

Does Public Art Have "Bequest Value"?

Arthur C. Brooks

Associate Professor of Public Administration

Maxwell School, Syracuse University

Center for Policy Research, 426 Eggers Hall

Maxwell School, Syracuse University

Syracuse, NY 13244

Tel. (315) 443-3719, Fax (315) 443-1081

e-mail: acbrooks@maxwell.syr.edu

May, 2002

Abstract

Many people argue that public art contains an element of "bequest value": value derived by people today from the expected enjoyment of the art by future generations. This benefit, many believe, can only be uncovered vis-à-vis non-market valuation mechanisms such as contingent valuation (CV) surveys. In this paper, I investigate the existence of this claimed benefit. I employ an intergenerational model of

the benefits of willingness-to-pay and private charitable gifts to the arts, and fit it empirically using General Social Survey data. The data analysis suggests that people do take their life expectancies into account to some extent when responding to questions about WTP. Indeed, we cannot reject the hypothesis that people do *not* consider future generations in their current support for the arts.

Does Public Art Have "Bequest Value"?

Introduction

The so-called "culture wars" of the 1980s and 90s were characterized by acrimonious debate over controversial art. Proponents of government-backed cultural programs generally spoke of the social benefits embodied in all kinds of art. For example, in a 1995 speech at Harvard University, actress and political activist Barbra Streisand stated that "by trying to cut these arts programs, which bring culture, education, and joy into the lives of ordinary Americans, [Republicans] are hurting the very people they claim to represent" (Streisand 1995). In contrast, the conservative position on arts funding tended to focus on the *costs* of art. In a 1989 speech before the U.S. Senate, North Carolina Republican Senator Jesse Helms argued against the National Endowment for the Arts' support of controversial projects, saying "Americans for the most part are moral, decent people and they have a right not to be denigrated, offended, or mocked with their own tax dollars" (Hetherman 1999).

Fundamentally, these debates were over the "true" value of arts and culture. The reason that the preceding quotes—indeed, most all of the culture wars rhetoric—treat the question of value so impressionistically is that precise measures of value are not widely understood. Even arts scholars have struggled with the challenge of quantifying the net benefits (and costs) of the arts to society.

The difficulty lies in the multidimensionality of the problem. For most private-market goods and services, value is manifested in market prices. But this is only partly true for the arts. For example, value for a symphony orchestra's product is certainly reflected in the market demand for concert tickets. However, this is only "use" value; the orchestra arguably produces benefits that spill over onto non-users as well. Cultural non-use values may be substantial. Furthermore, much arts and culture—such as public monuments—are public goods whose use value itself is not captured by markets. And some value, usually described as secondary and tertiary economic impact from arts activity, is practically unrelated to arts and culture per se.

Complicating the issue still further is the fact that all of the benefits of the arts may not be enjoyed by current society. In the case of historic preservation or any other sort of "cultural patrimony," for example, the objective surrounds as-yet unborn generations as much as those

alive today. It is this last complication that is the focus of this paper. Given that unborn generations are frequently so prominent in public policy arguments for arts funding, I ask whether people's true willingness-to-pay for the arts actually contains such a heavy element of future enjoyment.

I begin by discussing the purported non-use values of the arts (focusing especially on bequest value) and survey mechanisms that have been developed to measure them. I then introduce a structural model to test the existence of bequest value, and data to fit the model empirically. Next, I present data analysis and discussion. The paper finishes with a summary and conclusions.

Nonuse arts values and contingent valuation

Economists have used a number of mechanisms to measure the value of arts and culture. The most straightforward approach is estimation of market demand. Armed with an estimate of the demand curve for the arts, market use value can be calculated vis-à-vis consumers' surplus.

A number of papers over the past several decades have estimated demand for the arts subsectors in the most-organized markets. For example, Moore (1966) estimated the demand for American theater, Felton (1992) and Lange and Luksetich (1984) looked at symphony orchestra demand at both the industry and firm levels, Withers (1980) studied the demand for the arts as a whole in the United States, and Gapinski (1986) estimated the demand interrelationships within the arts sector.

