1,671	1,931	400.3

**Source:** U. S. Bureau of the Census (1958), Table 6, p. 10 for 1940-1950; Citro and Gaquin (1985), Table II.1, for 1960. Ellis and Beresford (1994) for 1970-90. 1997 Statistical Abstract, Table 645, for 1996; authors' calculations.

TABLE 3

**LABOR MARKET CHARACTERISTICS OF ARTISTS AND OTHER PROFESSIONALS IN THE EXPERIENCED CIVILIAN LABOR FORCE  
1940-2000**  
(Median in parentheses)

ATTRIBUTE	1940		1950		1960		1970		1980		1990		2000	
	Artists	Profs.	Artists	Profs.	Artists	Profs.	Artists	Profs.	Artists	Profs.	Artists	Profs.	Artists	Profs.
<b>Age</b>	37.9	38.3	37.8	38.9	40.2	40.0	38.6	39.0	36.8	38.0	38.3	39.2	40.2	40.9
<b>Education</b>	11.7	14.2	12.8	14.4	13.7	15.0	13.8	15.2	14.5	15.7	14.4	15.3	14.7	15.5
<b>% WHO ARE:</b>														
<b>Women</b>	33.0	43.7	34.7	35.2	38.6	38.2	29.7	41.1	38.2	47.4	44.3	52.7	45.7	56.6
<b>White</b>	95.4	95.9	95.6	95.5	96.1	95.0	94.7	93.0	92.1	88.7	89.9	86.2	86.2	81.5
<b>Black</b>	4.2	3.9	4.0	4.2	3.0	4.1	3.5	5.5	4.3	7.3	4.5	8.0	4.7	8.5
<b>Unemployed</b>	11.0	3.0	4.9	1.4	4.0	1.2	4.4	1.7	5.5	2.0	4.8	2.1	4.5	2.2
<b>Worked in 1999</b>	92.1	96.0	91.8	94.5	98.4	98.5	98.1	98.2	95.8	98.1	96.6	98.3	96.8	98.3
<b>Self-employed</b>	33.4	16.3	26.5	12.8	28.2	10.4	22.4	8.1	30.1	7.6	31.3	7.5	31.5	6.6
<b>Full-time*</b>	39.2	49.4	25.5	41.6	42.9	57.6	50.1	52.9	49.6	58.8	53.1	61.9	56.0	59.8
<b>WORK TIME:</b>														
<b>Hours worked*</b>	30.1 (40.0)	39.4 (40.0)	33.9 (40.0)	40.9 (40.0)	33.2 (40.0)	39.8 (40.0)	33.9 (40.0)	37.3 (40.0)	35.5 (40.0)	38.5 (40.0)	37.0 (40.0)	39.6 (40.0)	37.9 (40.0)	39.4 (40.0)
<b>Weeks worked*</b>	38.3 (50.0)	42.6 (52.0)	40.1 (51.0)	42.7 (52.0)	41.8 (51.0)	44.1 (51.0)	42.9 (51.0)	43.9 (51.0)	42.1 (52.0)	44.9 (52.0)	43.3 (52.0)	45.9 (52.0)	44.2 (52.0)	45.7 (52.0)

**Notes:** \*In year prior to Census year.

**Source:** Authors' tabulations from the 1940-2000 Census PUMS.

TABLE 5

**MEASURES OF LOW AND HIGH INCOMES AND INCOME VARIABILITY, ARTISTS AND PROFESSIONALS IN THE EXPERIENCED CIVILIAN  
LABOR FORCE: 1940-2000**

