CENTER FOR CREATIVE COMMUNITY DEVELOPMENT
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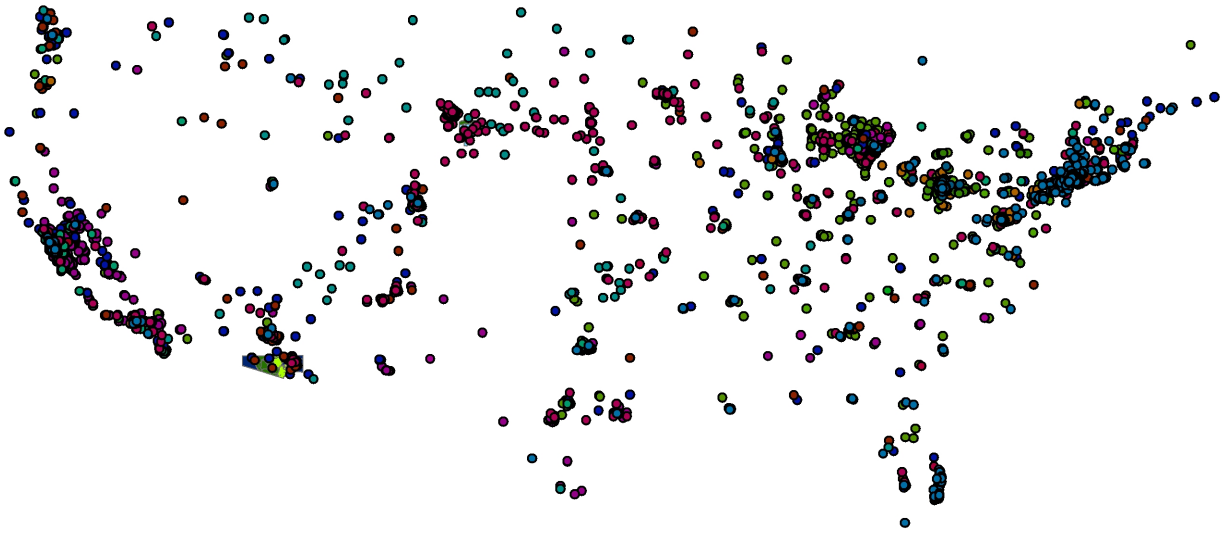
Space for Change: Community Impact of Cultural Arts Organizations



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 We would like to thank Leveraging Investments in Creativity (LINC) for funding and support of the analysis presented in this report.

LINC

On the cover:
The map shows the national scope of the combined locations of visitors, donors, stakeholders, artists, students and community partners of the nine organizations whose impact is studied in this report.

Introduction

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Introduction

In 2011 Leveraging Investments in Creativity (LINC) announced twelve grantees to receive planning and pre-development grants to renovate or expand their facilities. In addition, LINC had previously announced its Grand Prize winner of the Innovative Space Award. These thirteen organizations, all cultural arts organizations, were offered a variety of forms of technical assistance and expertise as they progressed through the planning and pre-development stages of their facilities project. One option available to them was to participate in research on the impact of cultural organizations on their communities. Nine of the organizations expressed an interest in participating in the research. They were: Casita Maria in the Bronx; City of Asylum/Pittsburgh; Dance Place in Washington, DC; Heidelberg Project in Detroit; Heritage Center on the Pine Ridge Indian Reservation in South Dakota; International Sonoran Desert Alliance (ISDA) in Ajo, Arizona; Intersection for the Arts in San Francisco; MACLA in San Jose, CA; and MOCAD in Detroit.

For each organization, the Center for Creative Community Development (C^3D) created an online interactive economic impact model. The web application provides estimates the economic impacts of the cultural arts organization and its visitors on the local economy. The online tool can be used to explore different scenarios and can be used in the future by changing the default numbers. The results include not only an estimate of total economic impact but also a breakdown of impact by industrial sector.

For each organization, C^3D created an online interactive map that geographically presents up to four types of address data provided by the organization. The types of data displayed on these maps range from visitors to artists to community partners. The address data are displayed over a Census layer map with block-level data on race and ethnicity, education, poverty, and home ownership. New data can be added and mapped by the organization.

Finally, three of the organizations expressed interest in a social network analysis of their community partnerships. The geographical mapping of social networks confirms the important social roles played by cultural arts organizations in their communities. It does require a higher level of data collection and special thanks are due to the Heidelberg Project, ISDA, and Intersection for the Arts for their willingness to provide these data.

All of these interactive tools can be explored on our web site (www.c-3-d.org) at http://web.williams.edu/Economics/ArtsEcon/cases.html.

What follows are the written reports, descriptions and suggested applications of these three research tools for each participating organization. The first section includes the output from the economic impact models, along with a brief summary report. The second section includes a set of papers for each organization on how to make effective use of the social mapping tool. These

papers include a hypothetical example of data the organization might want to map, along with step by step instructions on how to accomplish this. The third section includes results of the social network analyses. Each network analysis begins with a motivating question, presents the network, and then discusses the conclusions.

Finally, this report presents a more detailed discussion paper on using social network analysis to research cultural arts organizations. This paper was completed at the beginning of work with the nine Space for Change organizations. It provides a more detailed grounding in social network analysis for those who are interested. It is followed by an analysis and alternative view of the problem of gentrification, in which we argue that gentrification is a significant issue for communities because when residents feel at risk for displacement, they stop investing in and supporting their community in a variety of ways. We show that by concentrating on the persons actually displaced by gentrification rather than the communities they leave behind, previous studies have neglected an important part of the gentrification problem.

Economic Models

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Introduction to Economic Impact Models

For each of the nine participating Space for Change organizations we developed a model to estimate its regional economic impact. We present the results of these models here. It is interesting to see the results together in one place, to note the similarities and differences. The reports are not meant, however, to compel a comparison where one organization 'wins' in terms of economic impact. Each model is meant to be a tool for the organization to understand and articulate its economic impact, and to better understand the context in which it operates. It is possible, at the same time, to gain general insights from the nine models as a whole. The economic models together suggest ways in which context affects the Space for Change organizations, and the ways in which these organizations differ so much – in size and in programming – yet impact similar areas of their local economies. The models presented in the following pages are by their nature static. They are presented interactively – where annual budget and visitor estimates can be changed – online at http://web.williams.edu/Economics/ArtsEcon/cases.html. Three points are worth keeping in mind about the following models.

The models created by C3D are specific to each organization's regional economy. There are other estimators available in which an organization can enter its annual budget and obtain an estimate of economic impact. Those models are created to be the best estimate for all cultural arts organizations in the US (or a region or of a particular size), not for a specific organization. Our models are crafted for each Space for Change organization, using the documented flow of goods and services in its County for an organization of its type, such as a museum or a performing arts company. This gives an organization confidence that the model it is using is the best estimate of its impact on the regional economy.

Our models include nonlocal visitors and provide estimates of the economic impact of these visitors. One thing that stands out in the results that follow is that *visitors matter*. An organization that attracts visitors from outside its region (county) significantly increases its regional economic impact. This does not mean that the goal of a cultural arts organization is to increase the number of nonlocal visitors at the cost of its mission or programming. A cultural arts organization provides a mix of programming that serves its community and attracts visitors. What that exact mix is varies from organization to organization, depending on its mission and somewhat on its budget. Large nationally regarded museums attract many visitors because the public presentation of important high-quality art is their primary mission. Very small community-based arts organizations may have been created to meet a local need or provide opportunities to an at-risk or marginalized population, and they may attract few visitors from outside their community. In evaluating the success of an organization it is important to remember its mission, its budget, and its community context. This is why each Space for Change organization must ultimately be considered individually. The results of the economic models are

valuable, in part, because they affirm the accounts we are hearing from the organizations about their mission and programming.

The goal of the economic models is to provide data that can help inform a broader conversation about the community impacts of cultural arts organizations. Few cultural arts organizations are established solely because of their potential economic impact. But that does not mean we should overlook these impacts. The economic models can serve as input to a reasoned discussion of the role of cultural arts organizations in our communities, informing us and providing answers to questions.

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A Brief Summary of the Economic Impact of Casita Maria on the Bronx

In estimating the economic impact of Casita Maria, we used an approximate budget of $1,500,000 per year.[1] We calculated the economic impact of 20,000 visitors to Casita Maria per year, and estimated that approximately 60% of visitors come from outside the Bronx.[2] These 'nonlocal' visitors (an estimated 12,000 per year) bring money, through their local expenditures, into the Bronx economy that most likely would otherwise have been spent in their own county.

The results below estimate the total economic impact of Casita Maria using an inter-industry model of the flow of goods and services between sectors of the economy in the Bronx. Expenditures are made by Casita Maria; those monies circulate through the regional economy. The suppliers of goods and services to Casita Maria increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of Casita Maria. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[3]

Results:

- The $1,500,000 in annual expenditures by Casita Maria has an estimated economic impact of $2,255,278. Sectors of the Bronx regional economy that experience a significant increase in economic activity due to the presence of Casita Maria are educational services, promoters of performing arts, real estate, hospitals, and museums. In addition, the expenditures of Casita Maria result in an estimated 29 jobs regionally.

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[1] Annual expenditures of $1,500,000 are based on the projected FY11 budget.

[2] We consider the estimate of 20,000 visitors per year to be a minimum number once current enhancement of the Casita Maria performance space is completed. Our estimate is based on data we have for two similarly sized cultural arts organizations in Massachusetts. Our estimate that 60% of visitors will come from outside the Bronx is based on conversations with Casita Maria about current programming patterns and on address data we have from an organization in Boston with a similar budget and program mix. To estimate the economic impact of Intersection for the Arts based on alternative visitation figures please visit our interactive web page at http://web.williams.edu/web/Economics/ArtsEcon/econpages/c3ddisplay.php?file=CMEconModelCounty.xml where you can update visitor and budget numbers to calculate different economic impact scenarios.

[3] Information on the Americans for the Arts study is available for download at http://www.artsusa.org/information_services/research/services/economic_impact/default.asp. The survey was carefully designed to count only the expenditures directly tied to visiting a cultural organization on a specific day, so as not to 'take credit' for expenditures primarily resulting from an extended vacation or other reasons for traveling.

- The local expenditures made by 12,000 visitors from outside the Bronx to Casita Maria have a total economic impact of approximately $871,426. Sectors of the economy that benefit most from visitor expenditures are food and drinking places, hotels and motels, retail stores, gasoline stations, real estate, wholesale trade and hospitals. The expenditures of 12,000 nonlocal visitors to Casita Maria result in an additional 10 jobs regionally.

- The total economic impact of Casita Maria consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside the Bronx. ***The total economic impact of Casita Maria is approximately $3.1 million annually. The total impact in terms of employment in the Bronx is an estimated 39 jobs.***

The presence of Casita Maria in the Bronx results in benefits to the community and county far beyond its economic impact. This summary is only an estimate of the economic impact of Casita Maria on the economy of the Bronx.

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About Casita Maria

Casita Maria is an arts and education center in the South Bronx. Casita Maria, which opened in 1934, strives to support vulnerable children and adults; foster academic achievement; develop job skills; and participate in the cultural and economic revitalization of the Bronx. As the result of a public/private partnership with the NYC Department of Education, Casita Maria enjoys a new building with studios, classrooms, gallery, and theatre space. Casita Maria offers many programs including an arts summer internship program for middle and high school students; a program that places teaching artists in the public school; portfolio development workshops; student gallery exhibitions; theatre performances; and an artist-in-residence program.

About the Williams College Center for Creative Community Development (C^3D)

The Center for Creative Community Development (C^3D) was founded in June 2004 with an initial grant from the Ford Foundation and subsequent funding from the Institute of Museum and Library Services (IMLS), Leveraging Investments in Creativity (LINC), Massachusetts Cultural Council (MCC) and others. This report is part of a research initiative on organizations awarded Space for Change planning and pre-development grants. The Space for Change program is funded by LINC in partnership with the Ford Foundation. C^3D is a research organization working to better quantify and characterize the impacts of neighborhood-based arts and cultural organizations on their surrounding communities. The Center provides sound data and case studies that can be used for case-making as well as for planning and evaluation purposes. Such measurements are essential for communities to manage the process of change, and to ensure equitable distribution of the benefits created by cultural economic development.

C^3D is located on the campus of Williams College in Williamstown, Massachusetts, and is directed by Stephen Sheppard, Class of 2012 Professor of Economics. Professor Sheppard (PhD from Washington University in St Louis) is an economist who specializes in urban and regional

economics and the use of economic geography to analyze the impacts of cultural and environmental amenities on housing markets, job creation, and neighborhood development.

More information about C^3D and its analyses is available3 at www.c-3-d.org.

About this Study

The economic impacts reported above are based on standard input/output analysis. This type of model has been in use at least since the publication in 1960 of Walter Isard's important book *Methods of Regional Analysis: an Introduction to Regional Science* (M.I.T. Press). An input/output model is a set of mathematical formulas whose values are based on statistical analysis of actual observations. In this case, the formulas are designed to present the workings of the regional economy. The economic impact estimates provided here are the result of a predictive model that estimates the amount of aggregate regional income and employment that is attributable to expenditures by a particular cultural organization and its nonlocal visitors (visitors living outside the county). The model discussed in this report is designed for analysis at the county level, meaning the estimates cover impacts occurring throughout the county.

The input/output model utilizes data from a variety of sources (including the US Bureau of Economic Analysis, the US Bureau of Labor, and the US Census Bureau) to characterize the flow of goods and services among sectors of the economy and the employment and consumption patterns of different sectors of the regional economy. The sectors are identified by NAICS (North American Industry Classification System) codes. Much of the data is collected at the county level through a survey process that examines the spending patterns of representative firms in every sector of the economy in every county in the US. The data collected are used to provide estimates of the purchasing patterns of each sector of the county economy, identifying how much of every dollar spent in one particular sector is received as income in every other sector of the county economy, and how much of every dollar 'leaks' outside the county economy or is considered 'final consumption'. The input/output economic model divides the economy into over 400 sectors ranging from 'Abrasive products' to 'Wood window and door manufacturing'. Not all of these sectors are present in every region. The model also draws heavily on data from the federal ES202 database of unemployment insurance filings and the 'Regional Economic Information System' of the US Bureau of Economic Analysis.

This study was supported by a research grant from LINC in partnership with the Ford Foundation.

For more detailed background information on our input/output model for cultural organizations, we encourage you to visit http://www.williams.edu/Economics/ArtsEcon/econpages/FAQ.html.

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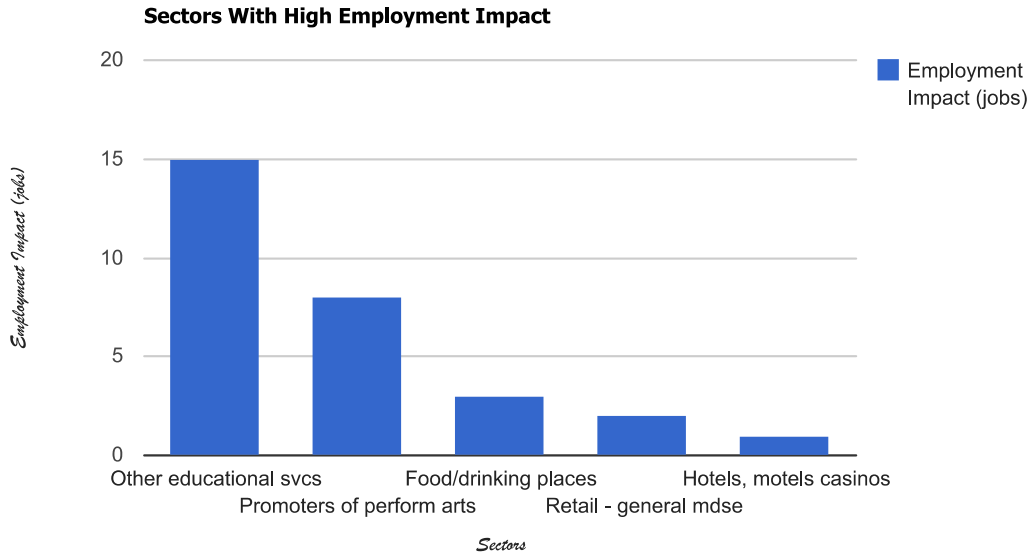
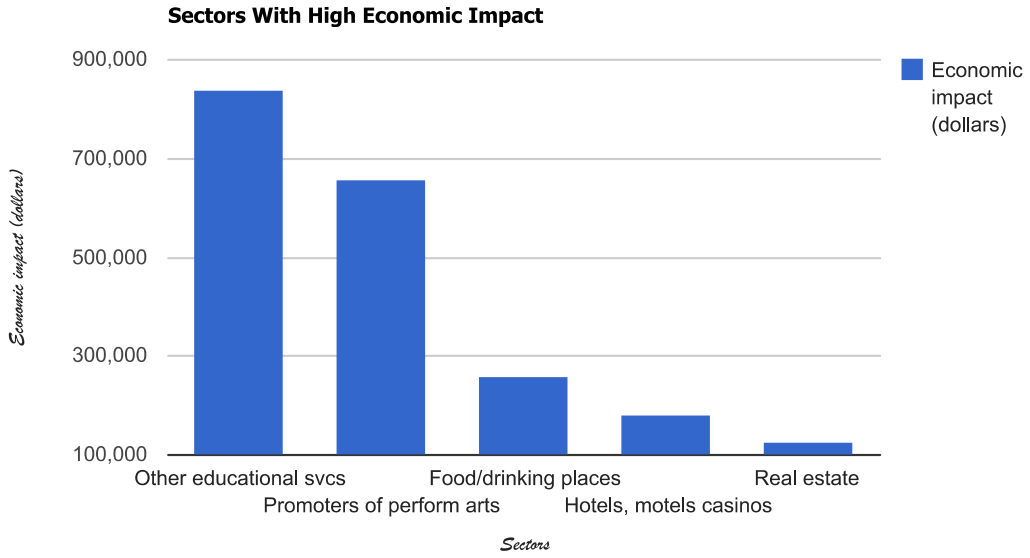
Regional Economic Impact of Casita Maria Center for Arts and Education

Annual Budget	Visitors	% Non-local	Year	
$1,500,000	20,000	60%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$1,500,000	$331,794	$423,483	**$2,255,278**
Non-local Visitors	$598,080	$112,499	$160,848	**$871,426**
Total Output Impact	**$2,098,080**	**$444,293**	**$584,331**	**$3,126,704**
Total Jobs	32	3	4	39





Description	Direct	Indirect	Induced	Total	Jobs
Other educational svcs	$831,000	$4,904	$2,141	$838,045	15.0
Promoters of perform arts	$621,000	$34,338	$1,581	$656,919	8.6
Food/drinking places	$235,800	$5,102	$18,825	$259,727	3.9
Hotels, motels casinos	$178,920	$499	$700	$180,118	1.3
Real estate	$0	$79,992	$45,952	$125,944	0.5
Retail - general mdse	$111,480	$146	$3,467	$115,093	2.7
Imputed rental value	$0	$0	$100,411	$100,411	0.0
Hospitals	$0	$36	$70,765	$70,802	0.4
Retail - gas stations	$67,440	$21	$512	$67,973	1.2
Wholesale trade	$0	$17,846	$39,127	$56,973	0.3
Museums, historical sites	$48,000	$0	$1,189	$49,189	0.3
Power generation	$0	$19,318	$14,939	$34,257	0.1
Telecommunications	$0	$22,805	$10,048	$32,853	0.1
Health practitioners	$0	$8	$25,289	$25,296	0.2
Advertising	$0	$21,926	$2,227	$24,153	0.2
Nondepository credit	$0	$8,442	$14,105	$22,547	0.1
Monetary authorities	$0	$9,130	$11,670	$20,799	0.1
Cable programming	$0	$15,265	$1,917	$17,182	0.0
Legal services	$0	$8,949	$7,841	$16,791	0.1
Nursing/residential care	$0	$0	$16,024	$16,024	0.2
Nonfinan intang lessors	$0	$14,303	$906	$15,209	0.0
Management of companies	$0	$11,403	$3,109	$14,512	0.1
Insurance carriers	$0	$5,792	$8,376	$14,168	0.1
Transit transportation	$0	$11,164	$1,966	$13,130	0.3
Retail - food and bev	$0	$249	$12,672	$12,921	0.2
Colleges/universities	$0	$178	$12,622	$12,800	0.1
Medical labs	$0	$484	$11,723	$12,207	0.1
Insurance brokers	$0	$10,756	$1,119	$11,875	0.1
Accounting, tax prep	$0	$9,029	$2,104	$11,133	0.1
Truck transportation	$0	$5,974	$4,967	$10,941	0.1
Civic, social, prof orgs	$0	$6,121	$4,538	$10,659	0.2
Nonres maintenance	$0	$8,682	$1,808	$10,491	0.1
Employment services	$0	$8,207	$1,460	$9,667	0.1
Independent artists	$0	$8,768	$178	$8,946	0.1
Child day care svcs	$4,440	$0	$4,264	$8,704	0.2
Management svcs	$0	$7,233	$908	$8,141	0.0
Waste management	$0	$5,549	$2,579	$8,128	0.0
Internet publishing	$0	$7,732	$360	$8,092	0.1
Couriers, messengers	$0	$6,615	$1,447	$8,062	0.1
Home health care svcs	$0	$0	$8,049	$8,049	0.1
Oth State/Loc enterprise	$0	$2,515	$4,673	$7,187	0.0
Pharma prep mfg	$0	$15	$7,165	$7,180	0.0
Services to buildings	$0	$5,277	$1,724	$7,001	0.1
Postal service	$0	$5,532	$1,438	$6,971	0.1
Retail - health care	$0	$170	$6,237	$6,407	0.1
Automotive repair	$0	$2,804	$3,316	$6,119	0.1
Individual, family svcs	$0	$0	$5,879	$5,879	0.2
Non-poultry processing	$0	$1,881	$3,772	$5,652	0.0
Soc Advoc/Grantmkg org	$0	$0	$5,346	$5,346	0.1
Religious organizations	$0	$0	$5,013	$5,013	0.0
Retail - clothing	$0	$80	$4,578	$4,658	0.1
Periodical publisher	$0	$3,825	$592	$4,416	0.0
Industrial repair	$0	$3,472	$632	$4,104	0.0
Retail - Nonstore	$0	$42	$3,944	$3,986	0.0
Elem/sec schools	$0	$0	$3,740	$3,740	0.1
Security services	$0	$2,407	$1,194	$3,601	0.1
Bakery/bread mfg	$0	$1,150	$2,382	$3,532	0.0
Community relief svcs	$0	$0	$3,028	$3,028	0.1
Cookie & cracker mfg	$0	$907	$2,058	$2,965	0.0
Spectator sports	$0	$1,597	$1,273	$2,870	0.0

Scientific research	$0	$1,344	$1,465	$2,809	0.0
Retail - building material	$0	$53	$2,739	$2,792	0.0
Warehousing/storage	$0	$2,116	$672	$2,789	0.0
Residential maintenance	$0	$235	$2,472	$2,706	0.0
Other personal svcs	$0	$282	$2,359	$2,640	0.0
Retail-motor veh, parts	$0	$62	$2,514	$2,575	0.0
Other plastics mfg	$0	$1,132	$1,345	$2,477	0.0
Laundry services	$0	$1,137	$1,328	$2,464	0.0
Sightseeing transport	$0	$1,796	$610	$2,405	0.0
State/local transit	$0	$2,017	$355	$2,372	0.0
Commercial leasing	$0	$1,785	$399	$2,184	0.0
Office admin svcs	$0	$1,649	$249	$1,898	0.0
Printing	$0	$1,675	$157	$1,833	0.0
Auto equip rental	$0	$993	$795	$1,788	0.0
Household goods repair	$0	$1,013	$708	$1,721	0.0
Personal care svcs	$0	$0	$1,679	$1,679	0.0
Death care services	$0	$0	$1,616	$1,616	0.0
Other support svcs	$0	$1,432	$147	$1,579	0.0
Natural gas distrib	$0	$634	$917	$1,551	0.0
Retail - furniture	$0	$25	$1,441	$1,466	0.0
Amusement parks	$0	$30	$1,416	$1,446	0.0
Sign manufacturing	$0	$1,298	$134	$1,432	0.0
Other professional svcs	$0	$1,187	$237	$1,424	0.0
Travel reservation svcs	$0	$1,253	$148	$1,401	0.0
Securities, investments	$0	$646	$731	$1,378	0.0
Retail - misc	$0	$33	$1,191	$1,224	0.0
Environmental consulting	$0	$1,041	$133	$1,175	0.0
Retail - Electronics	$0	$30	$1,117	$1,147	0.0
Private households	$0	$0	$1,127	$1,127	0.1
Motion picture industry	$0	$784	$242	$1,025	0.0
Fitness / recreation	$0	$221	$800	$1,021	0.0
Retail - sporting goods	$0	$31	$979	$1,009	0.0
Consumer goods rental	$0	$394	$611	$1,005	0.0
Performing arts comp	$0	$652	$273	$924	0.1
Electronic repair	$0	$464	$422	$886	0.0
Support for businesses	$0	$640	$185	$825	0.0
Architectural svcs	$0	$549	$256	$804	0.0
Other accommodations	$0	$14	$783	$797	0.0
Air transportation	$0	$244	$546	$790	0.0
Specialized design	$0	$508	$259	$767	0.0
Soap and cleaning mfg	$0	$94	$632	$725	0.0
Computer programming	$0	$543	$61	$604	0.0
Photographic services	$0	$337	$235	$571	0.0
S/L electric utils	$0	$329	$242	$570	0.0
Wood window manufac	$0	$303	$241	$543	0.0
Car washes	$0	$152	$389	$541	0.0
Vehicle parts mfg	$0	$305	$231	$536	0.0
Water transportation	$0	$28	$497	$524	0.0
Other recreation indust	$0	$72	$377	$448	0.0
Support for facilities	$0	$367	$77	$443	0.0
Computer systems design	$0	$381	$57	$439	0.0
Newspaper publishers	$0	$357	$60	$417	0.0
Sound recording industry	$0	$190	$170	$360	0.0
Veterinary services	$0	$0	$336	$336	0.0
Unlaminated plastics	$0	$248	$60	$308	0.0
Other information svcs	$0	$177	$113	$290	0.0
Toilet prep mfg	$0	$29	$221	$250	0.0
Funds, trusts, other	$0	$7	$228	$235	0.0
Printing ink mfg	$0	$189	$32	$221	0.0
Radio/TV broacasting	$0	$182	$20	$202	0.0
Mattress mfg	$0	$3	$188	$191	0.0

Fluid milk, butter mfg	$0	$39	$149	$188	0.0
Cheese manufacturing	$0	$86	$93	$179	0.0
Cookingware mfg	$0	$101	$73	$174	0.0
Bowling centers	$0	$86	$83	$169	0.0
Book publishers	$0	$74	$92	$166	0.0
All other paper bag	$0	$95	$67	$162	0.0
Other computer svcs	$0	$134	$12	$146	0.0
Purchased glass mfg	$0	$79	$58	$138	0.0
Showcase, partition mfg	$0	$74	$59	$133	0.0
All other food mfg	$0	$39	$91	$130	0.0
Plastics packaging mfg	$0	$63	$61	$124	0.0
Wood cabinet mfg	$0	$40	$78	$117	0.0
Soft drink/ice mfg	$0	$84	$31	$115	0.0
Wood TV, radio mfg	$0	$0	$111	$112	0.0
Apparel accessories	$0	$32	$78	$110	0.0
Rail transportation	$0	$50	$55	$105	0.0
Misc wood mfg	$0	$41	$54	$96	0.0
Material handling mfg	$0	$51	$40	$91	0.0
Data processing	$0	$62	$29	$91	0.0
Urethane/other mfg	$0	$55	$30	$85	0.0
Nonupholstered mfg	$0	$0	$82	$82	0.0
Video/DVD rental	$0	$0	$78	$78	0.0
Wood container mfg	$0	$35	$39	$75	0.0
Cut & sew contractors	$0	$44	$29	$74	0.0
Ice cream manufac	$0	$44	$28	$73	0.0
Software publishers	$0	$31	$41	$71	0.0
Knitting mills	$0	$1	$67	$68	0.0
Fruit & veg canning	$0	$36	$28	$64	0.0
Other machinery mfg	$0	$35	$26	$61	0.0
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A Brief Summary of the Economic Impact of City of Asylum with Completed Literary Center on Allegheny County, Pennsylvania

In estimating the economic impact of City of Asylum, we used an approximate budget of $1,353,000 per year.[1] City of Asylum currently has under development a new Literary Center that will include a cafe and bookstore; the total budget used in calculating economic impact included estimates of expenditures of the Literary Center as well as the original City of Asylum operations. We calculated the economic impact of 10,000 visitors to City of Asylum per year.[2] Based on discussion with City of Asylum and data available from a neighboring cultural arts organization, we estimated that approximately 35% of visitors come from outside Allegheny County. These 'nonlocal' visitors (an estimated 3,500 per year) bring money, through their local expenditures, into the Allegheny County economy that most likely would otherwise have been spent in their own county.

The results below estimate the total economic impact of City of Asylum using an inter-industry model of the flow of goods and services between sectors of the economy in Allegheny County. Expenditures are made by City of Asylum; those monies circulate through the regional economy. The suppliers of goods and services to City of Asylum increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of City of Asylum. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[3]

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[1] Annual expenditures are based on an email communication with City of Asylum. City of Asylum requested a model that included the literary center with cafe and bookstore that is currently under development.

[2] Our figure of 10,000 visitors to City of Asylum annually is meant to be taken as a minimum estimate of visitors who come to City of Asylum as a destination, who spend a significant amount of time at the site, and thus who most closely match cultural participants surveyed by the Americans for the Arts in their study of the economic impact of visitors to cultural venues (Footnote 3). To estimate the economic impact of City of Asylum based on alternative visitation figures please visit our interactive web page at http://web.williams.edu/web/Economics/ArtsEcon/econpages/c3ddisplay.php?file=COAEconModelCounty.xml where you can update visitor and budget numbers to calculate different economic impact scenarios.

[3] Information on the Americans for the Arts study is available for download at http://www.artsusa.org/information_services/research/services/economic_impact/default.asp. The survey was carefully designed to count only the expenditures directly tied to visiting a cultural organization on a specific day, so as not to 'take credit' for expenditures primarily resulting from an extended vacation or other reasons for traveling.

Results:

- $1,353,000 in annual expenditures by City of Asylum has an estimated economic impact of $2,361,339. Sectors of the Allegheny County regional economy that experience a significant increase in economic activity due to the presence of City of Asylum are promoters of performing arts, food and drinking places, retail book stores, real estate, wholesale trade, insurance, and hospitals and health practitioners. In addition, the expenditures of City of Asylum result in an estimated 35 jobs regionally.

- The local expenditures made by 3,500 visitors from outside Allegheny County to City of Asylum have a total economic impact of approximately $224,483. Sectors of the economy that benefit most from visitor expenditures are food and drinking places, hotels and motels, retail stores, gasoline stations, real estate, wholesale trade, and hospitals. The expenditures of 3,500 nonlocal visitors to City of Asylum result in an additional 3 jobs regionally.

- The total economic impact of City of Asylum consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside Allegheny County. ***The total economic impact of City of Asylum is approximately $2.6 million annually. The total impact in terms of employment in Allegheny County is an estimated 38 jobs.***

The presence of City of Asylum/Pittsburgh in Allegheny County results in benefits to the community and county far beyond its economic impact. This summary is only an estimate of the economic impact of City of Asylum/Pittsburgh and its new Literary Center on the economy of Allegheny County.

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About City of Asylum/Pittsburgh

City of Asylum/Pittsburgh provides two year residencies for writers exiled under threat of death, imprisonment, or persecution in their native countries. In addition to its residency program, City of Asylum hosts public readings, concerts, and its web magazine Sampsonia Way. City of Asylum programming spans languages and cultures, bringing together diverse groups from the greater Pittsburgh area. City of Asylum currently has undertaken to create a new literary center as part of its facility, with a cafe and bookstore.

About the Williams College Center for Creative Community Development (C^3D)

The Center for Creative Community Development (C^3D) was founded in June 2004 with an initial grant from the Ford Foundation and subsequent funding from the Institute of Museum and Library Services (IMLS), Leveraging Investments in Creativity (LINC), Massachusetts Cultural Council (MCC) and others. This report is part of a research initiative on organizations awarded Space for Change planning and pre-development grants. The Space for Change program is funded by LINC in partnership with the Ford Foundation. C^3D is a research organization working to better quantify and characterize the impacts of neighborhood-based arts and cultural

organizations on their surrounding communities. The Center provides sound data and case studies that can be used for case-making as well as for planning and evaluation purposes. Such measurements are essential for communities to manage the process of change, and to ensure equitable distribution of the benefits created by cultural economic development.

C^3D is located on the campus of Williams College in Williamstown, Massachusetts, and is directed by Stephen Sheppard, Class of 2012 Professor of Economics. Professor Sheppard (PhD from Washington University in St Louis) is an economist who specializes in urban and regional economics and the use of economic geography to analyze the impacts of cultural and environmental amenities on housing markets, job creation, and neighborhood development. More information about C^3D and its analyses is available3 at www.c-3-d.org.

About this Study

The economic impacts reported above are based on standard input/output analysis. This type of model has been in use at least since the publication in 1960 of Walter Isard's important book *Methods of Regional Analysis: an Introduction to Regional Science* (M.I.T. Press). An input/output model is a set of mathematical formulas whose values are based on statistical analysis of actual observations. In this case, the formulas are designed to present the workings of the regional economy. The economic impact estimates provided here are the result of a predictive model that estimates the amount of aggregate regional income and employment that is attributable to expenditures by a particular cultural organization and its nonlocal visitors (visitors living outside the county). The model discussed in this report is designed for analysis at the county level, meaning the estimates cover impacts occurring throughout the county.

The input/output model utilizes data from a variety of sources (including the US Bureau of Economic Analysis, the US Bureau of Labor, and the US Census Bureau) to characterize the flow of goods and services among sectors of the economy and the employment and consumption patterns of different sectors of the regional economy. The sectors are identified by NAICS (North American Industry Classification System) codes. Much of the data is collected at the county level through a survey process that examines the spending patterns of representative firms in every sector of the economy in every county in the US. The data collected are used to provide estimates of the purchasing patterns of each sector of the county economy, identifying how much of every dollar spent in one particular sector is received as income in every other sector of the county economy, and how much of every dollar 'leaks' outside the county economy or is considered 'final consumption'. The input/output economic model divides the economy into over 400 sectors ranging from 'Abrasive products' to 'Wood window and door manufacturing'. Not all of these sectors are present in every region. The model also draws heavily on data from the federal ES202 database of unemployment insurance filings and the 'Regional Economic Information System' of the US Bureau of Economic Analysis.

This study was supported by a research grant from LINC in partnership with the Ford Foundation. For more detailed background information on our input/output model for cultural organizations, we encourage you to visit
http://www.williams.edu/Economics/ArtsEcon/econpages/FAQ.html.

