

Abstract

This study analyzed data from 3008 households that took part in a national arts participation survey. The data were analyzed using logistic regression, in which pro-social behavior was regressed on live versus electronic exposure to music. It was found that the likelihood of civic engagement was greater with increases in either mode of exposure.

Background

It is well established that participation in the arts has beneficial effects on intelligence (Schellenberg, 2004, 2011). Furthermore, some of the neurological processes underlying these benefits have been identified (Ehrlich, 2015; Zatorre, 2005).

A useful strategy for understanding these benefits is to focus on audience members rather than on artists or performers (Brown & Novak, 2007; Medvedeva, Novak-Leonard, J. & Brown, 2012). A study by Polzella and Forbis (2014) explored the relationship between audience participation and pro-social behavior. The results showed that individuals who attended a live music performance during the previous 12 months were approximately one and one-half times more likely to vote, two times more likely to volunteer time or contribute to charities, and two times more likely to participate in community activities.

The results of that study were limited in that the most frequent mode of engagement with the arts, i.e., electronic media (see Novak-Leonard and Brown, 2011), was not considered. In the present study, we addressed this limitation.

Method

Data

The Current Population Survey (CPS, < <http://www.census.gov/cps/> >), managed jointly by the US Census Bureau and the US Bureau of Labor Statistics, is the principal source of high-profile economic statistics as well as extensive demographic data and behavioral information that, together, provide a comprehensive understanding of labor market conditions in the nation overall. The CPS is administered monthly to a random sample of 57,000 individuals. It has its origins in the 1930s, when it was used as a means of tracking unemployment during the Great Depression. It has been updated numerous times since then in order to account for significant changes in the national economy.

In certain years, the CPS has included a Survey of Public Participation in the Arts (SPPA). These supplemental surveys, sponsored by the National Endowment for the Arts, include items that measure the household member's participation in various arts-related activities, e.g., frequency of participation, training and exposure, musical and artistic preferences, length of travel for trips to arts-related events, school-age socialization, and computer usage related to arts information. In our earlier study, we analyzed data from the 2008 supplemental survey. In this case, we analyzed data from the 2012 supplemental survey, which is the most recent version. Because the 2008 and 2012 SPPA surveys are similar, the two cohorts can be compared on numerous dimensions.

Procedure

Logistic regression was used to analyze the data. To determine whether we were able to replicate our earlier findings (Polzella & Forbis, 2013), we applied the same procedures to the 2012 SPPA data. The analysis measured the relationships between attending traditional music concerts and engaging in two types of pro-social behaviors: (1) making charitable donations or volunteering time, and (2) attending community meetings. [Note: Unlike the 2008 SPPA, the 2012 SPAA did not include a question addressing whether the participant voted in the most recent presidential election.] In technical terms, pro-social behaviors, i.e., the *criterion* variables, were regressed on attending musical concerts, i.e., the *predictor* variables. All variables were assigned binary values, such that 1 = *observed* and 0 = *not observed*.

To compare live versus electronic encounters with the arts (via the Internet), we regressed the data for each pro-social behavior (the *criterion* variables) on the two modes of arts-related experiences (the *predictor* variables).

Each regression model included seven control variables, which are known to predict pro-social behavior: Age, Race, Sex, Income, Education, Marital Status and Occupation Class.

Results

Table 1 shows descriptive statistics for the 2008 and 2012 databases. With few exceptions, the samples were comparable. As expected (Novak-Leonard & Brown, 2011, a greater proportion of respondents experienced the arts through electronic media rather than through live attendance.

Variable	2008 (N=6239)	2012 (N=3008)
Age (mean years)	42.9	42.9
Income (ordinal mean)	11.7	11.0
Education (mean years)	10.7	10.7
Gender (female)	.49	.50
Race (black)	.08	.09
Marital Status (married)	.61	.45
Occupation Class (labor)	.21	.20
Voted	.69	n/a
Volunteered or contributed	.38	.35
Participated	.35	.28
Classical (live)	.12	.10
Jazz (live)	.11	.10
Opera (live)	.03	.02
Classical (Internet)	n/a	.16
Jazz (Internet)	n/a	.14
Opera (Internet)	n/a	.06

Table 2 compares the regression models derived from the 2008 and 2012 databases. The data are expressed as odds ratios, computed after accounting for variance due to inter-correlations between the variables. The table rows correspond to the predictor variables, the columns to the criterion variables. For example, in 2008, individuals who attended classical music concerts were 2.825 times more likely to contribute than those who did not. In 2012, the ratio was similar (3.127). The other odds ratios followed the same pattern.

Table 2: Logistic Regression Models of Civic Engagement Using Music Attendance Type, Odds Ratios (standard errors).

	Civic Engagement Variables (2008)		
	Voting	Contributing	Participating
<i>Live-classical</i>	1.732 ** (0.207)	2.825 ** (0.251)	2.964 ** (0.261)
<i>Live-jazz</i>	2.145 ** (0.260)	2.467 ** (0.218)	3.054 ** (0.272)
<i>Live-opera</i>	1.646 (0.395)	2.353 ** (0.410)	1.626 * (0.269)
N	6239	6239	6239
	Civic Engagement Variables (2012)		
		Contributing	Participating
<i>Live-classical</i>		3.127 ** (0.428)	3.163 ** (0.419)
<i>Live-jazz</i>		2.754 ** (0.373)	2.479 ** (0.329)
<i>Live-opera</i>		1.984 (0.509)	2.971 ** (0.762)
N		3008	3008

Table 3 compares the odds ratios for live versus Internet music engagements obtained from the 2012 database. In the majority of cases, both types of engagement were associated with greater likelihoods of volunteering/contributing or participating in community activities.

Table 3. Logistic Regression of Pro-Social Behaviors on Live versus Internet Exposure to Music: Odds Ratios (standard errors).

	Contributing		Participating	
<i>Live-classical</i>	2.297 * (0.787)	1.857 * (0.611)		
<i>Live-Jazz</i>	1.887 * (0.616)	2.272 ** (0.754)		
<i>Live-opera</i>	1.868 (0.954)	3.541 ** (1.842)		
N	586	586		
	Contributing		Participating	
<i>Internet-classical</i>	2.698 ** (0.711)	2.877 ** (0.758)		
<i>Internet-jazz</i>	1.381 (0.370)	2.259 * (0.635)		
<i>Internet-opera</i>	4.111 ** (1.671)	4.004 ** (1.569)		
N	586	586		

**p*<.005

***p*<.001

Discussion

The successful replication of Polzella and Forbis's (2014) findings shows that the positive relationship between exposure to live music and pro-social behavior has persisted more or less unchanged from 2008 through 2012.

Another objective of this study was to determine whether exposure to music via the Internet also predicted pro-social behavior. Table 3 shows that this was the case.

Brown and Novak (2007) point out that "social bonding" is an intrinsic component of live performances, leading to feelings of belonging or connectedness with the rest of the audience, to the sharing of a cultural heritage, and to gaining new insight on human relations or social issues. This social component helps to explain the positive relationship between exposure to live music and pro-social behavior. Social bonding is also an intrinsic characteristic of the Internet, which may help explain its being related to pro-social behavior as well.

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