STATISTIC	1940*		1950*		1960*		1970*		1980*		1990*		2000*	
	Artists	Prof.	Artists	Prof.	Artists	Prof.	Artists	Prof.	Artists	Prof.	Artists	Prof.	Artists	Prof.
<b>Percent with zero or less income from:</b>														
<b>Wage &amp; salary</b>	32.7	22.6	33.7	20.5	28.0	13.4	19.4	8.4	24.6	6.7	23.5	5.9	23.3	5.3
<b>Self-employment</b>	NA	NA	73.8	84.5	67.5	84.8	77.9	90.3	73.9	91.8	69.9	90.5	72.4	92.2
<b>Total earnings</b>	NA	NA	12.1	8.5	7.2	4.4	3.9	2.4	5.4	2.2	5.0	1.9	4.5	1.8
<b>All sources</b>	NA	NA	9.9	6.9	4.1	3.6	2.9	1.8	3.4	1.3	3.3	1.2	3.0	1.2
<b>Percent with income at maximum from:</b>														
<b>Wage &amp; salary</b>	2.0	2.6	1.4	1.3	0.5	0.4	0.3	0.2	0.7	0.8	1.7	2.6	1.1	1.5
<b>Self-employment</b>	NA	NA	2.1	2.7	0.7	1.0	0.3	0.5	0.5	0.4	0.6	0.9	0.6	0.7
<b>Total earnings</b>	NA	NA	3.5	4.1	1.4	1.7	0.7	0.6	1.3	0.9	2.6	3.6	1.0	1.4
<b>All sources</b>	4.9	NA	3.8	4.7	1.6	2.0	0.9	1.0	1.5	1.5	3.1	4.2	0.0	0.0
<b>Variability in total earnings:</b>														
<b>Coefficient of variation</b>	1.231	0.944	0.940	0.766	0.988	0.849	0.951	0.845	1.036	0.827	1.132	0.924	1.239	1.09
<b>Mean/Median</b>	1.540	1.271	1.266	1.132	1.214	1.198	1.186	1.168	1.318	1.176	1.333	1.197	1.355	1.275

**Notes:** Reporting of self-employment earnings, total earnings and total income allows for negative amounts. Prior to the 1970 Census, self-employment earnings included earnings from farm sources; from 1970 on, they are from non-farm sources only. Total earnings include all wage and salary and self-employment earnings. All income sources were capped at a maximum amount by the Census. The maximum reportable amounts in each income category for each Census year were: in 1940, \$5,000; in 1950, \$10,000; in 1960, \$25,000; in 1970, \$50,000; in 1980, \$75,000; and in 1990, \$90,000. In 2000 maximum reportable earnings/income varied by type of income and were: \$175,000 for wage and salary earnings; \$126,000 for self-employment earnings; and \$310,000 for total earnings. Total earnings were not directly reported in the 1950-1980 Censuses but were calculated by the authors. Income from all sources was also calculated by the authors. For 1939, earnings variability measures refer to wage and salary earnings only. See the text for more detail.

**Source:** Authors' tabulations and calculations from the 1940-2000 Census PUMS.

TABLE 6

## PROFESSIONAL OCCUPATIONS WITH GREATEST EARNINGS VARIABILITY, 1999

OCCUPATION	Mean earnings	Earnings of \$0 or less	Earnings greater than \$175,000	Earnings greater than \$310,000	Coefficient of variation		Mean/Median	
	(\$)	(%)	(%)	(%)	Rank	Value	Rank	Value
Actor	35,545	4.9	3.9	3.1	1	1.774	1	2.031
Announcer	31,739	3.5	1.9	1.7	4	1.580	8	1.580
Artist and rel.	30,427	8.2	1.2	0.5	8	1.305	14	1.415
Athlete	26,160	5.9	1.6	1.3	2	1.727	2	1.869
Author	40,093	6.5	2.9	1.6	6	1.381	12	1.463
Chiropractor	80,646	3.6	12.6	4.5	15	1.123	6	1.613
Dancer	19,709	7.5	0.2	0.1	14	1.141	*	1.314
Entertainer, nec	25,463	6.1	1.2	0.8	5	1.526	7	1.591
Health diag.	32,483	7.6	1.4	0.3	10	1.282	9	1.547
Library tech.	10,731	4.4	0.0	0.0	*	1.076	3	1.788
Misc. health tech.	34,642	2.0	1.6	0.9	11	1.214	13	1.443
Musician	25,323	5.4	1.2	0.6	3	1.596	4	1.783
Other teacher	18,930	5.2	0.2	0.1	9	1.285	5	1.661
Photographer	30,404	4.8	1.4	0.7	7	1.351	10	1.498
Podiatrist	110,813	1.5	20.7	7.1	*	0.906	11	1.478
Producer/Director	53,916	2.5	3.6	3.2	13	1.145	*	1.390
TV, movie camera operator and editor	41,914	4.0	1.7	1.2	12	1.152	*	1.397
Veterinarian	77,158	1.7	8.6	3.7	*	0.967	15	1.403

Notes: \* Occupation not in the top 15.