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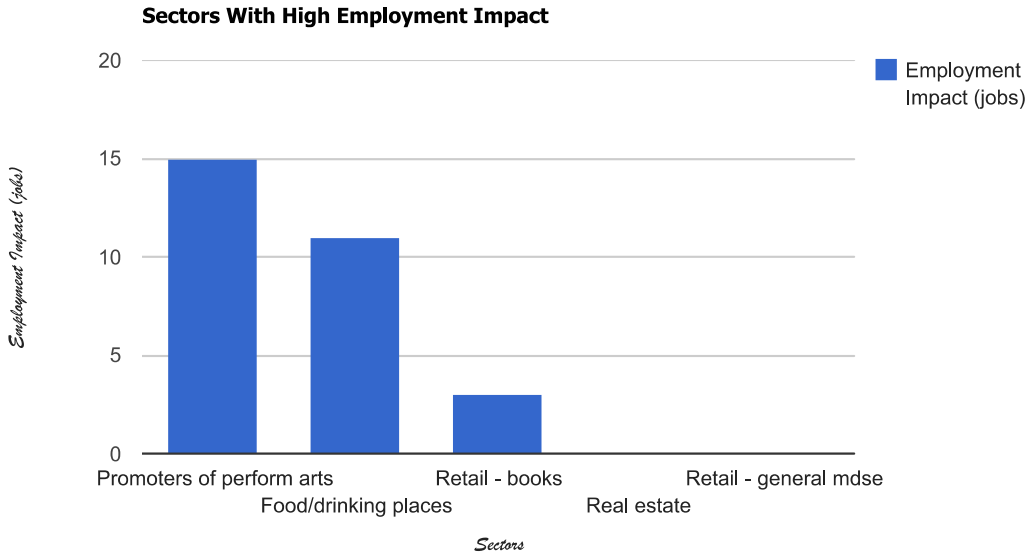
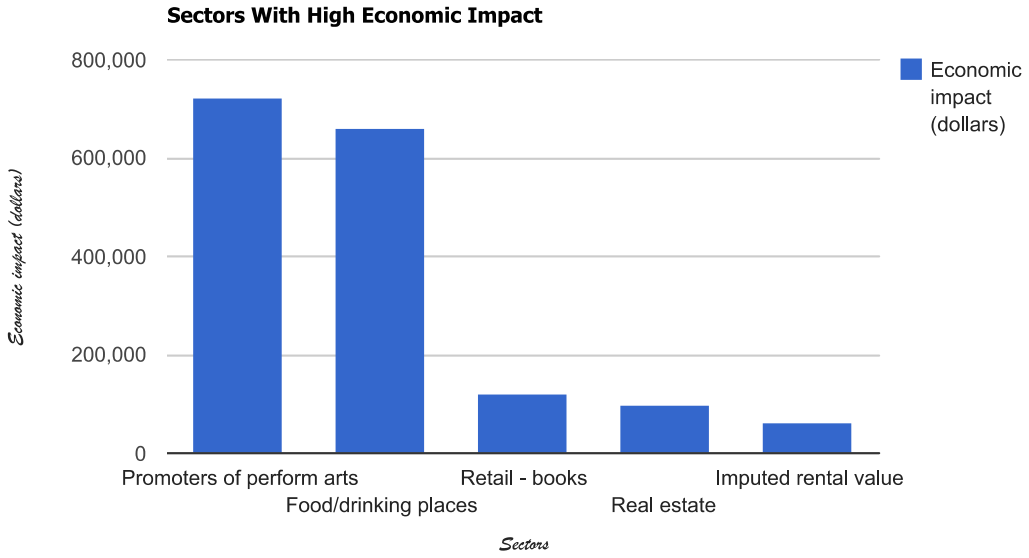
Regional Economic Impact of the City of Asylum with Literary Center Completed

Annual Budget	Visitors	% Non-local	Year	
$1,353,000	10,000	35%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$1,353,000	$567,006	$441,333	**$2,361,339**
Non-local Visitors	$139,510	$37,520	$47,453	**$224,483**
Total Output Impact	**$1,492,510**	**$604,526**	**$488,786**	**$2,585,822**
Total Jobs	29	5	4	38





Description	Direct	Indirect	Induced	Total	Jobs
Promoters of perform arts	$670,000	$51,226	$1,030	$722,257	15.2
Food/drinking places	$624,430	$11,556	$25,264	$661,250	11.3
Retail - books	$118,000	$316	$1,495	$119,812	3.3
Real estate	$0	$67,862	$29,427	$97,288	0.8
Imputed rental value	$0	$0	$62,538	$62,538	0.0
Wholesale trade	$0	$25,455	$21,575	$47,030	0.2
Hotels, motels casinos	$35,315	$2,939	$2,334	$40,588	0.4
Insurance carriers	$0	$19,292	$18,647	$37,939	0.1
Hospitals	$0	$31	$37,825	$37,856	0.3
Health practitioners	$0	$19	$31,201	$31,220	0.2
Retail - general mdse	$24,150	$507	$6,258	$30,915	0.6
Insurance brokers	$0	$24,660	$3,228	$27,889	0.2
Management of companies	$0	$23,194	$4,252	$27,446	0.1
Nonfinan intang lessors	$0	$25,432	$1,257	$26,689	0.0
Legal services	$0	$15,712	$8,961	$24,673	0.1
Management svcs	$0	$20,977	$2,571	$23,548	0.2
Monetary authorities	$0	$10,605	$12,255	$22,859	0.1
Retail - gas stations	$18,795	$116	$1,933	$20,843	0.3
Telecommunications	$0	$13,512	$5,438	$18,950	0.0
Nondepository credit	$0	$9,519	$9,323	$18,843	0.0
Accounting, tax prep	$0	$14,619	$2,922	$17,541	0.1
Advertising	$0	$15,421	$1,580	$17,001	0.1
Employment services	$0	$12,178	$2,403	$14,581	0.3
Radio/TV broacasting	$0	$11,903	$1,265	$13,167	0.0
Civic, social, prof orgs	$0	$8,423	$4,467	$12,890	0.2
Services to buildings	$0	$9,016	$3,297	$12,313	0.2
Truck transportation	$0	$6,964	$3,889	$10,853	0.1
Transit transportation	$0	$10,038	$747	$10,785	0.2
Other educational svcs	$0	$8,273	$2,508	$10,781	0.2
Natural gas distrib	$0	$5,677	$5,049	$10,726	0.0
State/local transit	$0	$9,042	$673	$9,715	0.2
Power generation	$0	$6,851	$2,825	$9,676	0.0
Securities, investments	$0	$5,293	$4,152	$9,446	0.2
Nursing/residential care	$0	$0	$9,268	$9,268	0.1
Retail - food and bev	$0	$438	$8,140	$8,578	0.1
Postal service	$0	$6,970	$1,403	$8,373	0.1
Colleges/universities	$0	$196	$8,009	$8,205	0.1
Oth State/Loc enterprise	$0	$3,212	$4,852	$8,064	0.0
Cable programming	$0	$6,657	$763	$7,421	0.0
Other support svcs	$0	$6,922	$495	$7,418	0.1
Architectural svcs	$0	$5,225	$1,665	$6,890	0.1
Medical labs	$0	$646	$6,208	$6,854	0.0
Nonres maintenance	$0	$5,126	$1,476	$6,602	0.1
Support for businesses	$0	$5,219	$1,118	$6,337	0.1
Retail-motor veh, parts	$0	$394	$5,868	$6,262	0.1
Travel reservation svcs	$0	$5,851	$389	$6,240	0.1
Printing	$0	$5,064	$617	$5,681	0.0
Retail - Nonstore	$0	$158	$5,424	$5,583	0.1
Automotive repair	$0	$2,524	$2,915	$5,439	0.1
Funds, trusts, other	$0	$478	$4,808	$5,286	0.0
Oil & gas extraction	$0	$3,065	$2,145	$5,210	0.0
Newspaper publishers	$0	$4,581	$609	$5,190	0.0
Couriers, messengers	$0	$4,073	$1,096	$5,169	0.0
Waste management	$0	$3,471	$1,397	$4,868	0.0
Warehousing/storage	$0	$3,787	$1,028	$4,815	0.0
Other professional svcs	$0	$3,981	$590	$4,572	0.0
Office admin svcs	$0	$3,907	$617	$4,525	0.0
Other petroleum/coal mfg	$0	$2,709	$1,721	$4,430	0.0
Motion picture industry	$0	$3,088	$1,226	$4,314	0.0
Retail - clothing	$0	$195	$4,056	$4,251	0.1

Bakery/bread mfg	$0	$2,798	$1,428	$4,226	0.0
Retail - health care	$0	$289	$3,870	$4,159	0.1
Environmental consulting	$0	$3,670	$460	$4,130	0.0
Child day care svcs	$1,820	$0	$2,221	$4,041	0.1
Home health care svcs	$0	$0	$4,036	$4,036	0.1
Pharma prep mfg	$0	$5	$3,943	$3,948	0.0
Performing arts comp	$0	$3,420	$522	$3,942	0.1
Amusement parks	$0	$262	$3,503	$3,765	0.0
Retail - building material	$0	$188	$3,550	$3,738	0.1
Auto equip rental	$0	$2,324	$1,250	$3,574	0.0
Individual, family svcs	$0	$0	$3,527	$3,527	0.1
Independent artists	$0	$3,448	$43	$3,490	0.1
Fluid milk, butter mfg	$0	$1,957	$1,479	$3,435	0.0
Spectator sports	$0	$2,557	$838	$3,395	0.0
Residential maintenance	$0	$388	$2,923	$3,311	0.0
Soc Advoc/Grantmkg org	$0	$2	$3,256	$3,258	0.0
Religious organizations	$0	$0	$3,043	$3,043	0.0
Personal care svcs	$0	$0	$3,007	$3,007	0.1
Other personal svcs	$0	$435	$2,521	$2,955	0.0
Retail - misc	$0	$197	$2,612	$2,809	0.1
Security services	$0	$1,948	$829	$2,777	0.1
Internet publishing	$0	$2,452	$231	$2,683	0.0
Air transportation	$0	$1,092	$1,438	$2,531	0.0
Computer systems design	$0	$1,978	$546	$2,524	0.0
Industrial repair	$0	$2,018	$487	$2,505	0.0
Commercial leasing	$0	$2,012	$442	$2,454	0.0
Elem/sec schools	$0	$0	$2,360	$2,360	0.0
Laundry services	$0	$1,393	$938	$2,331	0.0
Data processing	$0	$1,662	$651	$2,313	0.0
Sightseeing transport	$0	$1,595	$644	$2,239	0.0
Rail transportation	$0	$1,330	$755	$2,085	0.0
Scientific research	$0	$1,110	$929	$2,039	0.0
Retail - furniture	$0	$91	$1,932	$2,024	0.0
Non-poultry processing	$0	$1,233	$625	$1,857	0.0
Cookie & cracker mfg	$0	$1,180	$612	$1,792	0.0
Community relief svcs	$0	$0	$1,736	$1,736	0.0
Other recreation indust	$0	$505	$1,230	$1,735	0.0
Other computer svcs	$0	$1,209	$355	$1,564	0.0
Periodical publisher	$0	$1,255	$263	$1,519	0.0
Electronic repair	$0	$902	$565	$1,467	0.0
Petroleum refineries	$0	$869	$544	$1,413	0.0
Seasoning mfg	$0	$1,112	$293	$1,405	0.0
Retail - Electronics	$0	$96	$1,302	$1,398	0.0
Fruit & veg canning	$0	$966	$349	$1,315	0.0
Household goods repair	$0	$834	$436	$1,270	0.0
Water & sewage system	$0	$406	$796	$1,203	0.0
Other plastics mfg	$0	$711	$449	$1,160	0.0
Plastics material mfg	$0	$814	$315	$1,129	0.0
Fitness / recreation	$0	$413	$691	$1,104	0.0
Sound recording industry	$0	$649	$396	$1,045	0.0
Soap and cleaning mfg	$0	$154	$871	$1,025	0.0
Specialized design	$0	$749	$248	$997	0.0
Consumer goods rental	$0	$442	$518	$960	0.0
Veterinary services	$0	$0	$957	$957	0.0
Surgical instrument mfg	$0	$13	$943	$956	0.0
Urethane/other mfg	$0	$779	$140	$919	0.0
Pipeline transportation	$0	$429	$477	$906	0.0
Other chemical mfg	$0	$538	$366	$904	0.0
Death care services	$0	$0	$903	$903	0.0
Computer programming	$0	$693	$209	$902	0.0
Wood window manufac	$0	$670	$230	$900	0.0

Software publishers	$0	$557	$342	$900	0.0
Petroleum lube mfg	$0	$513	$357	$869	0.0
Mailing list publishers	$0	$719	$116	$836	0.0
Surgical appliance mfg	$0	$22	$751	$773	0.0
Private households	$0	$0	$771	$771	0.1
Polystyrene foam mfg	$0	$710	$59	$768	0.0
Cheese manufacturing	$0	$548	$136	$685	0.0
Museums, historical sites	$0	$0	$676	$676	0.0
Other accommodations	$0	$31	$541	$571	0.0
Vehicle parts mfg	$0	$390	$168	$558	0.0
Photographic services	$0	$350	$140	$490	0.0
Toilet prep mfg	$0	$4	$458	$462	0.0
Sign manufacturing	$0	$413	$45	$457	0.0
Wood cabinet mfg	$0	$276	$154	$431	0.0
Water transportation	$0	$46	$371	$417	0.0
Other information svcs	$0	$326	$90	$416	0.0
Electromedical mfg	$0	$1	$384	$384	0.0
Soft drink/ice mfg	$0	$285	$94	$379	0.0
Ophthalmic goods mfg	$0	$6	$362	$368	0.0
Plastics packaging mfg	$0	$255	$111	$366	0.0
Switchgear mfg	$0	$297	$46	$343	0.0
Pipe/fitting mfg	$0	$294	$33	$327	0.0
All other food mfg	$0	$204	$109	$313	0.0
Relay, control mfg	$0	$256	$51	$307	0.0
Female cut & sew mfg	$0	$3	$301	$304	0.0
Support for facilities	$0	$244	$58	$302	0.0
Other comm Equip mfg	$0	$214	$68	$282	0.0
Other commercial mfg	$0	$66	$196	$261	0.0
Video/DVD rental	$0	$0	$261	$261	0.0
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A Brief Summary of the Economic Impact of Dance Place on Washington, DC

In estimating the economic impact of Dance Place, we used an approximate budget of $1,200,000 per year.[1] We calculated the economic impact of 36,600 visitors to Dance Place per year, estimating that 25% of visitors came from outside Washington, DC.[2] These 'nonlocal' visitors (an estimated 9,150 per year) bring money, through their local expenditures, into the Washington, DC economy that most likely would otherwise have been spent in their own county.

The results below estimate the total economic impact of Dance Place using an inter-industry model of the flow of goods and services between sectors of the economy in Washington, DC. Expenditures are made by Dance Place; those monies circulate through the regional economy. The suppliers of goods and services to Dance Place increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of Dance Place. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[3]

Results:

- The $1,200,000 in annual expenditures by Dance Place has an estimated economic impact of $1,885,655. Sectors of the Washington DC regional economy (beyond the promoters of performing arts sector) that experience a significant increase in economic activity due to the presence of Dance Place are real estate, insurance, management services, advertising, and state and local transit. In addition, the expenditures of Dance Place result in an estimated 26 jobs regionally.

- The local expenditures made by 9,150 visitors from outside Washington, DC to Dance Place have a total economic impact of approximately $508,150. Sectors of the economy

[1] Annual expenditures of $1,200,000 are based on FY10 expenses as reported on IRS Form 990.
[2] The figure of 36,600 visitors to Dance Place annually is based on information provided by Dance Place, 11/30/2011. To estimate the economic impact of Dance Place based on alternative visitation figures please visit our interactive web page at http://web.williams.edu/web/Economics/ArtsEcon/econpages/c3ddisplay.php?file=DPEconModelCounty.xml where you can update visitor and budget numbers to calculate different economic impact scenarios.
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that benefit most from visitor expenditures are food and drinking places; hotels and motels; retail stores; gasoline stations; real estate; and advertising. The expenditures of 9,150 nonlocal visitors to Dance Place result in an additional 5 jobs regionally.

- The total economic impact of Dance Place consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside Washington, DC. ***The total economic impact of Dance Place is approximately $2.4 million annually. The total impact in terms of employment in Washington, DC is an estimated 31 jobs.***

The presence of Dance Place in Washington, DC results in benefits to the community and county far beyond its economic impact. This summary is only an estimate of the economic impact of Dance Place on the economy of Washington, DC.

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About Dance Place

Dance Place is a community-based Arts, Education and Community organization in the Brookland neighborhood of Washing, DC. Dance Place offers a wide variety of performing arts and education programs to support the personal growth, physical wellbeing, and community engagement of students and families in the area. Simultaneously, Dance Place has developed as a presenter of national and international dance of high acclaim, offering a year-round dance performance series.

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C^3D is located on the campus of Williams College in Williamstown, Massachusetts, and is directed by Stephen Sheppard, Class of 2012 Professor of Economics. Professor Sheppard (PhD from Washington University in St Louis) is an economist who specializes in urban and regional economics and the use of economic geography to analyze the impacts of cultural and environmental amenities on housing markets, job creation, and neighborhood development.

More information about C^3D and its analyses is available3 at www.c-3-d.org.

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For more detailed background information on our input/output model for cultural organizations, we encourage you to visit http://www.williams.edu/Economics/ArtsEcon/econpages/FAQ.html.

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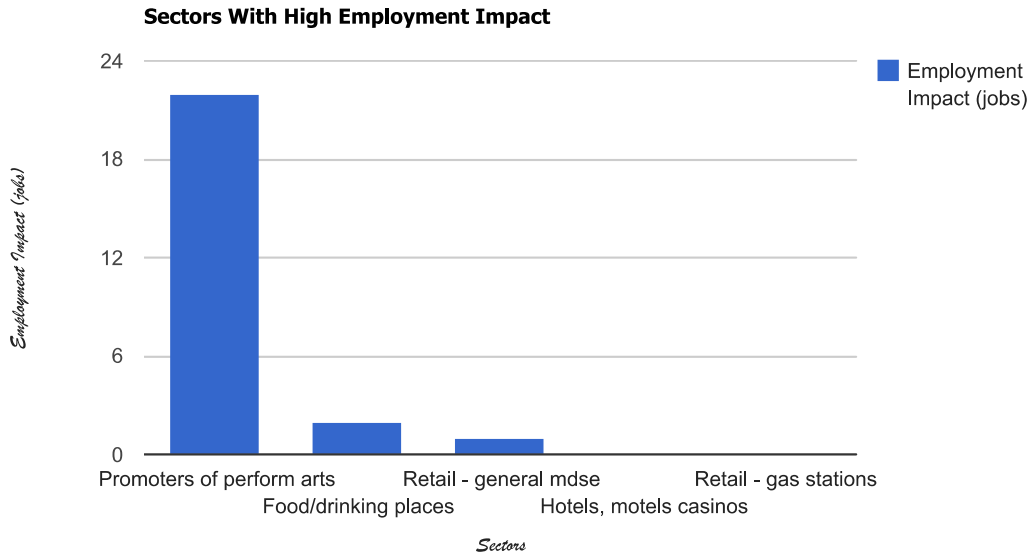
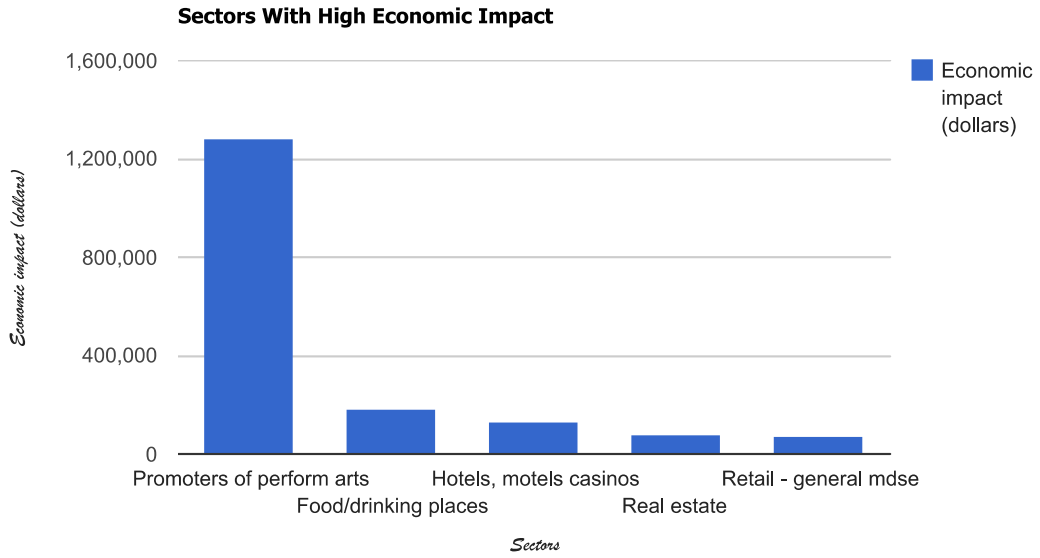
Regional Economic Impact of Dance Place

Annual Budget	Visitors	% Non-local	Year	
$1,200,000	36,600	25%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$1,200,000	$542,553	$143,102	**$1,885,655**
Non-local Visitors	$392,078	$71,597	$44,475	**$508,150**
Total Output Impact	**$1,592,078**	**$614,150**	**$187,577**	**$2,393,804**
Total Jobs	26	4	1	31





Description	Direct	Indirect	Induced	Total	Jobs
Promoters of perform arts	$1,200,000	$81,525	$517	$1,282,042	22.5
Food/drinking places	$156,557	$12,225	$12,045	$180,827	2.2
Hotels, motels casinos	$121,329	$4,940	$1,966	$128,235	0.7
Real estate	$0	$64,047	$11,856	$75,903	0.2
Retail - general mdse	$69,723	$42	$549	$70,314	1.2
Retail - gas stations	$41,541	$17	$229	$41,787	0.6
Advertising	$0	$33,896	$969	$34,865	0.1
Insurance brokers	$0	$33,651	$961	$34,612	0.1
Imputed rental value	$0	$0	$32,989	$32,989	0.0
Management svcs	$0	$30,263	$935	$31,198	0.1
State/local transit	$0	$27,850	$630	$28,480	0.4
Legal services	$0	$18,638	$3,959	$22,598	0.1
Telecommunications	$0	$17,669	$2,997	$20,666	0.0
Nondepository credit	$0	$14,410	$5,822	$20,232	0.0
Management of companies	$0	$18,759	$1,276	$20,035	0.0
Hospitals	$0	$49	$17,709	$17,758	0.1
Employment services	$0	$15,924	$871	$16,795	0.2
Insurance carriers	$0	$10,702	$5,058	$15,759	0.0
Accounting, tax prep	$0	$14,135	$1,039	$15,173	0.1
Civic, social, prof orgs	$0	$12,131	$2,208	$14,340	0.1
Power generation	$0	$11,371	$2,552	$13,923	0.0
Monetary authorities	$0	$9,451	$4,231	$13,682	0.0
Other educational svcs	$0	$12,442	$1,182	$13,623	0.1
Independent artists	$0	$12,303	$39	$12,342	0.1
Securities, investments	$0	$9,835	$2,454	$12,289	0.1
Services to buildings	$0	$10,427	$1,514	$11,941	0.2
Radio/TV broacasting	$0	$9,880	$334	$10,213	0.0
Wholesale trade	$0	$5,648	$4,011	$9,659	0.0
Architectural svcs	$0	$8,654	$785	$9,440	0.0
Nonfinan intang lessors	$0	$8,958	$111	$9,070	0.0
Health practitioners	$0	$11	$8,519	$8,530	0.1
Office admin svcs	$0	$8,128	$331	$8,459	0.1
Travel reservation svcs	$0	$8,220	$152	$8,372	0.1
Oth State/Loc enterprise	$0	$4,252	$3,353	$7,605	0.0
Petroleum refineries	$0	$6,421	$1,016	$7,436	0.0
Other professional svcs	$0	$7,087	$302	$7,389	0.0
Transit transportation	$0	$6,191	$140	$6,332	0.1
Periodical publisher	$0	$5,300	$322	$5,622	0.0
Environmental consulting	$0	$5,209	$161	$5,369	0.0
Postal service	$0	$4,406	$521	$4,927	0.0
Child day care svcs	$2,928	$0	$1,380	$4,308	0.1
Colleges/universities	$0	$143	$4,036	$4,179	0.0
Newspaper publishers	$0	$3,916	$188	$4,104	0.0
Nursing/residential care	$0	$0	$3,978	$3,978	0.1
Medical labs	$0	$999	$2,905	$3,904	0.0
Funds, trusts, other	$0	$518	$3,092	$3,610	0.0
Support for businesses	$0	$3,240	$220	$3,460	0.0
Other govt enterprises	$0	$1,403	$2,015	$3,418	0.0
Retail - food and bev	$0	$102	$2,974	$3,076	0.0
Internet publishing	$0	$2,967	$81	$3,048	0.0
Natural gas distrib	$0	$1,775	$1,015	$2,790	0.0
Performing arts comp	$0	$2,581	$203	$2,784	0.1
Security services	$0	$2,331	$363	$2,695	0.0
Other support svcs	$0	$2,290	$43	$2,333	0.0
Motion picture industry	$0	$1,894	$387	$2,280	0.0
Spectator sports	$0	$1,720	$303	$2,023	0.0
Couriers, messengers	$0	$1,891	$130	$2,021	0.0
Commercial leasing	$0	$1,862	$114	$1,976	0.0
Individual, family svcs	$0	$0	$1,792	$1,792	0.0
Home health care svcs	$0	$0	$1,764	$1,764	0.0

Cable programming	$0	$1,592	$126	$1,718	0.0
Soc Advoc/Grantmkg org	$0	$2	$1,684	$1,686	0.0
Other personal svcs	$0	$499	$1,174	$1,673	0.0
Retail - clothing	$0	$47	$1,536	$1,583	0.0
Amusement parks	$0	$148	$1,433	$1,581	0.0
Religious organizations	$0	$0	$1,575	$1,575	0.0
Support for facilities	$0	$1,481	$93	$1,574	0.0
Retail - health care	$0	$69	$1,446	$1,515	0.0
Computer systems design	$0	$1,338	$147	$1,485	0.0
Nonres maintenance	$0	$1,328	$156	$1,484	0.0
Elem/sec schools	$0	$0	$1,380	$1,380	0.0
Personal care svcs	$0	$0	$1,290	$1,290	0.0
Rail transportation	$0	$876	$369	$1,245	0.0
Specialized design	$0	$1,078	$100	$1,178	0.0
Other computer svcs	$0	$976	$106	$1,082	0.0
Community relief svcs	$0	$0	$975	$975	0.0
Tobacco product mfg	$0	$0	$969	$969	0.0
Scientific research	$0	$680	$278	$958	0.0
Printing	$0	$841	$38	$879	0.0
Retail - Nonstore	$0	$16	$845	$861	0.0
Sound recording industry	$0	$678	$174	$851	0.0
Data processing	$0	$597	$201	$798	0.0
Oil & gas extraction	$0	$615	$137	$752	0.0
Retail - misc	$0	$34	$697	$731	0.0
Mailing list publishers	$0	$610	$116	$726	0.0
Waste management	$0	$569	$112	$681	0.0
Residential maintenance	$0	$129	$523	$651	0.0
Private households	$0	$0	$602	$602	0.0
Fitness / recreation	$0	$295	$293	$587	0.0
Automotive repair	$0	$334	$232	$566	0.0
Auto equip rental	$0	$466	$98	$564	0.0
Retail - building material	$0	$17	$509	$526	0.0
Retail - furniture	$0	$15	$509	$525	0.0
Sightseeing transport	$0	$459	$55	$514	0.0
Retail - sporting goods	$0	$26	$477	$504	0.0
Other information svcs	$0	$441	$50	$491	0.0
Truck transportation	$0	$354	$123	$477	0.0
Other accommodations	$0	$30	$403	$432	0.0
Laundry services	$0	$265	$144	$409	0.0
Bakery/bread mfg	$0	$203	$191	$394	0.0
Other recreation indust	$0	$178	$211	$390	0.0
Museums, historical sites	$0	$0	$352	$352	0.0
Computer programming	$0	$283	$31	$314	0.0
Industrial repair	$0	$270	$30	$300	0.0
Pharma prep mfg	$0	$1	$281	$282	0.0
Retail - Electronics	$0	$11	$237	$248	0.0
Household goods repair	$0	$191	$56	$247	0.0
Warehousing/storage	$0	$229	$17	$246	0.0
Air transportation	$0	$139	$96	$235	0.0
Wood cabinet mfg	$0	$107	$110	$217	0.0
Electronic repair	$0	$154	$57	$211	0.0
Software publishers	$0	$126	$82	$208	0.0
Book publishers	$0	$46	$142	$188	0.0
Consumer goods rental	$0	$116	$60	$177	0.0
Retail-motor veh, parts	$0	$7	$169	$176	0.0
Software, A/V reproducing	$0	$150	$11	$161	0.0
Veterinary services	$0	$0	$160	$160	0.0
Death care services	$0	$0	$118	$118	0.0
Car washes	$0	$37	$56	$93	0.0
Cookie & cracker mfg	$0	$29	$30	$59	0.0
Video/DVD rental	$0	$0	$43	$43	0.0

Water transportation	$0	$8	$29	$37	0.0
Photographic services	$0	$31	$4	$35	0.0
All other food mfg	$0	$16	$17	$34	0.0
Electronic computer mfg	$0	$4	$28	$33	0.0
Printing support	$0	$29	$2	$31	0.0
Recording media mfg	$0	$27	$3	$30	0.0
Water & sewage system	$0	$14	$15	$29	0.0
Telephone equip mfg	$0	$22	$6	$28	0.0
Soap and cleaning mfg	$0	$6	$21	$28	0.0
Male cut & sew mfg	$0	$0	$24	$24	0.0
Other plastics mfg	$0	$18	$6	$24	0.0
Sign manufacturing	$0	$22	$1	$23	0.0
Female cut & sew mfg	$0	$0	$21	$21	0.0
Dental laboratories	$0	$0	$16	$16	0.0
Computer peripheral mfg	$0	$9	$8	$16	0.0
Bowling centers	$0	$10	$5	$15	0.0
Wire/cable mfg	$0	$11	$1	$13	0.0
A/V equip mfg	$0	$3	$9	$12	0.0
Semiconductor mfg	$0	$9	$2	$11	0.0
Adhesive mfg	$0	$3	$6	$10	0.0
Other inorganic mfg	$0	$4	$3	$7	0.0
Wood TV, radio mfg	$0	$0	$7	$7	0.0
Nonupholstered mfg	$0	$0	$7	$7	0.0
Iron and steel mills	$0	$5	$0	$6	0.0
Nonplumb. valve, fittings	$0	$4	$1	$5	0.0
Wood window manufac	$0	$3	$1	$4	0.0
Metal furniture mfg	$0	$0	$4	$4	0.0
Carpet and rug mills	$0	$1	$1	$3	0.0
Breweries	$0	$1	$2	$3	0.0
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A Brief Summary of the Economic Impact of The Heidelberg Project on Wayne County, Michigan

In estimating the economic impact of The Heidelberg Project, we used an approximate budget of $400,000 per year.[1] We calculated the economic impact of 50,000 visitors to the Heidelberg Project per year.[2] Examining address data made available to us by The Heidelberg Project, we calculated that approximately 70% of visitors come from outside Wayne County. These 'nonlocal' visitors (an estimated 35,000 per year) bring money, through their local expenditures, into the Wayne County economy that most likely would otherwise have been spent in their own county.

The results below estimate the total economic impact of The Heidelberg Project using an inter-industry model of the flow of goods and services between sectors of the economy in Wayne County. Expenditures are made by The Heidelberg Project; those monies circulate through the regional economy. The suppliers of goods and services to The Heidelberg Project increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of The Heidelberg Project. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[3]

Results:

- The $400,000 in annual expenditures by The Heidelberg Project has an estimated economic impact of $646,398. Sectors of the Wayne County regional economy (beyond

[1] Annual expenditures of The Heidelberg Project are based on FY10 budget data provided by The Heidelberg Project.

[2] Our figure of 50,000 visitors to The Heidelberg Project annually is meant to be taken as a minimum estimate of visitors who come to The Heidelberg Project as a destination, who spend a significant amount of time at the site, and thus who most closely match cultural participants surveyed by the Americans for the Arts in their study of the economic impact of visitors to cultural venues (Footnote 3). Newspaper articles state annual visitation figures to The Heidelberg Project as being between 250,000 and 300,000 (for example, Bay City Times, 2/7/2008, "Messages of hope" by Pati Lalonde). To estimate the economic impact of The Heidelberg Project based on these higher visitation figures please visit our interactive web page at http://web.williams.edu/web/Economics/ArtsEcon/econpages/c3ddisplay.php?file=HPEconModelCounty.xml where you can update visitor and budget numbers to calculate different economic impact scenarios.

[3] Information on the Americans for the Arts study is available for download at http://www.artsusa.org/information_services/research/services/economic_impact/default.asp. The survey was carefully designed to count only the expenditures directly tied to visiting a cultural organization on a specific day, so as not to 'take credit' for expenditures primarily resulting from an extended vacation or other reasons for traveling.

the museum sector) that experience a significant increase in economic activity due to the presence of The Heidelberg Project are real estate, power generation, insurance carriers, and hospitals. In addition, the expenditures of The Heidelberg Project result in an estimated 5 jobs regionally.

- The local expenditures made by 35,000 visitors from outside Wayne County to The Heidelberg Project have a total economic impact of approximately $2,768,237. Sectors of the economy that benefit most from visitor expenditures are food and drinking places, hotels and motels, retail stores, gasoline stations, and real estate. The expenditures of 35,000 nonlocal visitors to The Heidelberg Project result in an additional 35 jobs regionally.

- The total economic impact of The Heidelberg Project consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside Wayne County. ***The total economic impact of The Heidelberg Project is approximately $3.4 million annually. The total impact in terms of employment in Wayne County is an estimated 40 jobs.***

The presence of The Heidelberg Project in the McDougall-Hunt neighborhood of Detroit results in benefits to the community and county far beyond its economic impact. This summary is only an estimate of the economic impact of The Heidelberg Project on the economy of Wayne County.

***

About The Heidelberg Project

The Heidelberg Project is an outdoor art environment on Heidelberg Street in the McDougall-Hunt neighborhood in Detroit. Tyree Guyton, founder and artist, first began creating art on the houses of Heidelberg Street 25 years ago to draw attention to the forgotten neighborhoods of Detroit and other social issues. “The Polka Dot House”, covered in large brightly colored polka dots, has become an iconic symbol of The Heidelberg Project. Other installations have included “Street Folk”, “The House that Makes Sense”, “The Shoe Tree” and “The Rosa Parks Bus”. Always provocative, The Heidelberg Project has attracted visitors from around world, and at times consternation from City Hall. Currently, The Heidelberg Project is partnering with local businesses, residents, community nonprofits, Foundations, and the City of Detroit to expand the arts installation aspect of The Heidelberg Project into a networked system of living artwork and locally-based economic development.

About the Williams College Center for Creative Community Development (C^3D)

The Center for Creative Community Development (C^3D) was founded in June 2004 with an initial grant from the Ford Foundation and subsequent funding from the Institute of Museum and Library Services (IMLS), Leveraging Investments in Creativity (LINC), Massachusetts Cultural Council (MCC) and others. This report is part of a research initiative on organizations awarded Space for Change planning and pre-development grants. The Space for Change program is funded by LINC in partnership with the Ford Foundation. C^3D is a research organization

working to better quantify and characterize the impacts of neighborhood-based arts and cultural organizations on their surrounding communities. The Center provides sound data and case studies that can be used for case-making as well as for planning and evaluation purposes. Such measurements are essential for communities to manage the process of change, and to ensure equitable distribution of the benefits created by cultural economic development.

C^3D is located on the campus of Williams College in Williamstown, Massachusetts, and is directed by Stephen Sheppard, Class of 2012 Professor of Economics. Professor Sheppard (PhD from Washington University in St Louis) is an economist who specializes in urban and regional economics and the use of economic geography to analyze the impacts of cultural and environmental amenities on housing markets, job creation, and neighborhood development.
More information about C^3D and its analyses is available3 at www.c-3-d.org.

About this Study

The economic impacts reported above are based on standard input/output analysis. This type of model has been in use at least since the publication in 1960 of Walter Isard's important book *Methods of Regional Analysis: an Introduction to Regional Science* (M.I.T. Press). An input/output model is a set of mathematical formulas whose values are based on statistical analysis of actual observations. In this case, the formulas are designed to present the workings of the regional economy of Wayne County. The economic impact estimates provided here are the result of a predictive model that estimates the amount of aggregate regional income and employment that is attributable to expenditures by a particular cultural organization and its nonlocal visitors (visitors living outside the county). The model discussed in this report is designed for analysis at the county level, meaning the estimates cover impacts occurring throughout Wayne County, Michigan.

The input/output model utilizes data from a variety of sources (including the US Bureau of Economic Analysis, the US Bureau of Labor, and the US Census Bureau) to characterize the flow of goods and services among sectors of the economy and the employment and consumption patterns of different sectors of the regional economy. The sectors are identified by NAICS (North American Industry Classification System) codes. Much of the data is collected at the county level through a survey process that examines the spending patterns of representative firms in every sector of the economy in every county in the US. The data collected are used to provide estimates of the purchasing patterns of each sector of the county economy, identifying how much of every dollar spent in one particular sector is received as income in every other sector of the county economy, and how much of every dollar 'leaks' outside the county economy or is considered 'final consumption'. The input/output economic model divides the economy into over 400 sectors ranging from 'Abrasive products' to 'Wood window and door manufacturing'. Not all of these sectors are present in every region. The model also draws heavily on data from the federal ES202 database of unemployment insurance filings and the 'Regional Economic Information System' of the US Bureau of Economic Analysis.

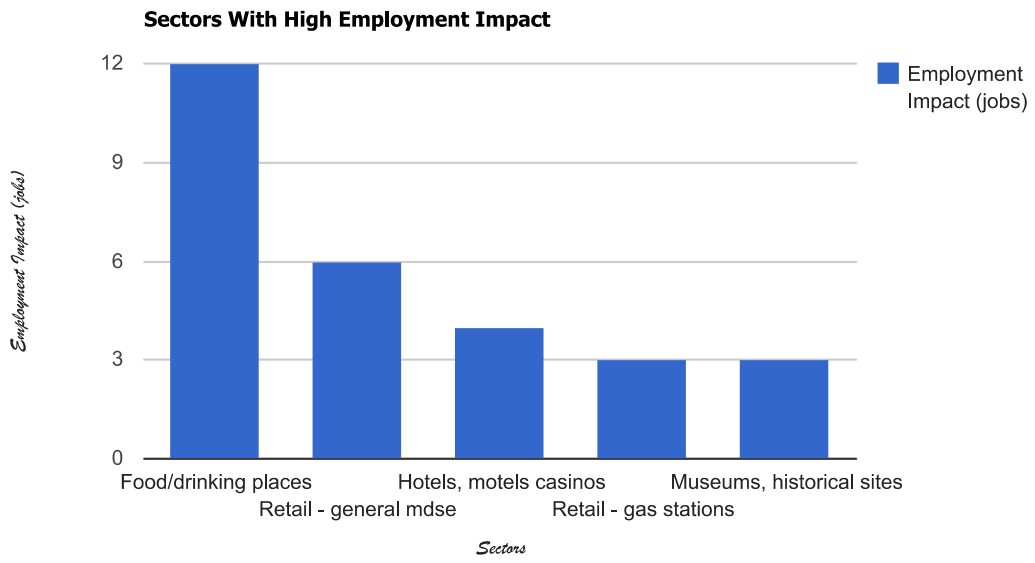
This study was supported by a research grant from LINC in partnership with the Ford Foundation. For more detailed background information we encourage you to visit http://www.williams.edu/Economics/ArtsEcon/econpages/FAQ.html.