However, as I have already pointed out, many argue that market demand is generally insufficient for understanding total value because arts value is frequently not completely encompassed by markets. On the contrary, many cultural goods do not have markets to price them, and most also are believed to produce non-use values. Purported nonuse values include the following (Frey 1997).

- *Existence value.* Even if they don't directly consume a particular cultural good, some people might appreciate its existence.
- *Option value.* Some non-users may place a positive value on the option to become users of it in the future, and hence favor its preservation.
- *Education value.* Some cultural goods might create intellectual and cultural capital spillovers among users and non-users.
- *Prestige value.* Certain cultural goods might produce prestige for their region of origin.
- *Economic impact.* The consumption of cultural goods may create secondary and tertiary economic activity.
- *Bequest value.* Users and non-users may derive utility from the expected enjoyment of a cultural good by future generations.

To capture non-market and non-use values (although without parsing out the individual components of these values), some arts researchers have turned to the contingent valuation (CV) approach. CV is a survey technique in which respondents are asked if they would pay a

particular amount—usually in taxes—to maintain or increase the provision of a particular cultural good. CV is undertaken in three main ways (Cameron and James 1987).

1. Sequential bids (SBCV). Respondents are presented with a series of dollar amounts that are increased until a negative response is reached.
2. Open-ended (OECV). Respondents are simply asked how much they would pay for the cultural good.
3. Closed-ended (CECV). Respondents are only presented with one value, to which they respond Yes or No. This value is varied across the sample to ascertain averages.

CV has been used in a moderate variety of arts and culture research. Topics have included historic sites (Chamber, et al. 1998, Garrod, et al. 1996), public broadcasting (Papandrea 1999, Jennings 2001), museums (Santagata and Signorello 2000, Martin 1994), libraries (Aabo 1998, Aabo and Strand 2000, Harless and Allen 1999), theater (Hansen 1997), the performing arts (Morrison and West 1986), and the arts in general (Throsby and Withers 1983, Throsby 1984, Thompson, et al. 2001).

The information gathered from CV surveys has been used in a number of ways in these studies to understand arts value comprehensively. In some papers, contingent values have been used to estimate total societal value of the arts by multiplying the mean WTP in a sample by the relevant population. In a smaller number of papers, more precise values for smaller groups have been ascertained by creating predictive models of WTP based on demographics. In these papers, the predictors of value for the arts are parsed, allowing study of the covariates of WTP. The characteristics that most frequently appear in the literature include income, age, sex, education, household size, and whether or not the respondent uses the cultural good directly.

Beyond estimating aggregate WTP, such survey data could be used to test CV techniques themselves to see if they truly embed all the purported nonuse values. In the next sections I demonstrate how this can be done in the case of bequest value. I start by outlining the theoretical underpinnings for this value, and follow with an empirical test for its existence.

Bequests and "intergenerational altruism"

Theoretically, most treatments of intergenerational giving have tended to focus on familial bequests. Most famously, Barro (1974) predicted that parents would behave altruistically toward their children in order to compensate for future tax payments—and thus also neutralize any Keynesian effects of current government debt. Andreoni (1989) alters Barro's prediction of strict Ricardian equivalence by noting that the presence of warm glow giving to heirs might occur. Some people may want to leave more to their children and grandchildren than just the amount necessary to pay for past government spending. Andreoni's prediction of imperfect Ricardian equivalence from warm glow leads to the conclusion that current government spending may indeed have Keynesian effects.

Baumol and Bowen (1966) enrich the discussion of government spending and the future by suggesting that non-familial intergenerational transfers are necessary for solving the problem

of external costs imposed by us on those yet unborn. Inadequate current conservation—through a kind of intergenerational freeriding—is their argument for government-coerced intergenerational altruism via preservation of public art for future generations.