Source: Authors' tabulations from 2000 Census PUMS

**TABLE 8**

**VARIABLES IN THE ESTIMATED EARNINGS FUNCTIONS**

<b>VARIABLE</b>	<b>VALUES</b>	<b>EXPLANATION</b>
<b>Education</b>	Years of schooling	Assigned from Census variable measuring highest level of education attained. See footnote 12.
<b>Experience, Experience<sup>2</sup>, Experience<sup>3</sup> and Experience<sup>4</sup></b>	Years of experience and years of experience up to the 4 <sup>th</sup> power	Calculated as: age-education-5
<b>Head of household</b>	1-household head, 0-not household head	
<b>Female</b>	1-female, 0-male	
<b>Black</b>	1-race black, 0-not black	
<b>Asian</b>	1-race Asian, 0-not Asian	
<b>White and other</b>	Racial category excluded	
<b>Hispanic</b>	1-ethnicity is Hispanic, 0-ethnicity not Hispanic	
<b>Married</b>	1-married, 0-not married	Not married includes: separated, divorced, widowed and never married
<b>Children under 6</b>	1-children under six years old present in household, 0-otherwise	
<b>Disability</b>	1-employment related disability, 0-otherwise	
<b>Immigrant</b>	1-born outside the U.S., 0-born in U.S.	
<b>Non-citizen</b>	1-citizen of the U.S., 0-not a citizen of the U.S.	
<b>English spoken</b>	1-speaks English (well or very well), 0-otherwise	
<b>Self-employed</b>	1-self-employed, 0-employee	
<b>Self-incorporated</b>	1-self-employed in an incorporated business, 0-otherwise	
<b>Self-unincorporated</b>	1-self-employed in an unincorporated business, 0-otherwise	

**TABLE 10****NUMBER OF ARTISTS BY YEAR: NLSY-79**

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1998
<b>Architect or Designer</b>	2	3	8	11	13	21	25	33	36	33	20	32	24	32	22	56
<b>Performer</b>	15	25	23	35	38	41	32	53	39	40	39	43	38	45	42	37
<b>Visual artist</b>	10	10	16	13	20	22	19	21	24	29	45	29	28	28	33	29
<b>Other</b>	8	14	17	21	23	29	25	24	43	26	5	28	25	26	30	22
<b>Total</b>	35	52	64	80	94	113	101	131	142	128	109	132	115	131	127	144

**Source:** Authors' tabulations and calculations from NLSY79, 1979-1998, Release 10.0.

**TABLE 11**

**AVERAGE AGE STARTED BEING AN  
ARTIST BY GENDER AND FIRST ARTS  
OCCUPATION  
(Years)**

	<b>Total</b>	<b>Male</b>	<b>Female</b>
<b>Architect or Designer</b>	27.2	27.4	26.8
<b>Performer</b>	24.2	24.1	24.3
<b>Visual artist</b>	25.4	24.4	26.4
<b>Other</b>	24.9	24.6	25.1