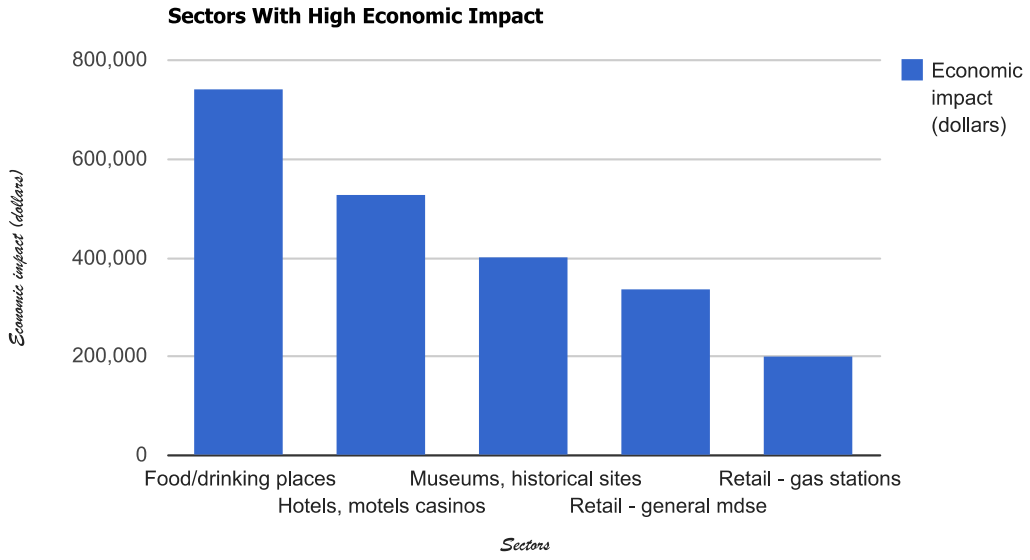
Return | Visitors Map | FAQ

Regional Economic Impact of the Heidelberg Project

Annual Budget	Visitors	% Non-local	Year	
$400,000	50,000	70%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$400,000	$141,875	$104,523	**$646,398**
Non-local Visitors	$1,744,400	$490,921	$532,915	**$2,768,237**
Total Output Impact	**$2,144,400**	**$632,796**	**$637,438**	**$3,414,634**
Total Jobs	31	4	5	40





Description	Direct	Indirect	Induced	Total	Jobs
Food/drinking places	$687,750	$19,939	$34,131	$741,820	12.7
Hotels, motels casinos	$521,850	$3,062	$2,955	$527,867	4.8
Museums, historical sites	$400,000	$0	$853	$400,853	3.7
Retail - general mdse	$325,150	$1,161	$9,408	$335,719	7.0
Retail - gas stations	$196,700	$281	$2,240	$199,220	3.7
Real estate	$0	$94,651	$35,253	$129,904	0.7
Imputed rental value	$0	$0	$82,919	$82,919	0.0
Power generation	$0	$46,182	$11,591	$57,773	0.1
Hospitals	$0	$0	$49,073	$49,074	0.3
Wholesale trade	$0	$23,298	$21,773	$45,071	0.2
Health practitioners	$0	$0	$40,803	$40,803	0.3
Petroleum refineries	$0	$22,392	$17,346	$39,738	0.0
Insurance carriers	$0	$20,169	$18,180	$38,349	0.1
Management of companies	$0	$29,700	$5,304	$35,004	0.2
Advertising	$0	$28,563	$2,565	$31,129	0.2
Telecommunications	$0	$16,151	$7,944	$24,095	0.1
Nondepository credit	$0	$10,286	$12,908	$23,194	0.0
Legal services	$0	$12,524	$10,342	$22,865	0.1
Oth State/Loc enterprise	$0	$12,144	$10,644	$22,788	0.1
Monetary authorities	$0	$7,667	$14,578	$22,244	0.1
Services to buildings	$0	$17,371	$4,011	$21,382	0.3
Natural gas distrib	$0	$13,303	$7,100	$20,403	0.0
Truck transportation	$0	$12,292	$6,887	$19,179	0.1
Management svcs	$0	$16,007	$2,958	$18,965	0.1
Accounting, tax prep	$0	$14,657	$3,452	$18,108	0.2
Child day care svcs	$12,950	$0	$2,946	$15,896	0.4
Employment services	$0	$9,728	$2,928	$12,657	0.3
Non-poultry processing	$0	$8,077	$4,235	$12,312	0.0
Nursing/residential care	$0	$0	$11,622	$11,622	0.2
Medical labs	$0	$4	$11,377	$11,381	0.1
Retail - food and bev	$0	$554	$10,764	$11,319	0.2
Postal service	$0	$9,824	$1,360	$11,184	0.1
Nonres maintenance	$0	$9,230	$1,667	$10,898	0.1
Newspaper publishers	$0	$9,568	$1,074	$10,642	0.1
Radio/TV broacasting	$0	$9,263	$924	$10,187	0.0
Waste management	$0	$7,976	$1,896	$9,872	0.0
Warehousing/storage	$0	$8,376	$1,372	$9,748	0.1
Retail-motor veh, parts	$0	$525	$8,175	$8,700	0.1
Couriers, messengers	$0	$6,581	$1,398	$7,979	0.1
Civic, social, prof orgs	$0	$2,056	$5,828	$7,885	0.1
Mailing list publishers	$0	$6,171	$658	$6,829	0.0
Automotive repair	$0	$3,432	$3,055	$6,487	0.1
Architectural svcs	$0	$4,288	$1,912	$6,200	0.0
Support for businesses	$0	$4,880	$1,314	$6,194	0.1
Funds, trusts, other	$0	$167	$5,906	$6,074	0.0
Nonfinan intang lessors	$0	$5,142	$617	$5,759	0.0
Office admin svcs	$0	$4,505	$1,175	$5,680	0.0
Bakery/bread mfg	$0	$3,705	$1,917	$5,622	0.0
Retail - building material	$0	$269	$5,312	$5,581	0.1
Retail - health care	$0	$370	$5,178	$5,548	0.1
Other educational svcs	$0	$2,245	$3,250	$5,496	0.0
Insurance brokers	$0	$2,761	$2,657	$5,418	0.0
Vehicle parts mfg	$0	$2,321	$2,953	$5,275	0.0
Amusement parks	$0	$198	$4,826	$5,024	0.0
Automobile mfg	$0	$46	$4,915	$4,961	0.0
Securities, investments	$0	$1,230	$3,694	$4,924	0.1
Retail - clothing	$0	$216	$4,691	$4,907	0.1
Sightseeing transport	$0	$3,920	$852	$4,772	0.1
Colleges/universities	$0	$228	$4,532	$4,761	0.1
Individual, family svcs	$0	$0	$4,532	$4,532	0.1

Auto equip rental	$0	$2,694	$1,775	$4,469	0.0
Industrial repair	$0	$3,802	$649	$4,451	0.0
Other professional svcs	$0	$3,400	$1,045	$4,445	0.0
Home health care svcs	$0	$0	$4,444	$4,444	0.1
Fluid milk, butter mfg	$0	$2,404	$1,931	$4,335	0.0
Printing	$0	$3,899	$401	$4,300	0.0
Laundry services	$0	$2,973	$1,241	$4,214	0.1
Soc Advoc/Grantmkg org	$0	$1	$4,167	$4,168	0.0
Periodical publisher	$0	$3,479	$551	$4,030	0.0
Other personal svcs	$0	$629	$3,282	$3,911	0.0
Religious organizations	$0	$0	$3,893	$3,893	0.0
Retail - misc	$0	$248	$3,421	$3,669	0.1
Other support svcs	$0	$2,827	$830	$3,658	0.0
Personal care svcs	$0	$0	$3,549	$3,549	0.1
Residential maintenance	$0	$458	$2,890	$3,348	0.0
Spectator sports	$0	$2,222	$1,056	$3,279	0.0
Scientific research	$0	$2,069	$1,174	$3,242	0.0
Pharma prep mfg	$0	$88	$3,128	$3,216	0.0
Elem/sec schools	$0	$0	$2,985	$2,985	0.1
Polystyrene foam mfg	$0	$2,701	$262	$2,964	0.0
Security services	$0	$1,922	$991	$2,913	0.1
Electronic computer mfg	$0	$448	$2,426	$2,874	0.0
Computer systems design	$0	$2,076	$662	$2,738	0.0
Other computer svcs	$0	$1,970	$671	$2,641	0.0
Retail - Nonstore	$0	$70	$2,523	$2,594	0.1
Air transportation	$0	$979	$1,610	$2,588	0.0
Rail transportation	$0	$1,759	$744	$2,503	0.0
Community relief svcs	$0	$0	$2,257	$2,257	0.0
Retail - sporting goods	$0	$167	$2,044	$2,212	0.1
Electronic repair	$0	$1,455	$739	$2,195	0.0
Performing arts comp	$0	$1,613	$553	$2,165	0.1
All other food mfg	$0	$1,342	$806	$2,148	0.0
Environmental consulting	$0	$1,797	$331	$2,127	0.0
State/Loc electric utils	$0	$1,638	$402	$2,039	0.0
Household goods repair	$0	$1,440	$582	$2,023	0.0
Promoters of perform arts	$0	$625	$1,382	$2,007	0.0
Soap and cleaning mfg	$0	$405	$1,600	$2,005	0.0
Travel reservation svcs	$0	$1,422	$494	$1,916	0.0
Other recreation indust	$0	$429	$1,399	$1,828	0.0
Retail - furniture	$0	$78	$1,724	$1,802	0.0
Commercial leasing	$0	$1,378	$321	$1,699	0.0
Urethane/other mfg	$0	$1,337	$339	$1,677	0.0
Transit transportation	$0	$612	$1,058	$1,670	0.0
Sound recording industry	$0	$791	$700	$1,491	0.0
Data processing	$0	$814	$673	$1,488	0.0
Coffee and tea mfg	$0	$951	$488	$1,438	0.0
Dry dairy products	$0	$990	$436	$1,426	0.0
Cable programming	$0	$1,237	$164	$1,401	0.0
Motion picture industry	$0	$960	$428	$1,387	0.0
Retail - Electronics	$0	$90	$1,281	$1,372	0.0
Plastics material mfg	$0	$866	$439	$1,306	0.0
Consumer goods rental	$0	$579	$703	$1,283	0.0
Petroleum lube mfg	$0	$795	$438	$1,233	0.0
Fitness / recreation	$0	$389	$828	$1,217	0.0
Internet publishing	$0	$1,066	$142	$1,208	0.0
Death care services	$0	$0	$1,132	$1,132	0.0
Private households	$0	$0	$1,053	$1,053	0.1
Specialized design	$0	$748	$300	$1,047	0.0
Surgical appliance mfg	$0	$44	$942	$986	0.0
Soft drink/ice mfg	$0	$672	$285	$957	0.0
Cookie & cracker mfg	$0	$594	$337	$931	0.0

Veterinary services	$0	$0	$913	$913	0.0
Plastics packaging mfg	$0	$598	$248	$845	0.0
Water & sewage system	$0	$380	$416	$797	0.0
Seafood packaging	$0	$681	$109	$790	0.0
Other plastics mfg	$0	$400	$275	$675	0.0
Independent artists	$0	$533	$124	$657	0.0
Pipeline transportation	$0	$385	$234	$619	0.0
Other accommodations	$0	$16	$508	$523	0.0
Oil & gas extraction	$0	$280	$216	$496	0.0
Purchased glass mfg	$0	$219	$269	$488	0.0
Computer programming	$0	$370	$115	$486	0.0
Other petroleum/coal mfg	$0	$260	$223	$483	0.0
Car washes	$0	$173	$300	$473	0.0
Support for facilities	$0	$336	$137	$473	0.0
Mattress mfg	$0	$6	$466	$472	0.0
Other information svcs	$0	$369	$97	$466	0.0
Software, A/V reproducing	$0	$343	$121	$464	0.0
Other chemical mfg	$0	$239	$212	$450	0.0
Seasoning mfg	$0	$340	$93	$433	0.0
Sign manufacturing	$0	$377	$35	$413	0.0
Video/DVD rental	$0	$0	$375	$375	0.0
Wood container mfg	$0	$272	$102	$374	0.0
Plastics bottle mfg	$0	$267	$105	$371	0.0
Aircraft engine mfg	$0	$267	$95	$362	0.0
Snack food mfg	$0	$234	$125	$359	0.0
Tortilla mfg	$0	$203	$128	$332	0.0
Other engine equip mfg	$0	$155	$164	$319	0.0
Software publishers	$0	$96	$219	$315	0.0
Unlaminated plastics	$0	$239	$50	$289	0.0
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A Brief Summary of the Economic Impact of the Heritage Center on the Pine Ridge Indian Reservation

In estimating the economic impact of the Heritage Center, we used an approximate budget of $400,000 per year.[1] We calculated the economic impact of 10,000 visitors to the Heritage Center per year, with approximately 80% coming from outside the Pine Ridge Indian Reservation.[2] These 'nonlocal' visitors (an estimated 8,000 per year) bring money, through their local expenditures, into the Pine Ridge Indian Reservation economy that most likely would otherwise have been spent in their own region.

The Heritage Center is a museum embedded in a private, Jesuit-sponsored school in a local economy with very few industrial sectors. Of the top ten sectors in terms of economic output, six are state and local or federal government sectors. Due to both of these facts – that it is an embedded museum and that the local economy is very sparse – we estimated the impact of the expenditures of the Heritage Center in the private schools and colleges sector rather than in the museum sector, which would have been more typical but is absent in the Pine Ridge economy.

The results below estimate the total economic impact of the Heritage Center using an inter-industry model of the flow of goods and services between sectors of the economy in the Pine Ridge Indian Reservation. Expenditures are made by the Heritage Center; those monies circulate through the regional economy. The suppliers of goods and services to the Heritage Center increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of the Heritage Center. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[3]

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[1] Annual expenditures of $400,000 are based on data received from the Heritage Center concerning 2010 expenses.
[2] Our figure of 10,000 visitors to the Heritage Center annually is based on the article "41st Red Cloud art show 'up a notch'", Rapid City Journal, July 18, 2008, by Sarah Beu at http://rapidcityjournal.com/news/local/article_38fe6e44-9e5c-54d9-b0e9-8aa848df35ab.html To estimate the economic impact of the Heritage Center based on alternative visitation figures please visit our interactive web page at http://web.williams.edu/web/Economics/ArtsEcon/econpages/c3ddisplay.php?file=HCEconModelCounty.xml where you can update visitor and budget numbers to calculate different economic impact scenarios.
[3] Information on the Americans for the Arts study is available for download at http://www.artsusa.org/information_services/research/services/economic_impact/default.asp. The survey was carefully designed to count only the expenditures directly tied to visiting a cultural organization on a specific day, so as not to 'take credit' for expenditures primarily resulting from an extended vacation or other reasons for traveling.

Results:

- The $400,000 in annual expenditures by the Heritage Center has an estimated economic impact of $451,418. Sectors of the Pine Ridge Indian Reservation economy (beyond the private schools and colleges sector) that experience a significant increase in economic activity due to the presence of the Heritage Center are state and local enterprises, state and local electric utilities, rental value, postal service, telecommunications, and food and drinking places. In addition, the expenditures of the Heritage Center result in an estimated 8 jobs regionally.

- The local expenditures made by 8,000 visitors from outside the Pine Ridge Indian Reservation to the Heritage Center have a total economic impact of approximately $468,977. Sectors of the economy that benefit most from visitor expenditures are food and drinking places, hotels and motels, retail stores, gasoline stations, rental values, and state and local enterprises. The expenditures of 8,000 nonlocal visitors to the Heritage Center result in an additional 10 jobs in the Pine Ridge Indian Reservation.

- The total economic impact of the Heritage Center consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside the Pine Ridge Indian Reservation. ***The total economic impact of the Heritage Center is approximately $920,000 annually. The total impact in terms of employment in the Pine Ridge Indian Reservation is an estimated 18 jobs.***

The presence of the Heritage Center in the Pine Ridge Indian Reservation results in benefits to the community far beyond its economic impact. This summary is only an estimate of the economic impact of the Heritage Center on the economy of the Pine Ridge Indian Reservation.

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About the Heritage Center

The Heritage Center museum opened in 1982 at Red Cloud Indian School on the Pine Ridge Reservation in Pine Ridge, South Dakota. The Heritage Center is committed to collecting, preserving, and exhibiting the fine arts of all Native Americans and the tribal arts of the Lakota. The Heritage Center has a particularly fine collection with over two thousand paintings, drawings, and sculptures. The Heritage Center is currently planning enhancements and modifications to its historic building, and developing programs to foster individual cultural and artistic awareness and community economic development.

About the Williams College Center for Creative Community Development (C^3D)

The Center for Creative Community Development (C^3D) was founded in June 2004 with an initial grant from the Ford Foundation and subsequent funding from the Institute of Museum and Library Services (IMLS), Leveraging Investments in Creativity (LINC), Massachusetts Cultural Council (MCC) and others. This report is part of a research initiative on organizations awarded Space for Change planning and pre-development grants. The Space for Change program is funded by LINC in partnership with the Ford Foundation. C^3D is a research organization

working to better quantify and characterize the impacts of neighborhood-based arts and cultural organizations on their surrounding communities. The Center provides sound data and case studies that can be used for case-making as well as for planning and evaluation purposes. Such measurements are essential for communities to manage the process of change, and to ensure equitable distribution of the benefits created by cultural economic development.

C^3D is located on the campus of Williams College in Williamstown, Massachusetts, and is directed by Stephen Sheppard, Class of 2012 Professor of Economics. Professor Sheppard (PhD from Washington University in St Louis) is an economist who specializes in urban and regional economics and the use of economic geography to analyze the impacts of cultural and environmental amenities on housing markets, job creation, and neighborhood development. More information about C^3D and its analyses is available3 at www.c-3-d.org.

About this Study

The economic impacts reported above are based on standard input/output analysis. This type of model has been in use at least since the publication in 1960 of Walter Isard's important book *Methods of Regional Analysis: an Introduction to Regional Science* (M.I.T. Press). An input/output model is a set of mathematical formulas whose values are based on statistical analysis of actual observations. In this case, the formulas are designed to present the workings of the regional economy. The economic impact estimates provided here are the result of a predictive model that estimates the amount of aggregate regional income and employment that is attributable to expenditures by a particular cultural organization and its nonlocal visitors (visitors living outside the county). The model discussed in this report is designed for analysis at the county level, meaning the estimates cover impacts occurring throughout the county.

The input/output model utilizes data from a variety of sources (including the US Bureau of Economic Analysis, the US Bureau of Labor, and the US Census Bureau) to characterize the flow of goods and services among sectors of the economy and the employment and consumption patterns of different sectors of the regional economy. The sectors are identified by NAICS (North American Industry Classification System) codes. Much of the data is collected at the county level through a survey process that examines the spending patterns of representative firms in every sector of the economy in every county in the US. The data collected are used to provide estimates of the purchasing patterns of each sector of the county economy, identifying how much of every dollar spent in one particular sector is received as income in every other sector of the county economy, and how much of every dollar 'leaks' outside the county economy or is considered 'final consumption'. The input/output economic model divides the economy into over 400 sectors ranging from 'Abrasive products' to 'Wood window and door manufacturing'. Not all of these sectors are present in every region. The model also draws heavily on data from the federal ES202 database of unemployment insurance filings and the 'Regional Economic Information System' of the US Bureau of Economic Analysis.

This study was supported by a research grant from LINC in partnership with the Ford Foundation. For more detailed background information on our input/output model for cultural organizations, we encourage you to visit
http://www.williams.edu/Economics/ArtsEcon/econpages/FAQ.html.

the heritage center

C3D CENTER FOR CREATIVE COMMUNITY DEVELOPMENT

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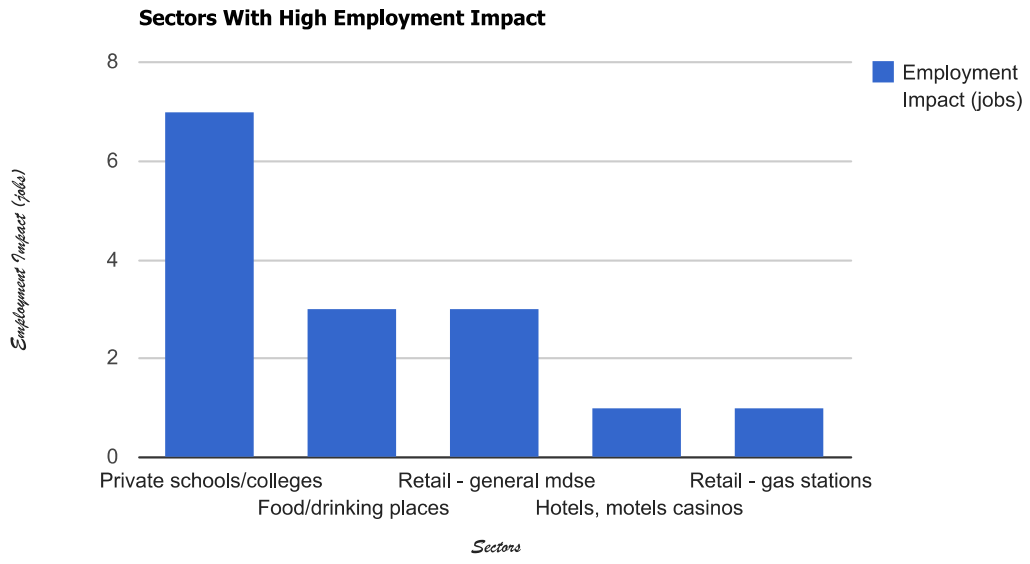
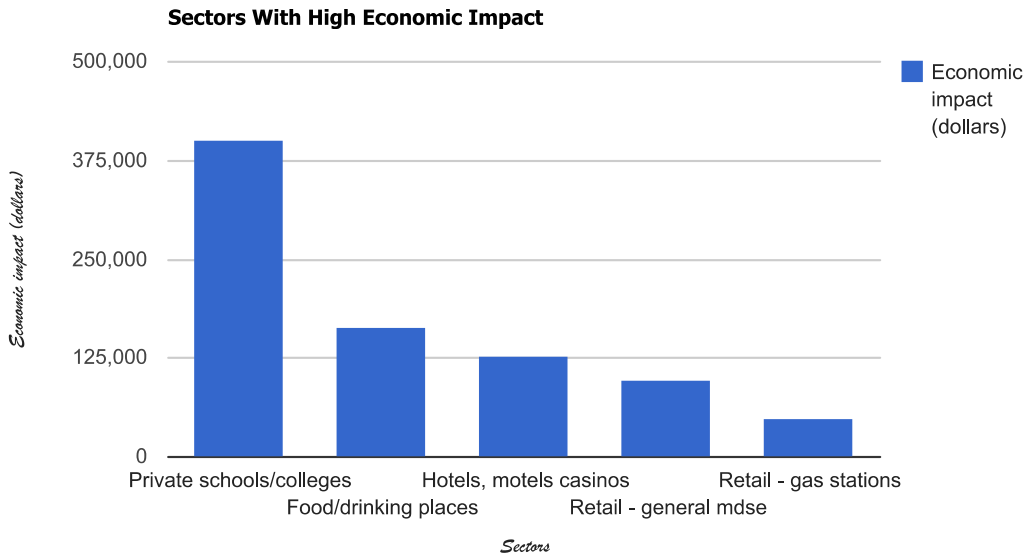
Regional Economic Impact of the Heritage Center

Annual Budget	Visitors	% Non-local	Year	
$400,000	10,000	80%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$400,000	$38,702	$12,716	**$451,418**
Non-local Visitors	$430,800	$18,616	$19,561	**$468,977**
Total Output Impact	**$830,800**	**$57,318**	**$32,277**	**$920,395**
Total Jobs	17	0	0	18





Description	Direct	Indirect	Induced	Total	Jobs
Private schools/colleges	$400,000	$22	$428	$400,450	7.3
Food/drinking places	$159,520	$2,053	$1,720	$163,293	3.5
Hotels, motels casinos	$127,440	$453	$111	$128,005	2.0
Retail - general mdse	$96,240	$3	$23	$96,266	3.1
Retail - gas stations	$47,600	$107	$755	$48,462	1.5
Oth State/Loc enterprise	$0	$25,150	$2,872	$28,021	0.1
Imputed rental value	$0	$0	$17,453	$17,453	0.0
State/Loc electric utils	$0	$10,113	$699	$10,812	0.0
Postal service	$0	$5,073	$113	$5,186	0.0
Telecommunications	$0	$3,482	$563	$4,044	0.0
Radio/TV broacasting	$0	$2,454	$50	$2,503	0.0
Real estate	$0	$1,346	$122	$1,468	0.0
Retail - food and bev	$0	$71	$1,291	$1,362	0.0
Management svcs	$0	$1,055	$32	$1,087	0.0
Retail - Nonstore	$0	$31	$1,040	$1,071	0.0
Individual, family svcs	$0	$0	$1,055	$1,055	0.0
Civic, social, prof orgs	$0	$411	$549	$959	0.0
Newspaper publishers	$0	$720	$24	$744	0.0
Wholesale trade	$0	$537	$184	$721	0.0
Truck transportation	$0	$549	$148	$697	0.0
Performing arts comp	$0	$551	$116	$667	0.0
Scientific research	$0	$622	$8	$630	0.0
Automotive repair	$0	$425	$180	$605	0.0
Insurance carriers	$0	$261	$207	$468	0.0
Residential maintenance	$0	$112	$294	$406	0.0
Health practitioners	$0	$0	$320	$320	0.0
Architectural svcs	$0	$291	$21	$311	0.0
Community relief svcs	$0	$0	$302	$302	0.0
Legal services	$0	$175	$94	$269	0.0
Fitness / recreation	$0	$141	$105	$247	0.0
Death care services	$0	$0	$239	$239	0.0
Soc Advoc/Grantmkg org	$0	$0	$238	$238	0.0
Motion picture industry	$0	$159	$53	$213	0.0
Rail transportation	$0	$162	$49	$211	0.0
Nonres maintenance	$0	$177	$10	$187	0.0
Other accommodations	$0	$23	$109	$132	0.0
Other educational svcs	$0	$101	$29	$130	0.0
Accounting, tax prep	$0	$119	$8	$127	0.0
Religious organizations	$0	$0	$121	$121	0.0
Amusement parks	$0	$5	$100	$105	0.0
Medical labs	$0	$0	$98	$98	0.0
Animal production	$0	$58	$31	$89	0.0
Retail-motor veh, parts	$0	$5	$76	$81	0.0
Retail - misc	$0	$5	$69	$75	0.0
Grain farming	$0	$39	$29	$68	0.0
Retail - sporting goods	$0	$6	$63	$68	0.0
Computer systems design	$0	$55	$1	$57	0.0
Employment services	$0	$49	$2	$51	0.0
Industrial gas mfg	$0	$43	$8	$50	0.0
Sightseeing transport	$0	$31	$6	$37	0.0
Computer programming	$0	$32	$0	$33	0.0
Oilseed farming	$0	$10	$13	$23	0.0
State/local transit	$0	$13	$8	$21	0.0
Nursing/residential care	$0	$0	$20	$20	0.0
Dairy Production	$0	$4	$6	$10	0.0
Nonchoc confectionary	$0	$8	$1	$9	0.0
Other crop farming	$0	$3	$4	$8	0.0
Cattle ranching	$0	$1	$3	$4	0.0
Agriculture support	$0	$1	$2	$3	0.0
Vehicle parts mfg	$0	$0	$0	$0	0.0

Travel trailer/camper mfg	$0	$0	$0	$0	0.0
Aircraft engine mfg	$0	$0	$0	$0	0.0
Motor home mfg	$0	$0	$0	$0	0.0
Aircraft mfg	$0	$0	$0	$0	0.0
Carbon/graphite prod Mfg	$0	$0	$0	$0	0.0
Other aircraft parts mfg	$0	$0	$0	$0	0.0
Truck trailer mfg	$0	$0	$0	$0	0.0
Motor vehicle body mfg	$0	$0	$0	$0	0.0
Guided missile mfg	$0	$0	$0	$0	0.0
Other electronic mfg	$0	$0	$0	$0	0.0
Metal furniture mfg	$0	$0	$0	$0	0.0
Wiring device mfg	$0	$0	$0	$0	0.0
Other electrical mfg	$0	$0	$0	$0	0.0
Automobile mfg	$0	$0	$0	$0	0.0
Heavy duty truck mfg	$0	$0	$0	$0	0.0
Light truck mfg	$0	$0	$0	$0	0.0
Dental equipment mfg	$0	$0	$0	$0	0.0
Propulsion units, parts	$0	$0	$0	$0	0.0
Ophthalmic goods mfg	$0	$0	$0	$0	0.0
Nonupholstered mfg	$0	$0	$0	$0	0.0
Upholstered furniture mfg	$0	$0	$0	$0	0.0
Dental laboratories	$0	$0	$0	$0	0.0
Relay, control mfg	$0	$0	$0	$0	0.0
Mattress mfg	$0	$0	$0	$0	0.0
Showcase, partition mfg	$0	$0	$0	$0	0.0
Office furniture mfg	$0	$0	$0	$0	0.0
Wood cabinet mfg	$0	$0	$0	$0	0.0
Other transportation mfg	$0	$0	$0	$0	0.0
Surgical appliance mfg	$0	$0	$0	$0	0.0
Railroad rolling stock mfg	$0	$0	$0	$0	0.0
Surgical instrument mfg	$0	$0	$0	$0	0.0
Wire/cable mfg	$0	$0	$0	$0	0.0
Ship building/repairing	$0	$0	$0	$0	0.0
Military vehicle mfg	$0	$0	$0	$0	0.0
Motorcycle, bicycle mfg	$0	$0	$0	$0	0.0
Boat building	$0	$0	$0	$0	0.0
Blind and shade mfg	$0	$0	$0	$0	0.0
Bare printed circuit mfg	$0	$0	$0	$0	0.0
Wood TV, radio mfg	$0	$0	$0	$0	0.0
Electron tube mfg	$0	$0	$0	$0	0.0
A/V equip mfg	$0	$0	$0	$0	0.0
Other comm Equip mfg	$0	$0	$0	$0	0.0
Semiconductor mfg	$0	$0	$0	$0	0.0
Capacit/coil/induct mfg	$0	$0	$0	$0	0.0
Electromedical mfg	$0	$0	$0	$0	0.0
Institutional furnit mfg	$0	$0	$0	$0	0.0
Computer peripheral mfg	$0	$0	$0	$0	0.0
Other general machine mfg	$0	$0	$0	$0	0.0
Electronic connector mfg	$0	$0	$0	$0	0.0
Wireless comm Equip	$0	$0	$0	$0	0.0
Telephone equip mfg	$0	$0	$0	$0	0.0
Power handtool mfg	$0	$0	$0	$0	0.0
Other personal svcs	$0	$0	$0	$0	0.0
Switchgear mfg	$0	$0	$0	$0	0.0
Material handling mfg	$0	$0	$0	$0	0.0
Industrial furnace mfg	$0	$0	$0	$0	0.0
Fluid power machinery	$0	$0	$0	$0	0.0
Packaging equip mfg	$0	$0	$0	$0	0.0
Computer storage mfg	$0	$0	$0	$0	0.0
Fridge/freezer mfg	$0	$0	$0	$0	0.0
Navigation instrument mfg	$0	$0	$0	$0	0.0

Environmental control mfg	$0	$0	$0	$0	0.0
Other appliance mfg	$0	$0	$0	$0	0.0
Cooking appliance mfg	$0	$0	$0	$0	0.0
Jewelry, silverware mfg	$0	$0	$0	$0	0.0
Electronic computer mfg	$0	$0	$0	$0	0.0
Power/transformer mfg	$0	$0	$0	$0	0.0
Motor, generator mfg	$0	$0	$0	$0	0.0
Storage battery mfg	$0	$0	$0	$0	0.0
Small electrical mfg	$0	$0	$0	$0	0.0
Personal care svcs	$0	$0	$0	$0	0.0
Lighting fixture mfg	$0	$0	$0	$0	0.0
Analytical instru Mfg	$0	$0	$0	$0	0.0
Signal testing equip mfg	$0	$0	$0	$0	0.0
Fluid meter mfg	$0	$0	$0	$0	0.0
Industrial process mfg	$0	$0	$0	$0	0.0
Irradiation equip mfg	$0	$0	$0	$0	0.0
Watch, clock mfg	$0	$0	$0	$0	0.0
Electric lamp bulb mfg	$0	$0	$0	$0	0.0
Recording media mfg	$0	$0	$0	$0	0.0
Software, A/V reproducing	$0	$0	$0	$0	0.0
Pprimary battery mfg	$0	$0	$0	$0	0.0
Gasket, packing mfg	$0	$0	$0	$0	0.0
Industrial repair	$0	$0	$0	$0	0.0
Other computer svcs	$0	$0	$0	$0	0.0
Household goods repair	$0	$0	$0	$0	0.0
Specialized design	$0	$0	$0	$0	0.0
Environmental consulting	$0	$0	$0	$0	0.0
Laundry services	$0	$0	$0	$0	0.0
Photographic services	$0	$0	$0	$0	0.0
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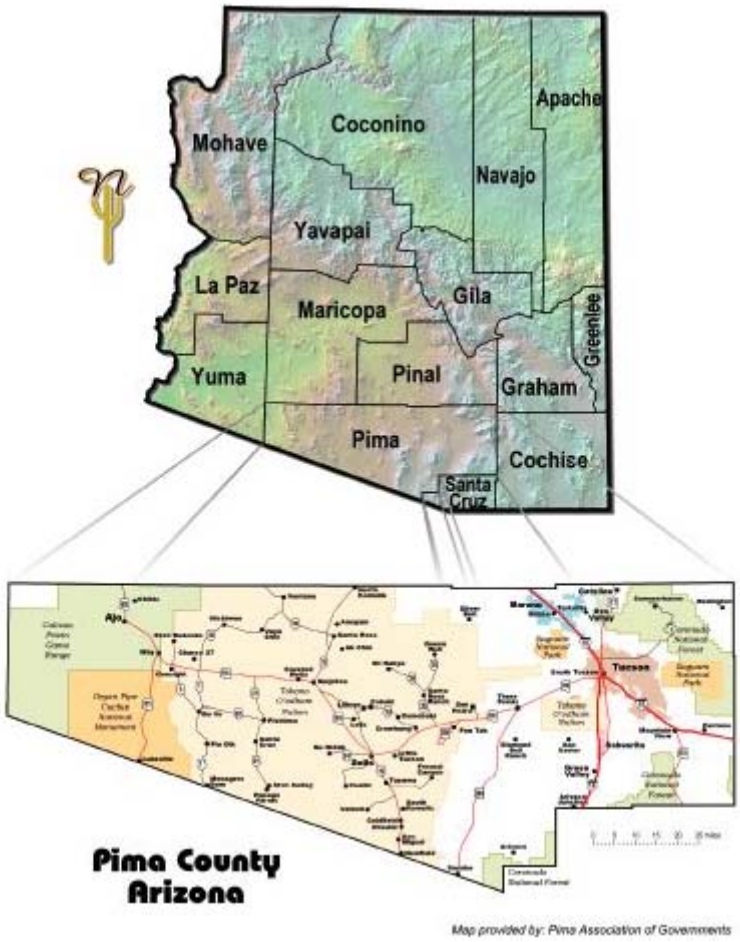
A Brief Summary of the Economic Impact of ISDA on Ajo, Arizona

This brief report summarizes the economic impact that the International Sonoran Desert Alliance (ISDA) has on its local community of Ajo, Arizona. Models of economic impact such as we use typically focus on the county for analysis. It is possible, however, to 'build' an area by combining zip codes to form a region of interest. This approach may be taken to estimate economic impact on a metropolitan area, for instance.

The case of ISDA in Ajo, Arizona is just the opposite type of case. Ajo is small, rural, and isolated. The map in *Figure 1* shows the location of Pima County within Arizona and the location of Ajo in far western Pima County.

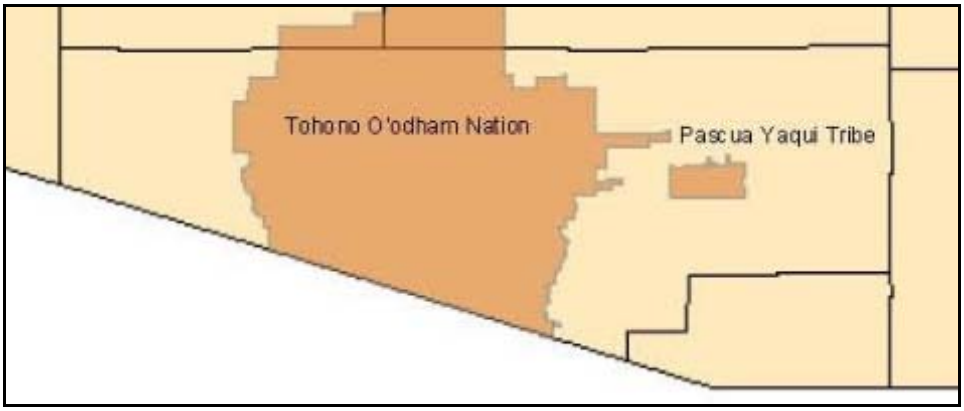
Figure 1: Arizona, Pima County, and Ajo



Source: http://www.pima.gov/areainfo/area.html

Not only is Ajo a small, rural town far from the county seat of Tucson, its isolation is increased by the fact that, as shown in *Figure 2*, between Ajo and Tucson is the 2.7 million acre Tohono O'odham reservation.

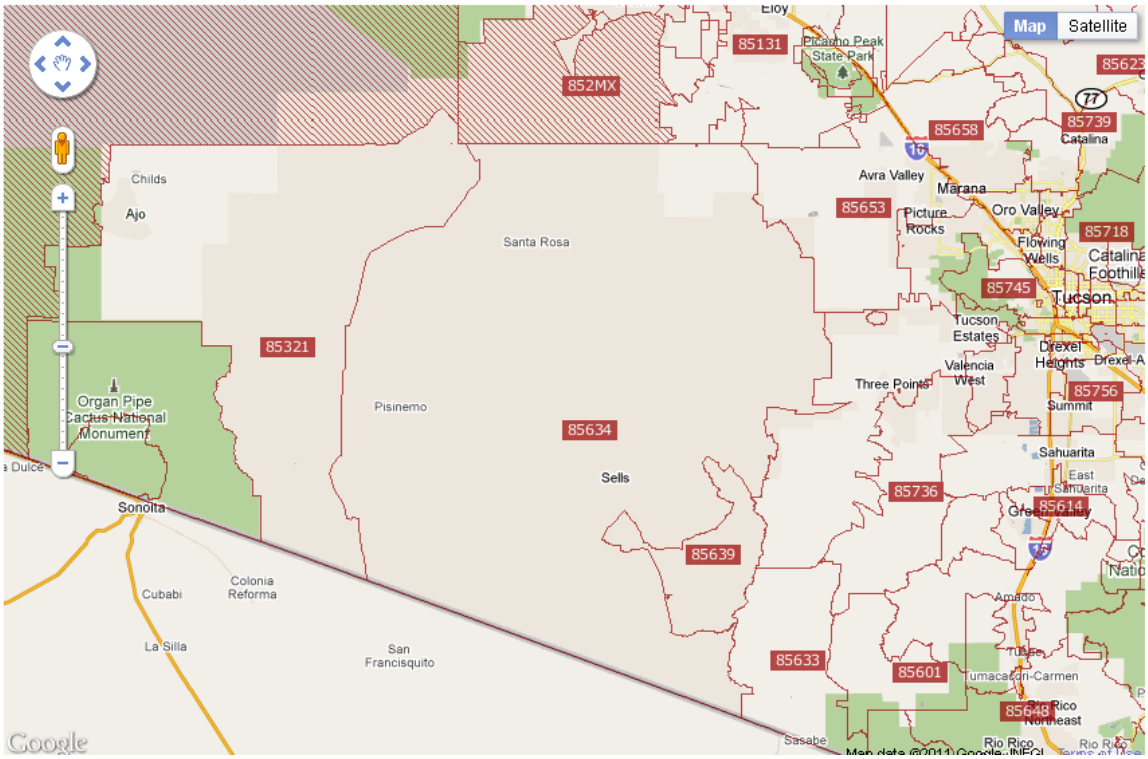
Figure 2: The Location of Tohono O'odham Reservation between Ajo and Tucson



Source: http://www.itcaonline.com/azrezmap.jpg

The special circumstances surrounding Ajo's relationship to Pima County led us to develop an economic impact model for ISDA that was strictly local, indeed, based on Ajo's single zip code of 85321. The map presented in *Figure 3* shows the area covered by zip code 85321.

