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Greater Houston Arts and Culture Demographics, and Audience Opportunity

March 2019

By Glenn B. Voss, Rebecca Johnson, Zannie Voss, and Daniel Fonner

Introduction

Texas leads the countrywide shift to a majority-minority population, having already crossed the threshold where non-Hispanic Whites comprise less than half of the population.[1] More locally, Greater Houston celebrates being among the most racially and ethnically diverse metropolitan areas in an increasingly diverse country. The Texas Demographic Center forecasts that the number of African Americans in Houston will continue to grow and that Hispanics will outnumber all other ethnic groups combined by 2045.[2]

These trends are most pronounced among younger population cohorts. Births of children of color outnumber White births in the U.S. starting in 2007 and, as a result, a majority of the population under 18 will be non-White within the next decade.[3] As this increasingly diverse population ages and enters working age, non-Whites will become the majority population base for potential workers and consumers and will remain so into the future.

These demographic changes pose a challenge and opportunity for arts and cultural organizations to better understand and respond to their local communities, to diversify their workforces and audiences, and to begin considering strategies now for how to become increasingly inclusive. Arts and cultural organizations that do not take advantage of this opportunity to align with market realities will find themselves drawing from shrinking labor and audience pools.

Advancement towards a future where everyone has equal opportunity to participate in the arts begins with a baseline understanding of who works in and attends the arts today. To establish this baseline, Houston Endowment provided support to DataArts in 2016 to research the demographic composition of the workforce and audiences of Greater Houston's arts and cultural organizations. A side goal was to examine the effectiveness of two methodologies used to examine audience demographics.

Building on this strategic direction, Houston Endowment then awarded support to SMU's National Center for Arts Research (NCAR) in early 2018 to develop and pilot test an Audience Opportunity Tool (AOT) with a set of eight Houston arts and cultural organizations. The AOT is a heat map that shows the likelihood of attendance at an arts event for nearby households along with the sociodemographic characteristics of the neighborhoods. The goal of the AOT is to empower arts and cultural leaders with knowledge about the local market that can help them to understand, attract, and better serve their community.

DataArts and NCAR merged in August 2018 to become SMU DataArts. The two projects described in this report demonstrate the value of linking data collection to knowledge to customized tool creation and actionable insights.

1. Devine, Jason E. and Jennifer M. Ortman, "Nation to Become a Plurality, but Some Areas Already Are," U.S. Census Bureau, June 26, 2014. https://www.census.gov/newsroom/blogs/random-samplings/2014/06/nation-to-become-a-plurality-but-some-areas-already-are.html Accessed 11/22/2018. For more information, please see Census press release "New Census Bureau Report Analyzes U.S. Population Projections", March 2015, https://www.census.gov/newsroom/press-releases/2015/cb15-tps16.html
2. Greater Houston Partnership Research Department with Data from Texas Demographic Center, *Metro Houston Population Forecast*, April 2017.
3. Frey, William H., "US White population declines and Generation 'Z-Plus' is minority White, census shows," *Brookings Institution*, June 22, 2018, https://www.brookings.edu/blog/the-avenue/2018/06/21/us-white-population-declines-and-generation-z-plus-is-minority-white-census-shows/

![SMU DataArts logo]

Summary of Findings

Six key findings emerged from the demographic studies that form a helpful baseline and point to areas of future opportunity for growth and change:

1. The general profile of the arts and culture workforce and audience does not currently match the racial and ethnic diversity of Greater Houston; non-Hispanic Whites are overrepresented and Blacks/African Americans and Hispanics/Latino(a)s are underrepresented. However, the arts and culture ecosystem will become more representative of people of color as younger individuals enter the workforce and engage as audience members.

2. Smaller organizations engage a more racially and ethnically diverse staff than do larger organizations.

3. The arts and cultural workforce closely aligns with the age distribution found in the Harris County broader population of individuals aged 20 or older.[4]

4. There is greater representation of women and LGBTQ individuals in the workforce and audiences of arts and cultural organizations than in the larger population.

5. Free programming attracts more diverse audiences than paid programming, while members/subscribers tend to be less diverse than single ticket/admission patrons.

6. The levels of educational attainment and income are higher in audiences of participating organizations than in the Harris County population as a whole.

This benchmarking exercise is intended to inspire strategies to shift the make-up of the workforce and audiences in ways that are authentic to the organizations and meaningful to the community. Individual organizations can take stock of current workforce and audience profiles, decide whether they would like to engage new segments of the community, and create a blueprint for how they will do so. They can use the Audience Opportunity Tool to identify where these new segments live and model whether changing price or location of offerings would increase their likelihood of engaging with the organization.

Strategies also can emerge at the community level through partnerships and new collaborative thinking about how to increase diversity and inclusion in workplaces, exhibition spaces, and performance venues. The nonprofit arts and cultural sector can consider organizing efforts to spur diversity and inclusion in the workplace. Now more than ever, nonprofit arts and cultural organizations can benefit from market knowledge that informs how they will remain relevant and engaging to their changing community in the future.

The process of implementing these projects revealed key lessons about hurdles that data collection efforts face in the field of arts and culture. First, it is a challenge to collect data through intermediary organizations that have a wide variety of expertise with and commitment to data collection methodology. Small organizations have only a few individuals performing many functional roles, typically with little bandwidth to dedicate to data collection, reporting, and analysis. This leads to a second challenge associated with selection bias, which emerges at two levels: (1) smaller organizations may be less likely to fully engage in the data collection process, which can lead to under-representation, and (2) people

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4. Throughout this report, we use data from US Census 2015 American Community Survey (ACS) 5-year estimates to make comparisons from data collected in the DataArts survey to the population of Harris County.

between the ages of 65 and 79 and women appear to be more likely to respond to audience surveys. Third, staff turnover had an effect on the benefit received by organizations and their ability to fully participate in these projects.

This report begins with a description of results related to the Workforce Demographics Survey, then provides Audience Demographics findings that emerged from two different methodological approaches, audience survey and data append. We conclude with a summary of the Audience Opportunity Tool pilot test project and reflections on limitations and future directions.

Data Privacy

Throughout this study, DataArts collected and maintained all survey data to ensure privacy and anonymity for all survey participants. During the data append process, DataArts partnered with the firm Arts & Analytics to enhance patron data for participating organizations while ensuring data was not shared outside of the individual organizations. DataArts has successfully collected and protected data since it was established in 2004.

Houston Workforce Demographics

Characteristics of Methodology and Analysis

The DataArts Workforce Demographics study collected data from individuals who work or volunteer for Greater Houston organizations, surveying five demographic characteristics: 1) Heritage (race, ethnicity, and nation of origin); 2) Age; 3) Gender; 4) Disability, and 5) Lesbian, gay, bisexual, transgender, and/or queer (LGBTQ) identity.[5] DataArts developed the workforce demographics survey instrument over the course of seven years through extensive piloting and feedback from multiple communities across the country.[6] This instrument collects self-reported demographic data from individuals who were given the option to choose "I decline to state" if they preferred not to respond to a question.

Responses were captured directly by DataArts, and through the utilization of internet cookies, DataArts ensured each respondent completed the survey only once while giving respondents the option to affiliate with up to three cultural organizations.

To disseminate the online surveys, Houston Endowment, Houston Arts Alliance, Houston Museum District, Houston Theater District, and Miller Outdoor Theatre convened their grantees and member organizations to encourage participation in the study. Responses were collected from July 18 through September 6, 2017, during which time Houston was hit by Hurricane Harvey. While the survey timeframe allowed for sufficient survey completion rates, severe flooding and high winds took a heavy toll on Houston's cultural institutions, artists, and all residents. In response to Harvey, Houston Endowment assisted in creating *Harvey Arts Recovery*, which provided more than $84,000 to small and mid-sized arts organizations affected by the hurricane.[7]

In total, 1,590 individuals who serve as staff members, board, volunteers, and independent contractors with 187 cultural nonprofits completed the survey. Respondents represent an estimated 18.5% of the total workforce for this cohort of organizations, 23.5% of the board members, and only 3% of volunteers and 5% of independent contractors.