**Source:** Authors' tabulations and calculations from  
NLSY79, 1979-1998, Release 10.0.

**TABLE 12**

**OCCUPATION IN THE YEARS WORKING AS AN ARTIST  
(Percent)**

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1998
<b>Professional &amp; Managerial</b>	4.2	2.6	14.3	6.7	4.5	10.3	3.6	13.3	15.5	8.3	8.0	14.1	16.2	11.2	16.0	20.8
<b>Sales &amp; Clerical</b>	12.5	5.2	6.1	3.3	10.6	4.6	6.0	3.6	4.3	11.9	13.7	6.2	6.5	10.3	7.5	2.5
<b>Craft, Operative, Laborer, or Farmer</b>	4.2	5.2	2.0	3.4	4.5	4.5	4.8	12.4	7.8	10.1	10.3	5.4	6.5	0	3.8	5.8
<b>Service</b>	4.2	7.9	2.0	3.4	3.0	8.0	3.6	8.8	5.2	6.4	5.7	2.7	3.3	4.7	1.8	1.7
<b>Total nonart</b>	25.1	20.9	24.4	16.8	22.6	27.4	18.0	38.1	32.8	36.7	37.7	28.4	32.5	26.2	29.1	30.8
<b>Architect or Designer</b>	8.3	16.3	16.3	11.7	10.6	17.2	21.7	19.4	20.7	23.9	18.4	23.0	14.0	23.4	15.1	34.1
<b>Performer</b>	25.0	47.4	30.6	38.4	33.2	20.6	22.9	20.3	17.2	12.8	18.4	21.3	21.6	16.8	20.6	9.1
<b>Visual artist</b>	25.0	7.9	16.3	13.3	18.2	18.4	16.8	11.5	12.9	16.5	18.3	15.0	17.3	18.7	17.0	15.0
<b>Other</b>	16.7	21.1	12.2	20.0	15.2	16.1	20.5	10.6	16.4	10.1	6.9	12.4	15.1	14.9	17.9	10.9
<b>Total art</b>	75.0	79.0	75.4	83.4	77.2	72.3	81.9	61.8	67.2	63.3	62.0	71.7	68.0	73.8	70.6	69.1

**Source:** Authors' tabulations and calculations from NLSY79, 1979-1998, Release 10.0.

**TABLE 13**

**OCCUPATION IN THE YEARS NOT WORKING AS AN ARTIST  
(Percent)**

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1998
<b>Professional &amp; Managerial</b>	12.5	12.6	18.2	22.3	27.8	30.3	33.9	32.0	36.4	40.3	44.8	43.4	49.8	45.3	46.0	57.2
<b>Sales &amp; Clerical</b>	27.6	33.5	30.7	33.6	31.8	30.1	26.9	27.1	27.2	24.2	20.7	20.2	19.5	24.0	19.6	18.3
<b>Craft, Operative, Laborer or Farmer</b>	29.5	30.7	27.9	23.4	20.9	24.2	25.3	28.9	22.6	24.7	22.5	23	23.6	22.8	22.6	17.7
<b>Service</b>	30.4	23.2	23.3	20.5	19.4	15.4	14.1	12.0	13.7	10.8	12.0	13.4	7.2	9.9	11.6	6.6

**Source:** Authors' tabulations and calculations from NLSY79, 1979-1998, Release 10.0.

**TABLE 14**

**ARTISTS' CURRENT STATUS BY FIRST ARTS  
OCCUPATION  
(Percent)**

	<b>Still Artist</b>	<b>No longer artist</b>	<b>Status unkonwn</b>
<b>Architect or Designer</b>	53.1	39.6	7.3
<b>Performer</b>	39.8	50.3	9.9
<b>Visual artist</b>	38.7	51.4	9.9
<b>Other</b>	36.3	53.9	9.8
<b>All</b>	41.6	48.1	9.3

**Source:** Authors' tabulations and calculations from NLSY79,  
1979-1998, Release 10.0.

**TABLE 15****FIRST ARTS OCCUPATION BY LAST ARTS OCCUPATION  
(Percent)**

<b>FIRST ARTS OCCUPATION</b>	<b>LAST ARTS OCCUPATION</b>			
	<b>Arch./Des.</b>	<b>Performer</b>	<b>Visual</b>	<b>Other</b>
<b>Architect or Designer</b>	100.0	0.0	0.0	0.0
<b>Performer</b>	1.8	89.0	.09	8.3
<b>Visual artist</b>	0.0	0.0	95.3	4.7
<b>Other</b>	2.7	2.7	3.6	90.9
<b>All</b>	19.9	26.6	23.4	30.0

**Source:** Authors' tabulations and calculations from NLSY79, 1979-1998, Release 10.0.

**TABLE 16**

**AVERAGE AGE STOPPED BEING AN ARTIST BY  
GENDER AND LAST ARTS OCCUPATION  
(Years)**

---

	<b>TOTAL</b>	<b>MALE</b>	<b>FEMALE</b>
<b>Architect or Designer</b>	24.9	24.7	25.3
<b>Performer</b>	23.7	23.9	23.3
<b>Visual artist</b>	23.5	23.5	23.5
<b>Other</b>	23.3	23.4	23.2
<b>All</b>	23.8	23.8	23.7