Figure 3: Ajo's Zip Code 85321



In estimating the economic impact of the International Sonoran Desert Alliance (ISDA), we used an approximate budget of $1,000,000 per year.[1] We calculated the economic impact of 7,000 visitors to ISDA per year, with approximately 80% of visitors coming from outside Ajo.[2] These 'nonlocal' visitors (an estimated 5,600 per year) bring money, through their local expenditures, into the Ajo economy that most likely would otherwise have been spent in their own area.

The results below estimate the total economic impact of ISDA using an inter-industry model of the flow of goods and services between sectors of the economy in Ajo. Expenditures are made by ISDA; those monies circulate through the regional economy. The suppliers of goods and services to ISDA increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of ISDA in Ajo, Arizona. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[3]

Results:

- The $1,000,000 in annual expenditures by ISDA has an estimated economic impact of $1,213,426. Sectors of the Ajo, Arizona regional economy (beyond the social and environmental advocacy sector) that experience a significant increase in economic activity due to the presence of ISDA are rental value, telecommunications, food and drinking places, newspapers, state and local enterprises, and medical labs. In addition, the expenditures of ISDA result in an estimated 10 jobs in Ajo.

- The local expenditures made by 5,600 visitors from outside Ajo, Arizona to ISDA have a total economic impact of approximately $315,609. Sectors of the economy that benefit most from visitor expenditures are food and drinking places, hotels and motels, gasoline stations, retail stores, rental value, power generation, and newspapers. The expenditures of 5,600 nonlocal visitors to ISDA result in an additional 4 jobs in Ajo.

- The total economic impact of ISDA consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside Ajo, Arizona. ***The total***

[1] Annual expenditures of $1,000,000 are based on documents received from ISDA.
[2] Our figure of 7,000 visitors to ISDA annually with 80% nonlocal is based on ISDA's programming as discussed on its web site. To estimate the economic impact of ISDA based on alternative visitation figures please visit our interactive web page at http://web.williams.edu/web/Economics/ArtsEcon/econpages/c3ddisplay.php?file=ISDAEconModelZips.xml where you can update visitor and budget numbers to calculate different economic impact scenarios.
[3] Information on the Americans for the Arts study is available for download at http://www.artsusa.org/information_services/research/services/economic_impact/default.asp. The survey was carefully designed to count only the expenditures directly tied to visiting a cultural organization on a specific day, so as not to 'take credit' for expenditures primarily resulting from an extended vacation or other reasons for traveling.

economic impact of ISDA is approximately $1.5 million annually. The total impact in terms of employment in Ajo, Arizona is an estimated 15 jobs.[4]

The presence of ISDA in Ajo results in benefits to the town far beyond its economic impact. This summary is only an estimate of the economic impact of ISDA on the local economy of Ajo.

***

About ISDA

The International Sonoran Desert Alliance (ISDA) was founded in 1993 to promote conservation, develop solutions to local issues, and provide opportunities for individual and community action. Based in Ajo, Arizona, ISDA seeks to protect and enhance the 10,000 square mile region that encompasses the Sonoran Desert. ISDA's programs are centered on desert conservation, cultural preservation, and economic development. Live/work artist space has been developed at the former Curley School in Ajo, and ISDA is in the process of restoring and revitalizing the historic Ajo town plaza.

About the Williams College Center for Creative Community Development (C^3D)

The Center for Creative Community Development (C^3D) was founded in June 2004 with an initial grant from the Ford Foundation and subsequent funding from the Institute of Museum and Library Services (IMLS), Leveraging Investments in Creativity (LINC), Massachusetts Cultural Council (MCC) and others. This report is part of a research initiative on organizations awarded Space for Change planning and pre-development grants. The Space for Change program is funded by LINC in partnership with the Ford Foundation. C^3D is a research organization working to better quantify and characterize the impacts of neighborhood-based arts and cultural organizations on their surrounding communities. The Center provides sound data and case studies that can be used for case-making as well as for planning and evaluation purposes. Such measurements are essential for communities to manage the process of change, and to ensure equitable distribution of the benefits created by cultural economic development.

C^3D is located on the campus of Williams College in Williamstown, Massachusetts, and is directed by Stephen Sheppard, Class of 2012 Professor of Economics. Professor Sheppard (PhD from Washington University in St Louis) is an economist who specializes in urban and regional economics and the use of economic geography to analyze the impacts of cultural and environmental amenities on housing markets, job creation, and neighborhood development.

More information about C^3D and its analyses is available3 at www.c-3-d.org.

About this Study

The economic impacts reported above are based on standard input/output analysis. This type of model has been in use at least since the publication in 1960 of Walter Isard's important book

[4] The fact that ISDA expenditures support 10 jobs in Ajo, nonlocal visitors support 4 jobs, and combined the impact is 15 jobs is due to rounding errors, especially when reporting in whole numbers.

Methods of Regional Analysis: an Introduction to Regional Science (M.I.T. Press). An input/output model is a set of mathematical formulas whose values are based on statistical analysis of actual observations. In this case, the formulas are designed to present the workings of the regional economy. The economic impact estimates provided here are the result of a predictive model that estimates the amount of aggregate regional income and employment that is attributable to expenditures by a particular cultural organization and its nonlocal visitors (visitors living outside the county). The model discussed in this report is designed for analysis at the county level, meaning the estimates cover impacts occurring throughout the county.

The input/output model utilizes data from a variety of sources (including the US Bureau of Economic Analysis, the US Bureau of Labor, and the US Census Bureau) to characterize the flow of goods and services among sectors of the economy and the employment and consumption patterns of different sectors of the regional economy. The sectors are identified by NAICS (North American Industry Classification System) codes. Much of the data is collected at the county level through a survey process that examines the spending patterns of representative firms in every sector of the economy in every county in the US. The data collected are used to provide estimates of the purchasing patterns of each sector of the county economy, identifying how much of every dollar spent in one particular sector is received as income in every other sector of the county economy, and how much of every dollar 'leaks' outside the county economy or is considered 'final consumption'. The input/output economic model divides the economy into over 400 sectors ranging from 'Abrasive products' to 'Wood window and door manufacturing'. Not all of these sectors are present in every region. The model also draws heavily on data from the federal ES202 database of unemployment insurance filings and the 'Regional Economic Information System' of the US Bureau of Economic Analysis.

This study was supported by a research grant from LINC in partnership with the Ford Foundation.

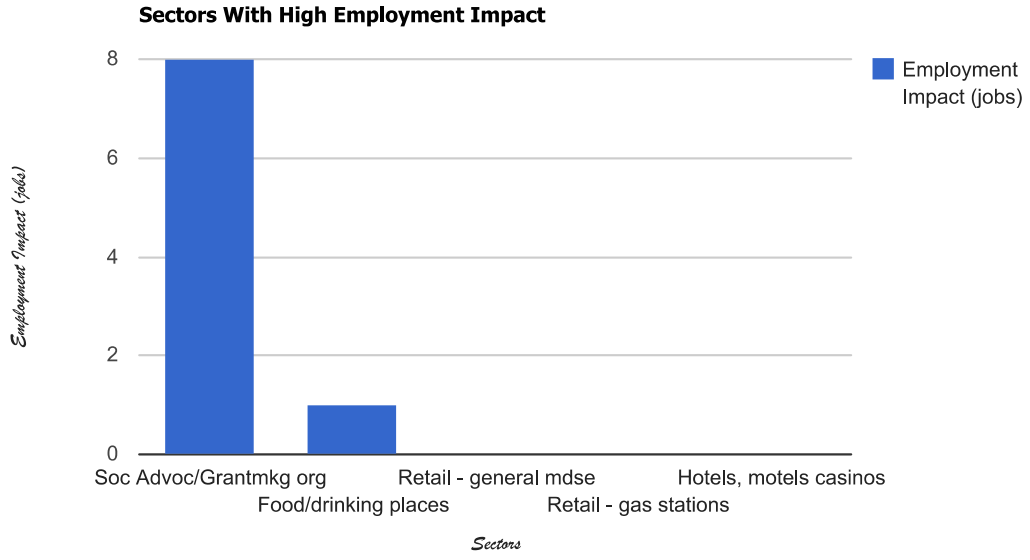
For more detailed background information on our input/output model for cultural organizations, we encourage you to visit http://www.williams.edu/Economics/ArtsEcon/econpages/FAQ.html.

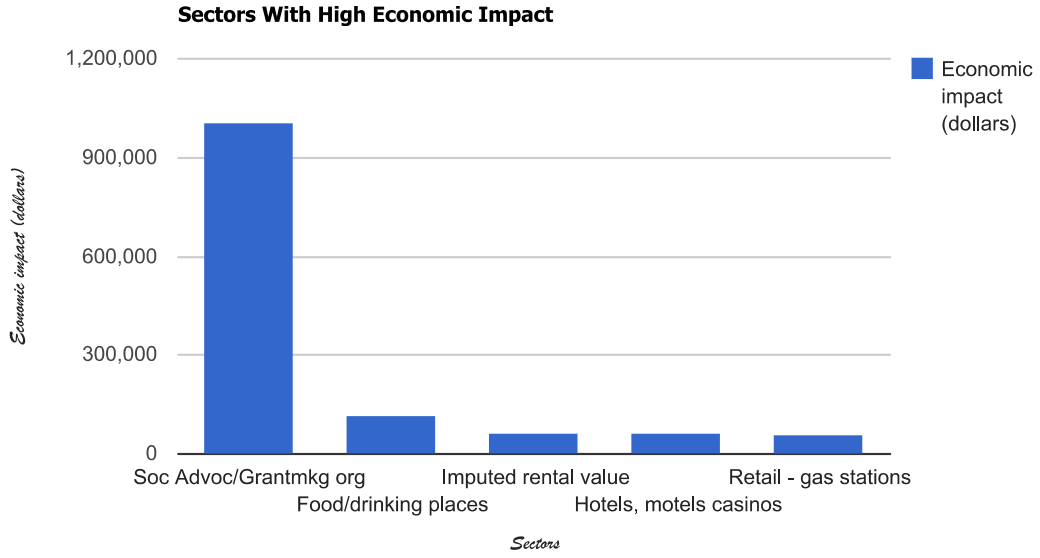
Return | Visitors Map | FAQ

Community Economic Impact of International Sonoran Desert Alliance

Annual Budget	Visitors	% Non-local	Year	
$1,000,000	7,000	80%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$1,000,000	$68,670	$144,756	**$1,213,426**
Non-local Visitors	$267,568	$19,197	$28,844	**$315,609**
Total Output Impact	**$1,267,568**	**$87,867**	**$173,599**	**$1,529,035**
Total Jobs	13	1	1	15





Description	Direct	Indirect	Induced	Total	Jobs
Soc Advoc/Grantmkg org	$1,000,000	$0	$3,437	$1,003,437	9.0
Food/drinking places	$100,240	$5,213	$12,449	$117,902	2.0
Imputed rental value	$0	$0	$65,517	$65,517	0.0
Hotels, motels casinos	$60,088	$3,058	$1,079	$64,225	0.6
Retail - gas stations	$57,456	$141	$2,834	$60,431	0.8
Retail - general mdse	$49,784	$83	$1,969	$51,836	1.0
Telecommunications	$0	$21,309	$5,614	$26,923	0.1
Newspaper publishers	$0	$14,458	$1,157	$15,614	0.1
Power generation	$0	$6,642	$8,648	$15,289	0.0
Oth State/Loc enterprise	$0	$4,919	$7,088	$12,007	0.0
Medical labs	$0	$391	$11,170	$11,561	0.1
Real estate	$0	$7,322	$3,805	$11,127	0.1
Monetary authorities	$0	$4,446	$5,677	$10,123	0.0
Truck transportation	$0	$3,456	$2,336	$5,792	0.0
Postal service	$0	$5,027	$664	$5,691	0.1
Transit transportation	$0	$2,185	$1,753	$3,938	0.1
Individual, family svcs	$0	$0	$3,862	$3,862	0.1
Civic, social, prof orgs	$0	$1,491	$2,254	$3,745	0.1
Health practitioners	$0	$0	$3,649	$3,649	0.0
Retail-motor veh, parts	$0	$90	$3,193	$3,283	0.0
Amusement parks	$0	$22	$3,210	$3,232	0.1
Residential maintenance	$0	$69	$2,262	$2,331	0.0
Accounting, tax prep	$0	$1,980	$242	$2,222	0.0
Funds, trusts, other	$0	$15	$2,179	$2,194	0.0
Retail - health care	$0	$64	$2,045	$2,109	0.0
Community relief svcs	$0	$0	$1,929	$1,929	0.0
Other recreation indust	$0	$543	$1,152	$1,695	0.0
Insurance carriers	$0	$517	$1,111	$1,628	0.0
Retail - food and bev	$0	$34	$1,498	$1,532	0.0
Travel reservation svcs	$0	$1,315	$116	$1,431	0.0
Oil & gas extraction	$0	$473	$942	$1,415	0.0
Retail - building material	$0	$31	$1,381	$1,411	0.0
Rail transportation	$0	$531	$777	$1,308	0.0
Private households	$0	$0	$1,173	$1,173	0.1
Retail - Electronics	$0	$34	$1,096	$1,130	0.0
Cable programming	$0	$890	$195	$1,085	0.0
Personal care svcs	$0	$0	$933	$933	0.0
Cu,Pb,Ni,Zn Mining	$0	$705	$26	$731	0.0
Other accommodations	$0	$13	$598	$610	0.0
Greenhouse production	$0	$136	$406	$542	0.0
Child day care svcs	$0	$0	$541	$541	0.0
Retail - sporting goods	$0	$19	$516	$534	0.0
Retail - clothing	$0	$8	$404	$412	0.0
Insurance brokers	$0	$99	$184	$283	0.0
Other govt enterprises	$0	$69	$155	$223	0.0
Animal production	$0	$27	$101	$128	0.0
Religious organizations	$0	$0	$110	$110	0.0
Other mineral mining	$0	$8	$56	$64	0.0
Poultry production	$0	$5	$45	$50	0.0
State/Loc electric utils	$0	$12	$14	$26	0.0
Dairy Production	$0	$8	$17	$25	0.0
Cotton farming	$0	$5	$11	$16	0.0
Cattle ranching	$0	$1	$7	$8	0.0
Tree nut farming	$0	$0	$7	$7	0.0
State/local transit	$0	$3	$3	$6	0.0
Grain farming	$0	$2	$3	$6	0.0
Water transportation	$0	$0	$3	$3	0.0
Forest nurseries	$0	$0	$0	$0	0.0
Ship building/repairing	$0	$0	$0	$0	0.0
Guided missile mfg	$0	$0	$0	$0	0.0

Propulsion units, parts	$0	$0	$0	$0	0.0
Other aircraft parts mfg	$0	$0	$0	$0	0.0
Railroad rolling stock mfg	$0	$0	$0	$0	0.0
Aircraft engine mfg	$0	$0	$0	$0	0.0
Travel trailer/camper mfg	$0	$0	$0	$0	0.0
Aircraft mfg	$0	$0	$0	$0	0.0
Jewelry, silverware mfg	$0	$0	$0	$0	0.0
Vehicle parts mfg	$0	$0	$0	$0	0.0
A/V equip mfg	$0	$0	$0	$0	0.0
Blind and shade mfg	$0	$0	$0	$0	0.0
Dental equipment mfg	$0	$0	$0	$0	0.0
Military vehicle mfg	$0	$0	$0	$0	0.0
Wood TV, radio mfg	$0	$0	$0	$0	0.0
Ophthalmic goods mfg	$0	$0	$0	$0	0.0
Institutional furnit mfg	$0	$0	$0	$0	0.0
Office furniture mfg	$0	$0	$0	$0	0.0
Surgical instrument mfg	$0	$0	$0	$0	0.0
Surgical appliance mfg	$0	$0	$0	$0	0.0
Motor home mfg	$0	$0	$0	$0	0.0
Showcase, partition mfg	$0	$0	$0	$0	0.0
Boat building	$0	$0	$0	$0	0.0
Other electronic mfg	$0	$0	$0	$0	0.0
Other transportation mfg	$0	$0	$0	$0	0.0
Mattress mfg	$0	$0	$0	$0	0.0
Motorcycle, bicycle mfg	$0	$0	$0	$0	0.0
Wood cabinet mfg	$0	$0	$0	$0	0.0
Upholstered furniture mfg	$0	$0	$0	$0	0.0
Metal furniture mfg	$0	$0	$0	$0	0.0
Nonupholstered mfg	$0	$0	$0	$0	0.0
Sporting goods mfg	$0	$0	$0	$0	0.0
Laundry equip mfg	$0	$0	$0	$0	0.0
Electronic connector mfg	$0	$0	$0	$0	0.0
Circuit assembly mfg	$0	$0	$0	$0	0.0
Capacit/coil/induct mfg	$0	$0	$0	$0	0.0
Semiconductor mfg	$0	$0	$0	$0	0.0
Bare printed circuit mfg	$0	$0	$0	$0	0.0
Electromedical mfg	$0	$0	$0	$0	0.0
Dental laboratories	$0	$0	$0	$0	0.0
Fluid meter mfg	$0	$0	$0	$0	0.0
Signal testing equip mfg	$0	$0	$0	$0	0.0
Industrial process mfg	$0	$0	$0	$0	0.0
Environmental control mfg	$0	$0	$0	$0	0.0
Navigation instrument mfg	$0	$0	$0	$0	0.0
Electron tube mfg	$0	$0	$0	$0	0.0
Doll,toy,game mfg	$0	$0	$0	$0	0.0
Computer peripheral mfg	$0	$0	$0	$0	0.0
Fluid power machinery	$0	$0	$0	$0	0.0
Packaging equip mfg	$0	$0	$0	$0	0.0
Other general machine mfg	$0	$0	$0	$0	0.0
Power handtool mfg	$0	$0	$0	$0	0.0
Electronic computer mfg	$0	$0	$0	$0	0.0
Computer storage mfg	$0	$0	$0	$0	0.0
Other comm Equip mfg	$0	$0	$0	$0	0.0
Wireless comm Equip	$0	$0	$0	$0	0.0
Telephone equip mfg	$0	$0	$0	$0	0.0
Performing arts comp	$0	$0	$0	$0	0.0
Analytical instru Mfg	$0	$0	$0	$0	0.0
Irradiation equip mfg	$0	$0	$0	$0	0.0
Wire/cable mfg	$0	$0	$0	$0	0.0
Wiring device mfg	$0	$0	$0	$0	0.0
Pprimary battery mfg	$0	$0	$0	$0	0.0

Storage battery mfg	$0	$0	$0	$0	0.0
Relay, control mfg	$0	$0	$0	$0	0.0
Carbon/graphite prod Mfg	$0	$0	$0	$0	0.0
Other electrical mfg	$0	$0	$0	$0	0.0
Motor vehicle body mfg	$0	$0	$0	$0	0.0
Heavy duty truck mfg	$0	$0	$0	$0	0.0
Light truck mfg	$0	$0	$0	$0	0.0
Automobile mfg	$0	$0	$0	$0	0.0
Switchgear mfg	$0	$0	$0	$0	0.0
Motor, generator mfg	$0	$0	$0	$0	0.0
Electric lamp bulb mfg	$0	$0	$0	$0	0.0
Lighting fixture mfg	$0	$0	$0	$0	0.0
Recording media mfg	$0	$0	$0	$0	0.0
Software, A/V reproducing	$0	$0	$0	$0	0.0
Watch, clock mfg	$0	$0	$0	$0	0.0
Small electrical mfg	$0	$0	$0	$0	0.0
Cooking appliance mfg	$0	$0	$0	$0	0.0
Power/transformer mfg	$0	$0	$0	$0	0.0
Other appliance mfg	$0	$0	$0	$0	0.0
Office supplies mfg	$0	$0	$0	$0	0.0
Fridge/freezer mfg	$0	$0	$0	$0	0.0
Truck trailer mfg	$0	$0	$0	$0	0.0
Periodical publisher	$0	$0	$0	$0	0.0
Home health care svcs	$0	$0	$0	$0	0.0
Other educational svcs	$0	$0	$0	$0	0.0
Colleges/universities	$0	$0	$0	$0	0.0
Elem/sec schools	$0	$0	$0	$0	0.0
Hospitals	$0	$0	$0	$0	0.0
Nursing/residential care	$0	$0	$0	$0	0.0
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A Brief Summary of the Economic Impact of Intersection for the Arts on San Francisco

In estimating the economic impact of Intersection for the Arts, we used an approximate budget of $1,700,000 per year.[1] We calculated the economic impact of 20,000 visitors to Intersection for the Arts per year, estimating that 30% of visitors come from outside San Francisco.[2] These 'nonlocal' visitors (an estimated 6,000 per year) bring money, through their local expenditures, into the San Francisco economy that most likely would otherwise have been spent in their own county.

The results below estimate the total economic impact of Intersection for the Arts using an inter-industry model of the flow of goods and services between sectors of the economy in San Francisco. Expenditures are made by Intersection for the Arts; those monies circulate through the regional economy. The suppliers of goods and services to Intersection for the Arts increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of Intersection for the Arts. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[3]

Results:

- The $1,700,000 in annual expenditures by Intersection for the Arts has an estimated economic impact of $3,060,939. Sectors of the San Francisco regional economy (beyond the promoters of performing arts sector) that experience a significant increase in economic activity due to the presence of Intersection for the Arts are real estate, independent artists, insurance, advertising, and management services. In addition, the expenditures of Intersection for the Arts result in an estimated 41 jobs in San Francisco.

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[1]The annual expenditure figure of Intersection for the Arts is based on its IRS Form 990 for FY2010.

[2] Our figure of 20,000 visitors to Intersection for the Arts annually, 30% of whom are nonlocal, is based on data provided by Intersection for the Arts. To estimate the economic impact of Intersection for the Arts based on alternative visitation figures please visit our interactive web page at http://web.williams.edu/web/Economics/ArtsEcon/econpages/c3ddisplay.php?file=IAEconModelCounty.xml where you can update visitor and budget numbers to calculate different economic impact scenarios.

[3] Information on the Americans for the Arts study is available for download at http://www.artsusa.org/information_services/research/services/economic_impact/default.asp. The survey was carefully designed to count only the expenditures directly tied to visiting a cultural organization on a specific day, so as not to 'take credit' for expenditures primarily resulting from an extended vacation or other reasons for traveling.

- The local expenditures made by 6,000 visitors from outside San Francisco to Intersection for the Arts have a total economic impact of approximately $523,814. Sectors of the economy that benefit most from visitor expenditures are food and drinking places, hotels and motels, retail stores, gasoline stations, real estate, wholesale trade, and insurance. The expenditures of 6,000 nonlocal visitors to Intersection for the Arts result in an additional 4 jobs in San Francisco.

- The total economic impact of Intersection for the Arts consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside San Francisco. ***The total economic impact of Intersection for the Arts is approximately $3.6 million annually. The total impact in terms of employment in San Francisco is an estimated 45 jobs.***

The presence of Intersection for the Arts in San Francisco results in benefits to the community and county far beyond its economic impact. This summary is only an estimate of the economic impact of Intersection for the Arts on the economy of San Francisco.

***

About Intersection for the Arts

Founded in San Francisco in the 1960s, Intersection's primary commitment is to testing and transcending boundaries through art. These boundaries can be around the meaning of art itself, or they can be boundaries separating fragmented segments of the community. The role of cultural space in building and rebuilding community, even as our concept of what counts as community evolves, is central to Intersection's current concerns. Intersection for the Arts partners with more than 85 neighborhood organizations as part of its offering of a wide range of arts programs, including workshops, gallery exhibitions and tours, youth literary programs, jazz performances, and theatre. Intersection for the Arts recently moved to the historic 1920s home of the San Francisco Chronicle as part of the new 5M (5th and Mission) community in San Francisco's South of Market area.

About the Williams College Center for Creative Community Development (C^3D)

The Center for Creative Community Development (C^3D) was founded in June 2004 with an initial grant from the Ford Foundation and subsequent funding from the Institute of Museum and Library Services (IMLS), Leveraging Investments in Creativity (LINC), Massachusetts Cultural Council (MCC) and others. This report is part of a research initiative on organizations awarded Space for Change planning and pre-development grants. The Space for Change program is funded by LINC in partnership with the Ford Foundation. C^3D is a research organization working to better quantify and characterize the impacts of neighborhood-based arts and cultural organizations on their surrounding communities. The Center provides sound data and case studies that can be used for case-making as well as for planning and evaluation purposes. Such measurements are essential for communities to manage the process of change, and to ensure equitable distribution of the benefits created by cultural economic development.

C^3D is located on the campus of Williams College in Williamstown, Massachusetts, and is directed by Stephen Sheppard, Class of 2012 Professor of Economics. Professor Sheppard (PhD from Washington University in St Louis) is an economist who specializes in urban and regional economics and the use of economic geography to analyze the impacts of cultural and environmental amenities on housing markets, job creation, and neighborhood development.

More information about C^3D and its analyses is available3 at www.c-3-d.org.

About this Study

The economic impacts reported above are based on standard input/output analysis. This type of model has been in use at least since the publication in 1960 of Walter Isard's important book *Methods of Regional Analysis: an Introduction to Regional Science* (M.I.T. Press). An input/output model is a set of mathematical formulas whose values are based on statistical analysis of actual observations. In this case, the formulas are designed to present the workings of the regional economy. The economic impact estimates provided here are the result of a predictive model that estimates the amount of aggregate regional income and employment that is attributable to expenditures by a particular cultural organization and its nonlocal visitors (visitors living outside the county). The model discussed in this report is designed for analysis at the county level, meaning the estimates cover impacts occurring throughout the county.

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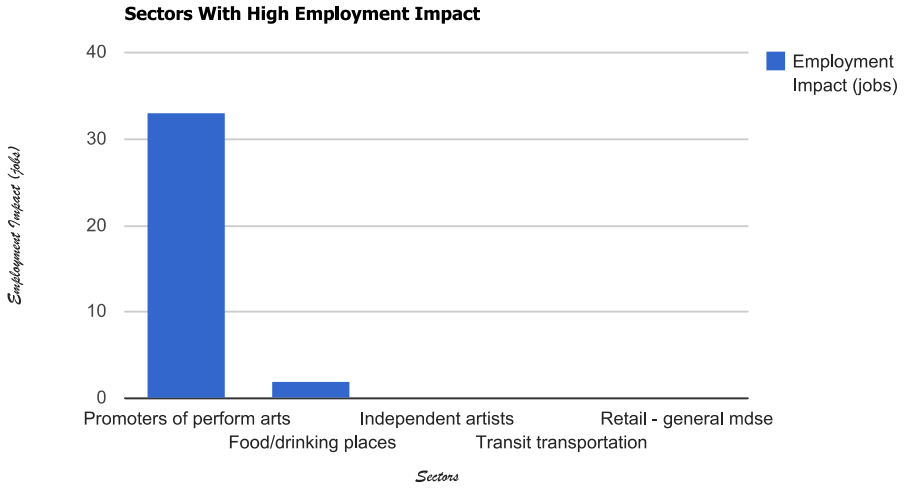
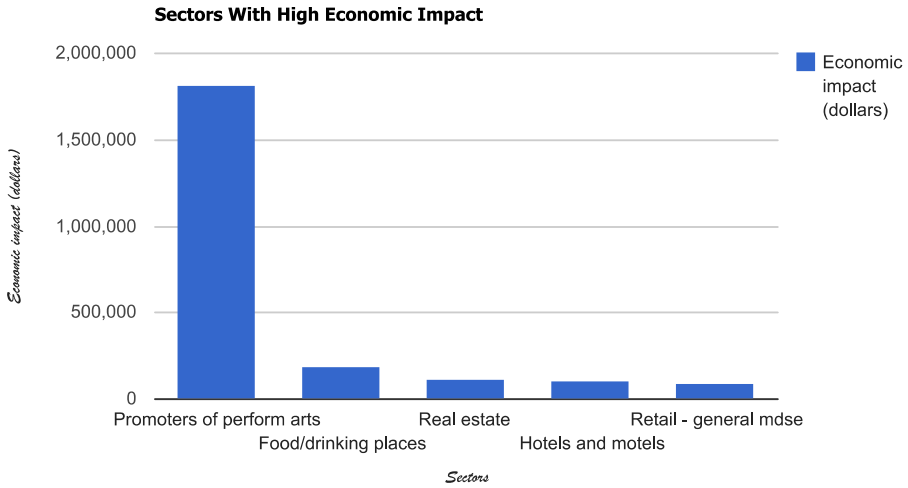
Regional Economic Impact of Intersection for the Arts

Annual Budget	Visitors	% Non-local	Year	
$1,700,000	20,000	30%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$1,700,000	$924,051	$436,889	**$3,060,939**
Non-local Visitors	$355,680	$80,624	$87,511	**$523,814**
Total Output Impact	**$2,055,680**	**$1,004,674**	**$524,400**	**$3,584,754**
Total Jobs	34	8	3	45





Description	Direct	Indirect	Induced	Total	Jobs
Promoters of perform arts	$1,700,000	$116,082	$1,294	$1,817,376	33.0
Food/drinking places	$138,600	$16,447	$30,481	$185,528	2.3
Real estate	$0	$86,832	$26,531	$113,363	0.4
Hotels and motels	$99,000	$5,969	$4,273	$109,242	0.6
Retail - general mdse	$77,040	$376	$8,881	$86,297	0.7
Imputed rental value	$0	$0	$82,369	$82,369	0.0
Independent artists	$0	$81,203	$513	$81,716	0.8
Insurance brokers	$0	$51,201	$3,550	$54,751	0.2
Advertising	$0	$47,461	$3,115	$50,576	0.3
Insurance carriers	$0	$26,264	$22,167	$48,431	0.1
Management svcs	$0	$43,248	$2,489	$45,738	0.2
Nonfinan intang lessors	$0	$44,209	$1,247	$45,456	0.0
Wholesale trade	$0	$14,132	$26,505	$40,637	0.2
Retail - gas stations	$37,440	$71	$2,028	$39,539	0.2
Transit transportation	$0	$37,672	$1,389	$39,061	0.7
Legal services	$0	$27,154	$9,670	$36,824	0.2
Telecommunications	$0	$24,494	$6,880	$31,374	0.1
Monetary authorities	$0	$16,861	$14,366	$31,228	0.1
Hospitals	$0	$68	$31,132	$31,200	0.2
Management of companies	$0	$25,171	$3,658	$28,829	0.1
Employment services	$0	$23,099	$2,149	$25,248	0.4
Nondepository credit	$0	$13,986	$10,323	$24,309	0.0
Health practitioners	$0	$39	$23,957	$23,996	0.2
Accounting, tax prep	$0	$20,891	$2,828	$23,719	0.2
Securities, investments	$0	$15,763	$7,360	$23,123	0.2
Other educational svcs	$0	$18,795	$3,067	$21,862	0.3
Oth State/Loc enterprise	$0	$7,900	$10,711	$18,611	0.0
Civic, social, prof orgs	$0	$14,026	$4,444	$18,470	0.2
Services to buildings	$0	$13,476	$3,787	$17,262	0.2
Travel reservation svcs	$0	$12,975	$450	$13,425	0.1
Office admin svcs	$0	$12,196	$865	$13,061	0.1
Petroleum refineries	$0	$8,054	$4,840	$12,894	0.0
Other support svcs	$0	$10,476	$396	$10,872	0.1
Natural gas distrib	$0	$5,359	$5,387	$10,746	0.0
Other professional svcs	$0	$9,863	$793	$10,656	0.1
Retail - food and bev	$0	$208	$9,925	$10,133	0.1
Support for businesses	$0	$8,805	$1,181	$9,986	0.1
State/local transit	$0	$9,307	$343	$9,651	0.1
Colleges/universities	$0	$129	$9,040	$9,169	0.1
Funds, trusts, other	$0	$888	$8,131	$9,019	0.0
Radio/TV broacasting	$0	$7,778	$578	$8,356	0.0
Environmental consulting	$0	$7,604	$439	$8,043	0.1
Architectural svcs	$0	$6,171	$1,761	$7,932	0.1
Motion picture industry	$0	$5,648	$2,179	$7,827	0.0
Couriers, messengers	$0	$6,181	$1,145	$7,325	0.0
Retail - Nonstore	$0	$78	$6,904	$6,982	0.0
Cable programming	$0	$6,098	$640	$6,738	0.0
Postal service	$0	$5,286	$1,451	$6,737	0.1
Child day care svcs	$3,600	$0	$2,940	$6,540	0.1
Medical labs	$0	$1,082	$5,114	$6,196	0.0
Nonres maintenance	$0	$5,001	$1,170	$6,171	0.0
Internet publishing	$0	$5,794	$341	$6,135	0.0
Waste management	$0	$4,410	$1,688	$6,098	0.0
Nursing/residential care	$0	$0	$6,082	$6,082	0.1
Spectator sports	$0	$4,502	$933	$5,435	0.1
Newspaper publishers	$0	$4,885	$485	$5,370	0.0
Auto equip rental	$0	$3,911	$1,432	$5,343	0.0
Retail - clothing	$0	$97	$5,151	$5,248	0.1
Performing arts co	$0	$4,444	$627	$5,071	0.1
Retail - health care	$0	$142	$4,896	$5,038	0.0
Truck transportation	$0	$2,779	$1,937	$4,716	0.0
Amusement parks	$0	$247	$4,362	$4,609	0.0
Automotive repair	$0	$1,799	$2,646	$4,445	0.0
Individual, family svcs	$0	$0	$4,402	$4,402	0.1
Periodical publisher	$0	$3,840	$465	$4,305	0.0
Security services	$0	$3,257	$930	$4,187	0.1
Other computer svcs	$0	$3,460	$702	$4,162	0.0
Other personal svcs	$0	$824	$3,273	$4,097	0.0
Elem/sec schools	$0	$0	$3,931	$3,931	0.1

Soc Advoc/Grantmkg org	$0	$2	$3,841	$3,843	0.0
Commercial leasing	$0	$3,379	$369	$3,748	0.0
Religious organizations	$0	$0	$3,588	$3,588	0.0
Personal care svcs	$0	$0	$3,566	$3,566	0.0
Retail - misc	$0	$101	$3,406	$3,507	0.1
Electronic computer mfg	$0	$618	$2,838	$3,456	0.0
Printing	$0	$3,022	$267	$3,289	0.0
Sightseeing transport	$0	$1,947	$839	$2,787	0.0
Retail - furniture	$0	$45	$2,455	$2,500	0.0
Residential maintenance	$0	$292	$2,143	$2,435	0.0
Sound recording industry	$0	$1,791	$583	$2,374	0.0
Mailing list publishers	$0	$2,104	$236	$2,339	0.0
Computer systems design	$0	$1,869	$395	$2,264	0.0
Community relief svcs	$0	$0	$2,253	$2,253	0.0
Non-poultry processing	$0	$807	$1,413	$2,220	0.0
Retail - building material	$0	$45	$2,175	$2,220	0.0
Retail - Electronics	$0	$62	$2,153	$2,215	0.0
Retail-motor veh, parts	$0	$55	$2,122	$2,177	0.0
Oil & gas extraction	$0	$1,271	$860	$2,131	0.0
Bakery/bread mfg	$0	$633	$1,478	$2,111	0.0
Retail - sporting goods	$0	$64	$1,931	$1,995	0.0
Support for facilities	$0	$1,727	$214	$1,941	0.0
Electronic repair	$0	$1,166	$670	$1,836	0.0
Household goods repair	$0	$1,049	$637	$1,686	0.0
Scientific research	$0	$750	$856	$1,606	0.0
Specialized design	$0	$1,273	$312	$1,586	0.0
Private households	$0	$0	$1,525	$1,525	0.1
Warehousing/storage	$0	$1,176	$300	$1,476	0.0
Fitness / recreation	$0	$494	$879	$1,373	0.0
Other recreation indust	$0	$436	$909	$1,344	0.0
Data processing	$0	$846	$463	$1,309	0.0
Water transportation	$0	$79	$1,133	$1,212	0.0
Photographic services	$0	$977	$218	$1,194	0.0
Laundry services	$0	$570	$560	$1,130	0.0
Software publishers	$0	$653	$436	$1,089	0.0
State/Loc electric utils	$0	$708	$291	$999	0.0
Home health care svcs	$0	$0	$988	$988	0.0
Seafood packaging	$0	$581	$386	$967	0.0
Other accommodations	$0	$33	$881	$914	0.0
Museums, historical sites	$0	$0	$843	$843	0.0
Veterinary services	$0	$0	$835	$835	0.0
Industrial repair	$0	$667	$159	$826	0.0
Automobile mfg	$0	$7	$781	$789	0.0
Other information svcs	$0	$605	$125	$730	0.0
Other govt enterprises	$0	$256	$470	$726	0.0
Dry dairy products	$0	$225	$467	$692	0.0
Computer programming	$0	$543	$135	$678	0.0
Consumer goods rental	$0	$346	$304	$650	0.0
All other food mfg	$0	$175	$411	$586	0.0
Rail transportation	$0	$237	$324	$562	0.0
Pipeline transportation	$0	$240	$314	$554	0.0
Upholstered furniture mfg	$0	$22	$531	$554	0.0
Car washes	$0	$133	$366	$499	0.0
Book publishers	$0	$74	$403	$477	0.0
Cookie & cracker mfg	$0	$135	$340	$475	0.0
Female cut & sew mfg	$0	$2	$439	$441	0.0
Power generation	$0	$308	$129	$437	0.0
Mattress mfg	$0	$3	$430	$433	0.0
Death care services	$0	$0	$415	$415	0.0
Air transportation	$0	$184	$229	$414	0.0
Video/DVD rental	$0	$0	$376	$376	0.0
A/V equip mfg	$0	$73	$300	$373	0.0
Flavor syrup manufac	$0	$331	$35	$366	0.0
Software, A/V reproducing	$0	$286	$44	$331	0.0
Telephone equip mfg	$0	$220	$98	$319	0.0
Ice cream manufac	$0	$182	$132	$314	0.0
Wireless comm Equip	$0	$140	$163	$303	0.0
Wood window manufac	$0	$156	$132	$288	0.0
Semiconductor mfg	$0	$158	$129	$287	0.0
Toilet prep mfg	$0	$4	$270	$274	0.0

Coffee and tea mfg	$0	$79	$174	$253	0.0
Sign manufacturing	$0	$220	$17	$238	0.0
Pharma prep mfg	$0	$0	$214	$215	0.0
Soap and cleaning mfg	$0	$25	$181	$207	0.0
Seasoning mfg	$0	$110	$95	$205	0.0
Plastics packaging mfg	$0	$92	$99	$192	0.0
Printing support	$0	$161	$23	$184	0.0
Knitting mills	$0	$2	$160	$162	0.0
Dental laboratories	$0	$0	$156	$156	0.0
Showcase, partition mfg	$0	$136	$20	$156	0.0
Urethane/other mfg	$0	$93	$63	$156	0.0
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A Brief Summary of the Economic Impact of MACLA on Santa Clara County, California

In estimating the economic impact of MACLA, we used an approximate budget of $500,000 per year.[1] We calculated the economic impact of 25,000 visitors to MACLA per year.[2] Examining address data made available to us by MACLA, we estimated that approximately 15% of visitors come from outside Santa Clara County. These 'nonlocal' visitors (an estimated 3,750 per year) bring money, through their local expenditures, into the Santa Clara County economy that most likely would otherwise have been spent in their own county.