Little research has been devoted to voluntary generosity toward future generations of strangers manifested in either positive willingness-to-pay (WTP) extra taxes for the arts or current-period private giving. When people "vote" for more arts support on a survey, or make a one-time contribution to the arts, are they considering the tangible or intangible good this gift might have for the future?

Models and data

Popp (2001) has suggested a framework for measuring the role of future generations' welfare in people's WTP for environmental clean-up efforts. The present value of the stream of yearly benefits is determined by a time horizon bounded, to some extent, by each person's life expectancy. He tested this proposition by regressing the survey respondents' WTP on a vector of sociodemographic characteristics, including each respondent's remaining number of expected years of life. In a subsequent paper, I adapted this framework to the case of charitable giving (Brooks 2001a), in which Wald tests were used with limited dependent variable models to test the hypothesis in question directly. The discussion below employs this latter framework for the case of bequest values embedded in both WTP and private charitable giving to the arts.

I begin by assuming that a donor's stated WTP, or actual private donation, yields a permanent, annual stream of benefits $b(x)$ to the donor and/or to others. The donor places value on this stream of benefits until year T , discounting at rate r . I conclude that

$$1) \quad V = \int_0^T b(x) e^{-rt} dt, \text{ where}$$

V denotes either dependent variable. If this donor displays only intergenerational egoism, $T \leq LE$, where LE =expected years of life remaining. On the other hand, if the donor displays some amount of intergenerational altruism, $T > LE$. I capture these two competing hypotheses by splitting equation (1) into a linear sum:

$$2) \quad V = a \int_T^\infty b(x) e^{-rt} dt + (1 - a) \int_0^{LE} b(x) e^{-rt} dt, \text{ where}$$

$a \in [0,1]$. If $a=0$, a donor is intergenerationally egoistic. In contrast, a donor exhibits some amount of intergenerational altruism if $a>0$.

The literature on charitable giving traditionally explains the variance in the perceived benefits of charitable giving with a function of a donor's economic and sociodemographic characteristics. Consistent with this, I model

3) $b(x) = Z\beta$, where

Z is a vector of appropriate sociodemographics.

Combining equations (2) and (3) and resolving the integral, it is simple to show that for an individual i ,

4)  , where

5ab) $\gamma = \frac{a}{r} \beta$ and  .

A simplified, linear version of equation (4) is

6)  .

Equations (4) and (6) can be fit with data to examine the existence of bequest values in people's stated WTP or private charitable giving to the arts. First, a positive, significant coefficient on LE_i in equation (6) would weaken the proposition that people fully consider future generations in current support for the arts, as their value decisions are at least partially dependent on their expected years of life. In other words, the sign and significance of this coefficient are a test of the hypothesis that people are unconcerned about the time horizon of benefits, and as such are purely "intergenerationally altruistic" in their WTP and private giving.

Second, we may test the alternative hypothesis, that people are purely intergenerationally egoistic, with equation (4). If people only value the arts in their WTP and private gifts in terms of their own lifetimes, $a=0$, so $\gamma = 0$ for all the elements of Z. To see this, note that in equation (2), a is the proportion of benefits that extend beyond the person's lifetime. Equation (5a) shows how $a=0$ affects the regression results.

To date, survey data on the arts compiled for any of the CV approaches discussed earlier have not included a measure of private giving to the arts, so a dataset in which both WTP and private giving can be compared is not currently available. Data that bear a striking similarity to these – although not precisely the same – are contained in the 1996 General Social Survey (GSS), which is produced by the National Opinion Research Center (Davis et al. 1999, 619-42). The GSS is designed to provide a sample of responses by adult interviewees to different subsets of about 4,000 questions on different social issues. The 1996 GSS included a module on giving to various charitable activities, including the arts. It also asked questions specifically pertaining to support for the arts paid for through taxes.

The arts support question asked, "Please indicate whether you would like to see more or less government spending [on culture and the arts]. Remember that if you say 'much more', it might require a tax increase to pay for it." Possible responses were categorical, ranging from "spend much more" to "spend much less." The giving question was coded as a dollar amount, to which 9.6 percent of respondents had a positive response.