Heritage

The DataArts Workforce Demographics Survey attempts to ensure that all participants can see themselves in the options provided and do not feel excluded by the choices. To that end, it offers respondents a broad range of options for self-identification as well as the opportunity to write in an identifier if the response options fail to capture a particular trait. The Hispanic/Latino(a) response category is a response option alongside the race categories such that the summation of all categories totals 100%. The survey ensures that the data can be meaningfully combined and compared to benchmark demographic data.[8]

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5. The DataArts Survey includes questions on LGBTQ identity at the recommendation of a broad-based advisory group that contributed to the instrument's development.
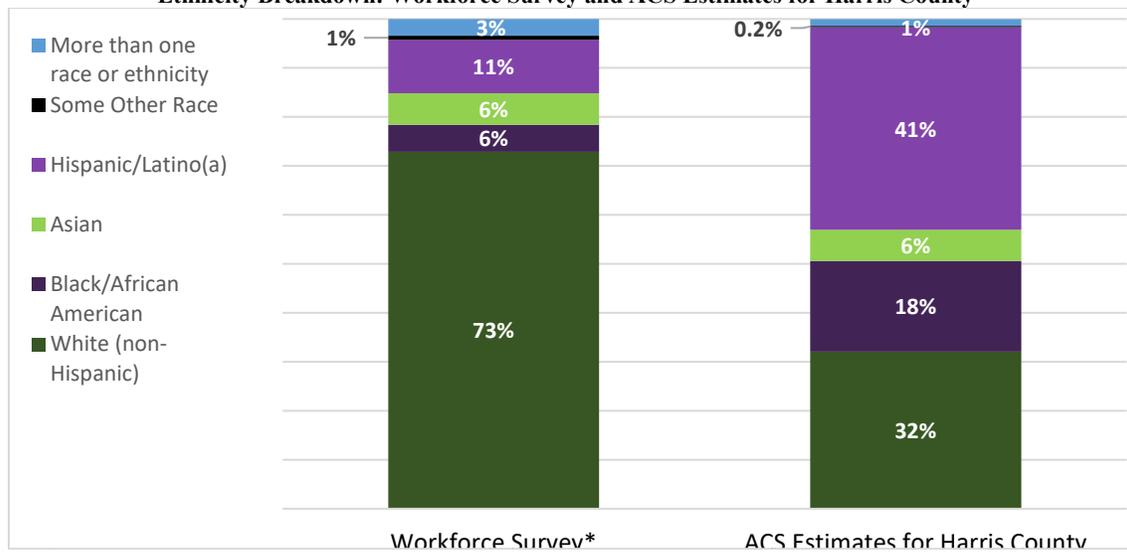6. For more information on the development of the survey instrument see "Identity and the Cultural Workforce: Lessons Learned in Seven Years and Three Cities." https://www.giarts.org/identity-and-cultural-workforce
7. To learn more about Houston Endowment's efforts following Harvey, see *Harvey Arts Recovery. http://www.harveyartsrecovery.org/*
8. The DataArts demographics survey and the U.S. Census Bureau take different methodological approaches to measuring race and Hispanic origin, making the two non-comparable without adjustments. The U.S. Census does not treat the Hispanic category as a discrete race category, but instead asks Hispanic/Latino(a) persons to identify themselves as such and to also select their race. Using this approach, the summation of all categories of Race and Hispanic Origin exceeds 100%. To compare survey responses to U.S. Census Bureau categories, we treated any individual selecting Hispanic/Latino(a) in the Census Bureau data and in the survey data as Hispanic/Latino(a) only, removing those who affiliate as Hispanic/Latino(a) from their other race selections. The limitation of this methodology is that it underrepresents Hispanic/Latino(a) respondents who consider themselves as "More than one race or ethnicity."

This study presents data on race and ethnicity in two ways. It first provides a comparison of the arts and culture workforce to the Harris County population using Census categories, with some adjustment. It then reveals how people represented their race and ethnicity in the DataArts Workforce Demographics Survey.

The general profile of the arts and culture workforce does not currently match the racial and ethnic diversity of Greater Houston; **non-Hispanic Whites are overrepresented and Blacks/African Americans and Hispanics/Latino(a)s are underrepresented**. Figure 1 shows a break-down of the racial and ethnic heritage of survey respondents compared with that of Harris County residents overall in. Over two-thirds of cultural workers – 73% – identify as White non-Hispanic. This compares to Harris County's population, which is 32% White non-Hispanic. Black/African Americans are underrepresented in the workforce (only 6% of the workforce compared to 18% of Harris County's population) as are Hispanics/Latino(a)s who comprise 41% of Harris County residents and only 11% of the arts and culture workforce. At 6%, the proportion of people who self-identify as Asian in the workforce mirrors that of the Harris County population.

Figure 1
Ethnicity Breakdown: Workforce Survey and ACS Estimates for Harris County*

* Hispanic/Latino(a) broken out as a separate category. The workforce survey numbers in this chart do not include 104 respondents who declined to self-identify their ethnicity since there is no equivalent in the data for Harris County.

Figure 2 shows the taxonomy employed and results from the workforce survey, with distinct groups for "Hispanic/Latino(a)" and "Middle-Eastern" along with "White," "Black/African American," "Asian," "Indigenous," "More than one race or ethnicity," "Not listed/Other," "Decline to state," and "No Response".[9] Non-Hispanic Whites still comprise slightly more than two-thirds of cultural workers.

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9. This breakdown cannot be directly compared to Census data because we categorize anyone selecting both "Hispanic" and "Black," for example, in "More than one race or ethnicity," driving the percentage of respondents in this category higher than reflected in Figure 1, and the percentage of people in the Hispanic/Latino(a) category lower.
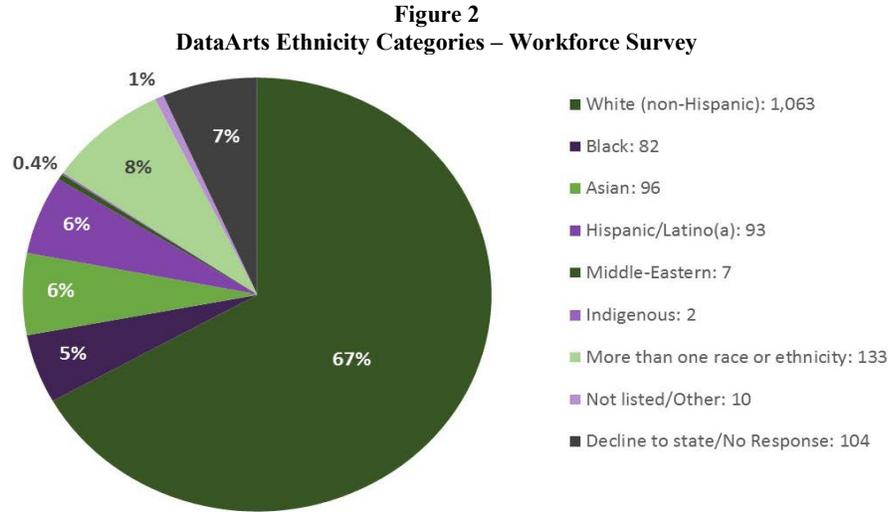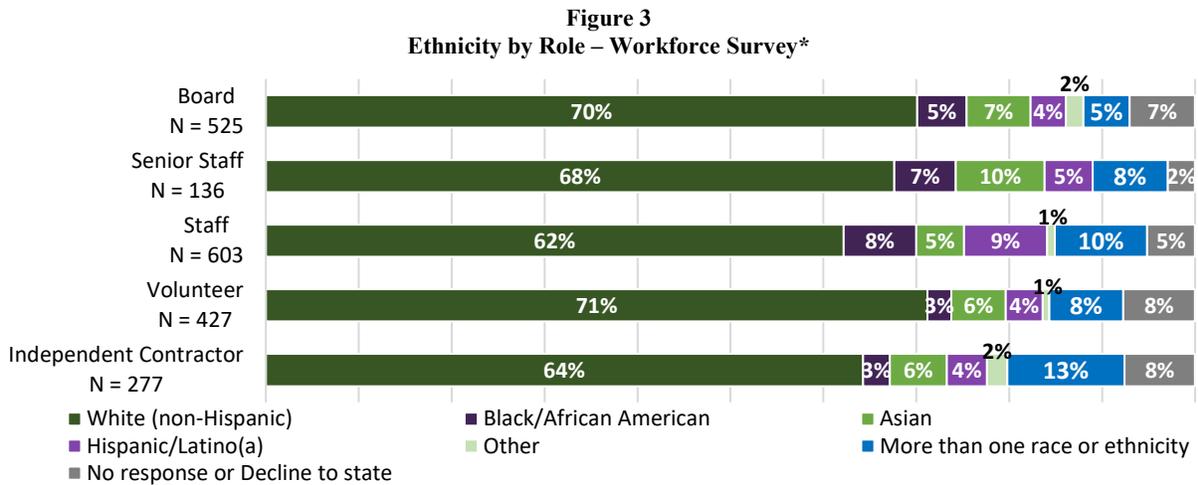
Figure 2
DataArts Ethnicity Categories – Workforce Survey