The results below estimate the total economic impact of MACLA using an inter-industry model of the flow of goods and services between sectors of the economy in Santa Clara County. Expenditures are made by MACLA; those monies circulate through the regional economy. The suppliers of goods and services to MACLA increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of MACLA. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[3]

Results:

- The $500,000 in annual expenditures by MACLA has an estimated economic impact of $810,997. Sectors of the Santa Clara County regional economy (beyond the promoters of performing arts sector) that experience a significant increase in economic activity due to the presence of MACLA are real estate, insurance, food and drinking places, hospitals, wholesale trade, independent artists, and health practitioners. In addition, the expenditures of MACLA result in an estimated 8 jobs regionally.

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[1] Annual expenditures of $500,000 are based on IRS Form 990-EZ FY2009 and FY11 projected budget provided by MACLA.

[2] The estimate of 25,000 visitors per year is based on earlier conversations with MACLA. To estimate the economic impact of MACLA based on alternative visitation figures please visit our interactive web page at http://web.williams.edu/web/Economics/ArtsEcon/econpages/c3ddisplay.php?file=MACLAEconModelCounty.xml where you can update visitor and budget numbers to calculate different economic impact scenarios.

[3] Information on the Americans for the Arts study is available for download at http://www.artsusa.org/information_services/research/services/economic_impact/default.asp. The survey was carefully designed to count only the expenditures directly tied to visiting a cultural organization on a specific day, so as not to 'take credit' for expenditures primarily resulting from an extended vacation or other reasons for traveling.

- The local expenditures made by 3,750 visitors from outside Santa Clara County to MACLA have a total economic impact of approximately $212,643. Sectors of the economy that benefit most from visitor expenditures are food and drinking places, hotels and motels, retail stores, gasoline stations, real estate, power generation, and hospitals. The expenditures of 3,750 nonlocal visitors to MACLA result in an additional 2 jobs regionally.

- The total economic impact of MACLA consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside Santa Clara County. ***The total economic impact of MACLA is approximately $1 million annually. The total impact in terms of employment in Santa Clara County is an estimated 10 jobs.***

The presence of MACLA in San Jose, California results in benefits to the community and county far beyond its economic impact. This summary is only an estimate of the economic impact of MACLA on the economy of Santa Clara County.

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About MACLA

MACLA is a contemporary arts space in San Jose, California. Founded in 1989, MACLA has consistently advocated the arts as a tool for social equity and civic dialogue. MACLA is a community-based arts organization grounded in the Chicano/Latino experience with an emphasis on bringing together traditional audiences, new art forms, and emerging artists. MACLA offers programming in visual arts; performance arts; youth arts education; and community development through the arts.

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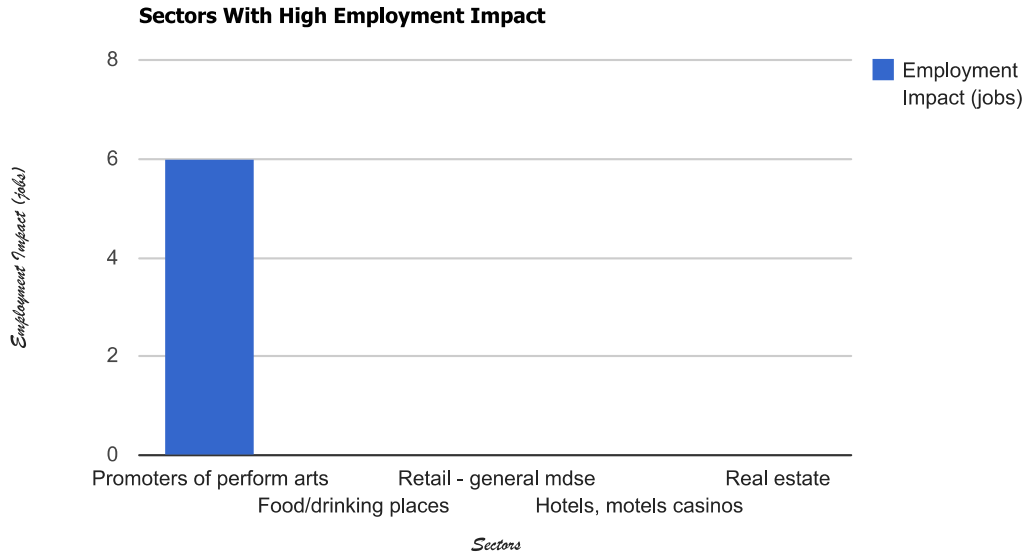
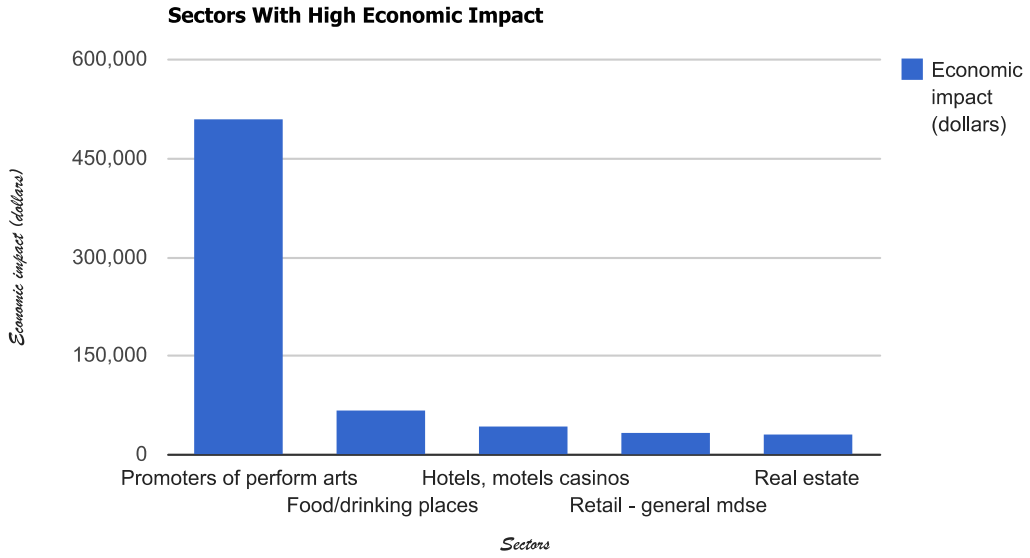
Regional Economic Impact of MACLA

Annual Budget	Visitors	% Non-local	Year	
$500,000	25,000	15%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$500,000	$175,515	$135,483	**$810,997**
Non-local Visitors	$142,050	$33,651	$36,942	**$212,643**
Total Output Impact	**$642,050**	**$209,166**	**$172,424**	**$1,023,640**
Total Jobs	8	1	1	10





Description	Direct	Indirect	Induced	Total	Jobs
Promoters of perform arts	$500,000	$11,084	$169	$511,252	6.3
Food/drinking places	$53,663	$4,105	$9,299	$67,066	0.9
Hotels, motels casinos	$42,300	$1,176	$1,167	$44,643	0.3
Retail - general mdse	$31,613	$82	$1,989	$33,684	0.5
Real estate	$0	$21,959	$8,642	$30,601	0.2
Imputed rental value	$0	$0	$27,132	$27,132	0.0
Wholesale trade	$0	$4,842	$9,056	$13,898	0.0
Retail - gas stations	$12,825	$17	$518	$13,360	0.1
Hospitals	$0	$19	$12,401	$12,420	0.1
Insurance brokers	$0	$11,474	$610	$12,084	0.1
Nonfinan intang lessors	$0	$10,541	$415	$10,956	0.0
Health practitioners	$0	$12	$10,805	$10,817	0.1
Internet publishing	$0	$9,193	$800	$9,993	0.0
Legal services	$0	$6,389	$3,152	$9,541	0.0
Independent artists	$0	$9,137	$67	$9,204	0.1
Monetary authorities	$0	$4,372	$4,595	$8,967	0.0
Power generation	$0	$5,981	$2,899	$8,880	0.0
Nondepository credit	$0	$4,271	$4,423	$8,694	0.0
Telecommunications	$0	$6,202	$2,189	$8,391	0.0
Management svcs	$0	$7,696	$658	$8,354	0.0
Employment services	$0	$5,448	$721	$6,169	0.1
Accounting, tax prep	$0	$5,217	$940	$6,157	0.0
State/local transit	$0	$5,156	$261	$5,417	0.1
Management of companies	$0	$4,075	$954	$5,029	0.0
Services to buildings	$0	$3,622	$1,245	$4,867	0.1
Insurance carriers	$0	$2,286	$2,566	$4,852	0.0
Securities, investments	$0	$3,163	$1,683	$4,847	0.1
Transit transportation	$0	$4,560	$231	$4,791	0.1
Other educational svcs	$0	$3,777	$866	$4,643	0.1
Data processing	$0	$3,477	$672	$4,149	0.0
Oth State/Loc enterprise	$0	$1,473	$2,558	$4,031	0.0
Colleges/universities	$0	$57	$3,579	$3,636	0.0
Office admin svcs	$0	$2,959	$309	$3,268	0.0
Retail - food and bev	$0	$57	$3,178	$3,236	0.0
Medical labs	$0	$416	$2,812	$3,228	0.0
Pharma prep mfg	$0	$7	$3,160	$3,167	0.0
Travel reservation svcs	$0	$2,993	$138	$3,132	0.0
Civic, social, prof orgs	$0	$2,048	$910	$2,958	0.0
Architectural svcs	$0	$2,166	$587	$2,753	0.0
Other professional svcs	$0	$2,359	$282	$2,641	0.0
Advertising	$0	$2,404	$215	$2,619	0.0
Child day care svcs	$1,650	$0	$863	$2,513	0.0
Nonres maintenance	$0	$1,879	$552	$2,431	0.0
Retail - Nonstore	$0	$22	$2,282	$2,304	0.0
Nursing/residential care	$0	$0	$2,223	$2,223	0.0
Radio/TV broacasting	$0	$1,849	$187	$2,036	0.0
Postal service	$0	$1,556	$471	$2,027	0.0
Automotive repair	$0	$743	$1,224	$1,966	0.0
Environmental consulting	$0	$1,792	$157	$1,949	0.0
Waste management	$0	$1,341	$582	$1,923	0.0
Cable programming	$0	$1,542	$211	$1,753	0.0
Retail-motor veh, parts	$0	$38	$1,674	$1,711	0.0
Retail - clothing	$0	$27	$1,648	$1,675	0.0
Funds, trusts, other	$0	$102	$1,450	$1,552	0.0
Amusement parks	$0	$63	$1,440	$1,502	0.0
Other support svcs	$0	$1,405	$71	$1,476	0.0
Truck transportation	$0	$744	$632	$1,376	0.0
Motion picture industry	$0	$840	$502	$1,341	0.0
Couriers, messengers	$0	$1,058	$264	$1,322	0.0
Software publishers	$0	$896	$377	$1,274	0.0

Other personal svcs	$0	$186	$1,080	$1,265	0.0
Electronic computer mfg	$0	$172	$1,077	$1,250	0.0
Retail - health care	$0	$29	$1,150	$1,179	0.0
Elem/sec schools	$0	$0	$1,174	$1,174	0.0
Religious organizations	$0	$0	$1,156	$1,156	0.0
Security services	$0	$797	$306	$1,103	0.0
Retail - building material	$0	$19	$1,060	$1,078	0.0
Spectator sports	$0	$785	$291	$1,076	0.0
Scientific research	$0	$592	$466	$1,058	0.0
Newspaper publishers	$0	$912	$129	$1,041	0.0
Personal care svcs	$0	$0	$996	$996	0.0
Retail - misc	$0	$24	$953	$977	0.0
Printing	$0	$871	$94	$965	0.0
Residential maintenance	$0	$87	$850	$937	0.0
Computer systems design	$0	$717	$195	$911	0.0
Soc Advoc/Grantmkg org	$0	$0	$870	$870	0.0
Commercial leasing	$0	$677	$106	$783	0.0
Industrial repair	$0	$604	$171	$775	0.0
State/Loc electric utils	$0	$531	$243	$774	0.0
Retail - Electronics	$0	$18	$715	$733	0.0
Individual, family svcs	$0	$0	$726	$726	0.0
Support for businesses	$0	$571	$108	$679	0.0
Petroleum refineries	$0	$440	$234	$673	0.0
Bakery/bread mfg	$0	$233	$435	$669	0.0
Natural gas distrib	$0	$297	$370	$667	0.0
Sightseeing transport	$0	$463	$199	$661	0.0
Retail - sporting goods	$0	$18	$640	$659	0.0
Retail - furniture	$0	$10	$643	$654	0.0
Performing arts comp	$0	$537	$102	$639	0.0
Auto equip rental	$0	$414	$211	$625	0.0
Water & sewage system	$0	$185	$419	$604	0.0
Air transportation	$0	$226	$369	$594	0.0
Oil & gas extraction	$0	$351	$211	$562	0.0
Laundry services	$0	$258	$296	$554	0.0
Support for facilities	$0	$472	$76	$548	0.0
Electronic repair	$0	$294	$216	$511	0.0
Other recreation indust	$0	$132	$372	$504	0.0
Cheese manufacturing	$0	$228	$234	$462	0.0
Home health care svcs	$0	$0	$456	$456	0.0
Seasoning mfg	$0	$251	$196	$447	0.0
Private households	$0	$0	$416	$416	0.0
Fitness / recreation	$0	$127	$285	$412	0.0
Community relief svcs	$0	$0	$398	$398	0.0
Water transportation	$0	$33	$351	$384	0.0
Semiconductor mfg	$0	$178	$198	$376	0.0
Household goods repair	$0	$192	$136	$328	0.0
Periodical publisher	$0	$250	$68	$318	0.0
Specialized design	$0	$233	$76	$308	0.0
Surgical instrument mfg	$0	$6	$297	$303	0.0
Other accommodations	$0	$9	$293	$302	0.0
Computer programming	$0	$224	$67	$291	0.0
Soap and cleaning mfg	$0	$30	$252	$282	0.0
Other information svcs	$0	$192	$55	$247	0.0
Ice cream manufac	$0	$152	$91	$243	0.0
Consumer goods rental	$0	$109	$131	$241	0.0
Other computer svcs	$0	$182	$48	$229	0.0
Surgical appliance mfg	$0	$10	$217	$227	0.0
Veterinary services	$0	$0	$219	$219	0.0
Warehousing/storage	$0	$165	$51	$216	0.0
Death care services	$0	$0	$196	$196	0.0
Rail transportation	$0	$102	$91	$192	0.0

Analytical instru Mfg	$0	$35	$156	$190	0.0
Mailing list publishers	$0	$161	$28	$189	0.0
Other chemical mfg	$0	$95	$76	$172	0.0
Non-poultry processing	$0	$63	$97	$160	0.0
Car washes	$0	$37	$120	$156	0.0
Automobile mfg	$0	$1	$153	$154	0.0
Pprimary battery mfg	$0	$55	$82	$137	0.0
Photographic services	$0	$94	$41	$135	0.0
All other food mfg	$0	$43	$88	$131	0.0
Semiconductor mach mfg	$0	$109	$18	$127	0.0
Electromedical mfg	$0	$0	$125	$125	0.0
Non-diag bio processing	$0	$3	$119	$122	0.0
Vegetable and melon	$0	$7	$114	$120	0.0
Other plastics mfg	$0	$56	$52	$108	0.0
Video/DVD rental	$0	$0	$106	$106	0.0
Wood window manufac	$0	$56	$46	$102	0.0
Book publishers	$0	$13	$88	$101	0.0
Wood cabinet mfg	$0	$30	$69	$99	0.0
Other comm Equip mfg	$0	$77	$22	$99	0.0
Recording media mfg	$0	$82	$16	$98	0.0
Wire/cable mfg	$0	$77	$21	$97	0.0
A/V equip mfg	$0	$13	$83	$96	0.0
Plastics material mfg	$0	$42	$52	$94	0.0
Machine shops	$0	$68	$27	$94	0.0
Telephone equip mfg	$0	$59	$33	$92	0.0
Wireless comm Equip	$0	$37	$46	$82	0.0
Asphalt block mfg	$0	$48	$28	$76	0.0
Museums, historical sites	$0	$0	$74	$74	0.0
In-vitro diag subst mfg	$0	$2	$70	$72	0.0
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A Brief Summary of the Economic Impact of MOCAD on Wayne County, Michigan

In estimating the economic impact of MOCAD, we used an approximate budget of $1,000,000 per year. We calculated the economic impact of 35,000 visitors to MOCAD per year, with at least 25% of visitors coming from outside Wayne County.[1] These 'nonlocal' visitors (an estimated 8,750 per year) bring money, through their local expenditures, into the Wayne County economy that most likely would otherwise have been spent in their own county.

The results below estimate the total economic impact of MOCAD using an inter-industry model of the flow of goods and services between sectors of the economy in Wayne County. Expenditures are made by MOCAD; those monies circulate through the regional economy. The suppliers of goods and services to MOCAD increase their own purchases to meet the new demand; increased employment results in additional expenditures by households. Similar modeling has been undertaken to estimate the impact of expenditures by nonlocal visitors as well.

The results are calculated for the specific case of MOCAD. Estimates of average spending by each nonlocal visitor are based upon an extensive national survey by Americans for the Arts of expenditures made by nonlocal visitors on the day of attendance to a cultural site or event.[2]

Results:

- The $1,000,000 in annual expenditures by MOCAD has an estimated economic impact of $1,615,994. Sectors of the Wayne County regional economy (beyond the museum sector) that experience a significant increase in economic activity due to the presence of MOCAD are real estate, power generation, insurance, hospitals, and management services. In addition, the expenditures of MOCAD result in an estimated 13 jobs regionally.

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[1] Estimates of annual expenditures and number of visitors are based on an interview with Luis Croquer, director and chief curator, as reported in Crain's Detroit, "Building on the energy" by Ellen Piligian, May 5, 2010, accessed on 9/28/2011..
http://www.crainsdetroit.com/article/20100505/DM01/100509929/building-on-the-energy
Our estimate of 25% of visitors coming from outside of Wayne County is based on an examination of a small number of visitor zip codes provided by MOCAD. We consider this to be a minimum estimate of the percent nonlocal visitors to MOCAD.

[2] Information on the Americans for the Arts study is available for download at http://www.artsusa.org/information_services/research/services/economic_impact/default.asp. The survey was carefully designed to count only the expenditures directly tied to visiting a cultural organization on a specific day, so as not to 'take credit' for expenditures primarily resulting from an extended vacation or other reasons for traveling.

- The local expenditures made by 8,750 visitors from outside Wayne County to MOCAD have a total economic impact of approximately $692,059. Sectors of the economy that benefit most from visitor expenditures are food and drinking places, hotels and motels, retail stores, gasoline stations, real estate, and power generation. The expenditures of 8,750 nonlocal visitors to MOCAD result in an additional 9 jobs regionally.

- The total economic impact of MOCAD consists of the impact of its own annual expenditures and the local expenditures made by visitors who reside outside Wayne County. ***The total economic impact of MOCAD is approximately $2.3 million annually. The total impact in terms of employment in Wayne County is an estimated 22 jobs.***

The presence of MOCAD in Detroit, Michigan results in benefits to the community and county far beyond its economic impact. This summary is only an estimate of the economic impact of MOCAD on the economy of Wayne County.

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About MOCAD

MOCAD, the Museum of Contemporary Art Detroit, is a non-collecting museum in Detroit's Midtown neighborhood. In addition to gallery exhibitions MOCAD offers lectures, performances, films, literary readings and educational activities. MOCAD is located in a 22,000 square-foot building that had been an early Detroit automobile dealership. It maintains its large open spaces, well-suited to the exhibition of contemporary art.

About the Williams College Center for Creative Community Development (C^3D)

The Center for Creative Community Development (C^3D) was founded in June 2004 with an initial grant from the Ford Foundation and subsequent funding from the Institute of Museum and Library Services (IMLS), Leveraging Investments in Creativity (LINC), Massachusetts Cultural Council (MCC) and others. This report is part of a research initiative on organizations awarded Space for Change planning and pre-development grants. The Space for Change program is funded by LINC in partnership with the Ford Foundation. C^3D is a research organization working to better quantify and characterize the impacts of neighborhood-based arts and cultural organizations on their surrounding communities. The Center provides sound data and case studies that can be used for case-making as well as for planning and evaluation purposes. Such measurements are essential for communities to manage the process of change, and to ensure equitable distribution of the benefits created by cultural economic development.

C^3D is located on the campus of Williams College in Williamstown, Massachusetts, and is directed by Stephen Sheppard, Class of 2012 Professor of Economics. Professor Sheppard (PhD from Washington University in St Louis) is an economist who specializes in urban and regional economics and the use of economic geography to analyze the impacts of cultural and environmental amenities on housing markets, job creation, and neighborhood development.

More information about C^3D and its analyses is available3 at www.c-3-d.org.

About this Study

The economic impacts reported above are based on standard input/output analysis. This type of model has been in use at least since the publication in 1960 of Walter Isard's important book *Methods of Regional Analysis: an Introduction to Regional Science* (M.I.T. Press). An input/output model is a set of mathematical formulas whose values are based on statistical analysis of actual observations. In this case, the formulas are designed to present the workings of the regional economy. The economic impact estimates provided here are the result of a predictive model that estimates the amount of aggregate regional income and employment that is attributable to expenditures by a particular cultural organization and its nonlocal visitors (visitors living outside the county). The model discussed in this report is designed for analysis at the county level, meaning the estimates cover impacts occurring throughout the county.

The input/output model utilizes data from a variety of sources (including the US Bureau of Economic Analysis, the US Bureau of Labor, and the US Census Bureau) to characterize the flow of goods and services among sectors of the economy and the employment and consumption patterns of different sectors of the regional economy. The sectors are identified by NAICS (North American Industry Classification System) codes. Much of the data is collected at the county level through a survey process that examines the spending patterns of representative firms in every sector of the economy in every county in the US. The data collected are used to provide estimates of the purchasing patterns of each sector of the county economy, identifying how much of every dollar spent in one particular sector is received as income in every other sector of the county economy, and how much of every dollar 'leaks' outside the county economy or is considered 'final consumption'. The input/output economic model divides the economy into over 400 sectors ranging from 'Abrasive products' to 'Wood window and door manufacturing'. Not all of these sectors are present in every region. The model also draws heavily on data from the federal ES202 database of unemployment insurance filings and the 'Regional Economic Information System' of the US Bureau of Economic Analysis.

This study was supported by a research grant from LINC in partnership with the Ford Foundation.

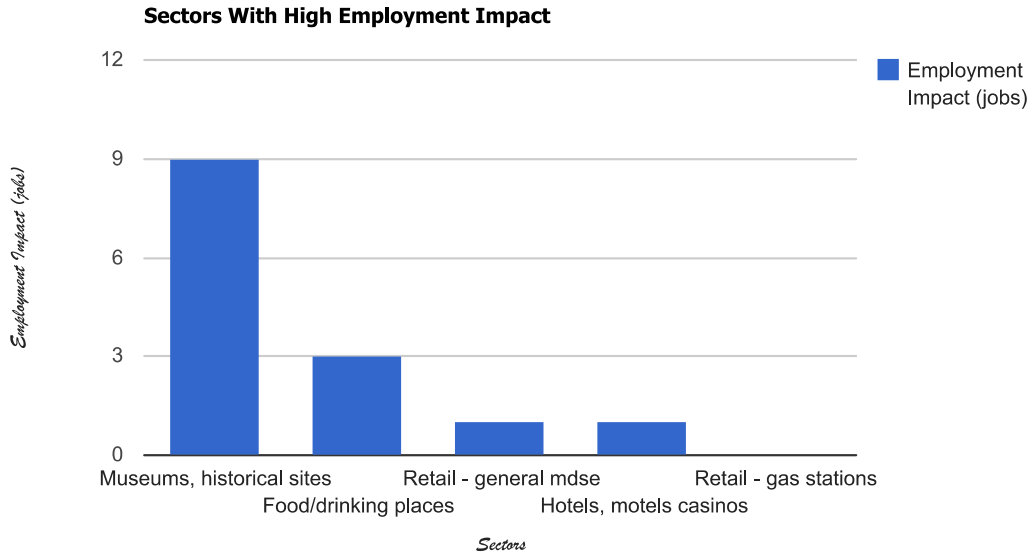
For more detailed background information on our input/output model for cultural organizations, we encourage you to visit http://www.williams.edu/Economics/ArtsEcon/econpages/FAQ.html.

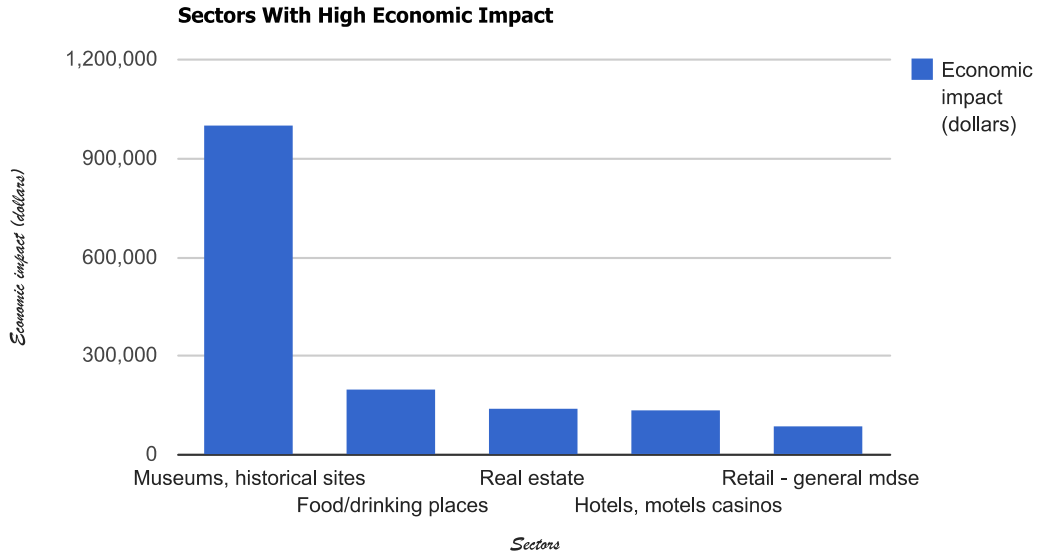
Return | Visitors Map | FAQ

Regional Economic Impact of MOCAD

Annual Budget	Visitors	% Non-local	Year	
$1,000,000	35,000	25%	2011	Update

	Direct	Indirect	Induced	Total
Programming and Events	$1,000,000	$354,688	$261,307	**$1,615,994**
Non-local Visitors	$436,100	$122,730	$133,229	**$692,059**
Total Output Impact	**$1,436,100**	**$477,418**	**$394,535**	**$2,308,054**
Total Jobs	16	3	3	22





Description	Direct	Indirect	Induced	Total	Jobs
Museums, historical sites	$1,000,000	$0	$527	$1,000,527	9.2
Food/drinking places	$171,938	$7,621	$21,131	$200,689	3.4
Real estate	$0	$119,104	$21,898	$141,002	0.8
Hotels, motels casinos	$130,463	$1,763	$1,824	$134,049	1.2
Retail - general mdse	$81,287	$404	$5,814	$87,505	1.8
Imputed rental value	$0	$0	$51,180	$51,180	0.0
Retail - gas stations	$49,175	$88	$1,384	$50,647	0.9
Power generation	$0	$35,277	$7,194	$42,471	0.1
Hospitals	$0	$0	$30,421	$30,421	0.2
Insurance carriers	$0	$16,924	$11,233	$28,157	0.1
Petroleum refineries	$0	$14,901	$10,756	$25,657	0.0
Health practitioners	$0	$0	$25,287	$25,287	0.2
Advertising	$0	$21,532	$1,588	$23,120	0.1
Wholesale trade	$0	$9,182	$13,513	$22,695	0.1
Management svcs	$0	$18,695	$1,831	$20,527	0.1
Oth State/Loc enterprise	$0	$9,916	$6,596	$16,512	0.1
Legal services	$0	$9,442	$6,407	$15,850	0.1
Telecommunications	$0	$10,799	$4,926	$15,725	0.1
Services to buildings	$0	$12,387	$2,479	$14,866	0.2
Nondepository credit	$0	$6,275	$7,984	$14,259	0.0
Accounting, tax prep	$0	$11,646	$2,138	$13,784	0.1
Natural gas distrib	$0	$9,345	$4,404	$13,749	0.0
Monetary authorities	$0	$4,136	$9,037	$13,173	0.0
Management of companies	$0	$9,797	$3,286	$13,084	0.1
Employment services	$0	$9,508	$1,813	$11,321	0.3
Truck transportation	$0	$6,865	$4,258	$11,123	0.1
Couriers, messengers	$0	$7,835	$866	$8,701	0.1
Nonres maintenance	$0	$7,341	$1,033	$8,374	0.1
Newspaper publishers	$0	$7,180	$665	$7,845	0.1
Radio/TV broacasting	$0	$6,983	$572	$7,554	0.0
Other educational svcs	$0	$5,192	$2,011	$7,203	0.1
Nursing/residential care	$0	$0	$7,195	$7,195	0.1
Medical labs	$0	$2	$7,046	$7,048	0.0
Retail - food and bev	$0	$230	$6,652	$6,882	0.1
Sightseeing transport	$0	$6,184	$527	$6,711	0.1
Waste management	$0	$5,168	$1,175	$6,343	0.0
Warehousing/storage	$0	$5,479	$850	$6,328	0.1
Office admin svcs	$0	$5,085	$728	$5,813	0.0
Postal service	$0	$4,958	$842	$5,800	0.1
Retail-motor veh, parts	$0	$218	$5,052	$5,270	0.1
Mailing list publishers	$0	$4,667	$407	$5,074	0.0
Child day care svcs	$3,238	$0	$1,818	$5,055	0.1
Non-poultry processing	$0	$2,132	$2,628	$4,761	0.0
Civic, social, prof orgs	$0	$878	$3,603	$4,481	0.0
Printing	$0	$4,203	$248	$4,452	0.0
Support for businesses	$0	$3,434	$813	$4,247	0.1
Architectural svcs	$0	$2,860	$1,184	$4,044	0.0
Automotive repair	$0	$2,131	$1,889	$4,020	0.1
Funds, trusts, other	$0	$129	$3,634	$3,763	0.0
Insurance brokers	$0	$2,116	$1,642	$3,758	0.0
Retail - building material	$0	$112	$3,282	$3,394	0.0
Retail - health care	$0	$154	$3,200	$3,353	0.0
Automobile mfg	$0	$19	$3,038	$3,057	0.0
Amusement parks	$0	$51	$2,981	$3,032	0.0
Retail - clothing	$0	$90	$2,899	$2,989	0.1
Auto equip rental	$0	$1,837	$1,098	$2,935	0.0
Securities, investments	$0	$631	$2,289	$2,920	0.1
Periodical publisher	$0	$2,530	$341	$2,871	0.0
Colleges/universities	$0	$70	$2,797	$2,867	0.0
Individual, family svcs	$0	$0	$2,800	$2,800	0.1

Home health care svcs	$0	$0	$2,751	$2,751	0.0
Vehicle parts mfg	$0	$920	$1,828	$2,748	0.0
Industrial repair	$0	$2,335	$402	$2,737	0.0
Soc Advoc/Grantmkg org	$0	$1	$2,575	$2,575	0.0
Other professional svcs	$0	$1,803	$647	$2,450	0.0
Religious organizations	$0	$0	$2,405	$2,405	0.0
Residential maintenance	$0	$536	$1,785	$2,320	0.0
Other personal svcs	$0	$255	$2,026	$2,281	0.0
Security services	$0	$1,662	$613	$2,275	0.0
Environmental consulting	$0	$2,068	$205	$2,273	0.0
Retail - misc	$0	$103	$2,114	$2,217	0.1
Personal care svcs	$0	$0	$2,198	$2,198	0.0
Pharma prep mfg	$0	$213	$1,946	$2,159	0.0
Bakery/bread mfg	$0	$940	$1,190	$2,129	0.0
Other support svcs	$0	$1,572	$514	$2,086	0.0
Scientific research	$0	$1,348	$727	$2,075	0.0
Nonfinan intang lessors	$0	$1,648	$382	$2,030	0.0
Electronic repair	$0	$1,411	$457	$1,868	0.0
Elem/sec schools	$0	$0	$1,829	$1,829	0.0
Spectator sports	$0	$1,162	$655	$1,816	0.0
Fluid milk, butter mfg	$0	$610	$1,199	$1,808	0.0
Other computer svcs	$0	$1,297	$415	$1,712	0.0
Electronic computer mfg	$0	$194	$1,501	$1,695	0.0
Laundry services	$0	$892	$766	$1,658	0.0
Computer systems design	$0	$1,210	$410	$1,619	0.0
Retail - Nonstore	$0	$29	$1,559	$1,589	0.1
Air transportation	$0	$524	$994	$1,518	0.0
Rail transportation	$0	$1,057	$461	$1,517	0.0
State/Loc electric utils	$0	$1,253	$249	$1,502	0.0
Community relief svcs	$0	$0	$1,395	$1,395	0.0
Retail - sporting goods	$0	$70	$1,263	$1,333	0.0
Household goods repair	$0	$935	$360	$1,295	0.0
Soap and cleaning mfg	$0	$176	$991	$1,168	0.0
Commercial leasing	$0	$931	$199	$1,129	0.0
Promoters of perform arts	$0	$266	$853	$1,119	0.0
Retail - furniture	$0	$32	$1,065	$1,098	0.0
Other recreation indust	$0	$180	$864	$1,044	0.0
Data processing	$0	$566	$417	$984	0.0
Travel reservation svcs	$0	$633	$305	$938	0.0
Transit transportation	$0	$280	$655	$935	0.0
Polystyrene foam mfg	$0	$715	$162	$877	0.0
Consumer goods rental	$0	$411	$434	$846	0.0
All other food mfg	$0	$344	$501	$844	0.0
Retail - Electronics	$0	$38	$792	$829	0.0
Motion picture industry	$0	$555	$265	$819	0.0
Performing arts comp	$0	$458	$342	$800	0.0
Cable programming	$0	$656	$102	$758	0.0
Internet publishing	$0	$661	$88	$749	0.0
Death care services	$0	$0	$706	$706	0.0
Sound recording industry	$0	$257	$434	$691	0.0
Fitness / recreation	$0	$157	$512	$669	0.0
Private households	$0	$0	$648	$648	0.1
Specialized design	$0	$434	$186	$620	0.0
Surgical appliance mfg	$0	$30	$584	$614	0.0
Urethane/other mfg	$0	$401	$210	$611	0.0
Plastics material mfg	$0	$332	$272	$604	0.0
Veterinary services	$0	$0	$564	$564	0.0
Petroleum lube mfg	$0	$282	$272	$554	0.0
Coffee and tea mfg	$0	$241	$303	$544	0.0
Dry dairy products	$0	$251	$271	$522	0.0
Water & sewage system	$0	$223	$258	$481	0.0

Support for facilities	$0	$343	$85	$428	0.0
Pipeline transportation	$0	$274	$145	$419	0.0
Cookie & cracker mfg	$0	$151	$209	$360	0.0
Plastics packaging mfg	$0	$206	$154	$359	0.0
Soft drink/ice mfg	$0	$171	$177	$347	0.0
Independent artists	$0	$259	$77	$336	0.0
Other information svcs	$0	$276	$60	$335	0.0
Other accommodations	$0	$15	$313	$328	0.0
Other plastics mfg	$0	$154	$171	$325	0.0
Oil & gas extraction	$0	$187	$134	$321	0.0
Computer programming	$0	$240	$71	$311	0.0
Other petroleum/coal mfg	$0	$172	$139	$310	0.0
Sign manufacturing	$0	$286	$22	$308	0.0
Software, A/V reproducing	$0	$224	$75	$299	0.0
Car washes	$0	$111	$186	$297	0.0
Mattress mfg	$0	$2	$288	$289	0.0
Other chemical mfg	$0	$142	$131	$273	0.0
Aircraft engine mfg	$0	$197	$59	$256	0.0
Seafood packaging	$0	$186	$68	$254	0.0
Purchased glass mfg	$0	$72	$166	$239	0.0
Video/DVD rental	$0	$0	$232	$232	0.0
Software publishers	$0	$67	$135	$202	0.0
Other engine equip mfg	$0	$96	$101	$197	0.0
Photographic services	$0	$123	$68	$191	0.0
In-vitro diag subst mfg	$0	$3	$175	$178	0.0
Asphalt shingle mfg	$0	$92	$83	$174	0.0
Light truck mfg	$0	$0	$173	$174	0.0
Plastics bottle mfg	$0	$105	$65	$170	0.0
Dental laboratories	$0	$0	$169	$169	0.0
Click here to expand hidden rows					

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Mapping Social Impact

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Introduction to Mapping Social Impact

A cultural arts organization often has has more data than it is able to use for understanding and presenting its social impact. Frequently mapping these data can help to highlight the nature of the community where the organization works, the extent of the organization's influence or the assets upon which it might draw. For this part of the research, each of the Space for Change organizations were asked to provide data that might benefit from presentation in this more visual manner. The goal was to provide maps of any data – donors, artists, visitors, or partners – in a way that allowed comparison with social, demographic and economic data from the Census. Each organization provided between one and four lists of address data that seemed appropriate. The addresses were geocoded, combined with Census data and incorporated into interactive maps that can be explored at http://web.williams.edu/Economics/ArtsEcon/cases.html.