---

**Source:** Authors' tabulations and calculations from NLSY79, 1979-1998, Release 10.0.

**TABLE 17**  
**POST ARTS EMPLOYMENT STATUS**  
 (Percent)

	<b>Employed</b>	<b>Unemployed</b>	<b>Keeping house</b>	<b>In school</b>	<b>Other</b>	<b>Armed forces</b>
<b>By Gender:</b>						
<b>Female</b>	70.8	12.6	7.3	5.3	4.0	0.0
<b>Male</b>	74.6	8.0	0.9	7.5	5.6	3.3
<b>All</b>	73.1	9.9	3.6	6.6	4.9	1.9

**Source:** Authors' tabulations and calculations from NLSY79, 1979-1998, Release 10.0.

**TABLE 18**  
**POST ARTS OCCUPATION**  
(Percent)

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<b>OCCUPATION</b>	<b>GENDER</b>		<b>Total</b>
	<b>Male</b>	<b>Female</b>	
<b>Professional + Managerial</b>	38.3	34.5	36.9
<b>Sales + Clerical</b>	19.5	35.4	25.9
<b>Craft, Operative, Laborer + Farmer</b>	30.1	11.2	22.5
<b>Service</b>	12.0	18.6	14.7

---

**Source:** Authors' tabulations and calculations from NLSY79, 1979-1998, Release 10.0.

**APPENDIX TABLE 1**

**CENSUS PUBLIC USE SAMPLE ARTISTIC OCCUPATIONS AND UNWEIGHTED  
SAMPLE SIZES**

OCCUPATIONS (with original titles)	CENSUS YEAR						
	1940	1950	1960	1970	1980	1990	2000
<b>Actors<sup>a</sup></b>	209	153	179	898	3,946	5,694	2,568
<b>Architects</b>	201	252	313	2,448	5,842	7,953	10,063
<b>Artists &amp; Art teachers<sup>b</sup></b>	627	781	1,289	5,095	8,905	11,995	14,352
<b>Authors</b>	156	132	322	1,253	2,720	5,920	9,327
<b>Dancers &amp; Dance teachers<sup>c</sup></b>	492	144	331	460	875	1,235	1,566
<b>Designers</b>	246	919	1,528	5,204	19,945	34,205	42,235
<b>Musicians &amp; Music teachers<sup>d</sup></b>	1,480	1,619	2,293	4,913	8,251	8,653	9,770
<b>Photographers</b>	376	570	598	3,095	5,595	8,022	7,164
<b>Showmen</b>	76	---	---	---	---	---	---
<b>Entertainers N.E.C.<sup>e</sup></b>	---	180	157	3,161	3,098	5,717	2,289
<b>College art, drama &amp; music teachers</b>	---	---	---	1,382	1,630	1,172	---
<b>Radio and TV announcers<sup>f</sup></b>	---	---	---	960	2,506	3,157	3,023
<b>Producers and Directors</b>	---	---	---	---	---	---	7,112
<b>TOTAL</b>	3,863	4,750	7,010	32,913	63,313	93,723	109,469

**Notes:**

<sup>a</sup>Called Actors and Directors in 1980 and 1990. Excludes producers and directors in 2000.

<sup>b</sup>Called Painters and Sculptors in 1970; Painters, Sculptors, Craft-Artists, and Artist Printmakers in 1980 and 1990; and Artists and Related Workers in 2000, excludes art teachers.

<sup>c</sup>Called Dancers from 1970 to 1990; and Dancers and Choreographers in 2000, excludes dance teachers.

<sup>d</sup>Called Musicians and Composers from 1970 to 1990; and Musicians, Singers and Related Workers in 2000, excludes music teachers.

<sup>e</sup>Called Writers, Artists and Entertainers, N.E.C. in 1970; Artists, Performers and Related Workers, N.E.C. in 1980 and 1990; Entertainers and Performers, Sports and Related Workers, All Other in 2000.

<sup>f</sup>Called Announcers starting in 1980.