- White (non-Hispanic): 1,063
- Black: 82
- Asian: 96
- Hispanic/Latino(a): 93
- Middle-Eastern: 7
- Indigenous: 2
- More than one race or ethnicity: 133
- Not listed/Other: 10
- Decline to state/No Response: 104

Figure 3 shows that race and ethnicity vary significantly depending on organizational role.[10] Notably, **the general Staff population at Houston organizations is more diverse (33% people of color) than Senior Staff (30%), Board (23%), or Volunteers (22%)**. The Board and Senior Staff include significantly higher proportions of Whites (non-Hispanic) and Asians than general Staff, and general Staff has higher proportions of Blacks and Hispanics. Volunteers are largely similar to the Board. Independent Contractors are more similar to General Staff in terms of Whites and Asians while they show the highest level of Other races. Board members, volunteers, and independent contractors had a greater tendency to withhold information on race and ethnicity.

Figure 3
Ethnicity by Role – Workforce Survey*

Legend: White (non-Hispanic), Black/African American, Asian, Hispanic/Latino(a), Other, More than one race or ethnicity, No response or Decline to state
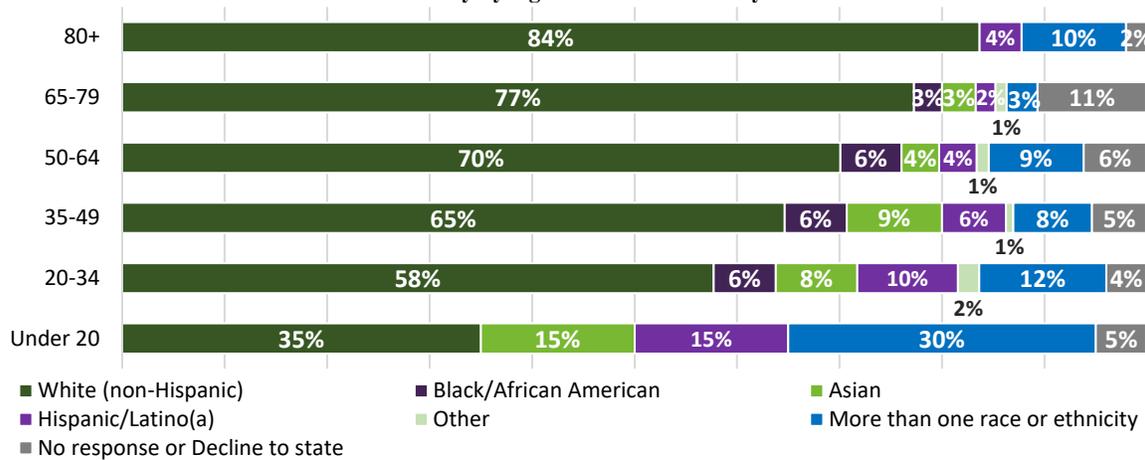
* Survey respondents were given the option of noting their affiliation with up to three organizations. Percentages are based on a total 1,968 reported affiliations.

Figure 4 breaks down ethnicity by age range. **Staff members who are people of color tend to be younger**. Sixty percent of those Under 20 and 38% of those aged 20-34 self-identify as non-White, whereas only 12% of those aged 65-79 years self-identify as non-White.
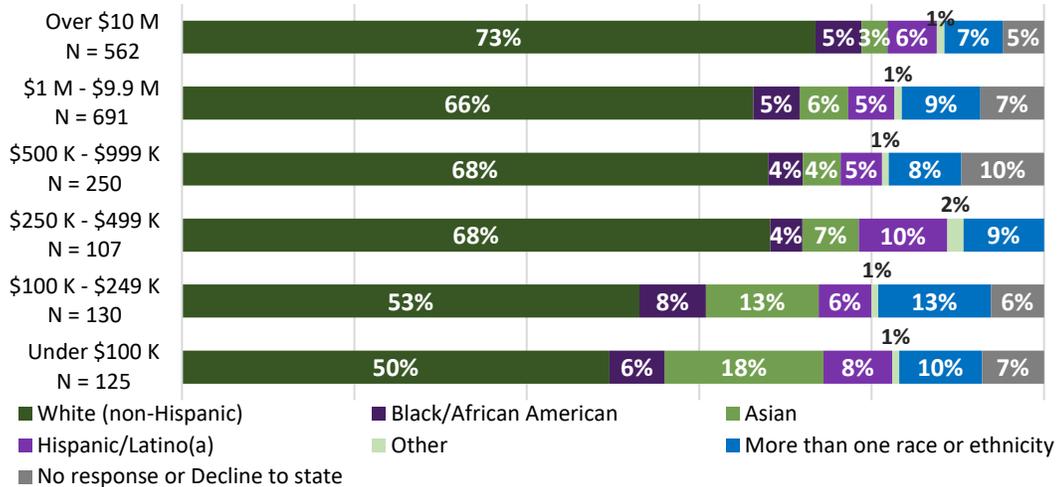
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10. Any reference to significant differences in this document indicates that a two-tailed t-test examining the hypothesis of equal proportions across two groups is rejected at the $p < .05$ level of statistical significance.

Figure 4
Ethnicity by Age – Workforce Survey

Age	White (non-Hispanic)	Black/African American	Asian	Hispanic/Latino(a)	Other	More than one race or ethnicity	No response or Decline to state
80+	84%	4%		10%			2%
65-79	77%	3%	3%	2%	1%	3%	11%
50-64	70%	6%	4%	4%	1%	9%	6%
35-49	65%	6%	9%	6%	1%	8%	5%
20-34	58%	6%	8%	10%	2%	12%	4%
Under 20	35%		15%	15%		30%	5%

■ White (non-Hispanic) ■ Black/African American ■ Asian
■ Hispanic/Latino(a) ■ Other ■ More than one race or ethnicity
■ No response or Decline to state

Smaller organizations engage a more racially and ethnically diverse staff than do larger organizations. Figure 5 shows detail on the ethnic make-up of the workforce for organizations of different budget size. The workforce at the largest organizations (over $10M) is significantly more White than that of smaller organizations. Individuals of Black/African American and Asian heritage comprise a larger portion of the workforce in organizations with budgets under $250k than they do in larger organizations, whereas Hispanics/Latinos(as) make up a higher proportion of the workforce in organizations with budgets of $250K-$499K as compared with organizations in other budget categories.
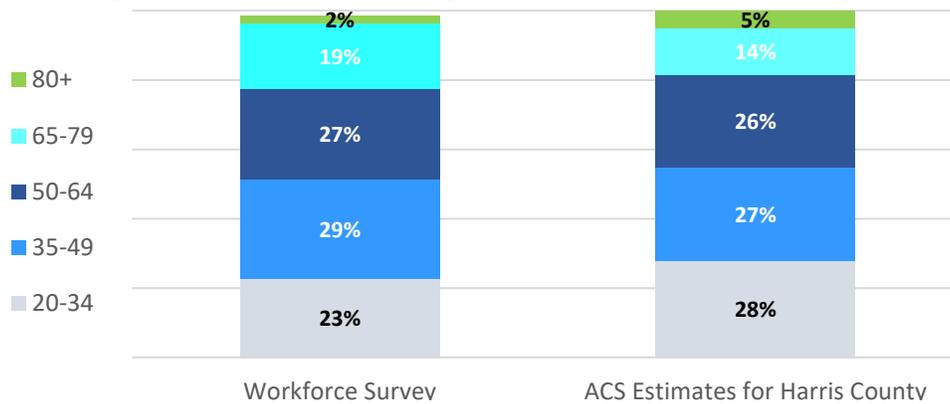
Figure 5
Ethnicity by Organization Budget Size – Workforce Survey