Table 1 summarizes the responses to the question on public funding. It also gives the percentage of respondents from each category that gave privately to the arts.

Table 1. GSS responses to whether the government should spend more or less on the arts than at present

Response	Percentage of respondents with this response	Percentage of respondents with this response that gave to the arts
Spend much less	18%	6%
Spend less	28%	8%
Spend the same as now	38%	9%
Spend more	11%	16%
Spend much more	4%	15%

Note: Percentages of respondents do not sum to 100 percent due to rounding.

Note that the public spending question is not a true measure of WTP, but rather a measure of support for public subsidy. However, given the suggestion that higher spending might be accompanied by higher taxes, it is a useful proxy for WTP in the absence of data designed specifically for the purpose.

The GSS contains data on a wide battery of sociodemographics. Consistent with the literature on charitable giving, I look at the separate impacts of political ideology, gender, race, education level, and income on WTP and private giving. The GSS subsample of respondents asked all of these questions was 801 (for giving) and 808 (for WTP). I used data on life expectancy (according to each respondent's gender and current age) contained in the *Statistical Abstract of the United States* (2000).

The descriptive statistics for these variables are summarized in Table 2.

Table 2. Descriptive statistics for GSS data

Variable	Definition	Mean (standard deviation)
WTP	Respondent's stated support for public arts funding: 0=much less than at present; 4=much more than at present	1.56 (1.05)
GIFTS	Respondent's charitable giving to the arts in the last 12 months	\$22.66 (181.16)
LIBERAL*	Respondent characterizes self as politically "liberal" or "very liberal"	0.13
MALE*	Respondent is male	0.44
WHITE*	Respondent is white	0.81
EDUCATION	Respondent's years of formal education	13.36 (2.93)
LE	Respondent's life expectancy	35.71 (14.46)
INCOME	Respondent's annual income	\$26,929 (\$22,077)

* Dummy variable

Results and discussion

To fit equations (6) and (4) with the data, I employ two different limited dependent variable models. First, given the fact that the WTP measure is categorical, I use an ordered probit model for this variable. This specification exploits the ordinal nature of the survey responses, producing coefficients that can be interpreted as the change between response categories attributable to a one-unit change in the regressor (Kao and Wu 1990). Second, given the fact that charitable giving is continuous but censored at zero, tobit models for this variable are appropriate, and are the standard specification in the literature on donations (McClelland and Kokoski 1994). In the latter case, the marginal effects are calculated at their mean values and have the standard interpretation. Table 3 presents the regression results from equation (6).

Table 3. Ordered probit and tobit regression results for simple linear model

	Dependent variable

	WTP (Ordered probit model)	GIFTS (tobit model)
Independent variable	Coefficient (standard error)	Coefficient (standard error) [marginal effect]
CONSTANT	0.0161 (0.283)	-2,270.49*** (434.652) [-164.37]
LIBERAL	0.5823*** (0.1086)	-15.0984 (144.058) [-1.093]
MALE	-0.0969 (0.0788)	-162.784 (105.107) [-11.78]
WHITE	-0.3186*** (0.0953)	321.596** (159.1) [23.28]
EDUCATION	0.0568*** (0.0165)	58.1286*** (20.8963) [4.21]
LE	0.0082** (0.0036)	-2.5376 (4.7623) [-0.184]
INCOME	0.0000019 (0.0000021)	0.0095*** (0.0022) [0.00069]
N	808	801

* denotes significance at the .10 level

** denotes significance at the .05 level

*** denotes significance at the .01 level

The first results of note in Table 3 are the coefficients on life expectancy. The effect of life expectancy is significant and positive in the case of WTP, but insignificant for private giving. The impact on WTP is slight, however: an extra year of expected life associates with a little less than a 1 percent increase in a response category. On average, it would require more than 61 years of extra life expectancy to swing a respondent from one category to another—a change captured by moving from age 16 well into one's 90s. These results don't materially call the assumption into question that public or private art possesses a bequest value, but they allow us to reject the hypothesis that people are *purely* intergenerationally altruistic.