**TABLE 9**

**STATISTICAL REWARDS AND PENALTIES OF BEING AND ARTISTS**

REWARD/PENALTY	YEAR					
	1949	1959	1969	1979	1989	1999
Percent return to extra year of education: artists	7.9	3.0	6.0	5.1	10.4	8.0
Percent return to extra year of education: professional & technical workers	6.0	5.3	8.1	8.0	11.6	11.6
Percent earnings difference between artists and other professional & technical occupations: actual	58.2	56.3	43.6	90.3	12.1	21.9
Percent earnings penalty to artists for not working in other professional & technical occupations: calculated using regression coefficients	19.3	25.3	33.2	50.7	5.9	8.4
<p><b>Notes:</b> Returns to education and earnings penalties calculated from regression equations with selected coefficients shown in Tables 6 and 7. In calculating penalty to artists for not entering other professional and technical occupations, it was assumed that they would distribute among these occupation in the same percentages as the then existing occupational distributions.</p>						

TABLE 7

SELECTED RESULTS FROM EARNINGS FUNCTIONS OF ARTISTS AND PROFESSIONAL AND TECHNICAL WORKERS IN THE EXPERIENCED CIVILIAN LABOR FORCE, 1939-1999

(Dependent variable is natural log of earnings; t-statistics in parentheses)