Budget Size	White (non-Hispanic)	Black/African American	Asian	Hispanic/Latino(a)	Other	More than one race or ethnicity	No response or Decline to state
Over $10 M (N = 562)	73%	5%	3%	6%	1%	7%	5%
$1 M - $9.9 M (N = 691)	66%	5%	6%	5%	1%	9%	7%
$500 K - $999 K (N = 250)	68%	4%	4%	5%	1%	8%	10%
$250 K - $499 K (N = 107)	68%	4%	7%	10%	2%	9%	
$100 K - $249 K (N = 130)	53%	8%	13%	6%	1%	13%	6%
Under $100 K (N = 125)	50%	6%	18%	8%	1%	10%	7%

■ White (non-Hispanic) ■ Black/African American ■ Asian
■ Hispanic/Latino(a) ■ Other ■ More than one race or ethnicity
■ No response or Decline to state

Age

The arts and cultural workforce closely aligns with the age distribution found in the Harris County broader population of individuals aged 20 or older, and it is fairly well balanced. Shown in Figure 6, fifty-six percent of arts and cultural workforce respondents are between the ages of 35 and 64 compared to 53% for Harris County overall. The workforce has 5% more individuals in the 65-79 age range than Harris County, attributable to Volunteers and Board members, and 5% fewer in the 20-34 age cohort.
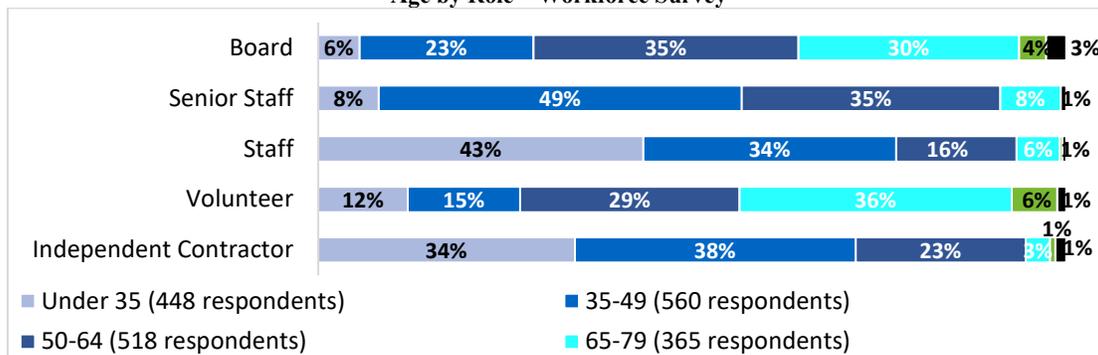
Figure 6
Age Breakdown: Workforce Survey and ACS Estimates for Harris County*

* The workforce survey numbers do not include 20 respondents who declined to self-identify their age. The Harris County estimates are adjusted to exclude people under the age of 20.

General Staff tend to be younger. Figure 7 shows the age distribution of the workforce by organizational role, with results that reflect accumulation of experience and work responsibility with age, as well as discretionary time for volunteer service with retirement. Those under the age of 35 comprise 43% of general Staff positions and make up 34% of independent contractors. Nearly half (49%) of Senior Staff positions are held by those between the ages of 35 and 49 and another 35% are 50 to 64 years of age. Roughly one-third of volunteers and board members are between the ages of 65 and 79. **The findings related to Age and Heritage underscore the link between racial and ethnic diversity and the seniority/age of the workforce**.

Figure 7
Age by Role – Workforce Survey

Gender

Women outnumber men in the workforce. Respondents self-identified as 65% female, 34% male, and 0.4% non-binary.[11] The gender composition of the general population of Harris County is a 50/50 split between male and female. This divergence is consistent with workforce demographics studies conducted in other markets, where the arts and cultural workforce tends to skew more female and with studies indicating that women are over-represented in the nonprofit workforce.[12]
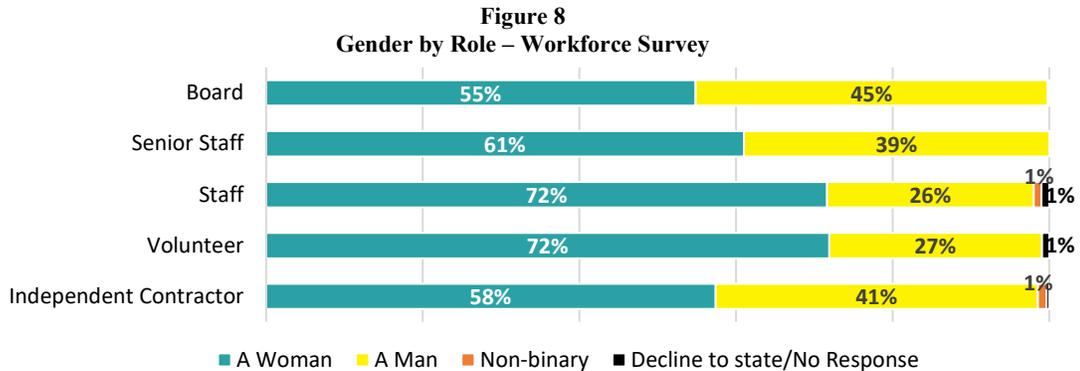
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11. Non-Binary describes genders that do not fall into either a male or female category. For more information see: https://transequality.org/sites/default/files/docs/resources/Understanding-Non-Binary-July-2016_1.pdf
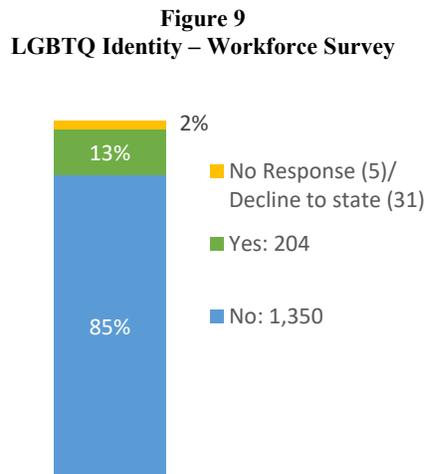12. See, for example: DataArts, *The Demographics of the Arts and Cultural Workforce in Los Angeles County*, April 2017, p.24: https://www.lacountyarts.org/article/demographics-arts-and-cultural-workforce-los-angeles-county; Chronicle of Philanthropy, *Lack of*

Figure 8 shows that the highest percentage of female respondents were Staff Members and Volunteers, at 72%, with lower percentages among Senior Staff (61%), Independent Contractors (58%) and Board Members (55%). As such, the gender breakdowns for Board members and Independent Contractors come closest to overall population breakdown.

Figure 8
Gender by Role – Workforce Survey

LGBTQ Identity

The LGBTQ community appears to be well represented in the arts and cultural workforce. As shown in Figure 9, 13% of respondents identify as Lesbian, Gay, Bisexual, Transgender, or Queer (2% of survey participants declined to answer this question). This percentage is similar to the cultural workforce's LGBTQ identity in other communities studied by DataArts.[13]

Figure 9
LGBTQ Identity – Workforce Survey

In 2012 and 2014, the public-opinion company Gallup conducted the largest study of the distribution of the LGBTQ population to date and found that 3.3% of the greater Houston population responded "yes" to the question: "Do you, personally, identify as lesbian, gay, bisexual, or transgender?" As such, the rate of LGBTQ survey respondents in this study is about four times the Gallup report baseline rate.