Several other coefficients in these models are interesting. Identifying oneself as a political liberal has a strong impact on WTP (increasing it by more than half a category), but no discernible impact on private giving. Being white pushes WTP down (by three-tenths of a category) but pushes giving up (by about \$322, on average). Higher education pushes up both measures slightly. An extra \$100 in income drives up private giving by about \$1, but has no impact on WTP. In general, the portrait of the supporter of government arts funding is a non-white political liberal with relatively high education; a private giver to the arts is white, has high income and education, and does not categorize oneself as politically liberal.

To operationalize equation (4) as a more specific test of the hypothesis that WTP and private giving do *not* contain a bequest component, I use the same two model specifications, but multiply each regressor by  and , respectively. Then, I test the hypothesis that all of the coefficients in equation (4) are jointly zero, the condition that obtains when $\alpha=0$. I test this hypothesis using Wald tests. Note that LE is not included as a regressor, as it appears in the exponent of the interaction terms.

Table 4 presents the results of the augmented regressions in equation (4) and their accompanying Wald tests.

Table 4. Regression results and hypothesis tests for augmented model

	Dependent variable	
	WTP (Ordered probit model)	GIFTS (tobit model)
Independent variable	Coefficient (standard error)	Coefficient (standard error)
(2exp{-rLE}-1)	4.2558** (2.1306)	-1,801.13 (2,469.61)
LIBERAL ·(2exp{-rLE}-1)	2.191** (1.0863)	-1,391 (1,623.56)
MALE ·(2exp{-rLE}-1)	-0.904 (0.7913)	578.503 (894.073)
WHITE ·(2exp{-rLE}-1)	-0.8714 (1.0146)	-813.302 (1,381.17)
EDUCATION ·(2exp{-rLE}-1)	-0.2656* (0.1546)	129.638 (141.132)
INCOME ·(2exp{-rLE}-1)	0.0000222 (0.0000185)	-0.0167 (0.0166)
(1-exp{-rLE})	3.8368** (1.7546)	-4,338.07** (2,059.19)
LIBERAL ·(1-exp{-rLE})	2.4838*** (0.9065)	-1,166.32 (1,370.32)
MALE ·(1-exp{-rLE})	-0.8644 (0.6678)	290.627 (741.078)
WHITE ·(1-exp{-rLE})	-1.1015 (0.8553)	-255.415 (1,130.94)
EDUCATION ·(1-exp{-rLE})	-0.142905 (0.126957)	174.09 (116.126)
INCOME ·(1-exp{-rLE})	0.00002 (0.00001)	-0.0007 (0.0132)
Wald test statistic (χ^2) that $\alpha=0$	8.20	6.78

* denotes significance at the .10 level

** denotes significance at the .05 level

*** denotes significance at the .01 level

The Wald tests show that the hypothesis of pure intergenerational egoism cannot be rejected. Recall that this hypothesis was constructed as any evident consideration of benefits accruing beyond the respondent's expected remaining years of life, from either WTP or private giving. As such, not rejecting this hypothesis suggests that people may *not* consider bequest value for the arts when they make a private contribution, or express a willingness to support the arts through higher public subsidies in a CV survey.

Conclusion

Estimation of the value of the arts and culture is complicated by the fact that much of this value is not tied up in the use of the good. Complicating the issue still further is the fact that all of the benefits of the arts may not be enjoyed by current society: Many people argue that public art contains an element of "bequest value," or value derived today from the enjoyment of future generations. This benefit, many believe, can only be uncovered vis-à-vis non-market valuation mechanisms such as contingent valuation (CV) surveys. In this paper, I have investigated the existence of this claimed benefit of the arts theoretically and empirically. I introduced a model of the way people discount the benefits of their stated willingness-to-pay (WTP) as well as their private charitable gifts. Then, I fit the model empirically using General Social Survey data on WTP and private donations for the arts, as well as life expectancy.