The interactive mapping tool has two features that make it particularly useful. One is what we might call the capability for micro/macro exploration. It is possible to zoom in on the map to the streets directly around the organization. Using the Census data layer on the map, one can then explore demographic characteristics of the neighborhood related to issues of race and ethnicity, education, and home ownership. With the visitor (or other) data from the organization displayed, it is possible to discuss the demographics of audience participation. It is also possible to zoom out to the national level and examine audience patterns nationally. Some organizations have a strong regional attraction; visitor patterns at other organizations may have a strong bi-coastal distribution; and some organizations will have a surprisingly strong distribution across the entire US.

The second real strength of the interactive mapping tool is that it can be used by the organizations as a planning and problem solving device. An organization may face a challenge, develop a plan for addressing the challenge, and use the mapping tool as part of effectively implementing that plan. It is this second strength of the tool that is addressed in the reports that follow. In each case we discuss a hypothetical community issue that might be relevant to the organization, and describe ways in which data might be found and mapped by the organization to inform that issue. The social mapping tool has been designed so that it can continue to be used in the future by the organization without outside assistance.

As with the economic impact models and social network analyses, the social mapping tool provides insight into the context of the organization. The results may confirm what the organization is communicating verbally, while providing additional texture and nuance to our understanding.

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Using Casita Maria's Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of Casita Maria through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC),[1] participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how visitor and clientele address data can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The map tool created for Casita Maria was developed to assist the organization in documenting and articulating the location of members of the community who support it through membership, donations, and general interest, and to document the location of the students who participate in youth programming. The map tool can be found on Casita Maria's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/Casita.html. There you will find a Casita Maria map option with an overlay of Census variables for the Bronx (listed as the county overlay), and a map option with an overlay of Census variables for a five mile (local) radius around Casita Maria.[2] We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show where in the Bronx one is reaching students; other times the attraction of students in the local area may be of greater interest. In this paper we will work with the Bronx (county) map, but everything presented here also applies to the 5 mile radius map.

We do not provide interpretations of the many interesting aspects of Casita Maria's online map here. Rather this paper provides examples of how to use the online, interactive map tool to explore questions about Casita Maria's neighborhood, programming, and support systems that might arise. This brief paper provides information on how to use the online mapping tool to:

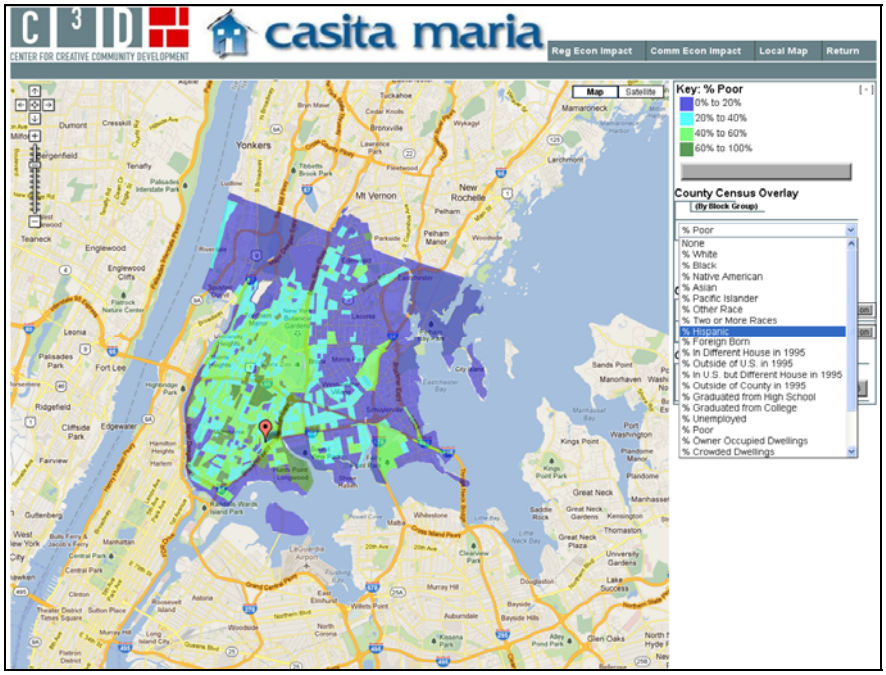
- change the Census variables displayed on the map;
- change the address lists displayed on the map;
- add new address data to the map; and
- create a copy of the map to include in a report.

How to change the Census variables displayed on the map

Casita Maria's interactive map has 23 Census variables available for viewing. The default variable when the map opens is '% poor'. Clicking on the drop-down box in the right-hand window provides the list of Census variables, as shown in Figure 1.

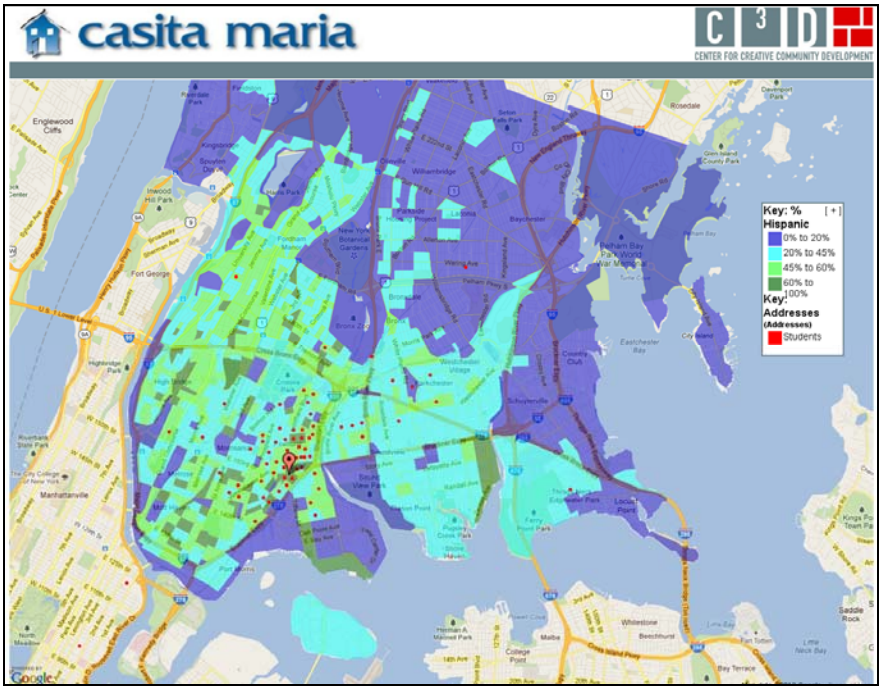
[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
[2] The Census overlay does not make a perfect circle with 5 mile radius around Casita Maria. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more jagged display.

Figure 1: Change the Census Variables Displayed on the Map



On the interactive map, select '% Hispanic' from the list. Then turn on the 'Students' layer. Zooming in on the map to better differentiate block groups around Casita Maria produces the map in Figure 2. On one layer we see Census block groups in the Bronx shaded according to the percent Hispanic. On the other layer is displayed a red dot where at least one student from that Census block group attended Casita Maria youth programming.

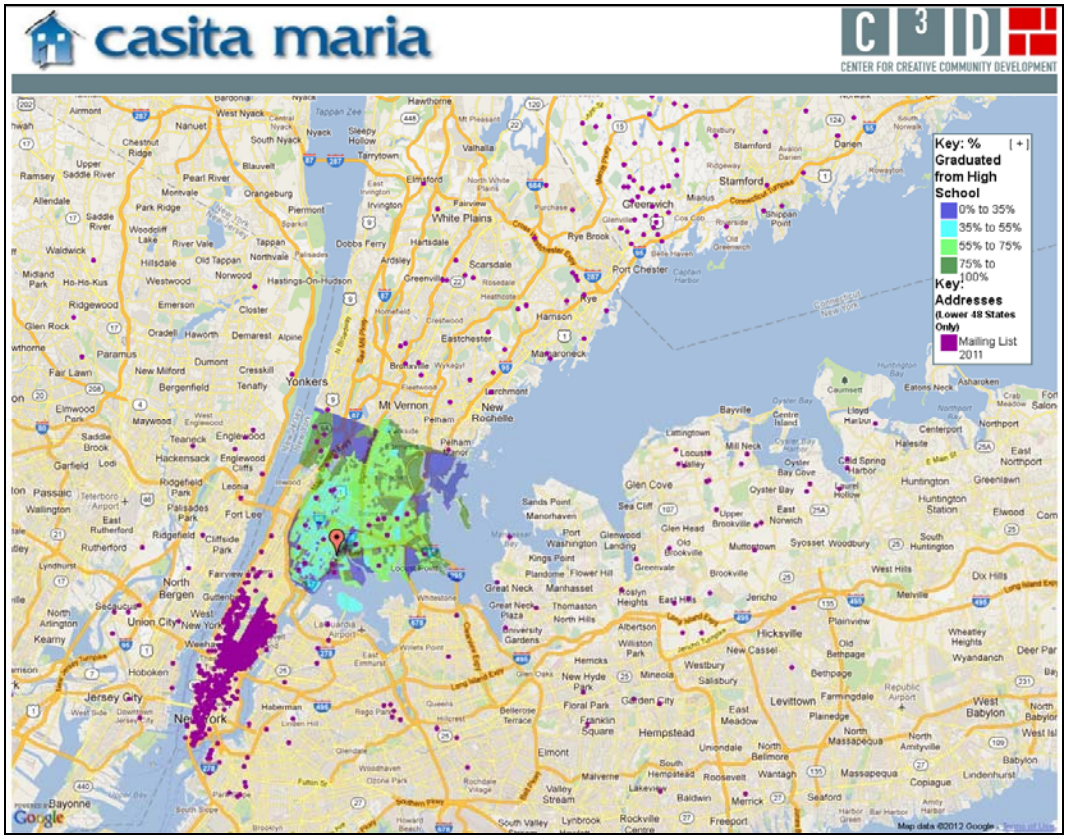
Figure 2: Casita Maria: Percent Hispanic and Origin of Students



How to change the address lists displayed on the map

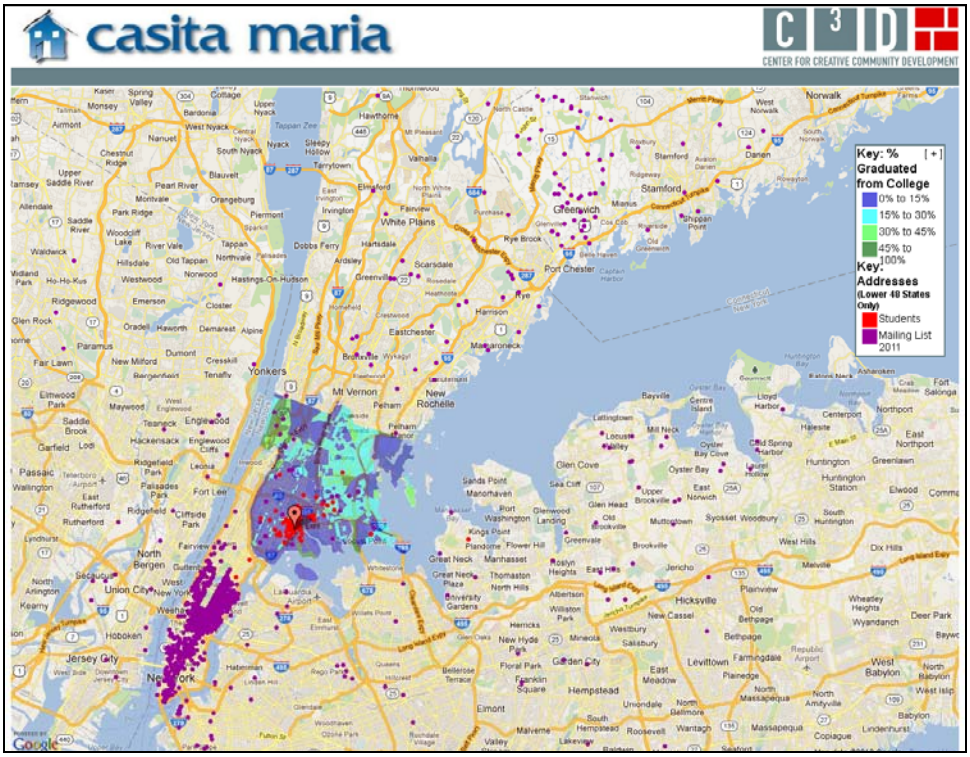
Two lists of addresses are available for the Casita Maria map. One is a list of Census block groups from which students to Casita Maria's youth programming were drawn; the other is Casita Maria's mailing list. The opening default for the map is that neither address list is displayed. To choose an address list click the 'on' button next to the list name. The map of students, shown in Figure 2 above, would be useful in a report on youth programming. The mailing list map, shown in Figure 3 below, would be useful for a marketing director or development director.

Figure 3: Casita Maria Mailing List Map



Mapping students for improvement of youth programming and mapping the mailing list for marketing use are straightforward applications of Casita Maria's mapping tool. One of the strengths of an interactive online tool, however, is that it is possible to explore combinations of Census variables and address lists, and discover relationships that might otherwise be overlooked. If we turn 'on' both the student list and the general mailing list we are presented with a map with exactly this characteristic: it is a map that might never have been specifically requested of a consultant, yet it can play a useful role in demonstrating and articulating a part of Casita Maria's story. The map in Figure 4 shows Casita Maria's two audiences.

Figure 4: Casita Maria's Two Audiences



In conversation with staff at Casita Maria, one thing that came out was that they have two very different audiences, and that this is an important feature of their position in the community. The students are drawn very locally, from within just a few miles. Members, supporters, and audience members, as represented on the mailing list, are more regional, heavily concentrated in Manhattan, and very limited in the Bronx. Casita Maria would like to broaden student participation beyond the immediate neighborhood, and to increase audience attendance in the Bronx.

While this feature of Casita Maria's community context came up early in conversation, it was difficult to assess if Casita Maria's programming audience was as bifurcated as they thought, or if it was really that much different from similar cultural arts organizations working in challenged neighborhoods. Figure 4 immediately, empirically, and visually supports what staff were telling us verbally -- that Casita Maria is working with two very different audiences. Comparison with maps of other organizations included in the Space for Change project confirmed that this was not a shared feature of the Space for Change organizations but was indeed pronounced for Casita Maria.

The information presented in Figure 4 can be very important, even if it is never included by Casita Maria in a report or grant application. It is important because it supports the social context story that Casita Maria tells. It is important because a person unfamiliar with the organization or the community can look at the map and reach their own conclusions rather than being totally reliant on a statement made by the organization. And it is important because after looking at the map a person might conclude that Casita Maria understands their community context, their organizational challenges, and that an initiative to increase membership and audience attendance

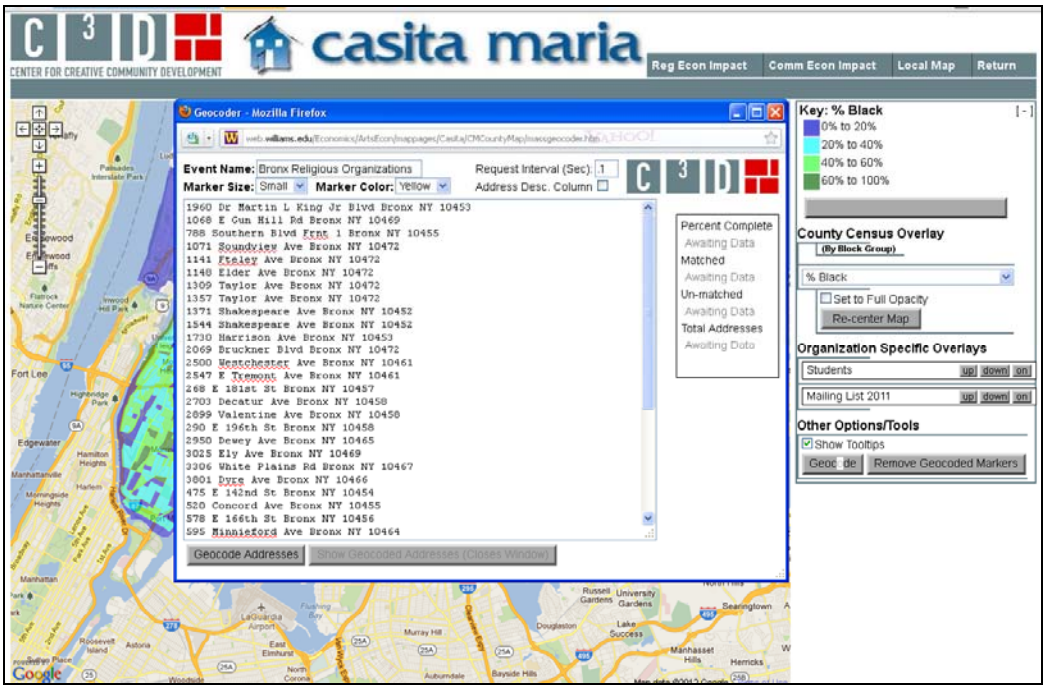
in the Bronx makes sense. The map in Figure 4 can transform a skeptic into a supporter not so much because it 'proves' need but because it demonstrates Casita Maria's understanding of the context within it works, and that Casita Maria ties future goals to existing realities.

How to add new address data to the map

In order to describe how to add new data to Casita Maria's map, we must work with a hypothetical situation. Let us say that Casita Maria decides to develop an initiative to expand attendance from the Bronx, especially the South Bronx. Perhaps they propose developing partnerships with religious organizations (typically broader than a church) in the area. As a first step they want to map the religious organizations in order to choose which to approach concerning partnering. It is possible to create such a map using the 'Geocode' button included on Casita Maria's map page.

Click on the 'Geocode' button and a new window opens. Addresses of area religious organizations can be copied and pasted into the Geocoder box from many sources such as an Excel spreadsheet or a Notepad text file. For the example below we pasted addresses of thirty-seven religious organizations in the Bronx.[3] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the addresses (we chose small) and the color of the markers (we chose yellow). Figure 5 shows what the computer screen for Casita Maria's interactive program looks like at this point.

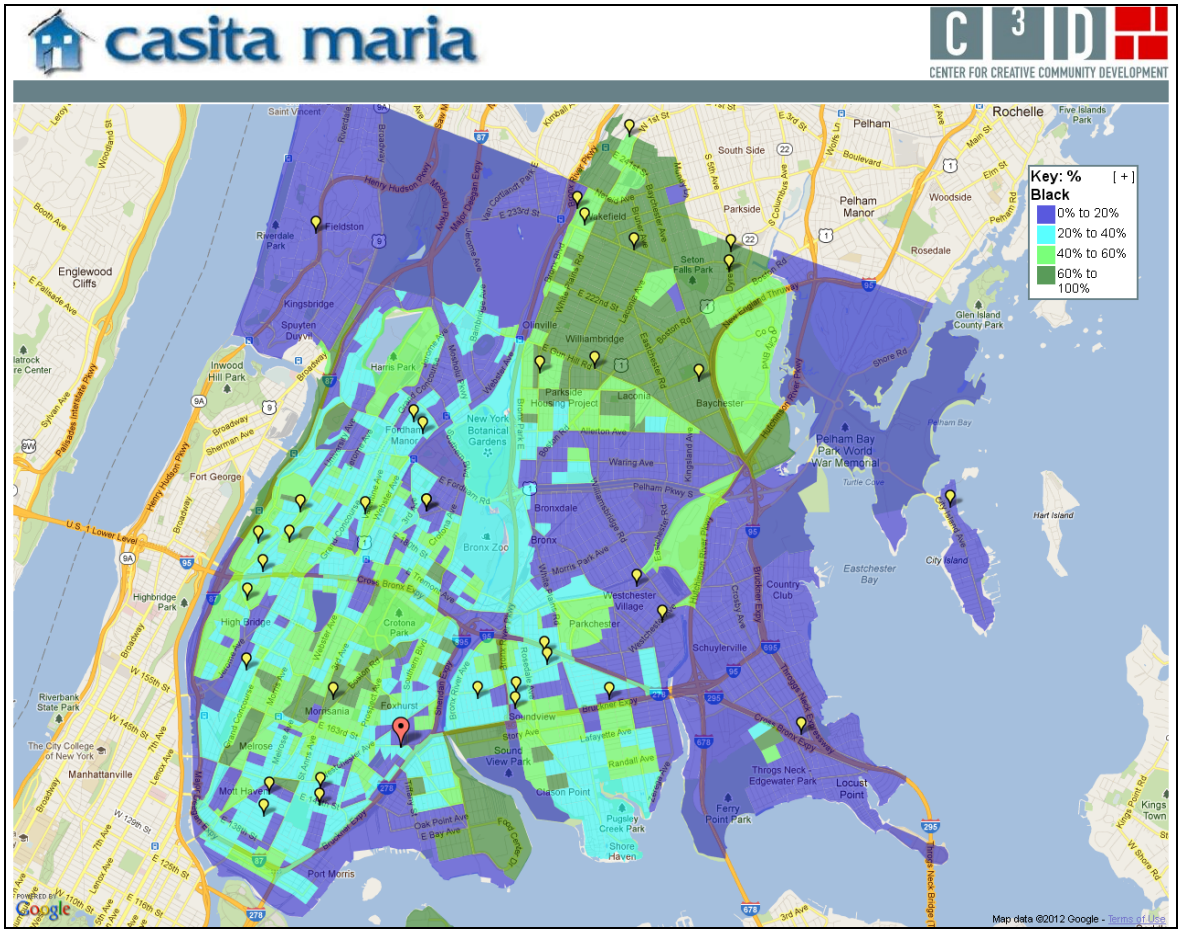
Figure 5: Adding Bronx Religious Organizations



[3]We used addresses of religious organizations provided at http://www.yellowpages.com/bronx-ny/churches-places-of-worship?refinements%5Bheadingtext%5D=Religious+Organizations, accessed 2/13/2012. The list of addresses is provided in Appendix A so that you can practice with the Geocoder.

Click the 'Show Geocoded Addresses' button. The Geocoder box closes and the new addresses are visible on the map. The new addresses can be shown by themselves or with the other address lists. Figure 6 shows the addresses of the area religious organizations mapped with '% Black' Census data.

Figure 6: Religious Organizations in the Bronx



Unlike address maps created by us for Casita Maria, these address markers will not save permanently once you close the map. You will want to save a copy of the addresses as an Excel spreadsheet or other file, so that you may use them again in the Geocoder. You will also want to capture images of the map once it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

<u>How to prepare a map for inclusion in a report</u>

Lastly, we describe how to take a map created with the map tool and prepare it for inclusion in a report[4]. We will discuss the map of religious organizations in the Bronx above. We have already provided the step by step instructions for creating the map.

[4] These instructions are for a PC.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map and choose 'Borders and Shading'. Choose 'Box' and the program will draw a box border around the figure in your Word document. This is how Figure 6 above was formatted.[5] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for Casita Maria. The goal of the mapping tool is to allow Casita Maria to easily and effectively make the case for the impact it has on the Bronx. The tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to Casita Maria's interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/Casita.html and explore variables and relationships among Census data, youth programming, and broader support. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to Casita Maria into the future, and it will be possible for addresses related to new initiatives to be mapped.

[5] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on your configuration of programs on your machine.

Appendix A
Addresses of Religious Organizations in the Bronx

Sample data to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/Casita/CMCountyMap/CMCountyMap.htm

1960 Dr Martin L King Jr Blvd Bronx NY 10453
1068 E Gun Hill Rd Bronx NY 10469
788 Southern Blvd Frnt 1 Bronx NY 10455
1071 Soundview Ave Bronx NY 10472
1141 Fteley Ave Bronx NY 10472
1148 Elder Ave Bronx NY 10472
1309 Taylor Ave Bronx NY 10472
1357 Taylor Ave Bronx NY 10472
1371 Shakespeare Ave Bronx NY 10452
1544 Shakespeare Ave Bronx NY 10452
1730 Harrison Ave Bronx NY 10453
2069 Bruckner Blvd Bronx NY 10472
2500 Westchester Ave Bronx NY 10461
2547 E Tremont Ave Bronx NY 10461
268 E 181st St Bronx NY 10457
2703 Decatur Ave Bronx NY 10458
2899 Valentine Ave Bronx NY 10458
290 E 196th St Bronx NY 10458
2950 Dewey Ave Bronx NY 10465
3025 Ely Ave Bronx NY 10469
3306 White Plains Rd Bronx NY 10467
3801 Dyre Ave Bronx NY 10466
475 E 142nd St Bronx NY 10454
520 Concord Ave Bronx NY 10455
578 E 166th St Bronx NY 10456
595 Minnieford Ave Bronx NY 10464
658 E 234th St Bronx NY 10466
822 E 233rd St Bronx NY 10466
85 E 165th St Bronx NY 10452
963 E 233rd St Bronx NY 10466
1475 Ave # 5B Bronx NY 10452
412 147th St Bronx NY 10455
660 243rd St Bronx NY 10470
535 246th St Bronx NY 10471
4300 Ave Bronx NY 10466
2509 Ave Bronx NY 10469
6301 Ave Bronx NY 10471

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Using City of Asylum's Map Tool

The paper presents examples of documenting, displaying, and discussing the position of City of Asylum in its community through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC)[1], participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how data on the location of community cultural and educational nonprofit organizations can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The map tool created for City of Asylum was developed to assist the organization in documenting and articulating the location of potential collaborators in Pittsburgh, specifically cultural and educational nonprofits in Allegheny County. The map tool can be found on City of Asylum's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/COA.html. There you will find a City of Asylum map option with an overlay of Census variables for Allegheny County (listed as the county overlay), and a map option with an overlay of Census variables for the five mile (local) area around City of Asylum. We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show the location of potential collaborators in the greater Pittsburgh area; other times the distribution of cultural and educational nonprofit organizations in the local area may be of greater interest. In this paper we will work with the Allegheny County map, but everything presented here also applies to the 5 mile radius map.[2]

We do not provide interpretations of the many interesting aspects of City of Asylum's online map here. Rather this paper presents a description of how to use the online, interactive map tool to explore questions about City of Asylum's neighborhood, its demographic characteristics, and its cultural assets. This brief paper provides information on how to use the online mapping tool to:

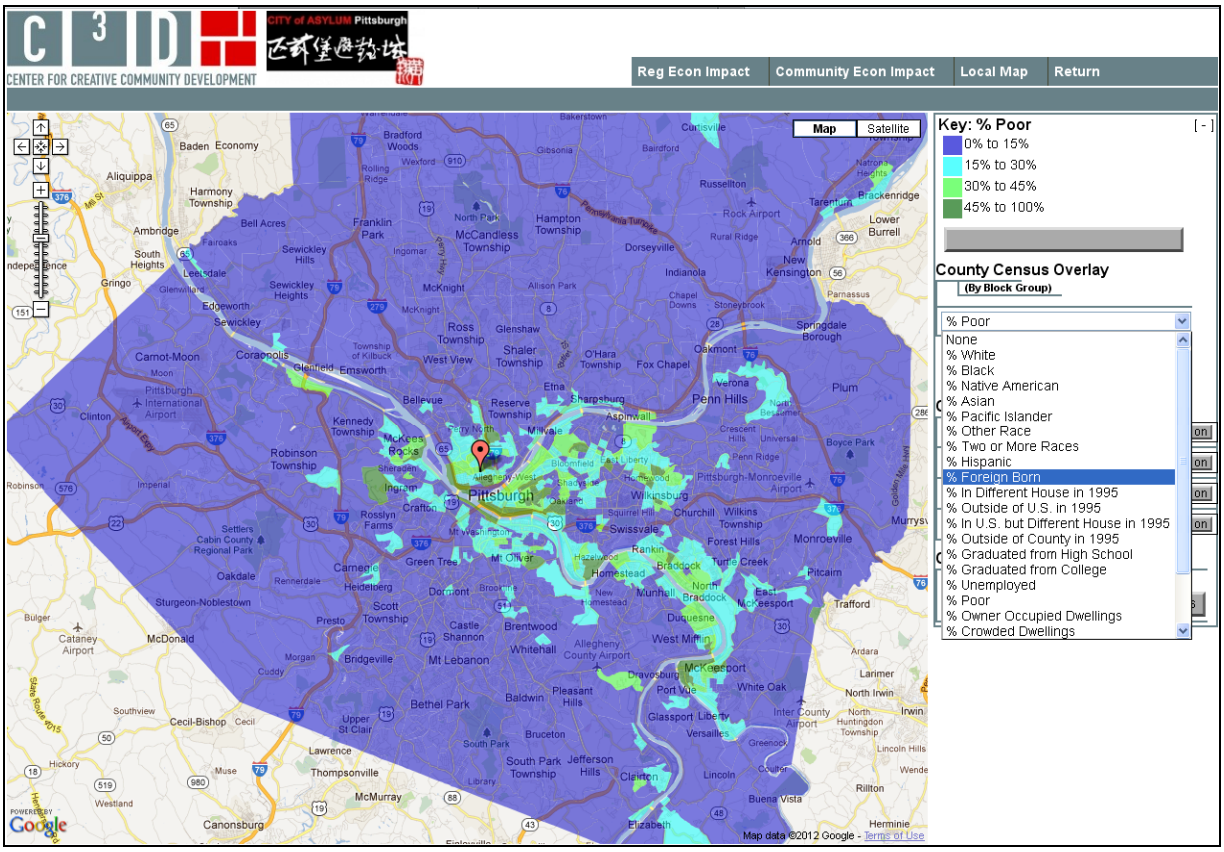
- change the Census variables displayed on the map;
- change the address lists displayed on the map;
- add new address data to the map; and
- create a copy of the map to include in a report.

[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
[2] The Census overlay does not make a perfect circle with 5 mile radius around City of Asylum. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more jagged display.

How to change the Census variables displayed on the map

City of Asylum's interactive map has 23 Census variables available for viewing. The default variable when the map opens is percent poor. Clicking on the drop-down box in the right hand window shows the choice of Census variables, as shown in Figure 1.

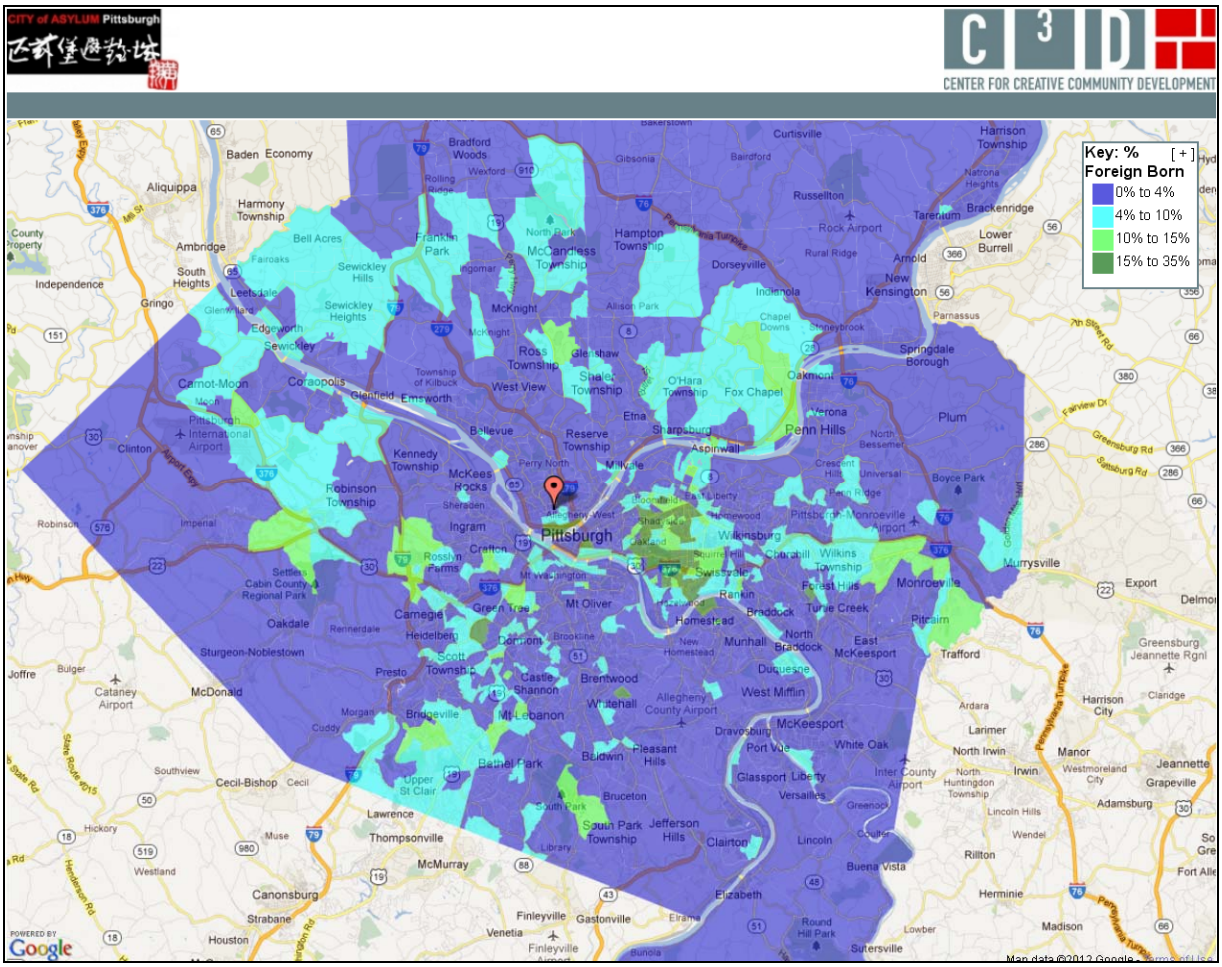
Figure 1
Change the Census Variables Displayed on the Map



City of Asylum is by its very nature internationally based while having been created locally in the heart of Pittsburgh. City of Asylum provides two-year residencies for writers exiled under threat of imprisonment or persecution in their native countries. We might, then, be interested in the distribution of foreign-born residents in Pittsburgh. On the interactive map, select '% Foreign Born' from the list. Figure 2 presents Census block groups shaded according to the percentage of residents born outside the US.[3]

[3] If you click on the orange bubble on the map a bubble with open with a photo of City of Asylum; within this bubble you can click on Streetview to see Google Maps archived photographs of the neighborhood. If you click on the City of Asylum logo at the top of the page you will be taken to City of Asylum's web site.