Women in Top Roles Hinders Nonprofits, Female Nonprofit Workers Say, April 28, 2014: https://www.philanthropy.com/article/Lack-of-Women-in-Top-Roles/153197

13. Ibid. The United States is in the early days of documenting the incidence of LGBTQ identity in the workplace. The Census does not collect this information and there is wide disparity of practice and policy complicating the ability to track this information across states or municipalities.
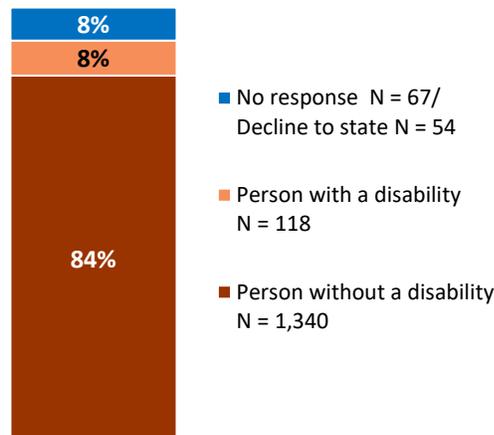
Disability

The DataArts workforce demographics survey asked respondents to describe their disability using the options presented in Table 1 below or select that they are either a "Person without a disability" or "My disability is not listed here". If they selected the latter, respondents had the option to describe their disability in an open text field. Respondents were given the option of selecting more than one category. Table 1 provides the response options, number of people who responded to each option, and the percentage of total respondents in each category.

Table 1

Disability Specific – Top 3 Disabilities Selected	N	%
Person with an emotional or behavioral disability	46	2.9%
Person who is deaf or hard of hearing	46	2.9%
Person with a physical disability or mobility impairment	41	2.6%
Person with a learning disability	24	1.5%
Other disability (not listed)	15	0.9%
Person who is blind or visually impaired	12	0.8%
Person with a communication disorder, who is unable to speak, or who uses a device to speak	4	0.3%
Person with an intellectual, cognitive, or developmental disability	1	0.1%

Figure 10 reveals that 8% of the Houston cultural workforce self-identifies as a "Person with a disability," which is an aggregation of the categories shown in Table 1. Eight percent of survey participants declined to provide information.

Figure 10
Self-Report Disability – Workforce Survey

- No response N = 67/ Decline to state N = 54
- Person with a disability N = 118
- Person without a disability N = 1,340

Workforce Demographics Conclusion

A key finding of this study revealed that the arts and culture workforce is becoming more reflective of the Houston population as younger, more ethnically diverse individuals enter the workforce. Questions for each organization's leadership to consider are as follows:

- What steps does your organization take to ensure a diversified workforce? What are the current hiring practices of your organization? Are there ways to attract and retain employees who are more reflective of the racial and ethnic diversity of Greater Houston?
- What is the relative level of age diversity in the workforce in your organization, and does it track with cultural diversity?

Houston Audience Demographics

Characteristics of Methodology and Analysis

The Houston Audience Demographics investigation represents a pilot study that included two main objectives:
- To learn and understand more about the demographics of Houston arts audiences and their access to cultural experiences.
- To test two separate audience demographic collection methodologies (direct surveys and data append) and gain knowledge regarding the benefits and limitations of each approach.

This study provided a unique opportunity to employ direct surveys and data append to gather audience demographic information. The exercise improved DataArts' understanding of the challenges, similarities, and differences between the methodologies. We also better understand the challenges of offering audience demographic surveys from the DataArts platform to arts and cultural organizations that may not have the capacity or staff necessary to conduct direct audience surveys in-house.

Direct surveys of arts participants at the community level require substantial time and resources and generate questions as to whether the sampling procedure produces a representative sample. This methodology employed a direct audience survey sent to patrons from participating organizations via a link in an email.

Data appends, which match audience data with demographic information from a larger vendor database, represent an alternative approach that does not require an audience survey. To implement the data append, organizations sent their patron records to DataArts. All records included patron names, an email address and/or a physical address. DataArts contracted with Arts & Analytics to process addresses through the National Change of Address (NCOA) system and then append five key household characteristics to each record: ethnicity, age, gender, educational attainment, and household income. Appended files were returned to participating organizations, along with reports summarizing the five key demographic variables for each organization's audience overall as well as a comparison to the demographic characteristics of Harris County as a whole.[14]

In total, DataArts received 2,576 direct surveys from audience members at 221 cultural nonprofits.[15] For the data append, 49 organizations provided over 1.4 million patron records, which after NCOA processing, resulted in 589,777 unique, matched records.
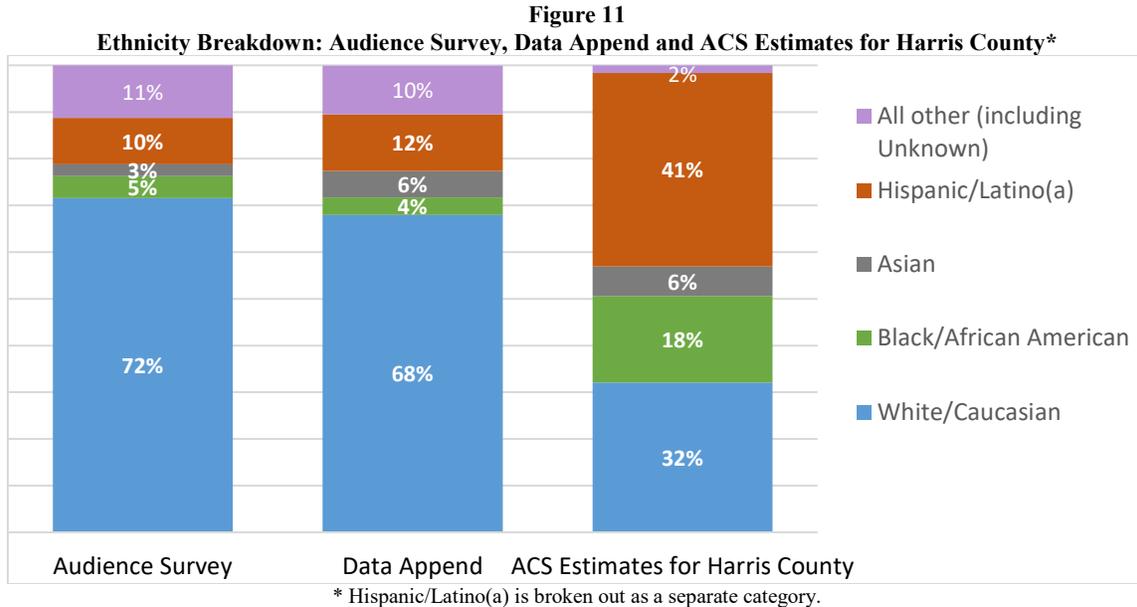
Heritage

The general profile of the arts and culture audience does not currently match the racial and ethnic diversity of Greater Houston; non-Hispanic Whites are overrepresented and Blacks/African Americans and Hispanics/Latino(a)s are underrepresented. Figure 11 compares Ethnicity Breakdowns for the audience survey data append for ticket buyers, and ACS estimates for Harris County. Similar to the workforce study results, more than two-thirds of audience survey respondents (72%) and a slightly lower percentage of the data append ticket buyers (68%) were non-Hispanic Whites. Those identifying as Asian were 3% of the audience sample, significantly lower than the workforce
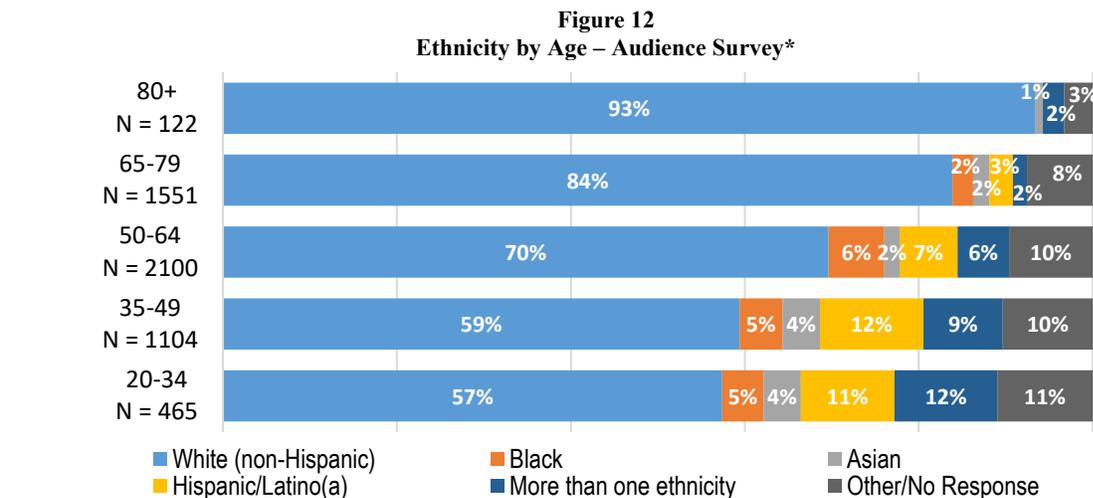
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14. Only 18 of the 221 nonprofits included in the audience study met the necessary threshold of responses to receive individual reports on their constituents, which was based on a ±10% confidence interval at an 80% confidence level.