Ordered probit analysis indicated that life expectancy is positive and significant, although slight, in the case of WTP, while tobit analysis indicated that LE is insignificant in predicting private giving. This suggests that people do take their life expectancies into account to some extent when responding to questions about WTP — they are not purely intergenerationally altruistic. A direct test of an alternative hypothesis, that people are purely intergenerationally egoistic, did not provide a clear rejection of this proposition: In the cases of both WTP and private giving, people do not clearly exhibit some element of intergenerational altruism.

The main conclusion of this paper is that the benefits of public art may not contain an element of bequest value, and as such, we should not assume this to be part of the value captured in CV surveys. Another interesting finding from the data analysis was a substantial difference between the average proponent of *public* subsidies to the arts and the average *private* donor. In general, the portrait of the supporter of government arts funding that emerges from the GSS data is a non-white political liberal with relatively high education. In contrast, a private giver to the arts tends to be white, has high income and education, and does not necessarily

categorize oneself as politically liberal.

The principal weakness of the findings in this paper revolve around the data used. While the GSS asks a question about respondents' opinions about government arts funding (and even suggests that high funding would require higher taxes to pay for it), it does not directly ask about their WTP. It is possible that the policy connotations of the government funding question might be obscuring the true WTP, and as such may be reflecting political beliefs more than true arts valuation. Future data collection efforts could address this criticism by asking respondents directly about WTP as well as their personal giving.

References

Aabo, Svanhild. (1998). "Contingent Valuation of Public Libraries," Tenth International Conference on Cultural Economics, Barcelona, June 1998.

Aabo Svanhild and Jon Strand. (2000). "Public Library Assessment and Motivation by Altruism." Eleventh International Conference on Cultural Economics, Minneapolis, Minnesota, May 2000.

Andreoni, James (1989). "Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence." *Journal of Political Economy* 97(6): 1447-1458.

Barro, Robert J. (1974). "Are Government Bonds Net Wealth?" *Journal of Political Economy* 82(6): 1095-1117.

Baumol, William J. and William G. Bowen. *Performing Arts – The Economic Dilemma*. New York: Twentieth Century Fund, 1966.

Bergstrom, Theodore C., Lawrence E. Blume, and Hal R. Varian (1986). "On the Private Provision of Public Goods." *Journal of Public Economics* 29, 25-49.

Brooks, Arthur C. (2000). "The 'Income Gap' and the Health of the Arts Nonprofits: Arguments, Evidence, and Strategies," *Nonprofit Management and Leadership*. 10 (3): 271-286.

Brooks, Arthur C. (2001a). "Evidence of Intergenerational Altruism." *Center for Policy Research*

Brooks, Arthur C. (2001b). "Who Opposes Government Arts Funding?" *Public Choice* 108(3/4): 355-367.

Cameron, Trudy Ann, and Michelle D. James (1987). "Efficient Estimation Methods for 'Closed-Ended' Contingent Valuation Surveys." *Review of Economics and Statistics* 69(2): 269-276.

Chambers, Catherine M., Paul E. Chambers, John C. Whitehead. (1998) "Contingent Valuation of Quasi-Public Goods: Validity, Reliability, and Application to Valuing a Historic Site." *Public Finance Review*. 26 (2): 137-154.

Davis, James Allan, Tom W. Smith, and Peter V. Marsden (1999). *General Social Surveys, 1972-1998: Cumulative CodeBook*. Chicago: National Opinion Research Center.

Frey, Bruno S. (1997) "Evaluating Cultural Property: The Economic Approach" *International Journal of Cultural Property*. 6 (2) 231-246.

Gapinski, James H. (1986). "The Lively Arts as Substitutes for the Lively Arts." *The American Economic Review* 76(2): 20-25.

Garrod, G.D., K.G. Willis, H. Bjarnadottir, and P Cockbain. (1996) "The Non-Priced Benefits of Renovating Historic Buildings." *Cities*. 13 (6): 420-430.