Figure 2
Percent Foreign Born in Allegheny County

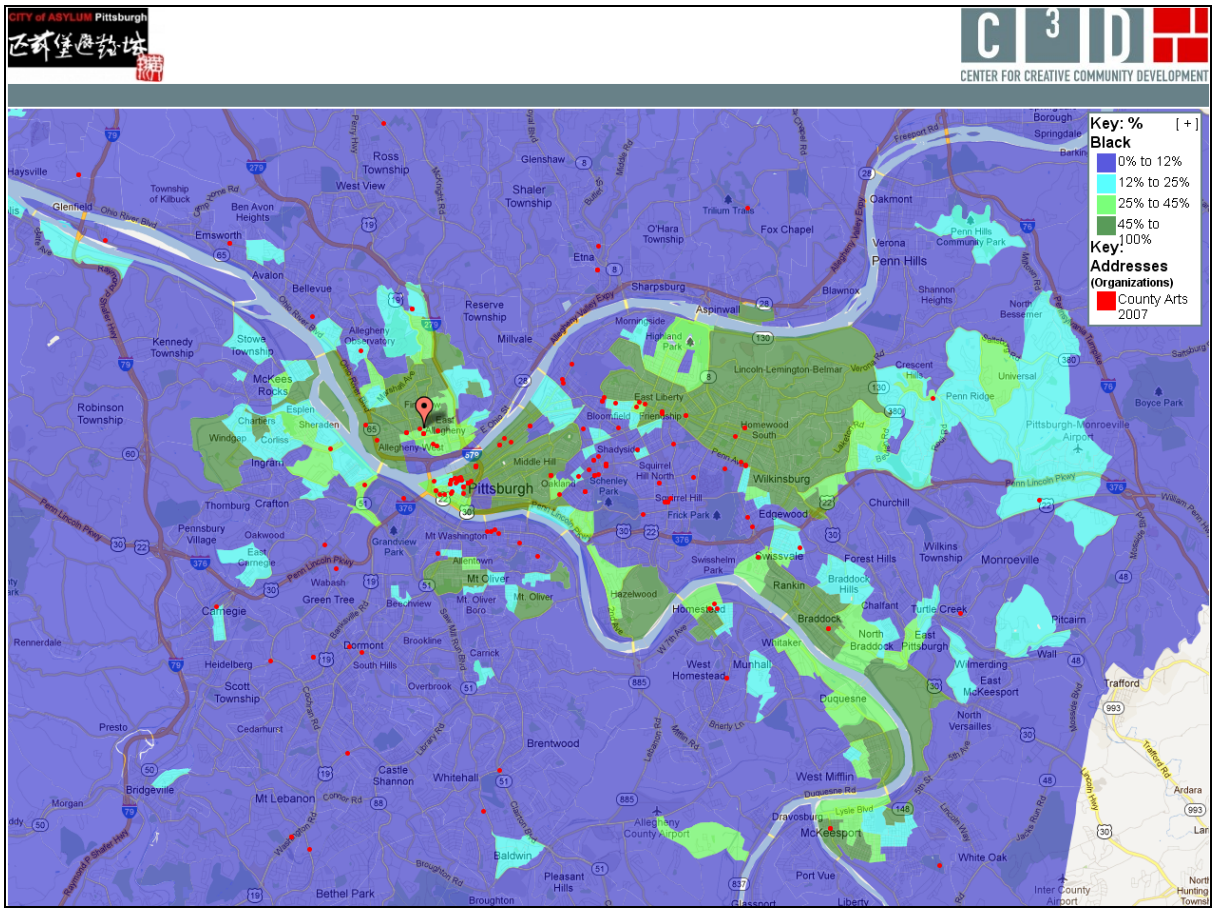


In Figure 2, the dark blue areas of the map represent Census block groups with the smallest percent of foreign-born residents. The bright green and dark green areas are Census block groups with the highest percent of foreign-born residents. The orange marker is the location of City of Asylum. We see that there are neighborhoods in Pittsburgh where immigrants make up 15 to 35 percent of the resident population. One such area is just south of City of Asylum, but a much more significant area is east of City of Asylum, across the Allegheny River.

<u>How to change the address lists displayed on the map</u>

Four lists of addresses were mapped for City of Asylum: the location of cultural arts nonprofits in 2007 and 1989 in Allegheny County, and the location of educational nonprofits in 2007 and 1989 in Allegheny County. The default when the map opens is that none of the lists of addresses are displayed. To examine the location of cultural arts nonprofits in 2007, click the "on" button next to the list name. Change the Census variable to '% Black'. The map of cultural arts nonprofits, shown in Figure 3, could be used in a discussion of potential partners in a new literary initiative.

Figure 3
Cultural Arts Nonprofits, Allegheny County 2007
(shown with % Black)



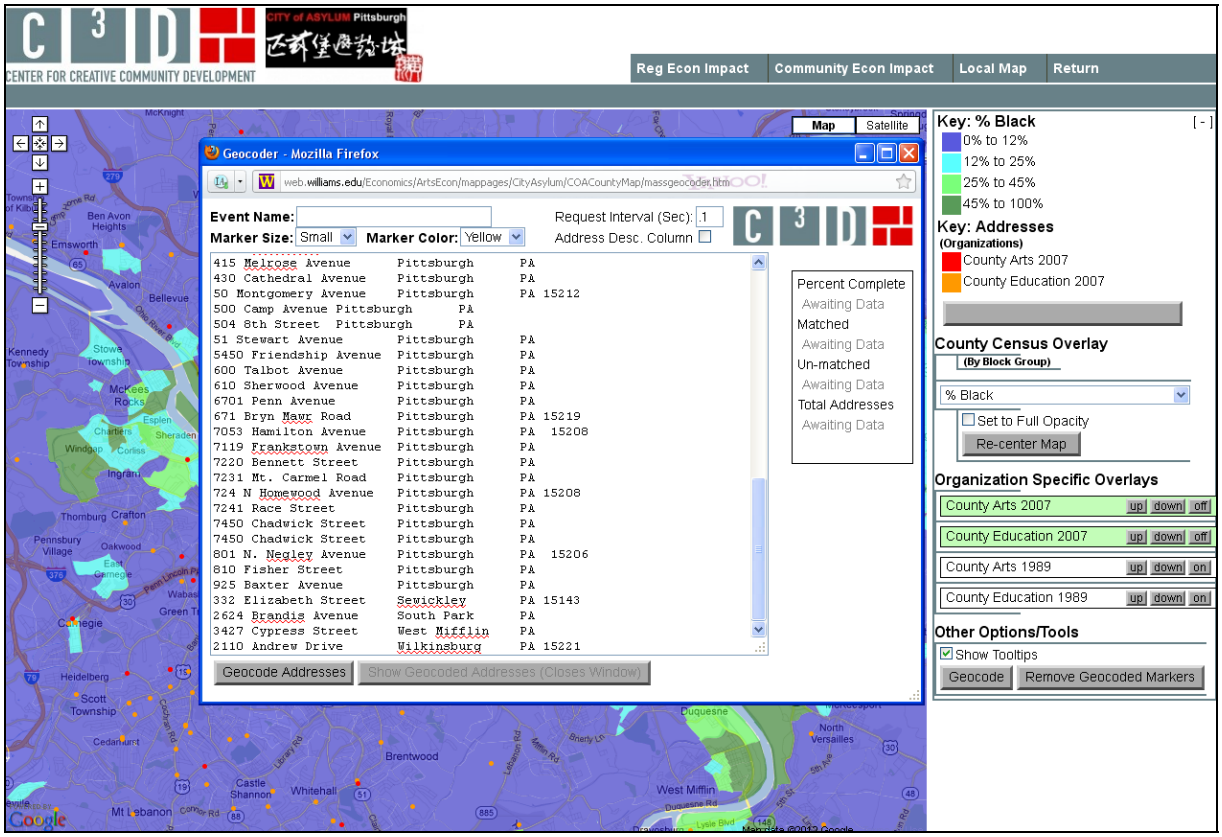
Across the Allegheny River from City of Asylum, in downtown Pittsburgh, is the Cultural District. We see in Figure 3 that there is indeed a cluster of cultural arts nonprofit organizations in that area. There are also, however, a loose grouping of cultural arts nonprofits in City of Asylum's general neighborhood, and other cultural nonprofits throughout the County.

<u>How to add new address data to the map</u>

City of Asylum may decide, after viewing Figure 3, to identify a third set of potential partners for a new initiative. In this example, City of Asylum might wish to identify Black churches in its neighborhood. It is possible to do this using the "Geocode" button included on City of Asylum's map page.

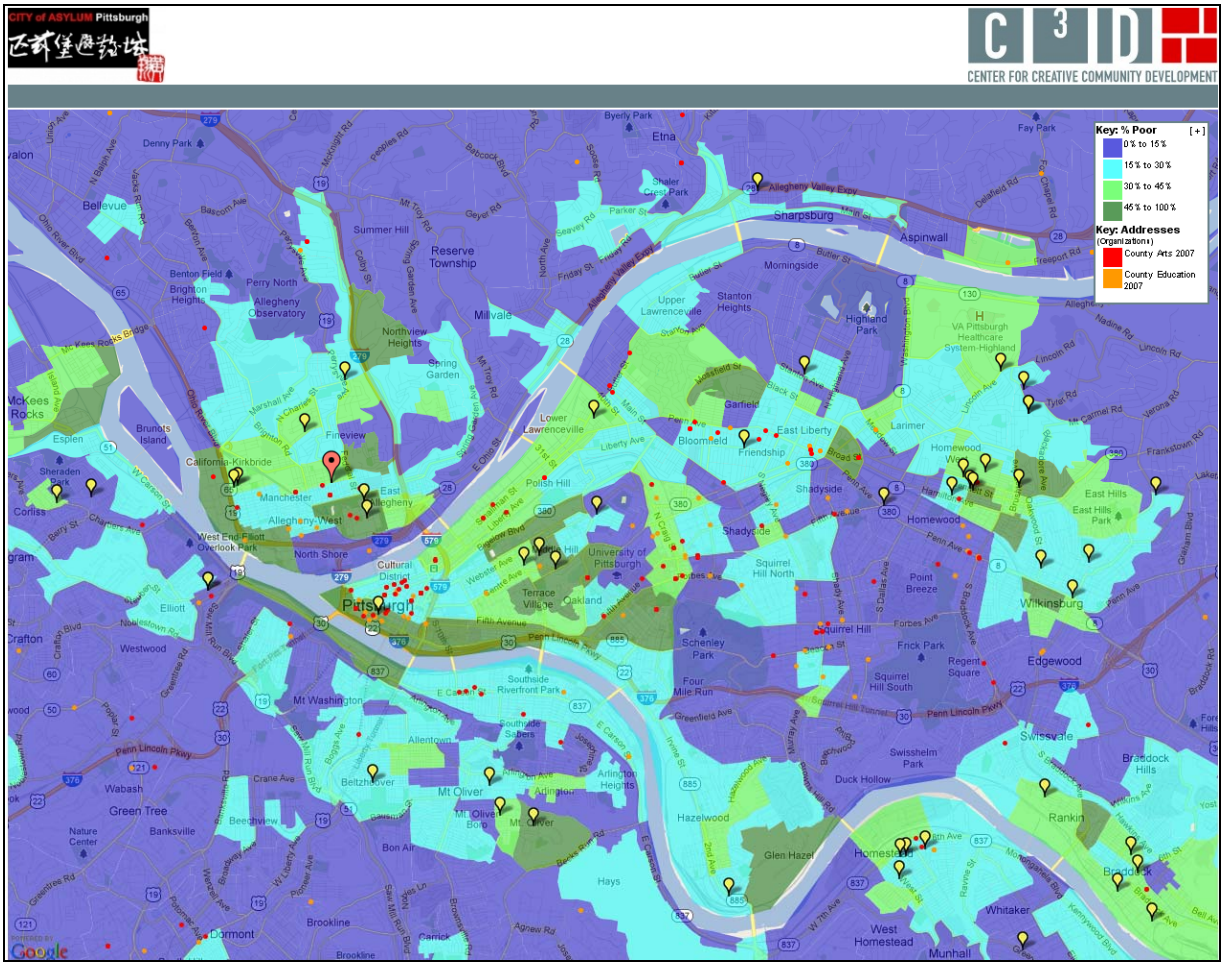
Click on the “Geocode” button and a new window opens. City of Asylum can copy the addresses of Black churches from many formats such as an Excel spreadsheet or a Notepad text file and paste them into the Geocoder box. The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the churches (we chose small) and the color of the markers (we chose yellow). Figure 4 shows what the computer screen for City of Asylum’s interactive program looks like at this point.

Figure 4
Adding Black Churches in Allegheny County



Click the ‘Show Geocoded Addresses’ button. The box closes and the new addresses are visible on the map. The new addresses can be shown by themselves or with the other address lists. Turn ‘on’ the list of County cultural arts nonprofits for 2007 and the list of County educational nonprofits for 2007. Figure 5 shows the location of the Black churches with small yellow markers; the location of cultural arts nonprofits with red dots; and the location of educational nonprofits with orange dots.

Figure 5
Cultural Assets of Pittsburgh
with Black Churches and Percent Black



<u>How to create a copy of the map to include in a report</u>

Finally, we explain how to take a map created with the interactive map tool and prepare it for inclusion in a report[4]. We will discuss the map of Black churches in Figure 5 above. We have already provided the step by step instructions for creating that map.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

[4] These instructions are for a PC.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map and choose 'Borders and Shading'. Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 5 above was formatted.[5] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for City of Asylum. The map tool is meant to be an additional resource for City of Asylum to explore its position in its neighborhood and place itself in the Pittsburgh landscape of cultural and educational community assets. The tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to City of Asylum's interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/COA.html and explore Census variables in relationship to community cultural assets. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to City of Asylum in the future, and it will be possible for addresses related to new initiatives to be mapped.

[5] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on the configuration of programs on your machine.

Appendix A
Addresses of Black Churches in Allegheny County[6]

Sample data to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/CityAsylum/COACountyMap/COACountyMap.htm

1023 Talbot Avenue	Braddock	PA
445 Sixth Street	Braddock	PA 15104
451 Park Avenue	Clairton	PA
17 Cochran	Duquesne	PA
601 Priscilla Avenue	Duquesne	PA 15110
416 Franklin Street	East Pittsburgh	PA
1000 Tenth & Ann Streets	Homestead	PA 15120
108 West 12th Avenue	Homestead	PA
215 East Tenth Avenue	Homestead	PA
5524 Second Avenue	Homestead	PA
2117 Jenny Lind Street	McKeesport	PA 15132
2538 Woodlawn Drive	Monroeville	PA 15146
437 E. 10TH Avenue	Munhall	PA 15120
90 Port Perry Road	North Versailles	PA 15137
699 Rodi Road	Penn Hills	PA 15235
1036 Penn Avenue	Pittsburgh	PA
12 South 5th Street Duquesne	Pittsburgh	PA
1205 Wood Street	Pittsburgh	PA
123 Steuben Street	Pittsburgh	PA 15220
123 Steuben Street	Pittsburgh	PA 15220-5522
1437 Juniata Street	Pittsburgh	PA
1440 Juniata Street	Pittsburgh	PA 15233
1511 Swissvale Avenue	Pittsburgh	PA
1701 Lincoln Avenue	Pittsburgh	PA 15206
18 Harriet Street	Pittsburgh	PA
200 Chalfont Street	Pittsburgh	PA
201 Frederick Avenue	Pittsburgh	PA
2200 Wylie Avenue	Pittsburgh	PA
225 37th Street	Pittsburgh	PA
2340 Wylie Avenue	Pittsburgh	PA 15230
241 Maple St Clairton	Pittsburgh	PA
245 Third Avenue	Pittsburgh	PA
250 East Ohio Street	Pittsburgh	PA
2505 Centre Ave and Reed St	Pittsburgh	PA
2602 Perrysville Avenue	Pittsburgh	PA 15214
3105 Allendale Street	Pittsburgh	PA 15204
415 Melrose Avenue	Pittsburgh	PA
430 Cathedral Avenue	Pittsburgh	PA

[6] This is a subset of addresses; it is not meant to be a comprehensive list of Black churches in Allegheny County.

50 Montgomery Avenue	Pittsburgh	PA 15212
500 Camp Avenue	Pittsburgh	PA
504 8th Street	Pittsburgh	PA
51 Stewart Avenue	Pittsburgh	PA
5450 Friendship Avenue	Pittsburgh	PA
600 Talbot Avenue	Pittsburgh	PA
610 Sherwood Avenue	Pittsburgh	PA
6701 Penn Avenue	Pittsburgh	PA
671 Bryn Mawr Road	Pittsburgh	PA 15219
7053 Hamilton Avenue	Pittsburgh	PA 15208
7119 Frankstown Avenue	Pittsburgh	PA
7220 Bennett Street	Pittsburgh	PA
7231 Mt. Carmel Road	Pittsburgh	PA
724 N Homewood Avenue	Pittsburgh	PA 15208
7241 Race Street	Pittsburgh	PA
7450 Chadwick Street	Pittsburgh	PA
7450 Chadwick Street	Pittsburgh	PA
801 N. Negley Avenue	Pittsburgh	PA 15206
810 Fisher Street	Pittsburgh	PA
925 Baxter Avenue	Pittsburgh	PA
332 Elizabeth Street	Sewickley	PA 15143
2624 Brandis Avenue	South Park	PA
3427 Cypress Street	West Mifflin	PA
2110 Andrew Drive	Wilkinsburg	PA 15221

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Using Dance Place's Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of Dance Place through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC),[1] participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how visitor and clientele address data can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The map tool created for Dance Place was developed to assist the organization in documenting and articulating its school outreach program. The map tool can be found on Dance Place's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/DancePlace.html.
There you will find a Dance Place map option with an overlay of Census variables for Washington DC, and a map option with an overlay of Census variables for a five mile (local) radius around Dance Place.[2] We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show where in Washington DC one is reaching students; other times the attraction of students in the local area may be of greater interest, particularly since Dance Place is located only two miles from the Maryland border. In this paper we will work with the Washington DC map, but everything presented here also applies to the 5 mile radius map.

We do not provide interpretations of the many interesting aspects of Dance Place's online map here. Rather this paper provides examples of how to use the online, interactive map tool to explore some of the questions about Dance Place's neighborhood and school outreach program that might arise. This brief paper provides information on how to use the online mapping tool to:

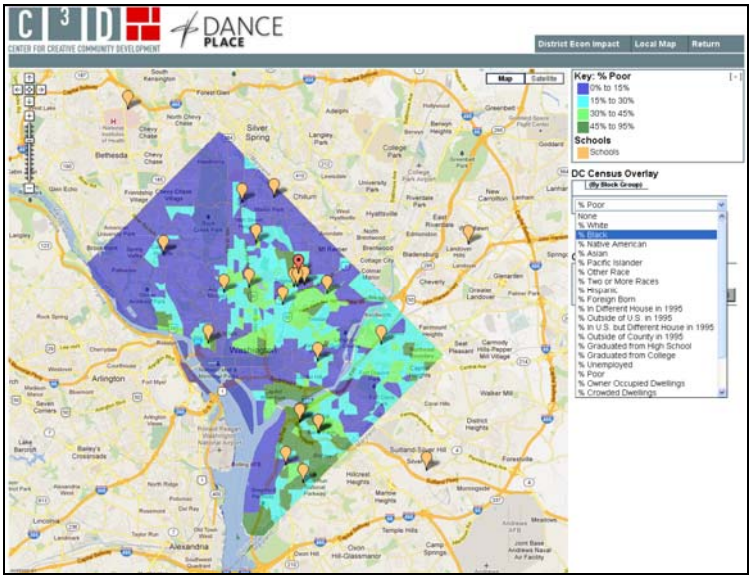
- change the Census variables displayed on the map;
- turn off and on the markers of the school outreach program;
- add new address data to the map; and
- create a copy of the map to include in a report.

How to change the Census variables displayed on the map

Dance Place's interactive map has 23 Census variables available for viewing. The default variable when the map opens is '% poor'. Clicking on the drop-down box in the right-hand window provides the list of Census variables, as shown in Figure 1.

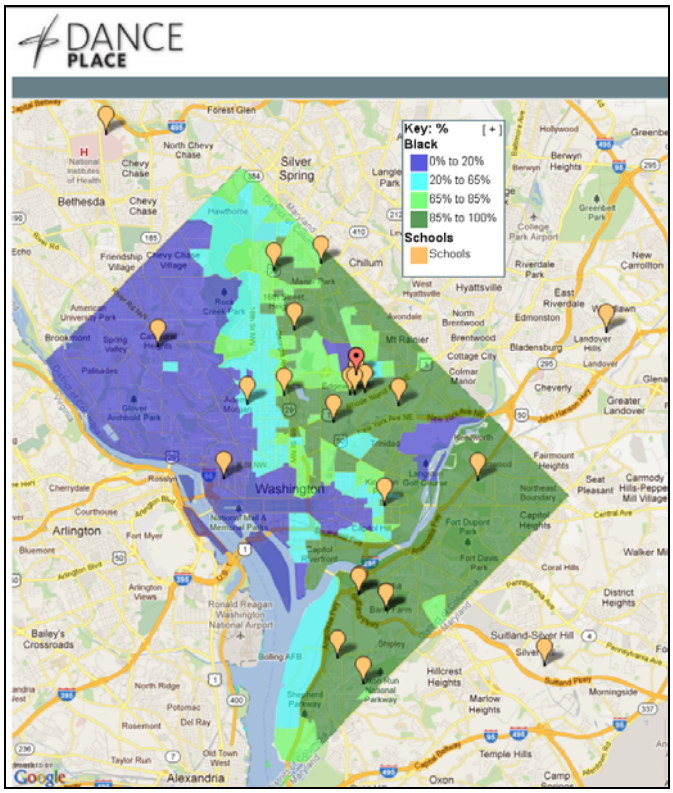
[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
[2] The Census overlay does not make a perfect circle with 5 mile radius around Dance Place. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more irregular display.

Figure 1: Change the Census Variables Displayed on the Map



On the interactive map, select '% Black' from the list. Zoom in on the map to better differentiate block groups around Dance Place. The result is shown in Figure 2, which presents Census block groups shaded according to the percent Black, and light orange markers for the schools where Dance Place has outreach programs. Clicking on a marker opens a bubble with the name and address of the school, along with the option of viewing archived photos in Google Streetview.

Figure 2: Dance Place Outreach Schools and Percent Black



The ethnic composition of Washington DC is distinctive, although not unique to US cities; the western side of the District has a very low percentage of Blacks as residents (less than 20%), while the eastern side of the District has a very high percentage of Black residents (greater than 85%). The bright turquoise strip in the middle separates the two areas.

How to turn off and on the markers of the school outreach program

When Dance Place's interactive map opens, the default is that it has markers identifying the location of schools with outreach programs. There may be times, however, (such as in Figure 4 below) when a map without the outreach schools may be preferable. Turning off the markers is quite easy. In the right-hand window, just above the button labeled 'Geocode' is a box with the label 'Hide Schools'. Checking this box temporarily removes the markers of outreach schools. To turn the outreach schools' markers back on again simply uncheck the 'Hide Schools' box.

How to add new address data to the map

In order to describe how to add new data to Dance Place's map, we must work with a hypothetical situation. For the hypothetical case, we will shift our attention from ethnicity to educational attainment. The Obama administration[3] and the Center for Disease Control (CDC)[4] have teen pregnancy prevention initiatives with education as a cornerstone. Dance Place has developed an active touring program to area schools with a strong educational component aimed at "guiding children in becoming responsible teens and adults."[5] Dance Place is well positioned to extend its outreach program as part of the White House and CDC initiatives.

Dance Place, in writing a grant proposal, might focus on areas where fewer residents have high school degrees, and might propose expanding its outreach program to middle schools in those areas. The interactive map created for Dance Place shows where it currently has school outreach programs. For a new initiative such as our hypothetical one, let's choose the variable '% Graduated from High School' and add to the map the location of all the middle schools in Washington DC.

Click the 'Geocode' button and a new window opens. Addresses of District middle schools can be copied and pasted into the Geocoder box from many sources such as an Excel spreadsheet or a Notepad text file. For the example below we pasted addresses of eighteen middle schools in Washington DC.[6] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the addresses (we chose large) and the color of the markers (we chose red). Figure 3 shows what the computer screen for Dance Place's interactive program looks like at this point.

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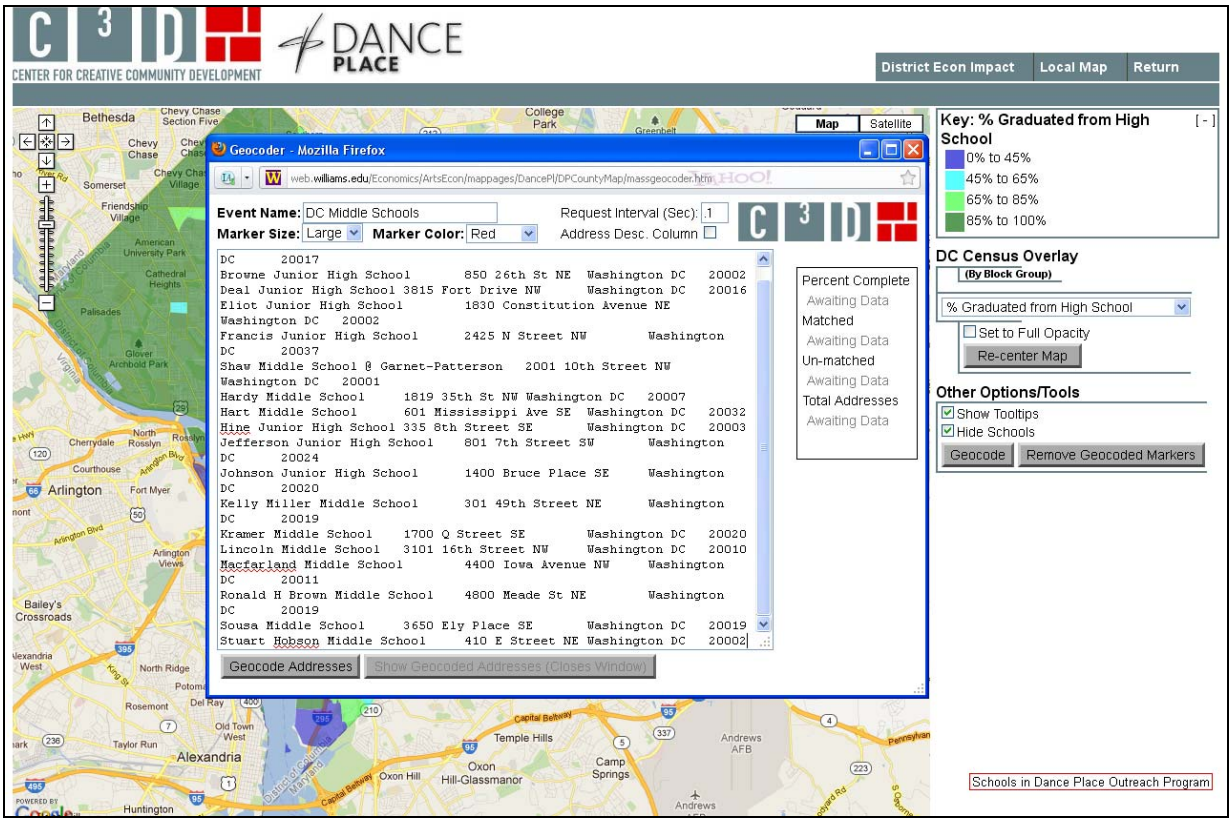
[3] See http://www.whitehouse.gov/omb/blog/09/06/08/BuildingRigorousEvidencetoDrivePolicyCite, accessed 2/21/2012, for the statement from the White House on its new emphasis on tying funding dollars to programs that measure and demonstrate program effectiveness.

[4] For more information on the CDC initiative see http://www.cdc.gov/TeenPregnancy/PreventTeenPreg.htm, accessed 2/21/2012.

[5] See http://www.danceplace.org/in-our-community/, accessed 2/10/2012.

[6] "We used addresses of public middle schools provided by The Washington Post at http://projects.washingtonpost.com/dcschools/list/, accessed 2/20/2012. The list of addresses is provided in Appendix A so that you can practice with the Geocoder. While we use only Middle Schools in this example, the Washington Post lists all the public schools in Washington DC.

Figure 3: Adding Washington DC Middle School Locations

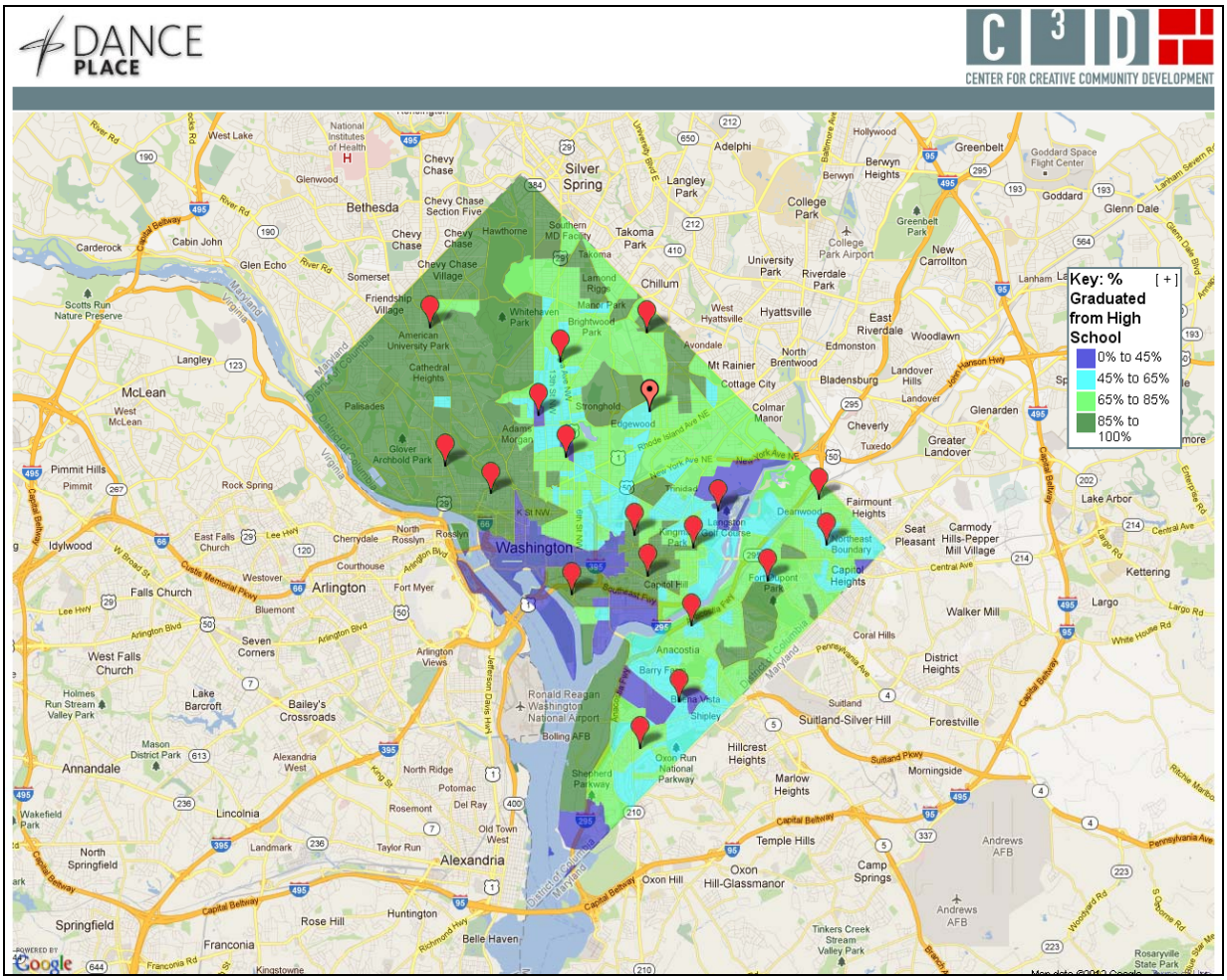


Now click the 'Show Geocoded Addresses' button. The Geocoder box closes and the new addresses are visible on the map. The middle schools can be shown by themselves or with the Dance Place outreach schools. Figure 4 shows the addresses of middle schools in Washington DC mapped with '% Graduated from High School' Census data.

The markers in Figure 4 identify the locations of middle schools in Washington DC. The Census block groups are shaded according to the percentage of residents age 25 and older who have graduated from high school. The block groups shaded dark purple and bright turquoise have lower percentages of adults with high school degrees. Dance Place might choose to focus on expanding its school outreach program to middle schools in or near those areas[7]. Clicking on any of the red markers opens a bubble with the name and address of the school. In most cases there is also the option of viewing archived photos of the area through Google Maps Streetview.

[7] In this map most of the dark purple Census block groups appear to have very few residents; they include things such as a golf course, the National Mall, and the Navy Yard. We would recommend focusing on the bright turquoise Census block groups.

Figure 4: Middle Schools in Washington DC

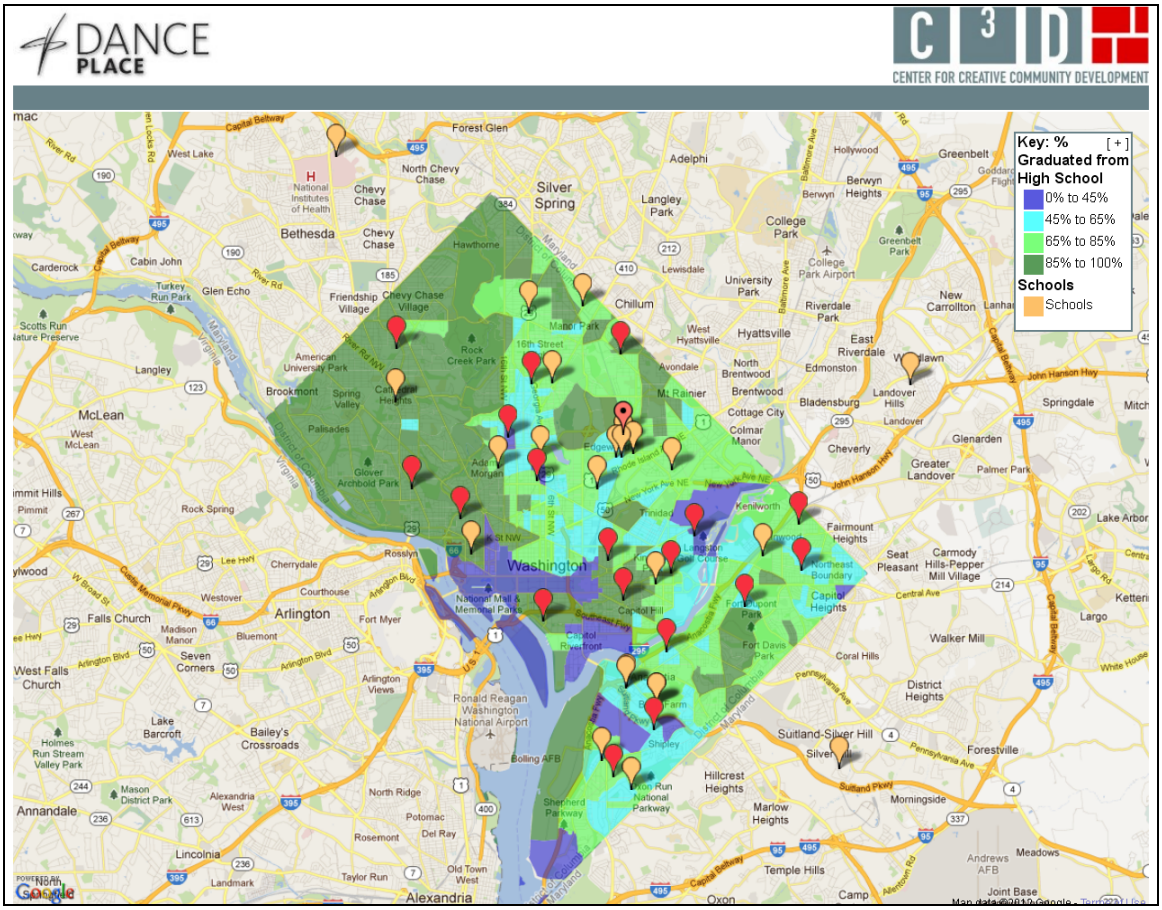


At this point it might be of interest to turn the markers for the schools in Dance Place's outreach program back on. This is done by unchecking the "Hide Schools" box directly above the Geocode tab.[8] The resulting map is shown in Figure 5.

The map presented in Figure 5 would allow Dance Place to identify areas of the District that have more residents with lower educational attainment and evaluate if its current school outreach program reaches all of those areas. Dance Place could identify two or three neighborhoods where expansion of their program might be beneficial, along with the middle schools closest to these neighborhoods. The map in Figure 4 could be included in a section on identifying need, and the map in Figure 5 could be used in justifying where to expand the program geographically.

[8] In some instances you may need to check "Hide Schools" and then uncheck it.

Figure 5: Washington DC Middle Schools and Dance Place Outreach Schools



Unlike the address maps created by us as part of Dance Place's online map tool, the address markers created using the Geocoder will not save permanently when the map is closed. You will want to save a copy of the addresses as an Excel spreadsheet or other file so that you may use them again in the Geocoder. You will also want to capture images of the map when it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

<u>How to prepare a map for inclusion in a report</u>

Lastly, we describe how to prepare a map created with the interactive map tool for inclusion in a report[9]. We will discuss the map of outreach schools and middle schools in Washington DC in Figure 5 above. We have already provided the step by step instructions for creating that map.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

[9] These instructions are for a PC.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map image and choose 'Borders and Shading'. Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 5 above was formatted.[10] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for Dance Place. The map tool is meant to be an additional resource for Dance Place to make the case, easily and effectively, for the impact of its school outreach program in Washington DC. The map tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to Dance Place's interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/DancePlace.html and explore Census variables in relationship to Dance Place's outreach programming. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to Dance Place into the future, and it will be possible for addresses related to new initiatives to be mapped.

[10] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on the configuration of programs on your machine.

Appendix A
Addresses of Middle Schools in Washington DC

Sample data to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/DancePl/DPCountyMap/DPCountyMap.htm

Backus Middle School	5171 South Dakota Ave NE	Washington DC	20017
Browne Junior High School	850 26th St NE	Washington DC	20002
Deal Junior High School	3815 Fort Drive NW	Washington DC	20016
Eliot Junior High School	1830 Constitution Avenue NE	Washington DC	20002
Francis Junior High School	2425 N Street NW	Washington DC	20037
Shaw Middle School @ Garnet-Patterson	2001 10th Street NW	Washington DC	20001
Hardy Middle School	1819 35th St NW	Washington DC	20007
Hart Middle School	601 Mississippi Ave SE	Washington DC	20032
Hine Junior High School	335 8th Street SE	Washington DC	20003
Jefferson Junior High School	801 7th Street SW	Washington DC	20024
Johnson Junior High School	1400 Bruce Place SE	Washington DC	20020
Kelly Miller Middle School	301 49th Street NE	Washington DC	20019
Kramer Middle School	1700 Q Street SE	Washington DC	20020
Lincoln Middle School	3101 16th Street NW	Washington DC	20010
Macfarland Middle School	4400 Iowa Avenue NW	Washington DC	20011
Ronald H Brown Middle School	4800 Meade St NE	Washington DC	20019
Sousa Middle School	3650 Ely Place SE	Washington DC	20019
Stuart Hobson Middle School	410 E Street NE	Washington DC	20002

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Using the Heidelberg Project's Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of the Heidelberg Project through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC)[1], participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how data on national visitors and community demographics can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The Heidelberg Project is an outdoor art environment that has grown over 25 years to encompass most of Heidelberg Street in Detroit. It began with the house of Tyree Guyton, founder and artist, and has grown over the years to include empty lots, abandoned houses, properties of neighbors, and the physical street itself. The art installations have focused on themes of social class, social change, and abandonment. The Heidelberg Project has received international press coverage over its 25 year history because of its use of found objects, including houses, to create public art engaged in social critique. It is only recently that the Heidelberg Project has transitioned from the impassioned project of the artist to a small cultural arts organization.