15. The study recognizes several limitations to the direct email survey for audiences: 1) Limited only to patrons with an email registered with an organization, 2) One respondent might represent an entire family or household, 3) Patrons may not respond to sensitive questions as often as overall questions.

demographics (6%), data append (6%), and Census (6%) figures. This result suggests that Asians were significantly under-represented in the audience survey but that their representation in the workforce survey and data append was proportional to the census figures. Hispanic/Latino(a) representation was the same for surveyed arts audiences as for the arts workforce (10%), slightly lower than for data append ticket buyers (12%), and significantly lower than Census (41%) figures. Representation for Blacks/African-Americans is similar in the audience survey (5%), data append (4%), and arts workforce (6%), but significantly lower than the Census figure (18%).

Figure 11
Ethnicity Breakdown: Audience Survey, Data Append and ACS Estimates for Harris County*

* Hispanic/Latino(a) is broken out as a separate category.

As with the workforce demographic findings, age is a source of difference for White audience members versus those who identify as non-White. The percentage of arts and culture patrons who self-identify as a person of color is significantly higher among younger age cohorts than among older patrons (see Figure 12). Non-Whites represent 32% of the audience member sample (and 38% of the workforce) aged 20 to 34 and only 8% (12% of the workforce) of those aged 65 to 79.

Figure 12
Ethnicity by Age – Audience Survey*

* Due to the way we received the appended data from Arts & Analytics, we cannot replicate the ethnicity by age analysis for the data append approach.

Free programming attracts more diverse audiences than paid programming, while members/ subscribers tend to be less diverse than single ticket/admission patrons (see Figure 13). We asked survey respondents to select the various ways they engage with up to three arts and cultural institutions (this information was not captured through the data append). Within the free event cohort, there are higher proportions of Black/African-American attendees (12%, compared with 5% overall) and Hispanic/ Latino(a) attendees (13%, compared with 10% overall). Members/subscribers are more likely to be non-Hispanic White (79% compared with 72% overall).

Figure 13
Ethnicity by Participant Type – Audience Survey

Age

Figure 14 breaks down audience survey respondents, data append ticket buyers, and the overall Harris County population by age range. Comparing breakdown results for the audience survey with the data append points to age selection bias in the audience survey sample. Very old (80+) audience members are significantly under-represented in the survey sample as are 50-64-year-olds. Young retirees (65-79) are significantly over-represented in the audience survey whereas younger audience members appear to be appropriately represented in the survey sample.
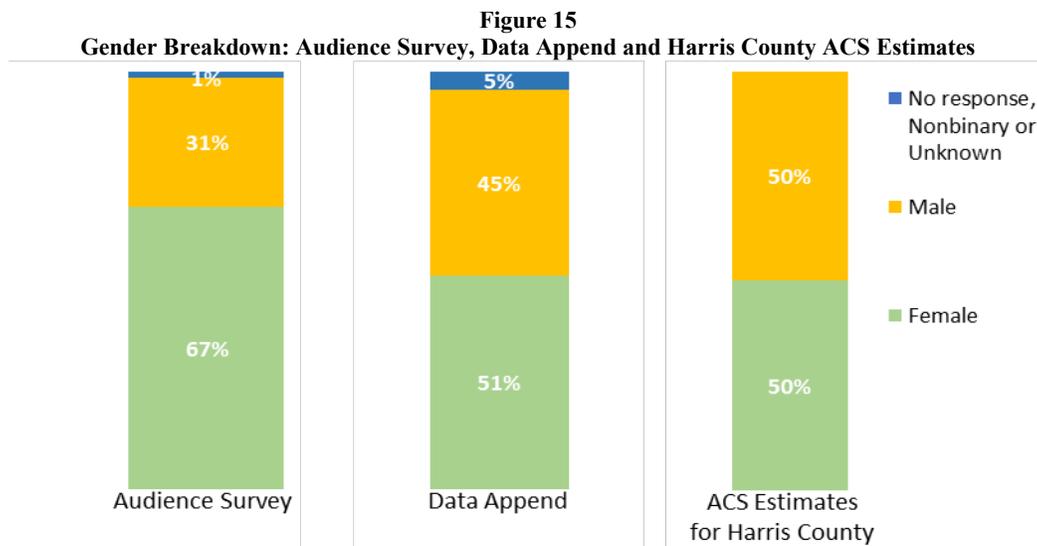
Figure 14
Age Breakdown: Audience Survey, Data Append, and ACS Estimates for Harris County

Excluding the 80+ category, **audience survey respondents and ticket buyers are older than the general population**. The 50-64 age category represents nearly 40% of the audience sample and 52% of the data append ticket buyers but only 26% of Harris County residents. Those 65 to 79 years of age comprise nearly 30% of the audience sample but only 15% of the ticket buyers and 14% of the general population. Younger populations (20 to 49 years of age) are significantly under-represented in both the audience survey and the data append. Given the consistency of the breakdown for younger populations across the two methodologies, we estimate that the penetration rate (i.e., realized audience proportion divided by population proportion) for 20-34-year-olds is approximately 32% and approximately 78% for 35-49-year-olds.

Gender

Similar to responses to the workforce study, women outnumbered men in the audience survey sample roughly 2:1 (see Figure 15). For comparison, the 2012 NEA's Survey of Public Participation in the Arts found that 56.1% of arts participants are female and 43.9% are male.[16] The data append results are closer to the NEA results and also closer to the gender breakdown for Harris County. Collectively, these results point to selection bias leading to significant over-representation of women in the audience survey study. Women were either more likely to provide their email addresses to arts and culture organizations or more likely than men to respond to our survey.

Figure 15
Gender Breakdown: Audience Survey, Data Append and Harris County ACS Estimates

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16. National Endowment for the Arts, *A Decade of Arts Engagement: Findings from the Survey of Public Participation in the Arts*, 2002–2012. p. 4.
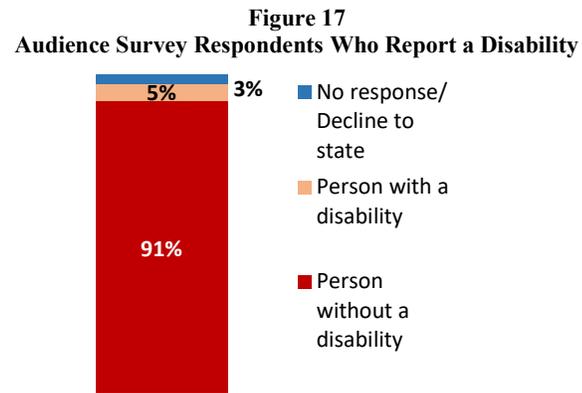
LGBTQ Identity

As shown in Figure 16, 9% of audience members self-identify as LGBTQ. As with the workforce, this percentage is substantially higher than estimates (3.3%) for the population of Houston.