VARIABLES	1949		1959		1969		1979		1989		1999	
	Artist	Prof.	Artist	Prof.	Artist	Prof.	Artist	Prof.	Artist	Prof.	Artist	Prof.
<b>Education</b>	0.079 (3.42)	0.060 (8.43)	0.030 (2.93)	0.053 (17.83)	0.059 (10.97)	0.081 (65.53)	0.051 (13.03)	0.080 (109.30)	0.104 (26.83)	0.116 (101.02)	0.080 (46.05)	0.116 (264.00)
<b>Experience</b>	0.166 (2.84)	0.157 (8.97)	0.140 (5.76)	0.129 (20.61)	0.165 (17.17)	0.112 (51.64)	0.077 (9.44)	0.117 (76.75)	0.174 (15.51)	-0.049 (-16.78)	0.127 (35.84)	0.114 (133.60)
<b>Experience<sup>2</sup></b>	-0.008 (-2.29)	-0.008 (-6.73)	-0.007 (-4.23)	-0.006 (-14.34)	-0.007 (-11.55)	-0.004 (-27.82)	-0.003 (-5.01)	-0.005 (-46.36)	-0.007 (-11.15)	-0.010 (-58.40)	-0.005 (-21.05)	-0.004 (-65.93)
<b>Experience<sup>3</sup></b>	0.0002 (1.95)	0.0001 (5.58)	0.0001 (3.10)	0.0001 (11.01)	0.0001 (8.16)	4.5E-5 (13.80)	3.6E-5 (2.53)	8.8E-5 (32.00)	0.0001 (7.97)	-0.0003 (-89.97)	5.5E-5 (10.53)	4.2E-5 (29.98)
<b>Experience<sup>4</sup></b>	-1.0E-6 (-1.77)	-1.3E-6 (-5.33)	-7.6E-7 (-2.46)	-8.4E-7 (-9.91)	-7.1E-7 (-6.69)	-2.0E-7 (-8.30)	-2.4E-7 (-2.03)	-6.7E-7 (-29.37)	-7.6E-7 (-6.64)	2.8E-6 (101.01)	-2.2E-7 (-5.39)	-2.0E-7 (-17.49)
<b>Head of Household</b>	1.124 (6.53)	0.858 (16.96)	0.894 (12.92)	0.873 (45.95)	0.943 (26.75)	0.602 (78.35)	0.769 (34.35)	0.489 (111.99)	0.692 (36.20)	0.664 (122.74)	0.391 (48.33)	0.281 (149.59)
<b>Female</b>	-0.589 (-3.13)	-0.537 (-8.74)	-0.781 (-10.2)	-0.332 (-14.48)	-0.767 (-22.53)	-0.416 (-51.37)	-0.622 (-26.92)	-0.288 (-60.70)	-0.457 (-22.16)	-0.310 (-50.46)	-0.419 (-51.58)	-0.226 (-113.24)
<b>Black</b>	-0.745 (-2.10)	-0.267 (-2.76)	-0.483 (-3.27)	-0.168 (-5.13)	-0.168 (-2.50)	-0.058 (-5.10)	-0.408 (-8.83)	-0.166 (-25.48)	-0.303 (-7.10)	-0.013 (-1.44)	0.000 (-0.01)	0.050 (17.44)
<b>Asian</b>	1.085 (0.97)	-0.900 (-1.76)	0.387 (1.25)	0.111 (-1.44)	-0.015 (-0.14)	-0.004 (-0.16)	0.094 (1.38)	0.116 (9.63)	-0.026 (-0.50)	0.028 (2.02)	-0.025 (-1.24)	0.032 (7.51)
<b>Hispanic</b>	-0.401 (-0.58)	-0.491 (-1.93)	0.200 (0.78)	-0.130 (-1.78)	-0.239 (-3.18)	-0.105 (-5.52)	-0.063 (-1.09)	0.018 (1.57)	-0.052 (-0.95)	0.007 (0.39)	-0.007 (-0.39)	0.047 (11.95)
<b>Married</b>	0.072 (0.46)	0.310 (6.80)	0.195 (3.09)	0.447 (26.48)	0.137 (4.45)	0.211 (31.55)	0.147 (6.74)	0.197 (48.08)	0.095 (5.18)	0.107 (20.35)	0.027 (3.28)	0.068 (36.02)
<b>Children Under 6</b>	-0.089 (-0.57)	-0.074 (-1.74)	-0.379 (-5.63)	-0.160 (-9.27)	-0.102 (-3.07)	-0.171 (-24.34)	-0.259 (-7.00)	-0.181 (-30.38)	-0.384 (-8.87)	-0.922 (-93.19)	-0.088 (-8.15)	-0.043 (-19.11)
<b>Disability</b>	-----	-----	-----	-----	-0.393 (-8.18)	-0.349 (-29.31)	-0.845 (-19.10)	-0.640 (-70.72)	-1.071 (-27.07)	-1.674 (-161.17)	-0.094 (-7.27)	-0.050 (-16.45)
<b>Non-Citizen</b>	-0.623 (-1.13)	-0.204 (-2.45)	-----	-0.037 (-0.73)	-0.322 (-3.67)	-0.046 (-3.22)	-0.484 (-7.13)	0.019 (1.88)	-0.351 (-6.92)	0.058 (5.11)	-0.112 (-5.44)	0.158 (34.97)
<b>Immigrant</b>	-0.006 (-0.02)	-0.891 (-4.33)	-0.048 (-0.26)	-----	0.162 (2.91)	-0.291 (-12.93)	0.157 (3.10)	-0.360 (-26.90)	0.098 (2.39)	-0.617 (-41.02)	0.127 (7.49)	0.053 (14.32)
<b>English spoken</b>	-----	-----	0.033 (0.16)	0.191 (3.19)	-----	-----	0.055 (1.44)	0.146 (19.65)	0.088 (2.76)	0.087 (9.63)	0.034 (2.49)	0.037 (12.05)
<b>Self-Employed</b>	-0.782 (-4.88)	0.005 (0.07)	-0.467 (-7.75)	0.122 (4.48)	-0.448 (-14.56)	-0.177 (15.54)	-0.933 (-42.00)	-0.487 (61.49)	-0.717 (-38.65)	-0.101 (11.08)	-----	-----
<b>Self-Incorporated</b>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.220 (17.98)	0.124 (22.33)
<b>Self-Unincorporated</b>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-0.491 (-53.91)	-0.402 (-96.83)
<b>R<sup>2</sup></b>	0.148	0.197	0.253	0.242	0.265	0.225	0.163	0.171	0.139	0.196	0.294	0.366
<b>F</b>	8.87	91.68	60.98	552.61	212.76	2,375.62	297.47	4,231.35	363.54	7,807.47	993.73	18,083.03
<b>n</b>	1,447	14,010	5,681	67,502	19,938	319,695	53,479	841,699	78,610	1,314,705	97,594	1,284,105

TABLE 4

**MEAN EARNINGS OF ARTISTS VS. OTHER PROFESSIONAL AND TECHNICAL WORKERS IN THE EXPERIENCED CIVILIAN  
LABOR FORCE, 1939-1999**  
(In current and real [2004] dollars; medians in parentheses)