Hanneman, W. Micheal. (1994) "Valuing the Environment through Contingent Valuation." *The Journal of Economic Perspectives*. 8 (4): 19-43

Hansen, Trine Bille. (1997) "The Willingness-to-Pay for the Royal Theatre Copenhagen as a Public Good." *Journal of Cultural Economics*. 21: 1-28.

Harless, David W. and Frank R. Allen. (1999) "Using the Contingent Valuation Method to Measure Patron Benefits of References Desk Service in an Academic Library." *College and Research Libraries*. 60: 56-69.

Hetherman, Luke (1999). "The National Endowment for the Arts: Essential for Cultural Growth, Democracy and Creative Expression in America." <<http://www.burbank.com/arts/nea.htm>> Last accessed: December, 2001.

Kao, Chihwa, and Chunchi Wu (1990). "Two-Step Estimation of Linear Models with Ordinal Unobserved Variables: The Case of Corporate Bonds." *Journal of Business and Economic Statistics* 8(3): 317-325.

McClelland, Robert, and Mary F. Kokoski (1994). "Econometric Issues in the Analysis of Charitable Giving." *Public Finance Quarterly* 22(4): 498-517.

Moore, Thomas Gale (1966). "The Demand for Broadway Theatre Tickets." *The Review of Economics and Statistics* 48(1): 79-87.

National Assembly of State Arts Agencies (NASAA). (1997) *Measuring Your Arts Economy: Twelve Questions and Answers about Economic Impact Studies*. United States.

Lange, Mark D. and William A. Luksetich. (1984) "Demand Elasticities for Symphony Orchestras." *Journal of Cultural Economics*. 8: 29-47.

McCarthy, Kevin, Arthur Brooks, Julia Lowell, and Laura Zakaras (2001). *The Performing Arts in a New Era*. Santa Monica, CA: The RAND Corporation.

Morrison, William G. and Edwin G. West. (1986) "Subsidies for the Performing Arts: Evidence on Voter Preference." *Journal of Behavioral Economics*. 15: 57-72.

Papandrea, Franco. (1999). "Willingness to Pay for Domestic Television Programming." *Journal of Cultural Economics*. 23: 149-166

Popp, David (2001). "Altruism and the Demand for Environmental Quality." *Land Economics* 77(3): 339-349.

Roberts, Russell D. (1984). "A Positive Model of Private Charity and Public Transfers." *Journal of Political Economy* 92, 136-48.

Santagata, Walter and Giovanni Signorello. (2000) Contingent Valuation of a Cultural Public Good and Policy Design: The Case of "Napoli Musei Aperti." *Journal of Cultural Economics*. 24: 181-2000

Streisand, Barbra (1995). "The Artist As Citizen." Speech delivered February 3, 1995, at the Kennedy School of Government, Harvard University.

<<http://www.artusa.org/clearinghouse/barbra.html>> Last accessed: December, 2001.

Thompson, Eric, Mark Berger, Glenn Blomquist, and Steve Allen. (2001). "Valuing the Arts: A Contingent Valuation Approach." University of Kentucky Working Paper.

Throsby, C.D. (1984)"The Measurement of Willingness-to-Pay for Mixed Goods." *Oxford Bulletin of Economics and Statistics*. 46 (4): 279-289.

Throsby, C.D., and G.A. Withers. (1983). "Measuring the Demand for the Arts as a Public Good: Theory and Empirical Results." In William S. Hendon and James L. Shanahan, eds. *Economics of Cultural Decisions* (Cambridge, MA: Abt Books).

Touchstone

Warr, Peter G. (1982). "Pareto Optimal Redistribution and Private Charity." *Journal of Public Economics* 19, 131-8.

Withers, Glen A. (1979). "Private Demand for Public Subsidies: An Econometric Study of Cultural Support in Australia." *Journal of Cultural Economics*. 3: 53-61.

Smith, David Horton (1994). "Determinants of Voluntary Association Participation and Volunteering: A Literature Review." *Nonprofit and Voluntary Sector Quarterly* 23(3): 243-263.