**Figure 16
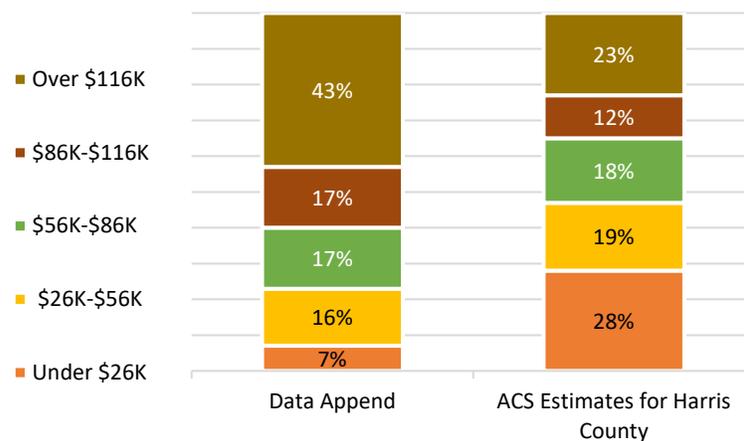Audience Survey Respondents Who Identify as LGBTQ**

- No response/ Decline to state — 3%
- Yes — 9%
- No — 88%

Disability

Five percent of arts and cultural audiences reported having a disability, as shown in Figure 17, as compared with 8% of workforce demographics study respondents.

**Figure 17
Audience Survey Respondents Who Report a Disability**

- No response/ Decline to state — 3%
- Person with a disability — 5%
- Person without a disability — 91%

Additional Data Append Characteristics: Education & Household Income

The levels of educational attainment and income are higher in audiences of participating organizations than in the Harris County population as a whole. While 29% of the population of Harris County has a Bachelor's or Advanced Degree, the figure for arts patrons is 75%. Arts attendees have higher income than the population as a whole. The median household income in Harris County is $53,822. Figure 18 shows that 77% of the records returned through data append come from households with annual income above $56,000. The education and income results are consistent with SMU DataArts' research on propensity to consume arts and culture; socioeconomic level (including education and income) has a strong, positive effect on arts consumption propensity.

**Figure 18
Household Income Breakdown: Data Append and ACS Estimates for Harris County**

	Data Append	ACS Estimates for Harris County
Over $116K	43%	23%
$86K-$116K	17%	12%
$56K-$86K	17%	18%
$26K-$56K	16%	19%
Under $26K	7%	28%

Audience Demographics Conclusion

Before offering any conclusions regarding audience demographics, it is important to recognize the study's limitations, especially with respect to selection bias, which occurs at multiple levels in this study. The tendency for large organizations' audiences to dominate creates one level of selection bias. For example, only five organizations received an adequate number of audience survey responses to produce standard confidence intervals (+/-5%) and confidence levels (95%); all five were very large organizations. The 49 organizations that submitted patron data for the data append also skewed towards larger organizations. This results in insufficient representation among smaller organizations to control for their under-representation in drawing inferences. Selection bias emerges at the audience level when members of different groups are more or less likely to share their names and addresses, respond to a survey, or be recognized by a data aggregator, perhaps because they have insufficient credit histories. Nevertheless, we have greater confidence in the data append results given the far larger sample size and match rates. Our confidence is especially high when results converge or align with general population characteristics. For example, the results suggest that the data append numbers capture the ethnicity of Houston audiences with reasonable accuracy.

When appropriately distributed and with sufficient response rates, direct surveys can produce results akin to or approximating random sampling when analyzing patronage at the organizational or community level. However, our results underscore the difficulty in generating a random sample using online survey instruments and indicate that selection bias is a critical challenge associated with conducting audience survey research. The data append offers an alternative approach that gives organizations demographic data on their patrons and can provide a better understanding of who is currently being served relative to whom the organization seeks to serve and help in developing future marketing strategies.

Compared to the Harris County population as a whole, Hispanics/Latino(a)s were the most under-represented ethnicity in the audience (which was also true for the workforce). In terms of audience participation, Hispanic/Latino(a) residents may engage with arts and culture but not with the organizations that participated in this study; that is, they may be engaging in cultural experiences elsewhere. A study examining arts and culture audiences in Philadelphia found that Hispanic/Latino(a) residents attended arts and culture events at equal or higher rates as other residents, but that their experiences did not always involve nonprofit venues.[17]

As with the workforce, younger audiences tend to be more ethnically diverse and more reflective of Houston's ethnic diversity. This study also found that audiences for free programming are more ethnically diverse than those for paid programming. These insights raise the following questions related to marketing mix decisions, particularly those related to price, place, and product:

- What types of mission-related programming may have more appeal to audiences who better reflect the racial and ethnic diversity of Greater Houston?

- Does the organization's pricing strategy provide ample opportunities for engagement by those who have demand for but not access to the organization's offerings?

- Should programming be offered in venue locations that are more convenient to diverse audiences in order to reduce the non-monetary cost of engagement created by distance?

- Can the organization consider more opportunities to engage children and younger adults (e.g., social events, family events), who embody the future of diversity of the Greater Houston community?

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17. Greater Philadelphia Cultural Alliance, *CEI2010: Philadelphia Cultural Engagement Index*, May 2011, pp. 6, 28, 31, 35.

<u>Audience Opportunity Tool (AOT)</u>

Introduction

As a companion project to the Greater Houston workforce and audience demographics studies detailed above, Houston Endowment provided support to SMU DataArts to create the **Audience Opportunity Tool (AOT)**, which **provides organizations with market data to drive efficient, effective audience development**. Whether an organization's desire is to diversify or broaden its audience base, the tool can identify which segments of the population are under-served and inform where resources should be directed. This information establishes a starting place for identifying areas of opportunity. The project is intended to serve as a resource for arts leaders and other decision-makers who are striving to build capacity and serve their communities but who struggle to overcome the challenges unique to their organization's location, sector, size, and constituency base. Ultimately, the outcome we hope to achieve is higher levels of engagement in the arts.

Houston Endowment aided in the identification of eight organizations that agreed to take part in the pilot test project: Asia Society, Da Camera Society, Ensemble Theatre, Houston Ballet, Houston Museum of African American Culture, Museum of Fine Arts Houston, Society for the Performing Arts, and The Health Museum. These organizations constituted a cohort that was diverse in terms of budget size, arts sector, and location.
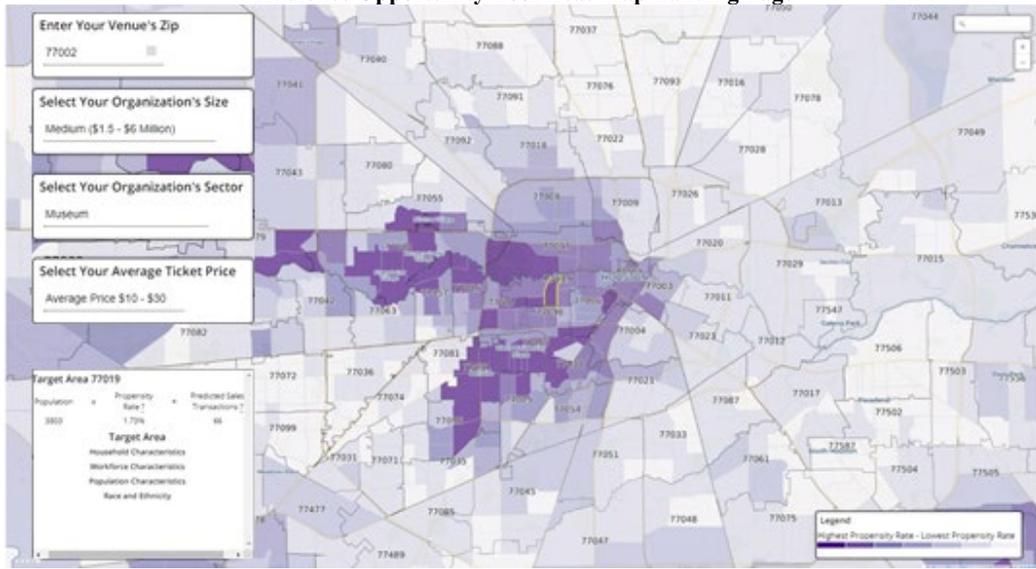
The Tool

The AOT uses insights derived from examining longitudinal, arts patronage data for several million households to build a model that can estimate arts patronage propensities using information for any arts and cultural organization and its surrounding communities.[18] Arts leaders input the organization's venue location, arts sector, budget size, and average ticket price. The AOT then presents a graphical mapping interface that displays every neighborhood within 30 miles of the venue location, color-coded according to its patronage propensity (see Figure 19).