EARNINGS TYPE	1939		1949		1959		1969		1979		1989		1999	
	Current	Real	Current	Real	Current	Real	Current	Real	Current	Real	Current	Real	Current	Real
<b>Artists:</b>														
<b>Wage &amp; salary</b>	905 (588)	12,436 (8,080)	1,913 (1,200)	15,352 (9,630)	3,619 (2,800)	23,754 (18,378)	6,612 (5,400)	34,411 (28,104)	9,942 (6,505)	26,156 (17,114)	18,985 (12,000)	29,243 (18,484)	29,353 (20,000)	33,652 (22,929)
<b>Self-employment</b>	NA		746 (0)	5,987 (0)	1,238 (0)	8,126 (0)	1,688 (0)	8,785 (0)	2,696 (0)	7,093 (0)	4,966 (0)	7,649 (0)	7,238 (0)	8,298 (0)
<b>Total earnings</b>	NA		2,658 (2,100)	21,331 (16,853)	4,857 (4,000)	31,879 (26,254)	8,305 (7,000)	43,222 (36,431)	12,657 (9,605)	33,299 (25,269)	23,992 (18,000)	36,955 (27,726)	36,590 (27,000)	41,949 (30,954)
<b>Hourly wage</b>	0.78 (0.26)	10.72 (3.57)	1.57 (0.96)	12.60 (7.70)	3.63 (2.49)	23.83 (16.34)	5.65 (3.98)	29.40 (20.71)	9.13 (5.97)	24.02 (15.71)	16.76 (10.38)	25.82 (15.99)	23.81 (15.38)	27.30 (17.63)
<b>Below poverty line</b>	NA		NA		NA		4.9%		7.6%		7.2%		6.9%	
<b>Prof/Tech:</b>														
<b>Wage &amp; salary</b>	1,271 (1,000)	17,465 (13,741)	2,510 (2,400)	20,143 (19,261)	4,759 (4,500)	31,236 (29,536)	8,019 (7,500)	41,734 (39,033)	14,882 (13,205)	39,152 (34,740)	28,465 (25,000)	43,845 (38,501)	41,235 (34,000)	47,274 (38,980)
<b>Self-employment</b>	NA		659 (0)	5,289 (0)	1,158 (0)	7,601 (0)	1,309 (0)	6,813 (0)	1,562 (0)	4,109 (0)	2,616 (0)	4,029 (0)	3,385 (0)	3,881 (0)
<b>Total earnings</b>	NA		3,170 (2,800)	25,440 (22,471)	5,917 (5,000)	38,837 (32,818)	9,342 (8,000)	48,619 (41,635)	16,476 (14,005)	43,346 (36,845)	31,117 (26,000)	47,930 (40,048)	44,620 (35,000)	51,155 (40,126)
<b>Hourly wage</b>	0.77 (0.56)	10.58 (7.69)	1.52 (1.35)	12.20 (10.83)	3.25 (2.70)	21.33 (17.72)	5.34 (4.36)	27.79 (22.69)	9.48 (7.60)	24.94 (19.99)	17.31 (13.46)	26.66 (20.73)	25.10 (18.75)	28.78 (21.50)
<b>Below poverty line</b>	NA		NA		NA		3.3%		3.5%		3.3%		4.2%	

**Notes:** See note at bottom of Table 4.

**Source:** Authors' tabulations from the 1940-2000 Census PUMS

**TABLE 1**  
**SOME LANDMARKS IN EMPIRICAL RESEARCH INTO ARTIST LABOR MARKETS**

<b>Empirical Finding</b>	<b>Authors</b>	<b>Artist Group/Database</b>
Artists as risk-takers	Santos (1976)	U.S. Census
Determinants of artists' earnings using statistical earnings function	Filer (1986)	U.S. Census
Artists' dependence on non-arts jobs for income	Throsby (1986) Jeffri (1988) Wassall and Alper (1983)	Australian artists Artists in several U.S. cities New England artist survey
Issues in identifying and defining artists	Filer (1986) Wassall and Alper (1985) Karttunen (1998)	U.S. Census New England artist survey Finnish artists
Artist moonlighting patterns	Alper and Wassall (2000)	Current Population Survey
Longitudinal analyses of artists' careers	Rengers (2002)	Dutch artists
Career transitions of artists	Alper and Wassall (1998) Smith (2000) Montgomery and Robinson (2003)	Nat'l. Survey of College Graduates U.S. Census College graduates
Examination of artists' entire careers	Galenson (2000a), (2000b)	Painters