Clicking on a location provides detailed information for the neighborhood, including number of households, population, workforce characteristics, socioeconomic and demographic information as well as the expected level of patronage as a likelihood percentage and expected number of transactions. Organizations can use this information to identify target neighborhoods to increase purchases or diversify audiences. They can also use it to see how changes in venue location or average ticket price affect purchase likelihood.

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18. Voss, Glenn B., Zannie G. Voss, Young Woong Park, *At What Cost: How Distance Influences Arts Attendance*, National Center for Arts Research, October 2017. https://sites.smu.edu/meadows/NCARWhitePaper%20October2017%2010-18.pdf Accessed 11/12/2018.
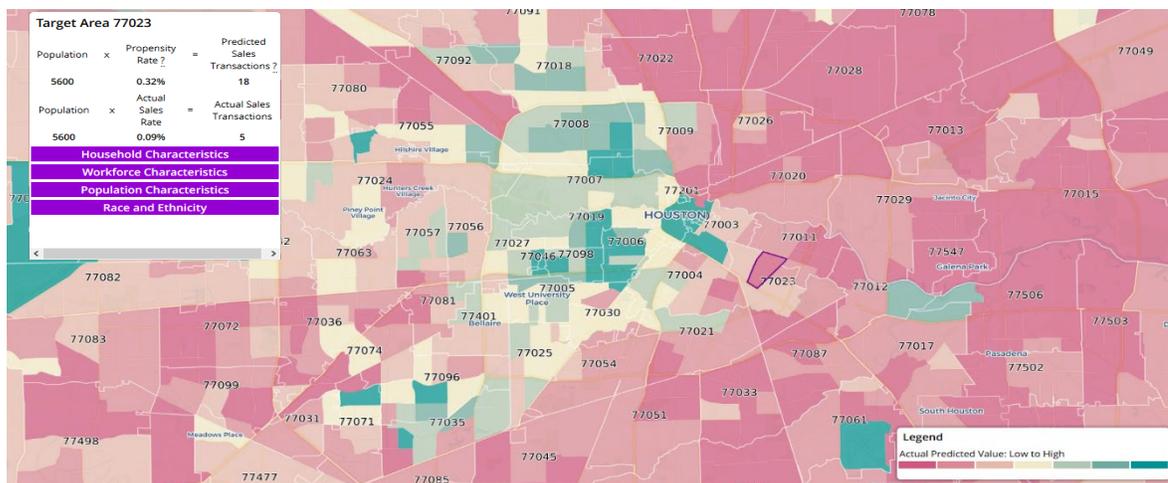
Figure 19
Audience Opportunity Tool Heat Map Landing Page

Testing

During a multi-iteration testing and comment period with the participating organizations, development of the AOT included the creation of a FAQ page to help organizations better understand the tool, redesigned user interface, and flexible data viewing at both the zip code and census tract level. As a thank-you for participating, organizations received a customized overlay for the heat map that shows the location of current households in their database to the tool's heat map to discover untapped local census tracts that are the best fit with their marketing objectives (see Figure 20). Color coding indicates the extent to which an organization is exceeding expected purchase levels (green), at the predicted level (yellow), or has a realistic opportunity to engage more people than it currently does in a census tract (red).

Figure 20
Sample Overlay of Customer Data with the Audience Opportunity Tool

Project Strengths and Limitations

A primary goal of the AOT is generation of actionable insights. There was general support for the AOT's perceived usefulness. Comments from pilot group participants included the following:

- "This could really help figure out where the young people are for our [X] series. I could set a goal for sales and say, 'This says we can get 18 transactions. I want to get 30 because I know there's a college campus there.' Setting goals. That's what it would be great for."
- "For us, since we've not had a tool, we've been doing a lot of manual stuff – like surveys. We're excited when we get the opportunity to use something that's intuitive and interactive."
- "One thing we thought about is we don't do a lot of direct mail pieces. But if we see where we can do more targeted direct mail this could certainly help us to see where the potential is."
- "What we found really interesting is to see the characteristics based on the statistics, especially in terms of ethnic breakdown. You think you know a neighborhood. We didn't have good guesses on how many African Americans, for instance, lived in these different neighborhoods."
- "When I change the venue zip code to [that of our new competitor in a nearby suburb], I can see why they've really hurt us. We were pulling a lot of people from their area and now that they're there, we're losing audience members to them. I'm looking at this and it's breaking my heart because I'm seeing exactly where it is and what it now means to have this venue there."
- "What I like about it is that the demographic information -- having it in such a handy, singular place -- is something we don't have right now. I'd have to go to multiple resources to compile that information. From an audience development/outreach perspective rather than sales transaction perspective, trying to identify a particular kind of person, this is very helpful."
- "This is really a gift to organizations our size. It opens a world. Especially if you're small, it levels the playing field."
- "We've found all kinds of pockets of places! It's a great snooping tool. This allows us to search the universe. You can tour your city without leaving home."

The project also encountered some hurdles and limitations. Pilot project participants made numerous suggestions that we were unable to incorporate at this stage, such as an overlay of neighborhood names onto the map and the capability to observe different predicted purchase propensity levels depending on the kind of programming presented.

There were two factors that impeded some participating organizations' ability to receive full benefit from the project. First, **staff turnover** during the project had an effect on the benefit received by organizations and their ability to fully participate. Second, **some organizations struggle to collect audience data and navigate patron software**. Pilot test organizations needed to provide clean audience household data in order to reap the full benefit from the customized overlay for the heat map. It was a struggle for several organizations to provide us with their exported audience data, and a few organizations collect only zip codes, not full household addresses. In many respects, organizations that currently have the sparsest information on current attendees stand to benefit most from the AOT. With it, they can discover untapped local zip codes or census tracts that are the best fit with their marketing objectives, and begin a structured data collection process to see whether they are successful in their efforts to achieve deeper reach in these neighborhoods.

<u>Conclusion</u>

Arts and cultural organizations in the U.S. face headwinds. There is environmental uncertainty related to changes that affect the tax-deductibility of contributions, ongoing threats to the elimination of federal arts funding, and changing consumer preferences that favor digital, on-demand consumption. Moreover, organizations are largely cash-strapped and unprepared to weather another economic downtown, with working capital shrinking by 55% for the average organization between 2013 and 2016, bottom lines deteriorating from an average surplus to an average deficit over the same period, and attendance on the decline for more than half of the arts and cultural sectors. In Houston, as elsewhere in the country, the demographic make-up of the population is changing, which presents both challenges and opportunities.

More than ever, there is a pressing need for organizations to better understand and respond to their local communities in order to remain relevant and engaging. Our goal is to arm those who lead these organizations with more knowledge, insights, and tools that can enhance organizational health and long-term sustainability. The projects described in this report follow a through line of data collection leading to insights and tools. More specifically, they provide leaders of Houston arts and cultural organizations:

1. A better understanding of the demographic composition of their workforce and audiences and the extent to which these individuals reflect the diversity of the broader Greater Houston community; and

2. Benefit from a mapping tool that puts detailed, customized, market knowledge about Greater Houston's community at their fingertips so they can create better informed strategies.

SMU DataArts' vision is to build a national culture of data-driven decision making for those who want to see the arts and culture sector thrive. Data gathering is a first, critical step in the process of providing knowledge that helps organizations take action.

Acknowledgements

About SMU DataArts

The survey, analyses, and tool creation projects described in this report were undertaken by SMU DataArts, the National Center for Arts Research at Southern Methodist University. SMU DataArts works to empower arts and cultural leaders with high-quality data and evidence-based resources and insights that help them to overcome challenges and increase impact. For more information on SMU DataArts, visit: www.smu.edu/dataarts.