The map tool created for the Heidelberg Project was developed to assist the organization in documenting and articulating the national extent of visitors to Heidelberg Street. The map tool can be found on the Heidelberg Project's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/Heidelberg.html. There you will find a Heidelberg Project map option with an overlay of Census variables for Wayne County, and a map option with an overlay of Census variables for the five mile (local) area around the Heidelberg Project.[2] We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show the larger county demographics; other times the local area may be of greater interest. In this paper we will work with the Wayne County map, but everything presented here also applies to the 5 mile radius map.

We do not provide interpretations of the many interesting aspects of the Heidelberg Project's online map here. Rather this paper presents a description of how to use the online, interactive map tool to explore questions about the Heidelberg Project's neighborhood and visitor patterns that might arise. This brief paper provides information on how to use the online mapping tool to:

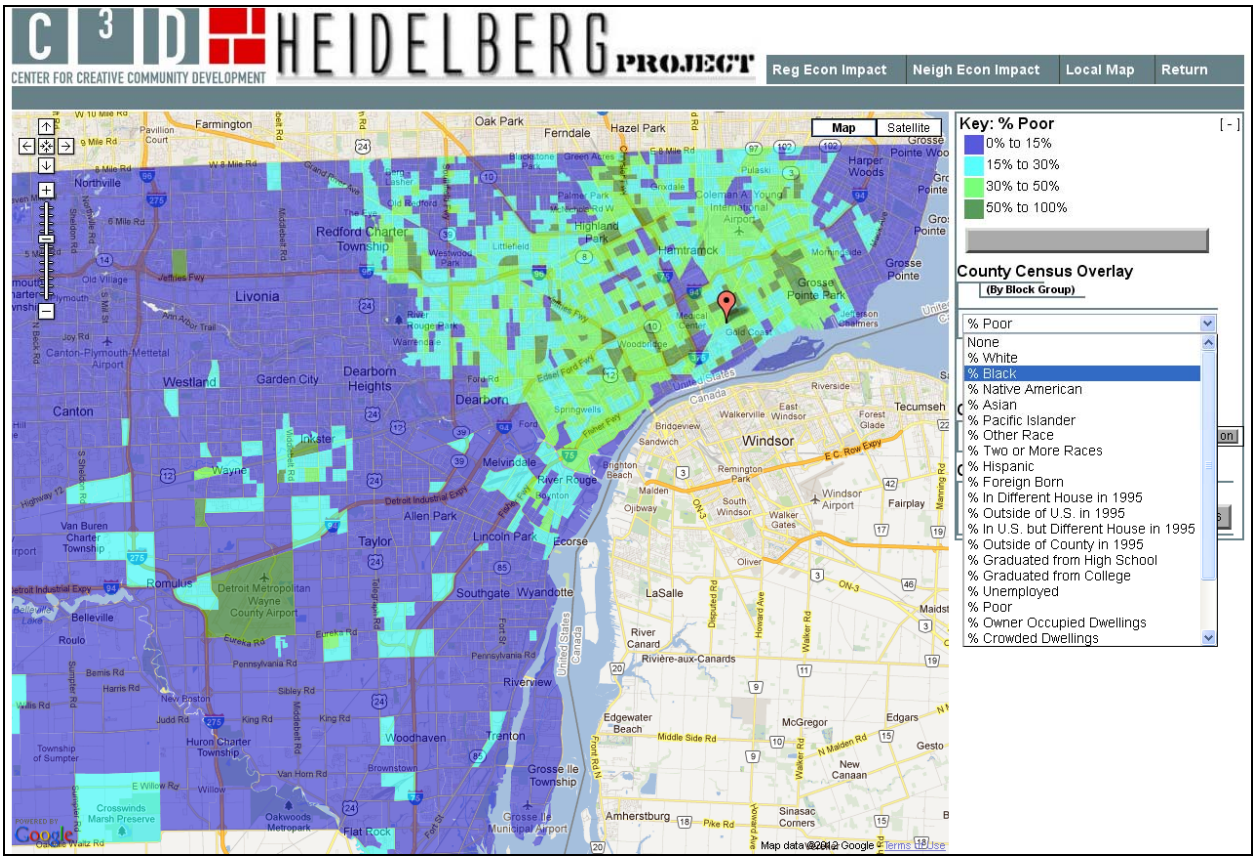
[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
[2] The Census overlay does not make a perfect circle with 5 mile radius around the Heidelberg Project. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more jagged display.

- change the Census variables displayed on the map;
- turn on and off the visitor address list;
- add new address data to the map; and
- create a copy of the map to include in a report.

<u>How to change the Census variables displayed on the map</u>

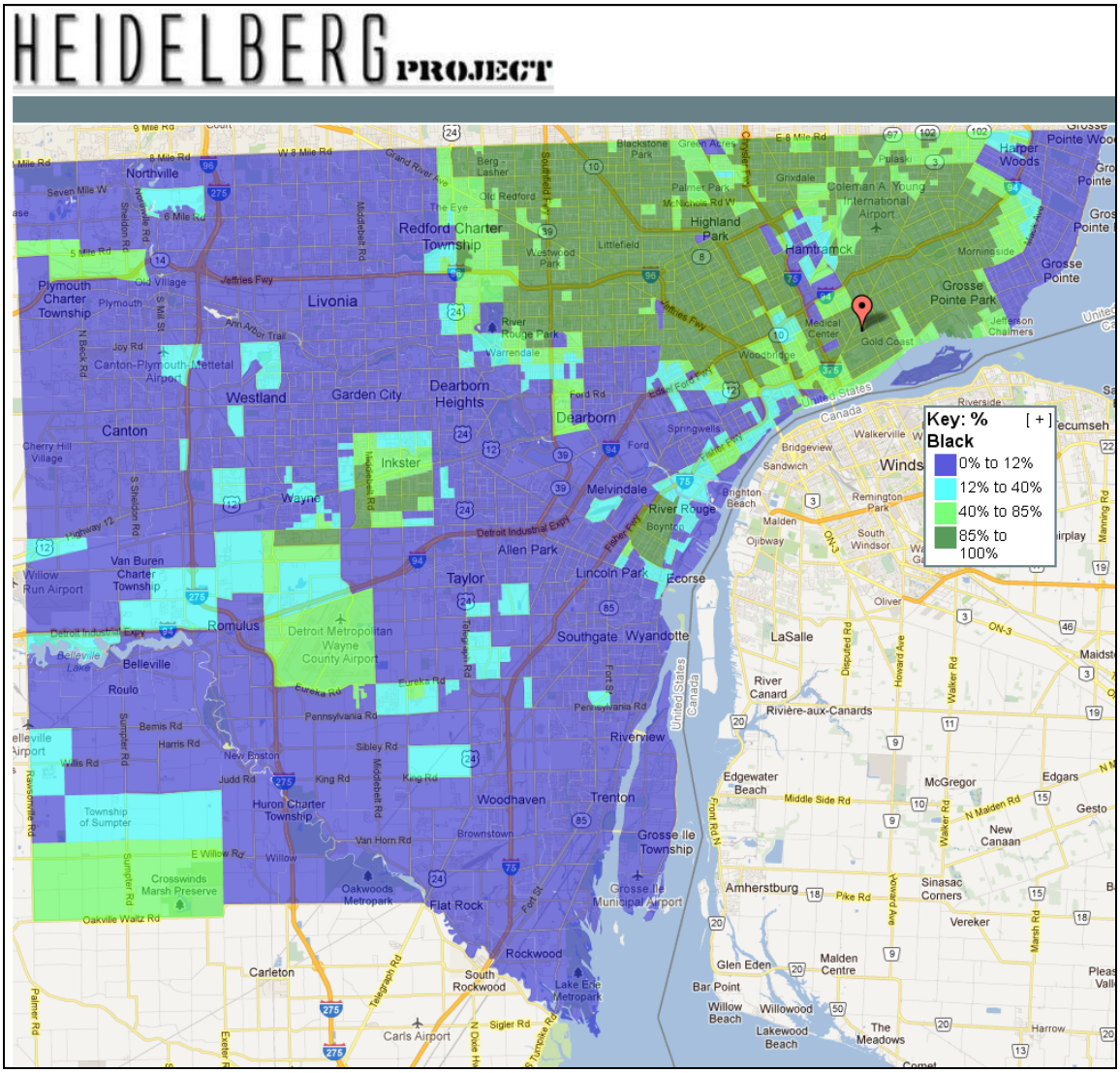
The Heidelberg Project's interactive map has 23 Census variables available for viewing. The default variable when the map opens is percent poor. Clicking on the drop-down box in the right hand window shows the choice of Census variables, as shown in Figure 1.

Figure 1: Change the Census Variables Displayed on the Map



On the interactive map, select '% Black' from the list. Figure 2 presents Census block groups shaded according to the percentage of residents who identify as Black.

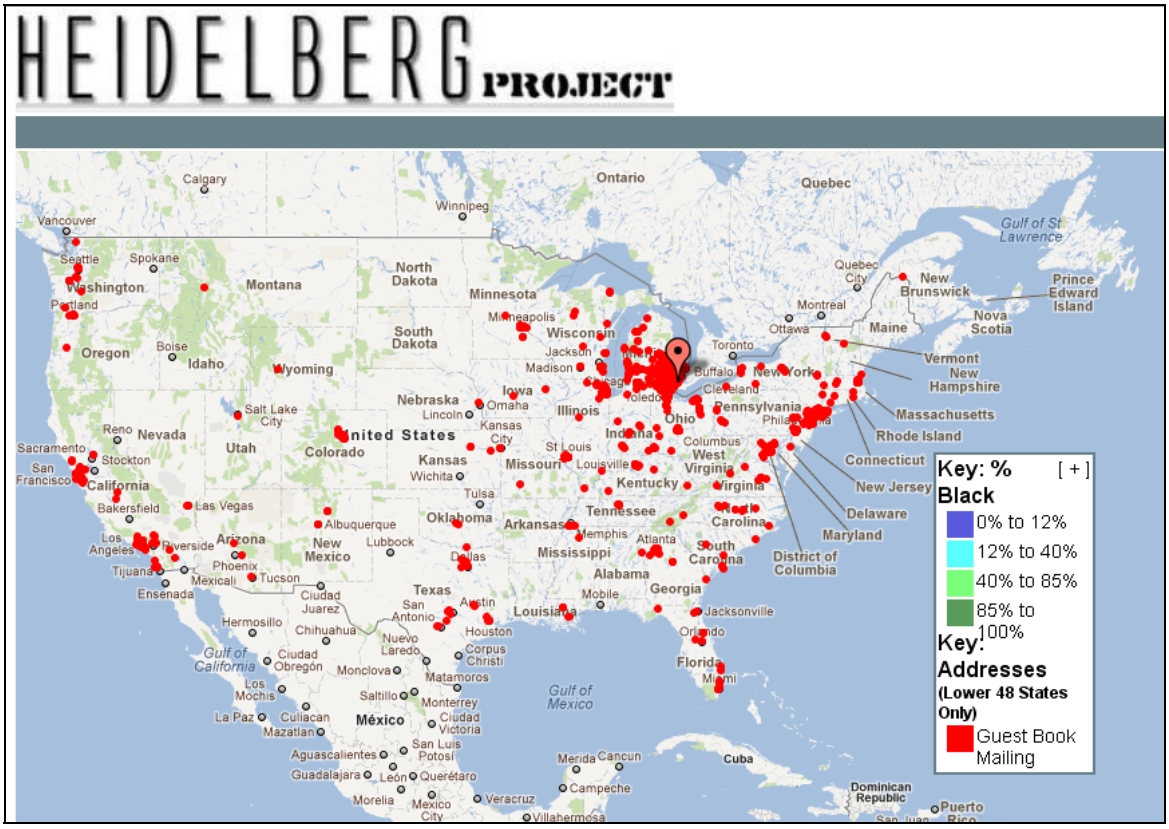
Figure 2: Heidelberg Project and Percent Black



<u>How to change turn on and off the visitor address list</u>

The Heidelberg Project has visitor guest books for many years. Visitors who signed the guest book were asked if they would like to join the mailing list and be kept current on Heidelberg Projects. We mapped the addresses of these visitors for the period 2006 to 2009. The default when the map opens is that addresses are not displayed. To show the visitor addresses click the "on" button next to 'Guest Book Mailing'. Zooming out to the national level of the map shows the national attraction of the Heidelberg Project. Figure 3 shows the results.

Figure 3: Heidelberg Project's National Visitors



The Heidelberg Project, in discussing the impact it has both locally and nationally, often discusses the fact that visitors who sign their guest books come from throughout the US and, indeed, from around the world. Given the fact that until recently the Heidelberg project has been the passion of the artist with little organizational support surrounding it, it has been difficult for some potential funders to evaluate this statement. Figure 3 quickly and effectively communicates that visitors to Heidelberg Street do indeed come from around the US.[3]

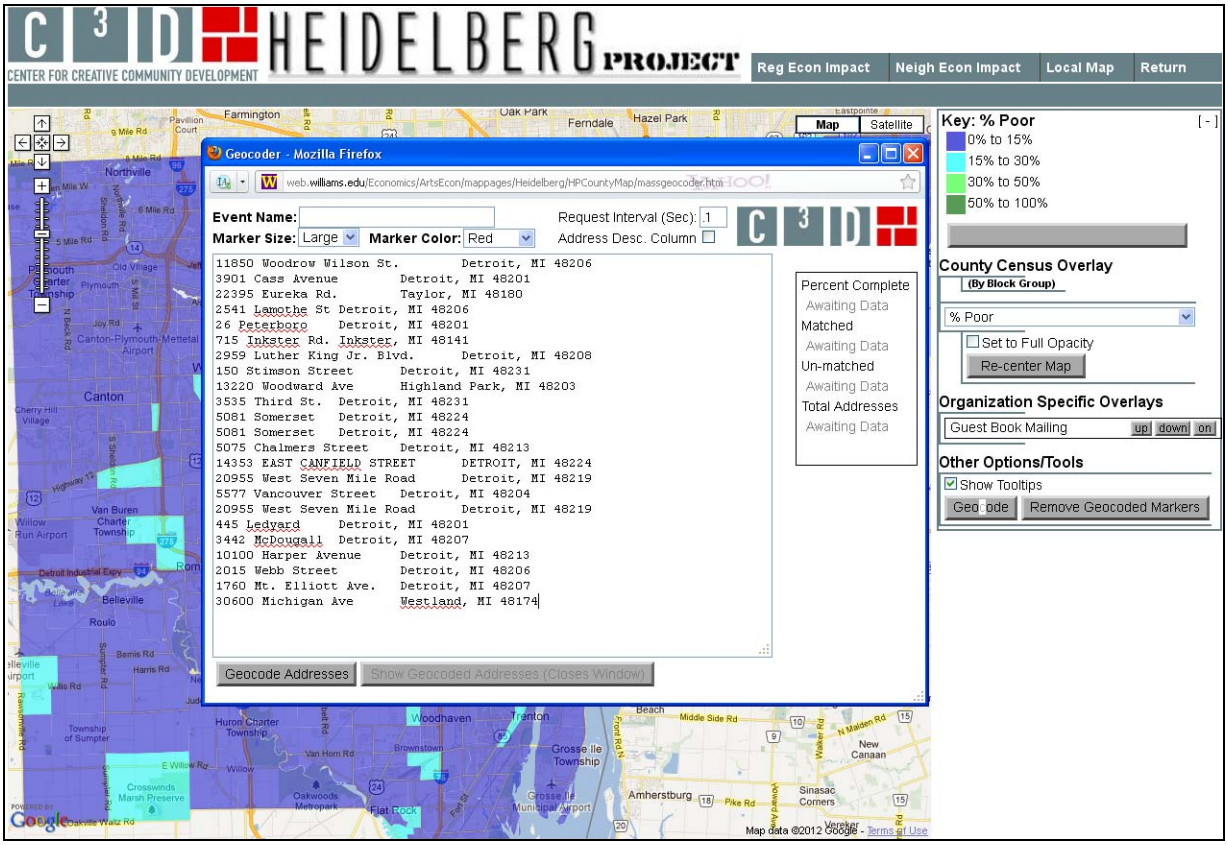
<u>How to add new address data to the map</u>

In order to describe how to add new data to the Heidelberg Project's map, we must work with a hypothetical situation. The Heidelberg Project has had installations in the past focusing on issues of homelessness, abandonment, and future possibilities. For our hypothetical case, let us say that the Heidelberg Project wants to develop an initiative focusing on homelessness and hope. As a first step, the Heidelberg Project might want to know where homeless shelters are located in Wayne County. It is possible to display this using the "Geocode" button included on the Heidelberg Project's map page.

[3] Our map tool covers only the Continental US but guest books do show may international visitors.

Click on the "Geocode" button and a new window opens. Addresses of homeless shelters in Detroit can be copied and pasted into the Geocoder box from many sources such as an Excel spreadsheet or a Notepad text file. For the example below we pasted addresses of 23 homeless shelters in Detroit.[4] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the addresses (we chose large) and the color of the markers (we chose red). Figure 4 shows the program at this point.

Figure 4: Adding Detroit Homeless Shelter Locations



Now click the "Show Geocoded Addresses" button. The Geocoder box closes and the new addresses are visible on the map. The homeless shelters can be shown by themselves or with the list of visitor addresses. To see the location of homeless shelters in relation to home ownership in Detroit, choose '% Owner Occupied Dwellings' from the Census variables list.

[4] We used addresses of homeless shelters provided at http://www.homelessshelterdirectory.org/cgi-bin/id/county.cgi?county=WAYNE-COUNTY&state=MI , accessed 2/26/12. The list of addresses is provided in Appendix A so you can practice with the Geocoder.

Figure 5: Homeless Shelters and Home Ownership in Detroit

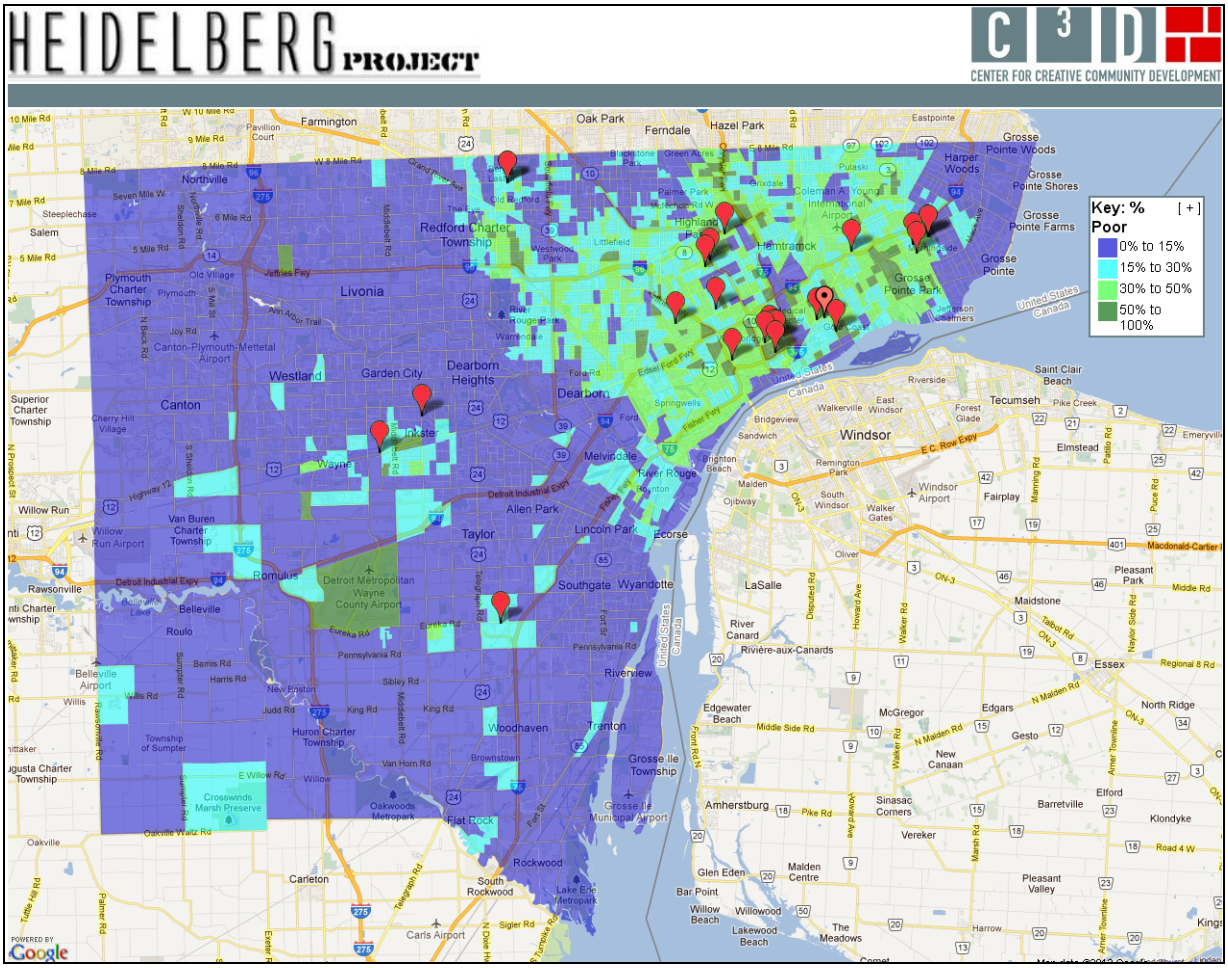


Figure 5 shows that homeless shelters in Detroit tend to be located in neighborhoods with lower rates of home ownership (the dark blue and bright turquoise areas of the map). Furthermore, there are multiple shelters in the vicinity of Heidelberg Street.

Unlike address maps created by us as part of the Heidelberg Project's online map tool, the address markers created using the Geocoder will not save permanently when the map is closed. You will want to save a copy of the addresses as an Excel spreadsheet or other file so that you may use them again in the Geocoder. You will also want to capture images of the map when it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

<u>How to prepare a map for inclusion in a report</u>

Lastly, we describe how to prepare a map created with the interative map tool for inclusion in a report.[5] We will discuss the national map of visitors Figure 3 above. We have already provided the step by step instructions for creating that map.

[5] These instructions are for a PC.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map image and choose 'Borders and Shading.' Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 3 above was formatted.[6] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for the Heidelberg Project. The map tool is meant to be an additional resource for the Heidelberg Project to explore its position in its neighborhood and to make the case for its visitor impact. The tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to the Heidelberg Project's interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/Heidelberg.html and explore Census variables in relationship to the Heidelberg Project's neighborhood and visitors. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to the Heidelberg Project in the future, and it will be possible for addresses related to new initiatives to be mapped.

[6] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on the configuration of programs on your machine.

Appendix A
Homeless Shelters in Detroit

Sample data to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/Heidelberg/HPCountyMap/HPCountyMap.htm

Cass Community Social Services, Inc	11850 Woodrow Wilson St.	Detroit, MI 48206
C C United Methodist Church Food Program	3901 Cass Avenue	Detroit, MI 48201
ChristNet	22395 Eureka Rd.	Taylor, MI 48180
Coffer Adult Foster Care Home	2541 Lamothe St	Detroit, MI 48206
COTS	26 Peterboro	Detroit, MI 48201
Counterpoint Crisis Shelter	715 Inkster Rd.	Inkster, MI 48141
Covenant House Michigan	2959 Luther King Jr. Blvd.	Detroit, MI 48208
Detroit Rescue Mission	150 Stimson Street	Detroit, MI 48231
Detroit Rescue Mission Ministries (Oasis)	13220 Woodward Ave	Highland Park, MI 48203
DRMM Detroit Rescue Mission	3535 Third St.	Detroit, MI 48231
East Eden Transitional Home	5081 Somerset	Detroit, MI 48224
East Eden Transitional Home	5081 Somerset	Detroit, MI 48224
Eastside Emergency Center	5075 Chalmers Street	Detroit, MI 48213
Genesis One Transitional Youth Center	14353 East Canfield St	Detroit, MI 48224
Judah Transitional and Recovery Home	20955 West Seven Mile Road	Detroit, MI 48219
Judah Transitional and Recovery House	5577 Vancouver Street	Detroit, MI 48204
Judah Transitional and Recovery House, LLC	20955 West Seven Mile Road	Detroit, MI 48219
Mariners Inn	445 Ledyard	Detroit, MI 48201
Open Door Rescue Mission Ministries	3442 McDougall	Detroit, MI 48207
Operation Get Down	10100 Harper Avenue	Detroit, MI 48213
Rescue Mission Genesis II	2015 Webb Street	Detroit, MI 48206
Visions of the Sacred Capuchin Soup Kitchen	1760 Mt. Elliott Ave.	Detroit, MI 48207
Wayne County Family Center	30600 Michigan Ave	Westland, MI 48174

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Using the Heritage Center's Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of the Heritage Center through the use of geographic maps. We discuss how artist and mailing list address data can be mapped geographically and used by the Heritage Center in various settings from internal management discussions to part of grant applications. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC)[1], participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. Each of the nine Space for Change grantee organizations had an online interactive map created for it showing block-group level Census variables as one layer and addresses relevant to the organization as additional layer/s.

The Heritage Center museum opened in 1982 at Red Cloud Indian School on the Pine Ridge Reservation in Pine Ridge, South Dakota. The Heritage Center collects and exhibits the tribal arts of the Lakota and the fine arts of all Native American artists. The Heritage Center owns an especially fine collection of historically significant pieces as well as hosts an annual art show featuring Lakota and Native American art from throughout North America. The geographical isolation of the Heritage Center and lack of an economic infrastructure in the immediate area has resulted in fewer visitors to the Heritage Center than the historical and cultural significance of the collection would otherwise warrant.

The map tool was created for the Heritage Center to assist the organization in documenting the geographical distribution of artists featured in the annual art show, as well as the distribution of visitor and mailing list addresses. The map tool can be found on The Heritage Center's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/Heritage.html. There you will find a Heritage Center map button with an overlay of Census variables for the five mile (local) radius around the Heritage Center.[2] The area consists of only a few Census block groups, but it is of interest nonetheless, particularly since the town of Pine Ridge is only two miles from the Nebraska border.

There are many interesting things about the Heritage Center museum, the Red Cloud Indian School of which it is a part, the Pine Ridge Indian Reservation in South Dakota where it is located, and the Lakota who live there. We cannot discuss all the relevant aspects of the Heritage Center's online map in this brief paper. Rather we will provide examples of how to use the online interactive map tool to explore the Heritage Center's community context. This brief paper will present a few examples to demonstrate how to use the Heritage Center's online mapping tool to:

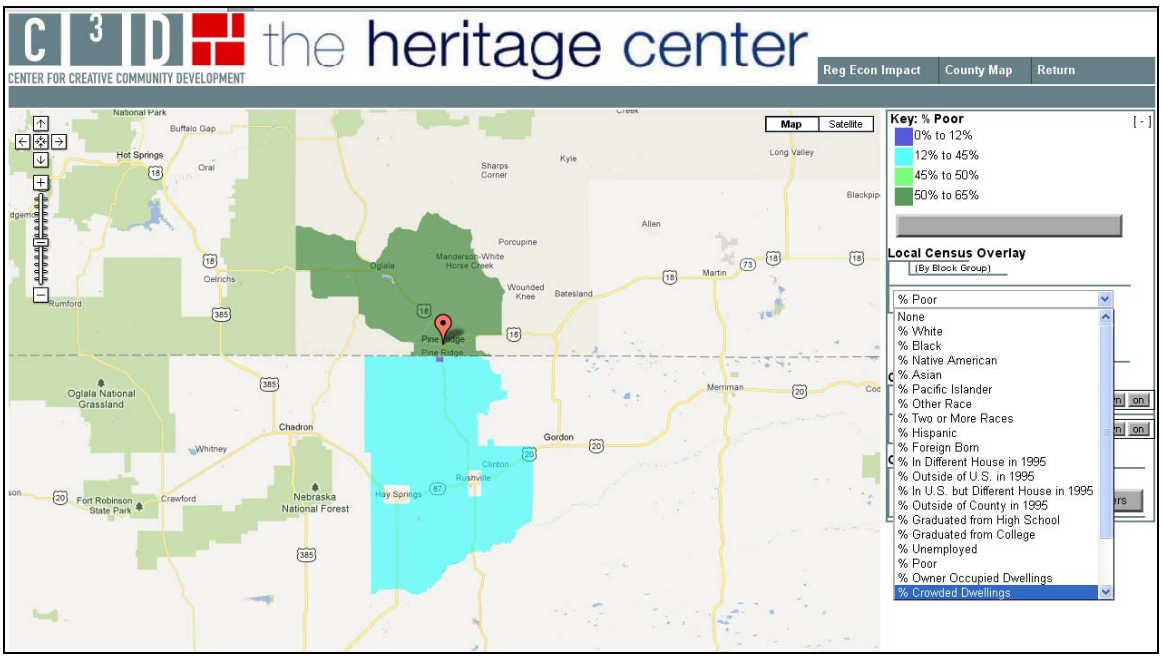
[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
[2] The Census overlay does not make a perfect circle with 5 mile radius around the Heritage Center. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more irregular display.

- change the Census variables displayed on the map;
- change the address lists displayed on the map;
- add new address data to the map; and
- create a copy of the map to include in a report.

<u>How to change the Census variables displayed on the map</u>

The Heritage Center's interactive map has 23 Census variables available for viewing. The default variable when the map opens is '% poor'. Clicking on the drop-down box in the right-hand window provides the list of Census variables, as shown in Figure 1.

Figure 1: Change the Census Variables Displayed on the Map



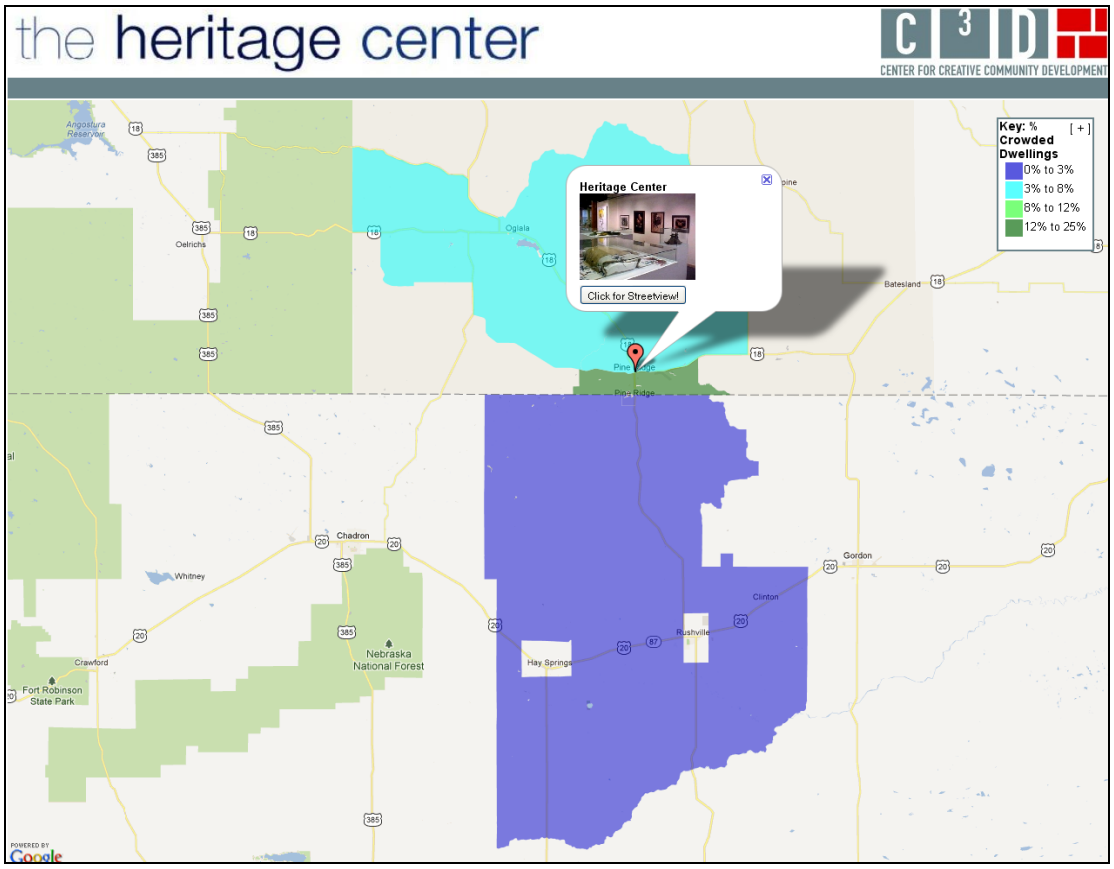
One pressing issue on Pine Ridge Indian Reservation is overcrowded housing. In March 2007 John Yellow Bird Steele, President of the Oglala Sioux Tribe in the Pine Ridge Reservation testified before The Senate Committee on Indian Affairs on housing needs.[3] The first issue he addressed was overcrowding, with extended families of 10 to 12 people living in homes designed for a family of four. He also testified that because such overcrowding may violate HUD guidelines and be grounds for eviction, the official rate of overcrowded housing does not reflect the reality. Keeping this in mind, we might be interested in the official rate of overcrowded housing.

On the interactive map, select '% Crowded Dwellings' from the list. Figure 2 presents Census block groups shaded according to the percentage of individuals who live in overcrowded homes. In addition to the results that you see in Figure 2, if you click on the orange marker on the map a bubble will open with a photo of the Heritage Center; within this bubble you can click on

[3] A transcript of John Yellow Bird Steele's testimony is available at www.indian.senate.gov/public/_files/Steele032207.pdf

Streetview to see Google Maps with archived photographs of the neighborhood. If you click on the Heritage Center logo at the top of the page you will be taken to the Heritage Center's web site.

Figure 2: Percent Overcrowded Housing



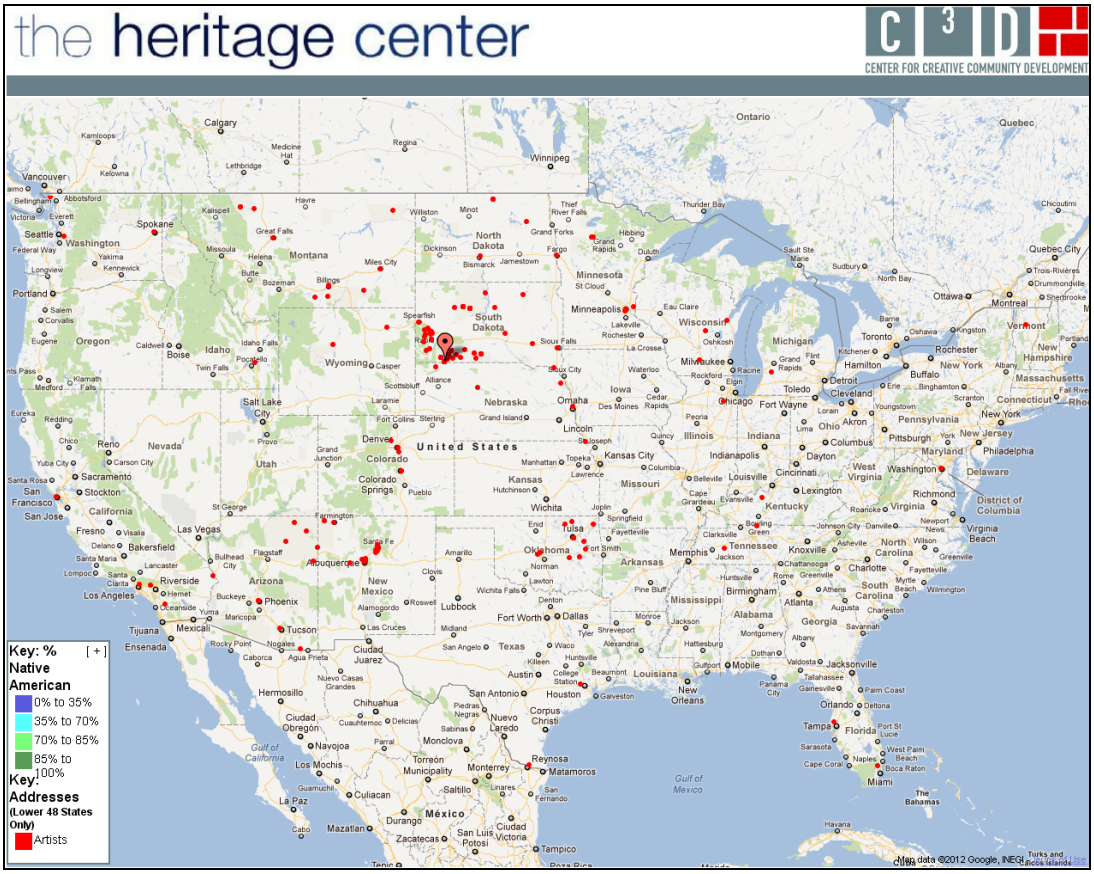
Accepting Steele's statement that overcrowding on the Reservation is underreported, the map nonetheless helps visualize the relative rates of overcrowding in the area around the Heritage Center.

<u>How to change the address lists displayed on the map</u>

Two lists of addresses are available for the Heritage Center map. One is a list of artists who have exhibited at the Heritage Center; the other is the Heritage Center's guest list. The opening default for the map is that neither address list is displayed. To choose an address list click the 'on' button next to the list name. Turn 'on' the list of artists and zoom the map out to the national level. The map of artists, shown in Figure 3 presents the national distribution of exhibiting Native American artists.[4] This map could be used in discussions with organizations that support Native American artists; with potential funders; and with state legislators. It quickly and effectively makes the case that the Heritage Center works on a national level in terms of the display of contemporary Native American arts.

[4] To view the Artists markers at the national level may take several minutes due to the large area covered.

Figure 3: Artists Exhibiting at the Heritage Center



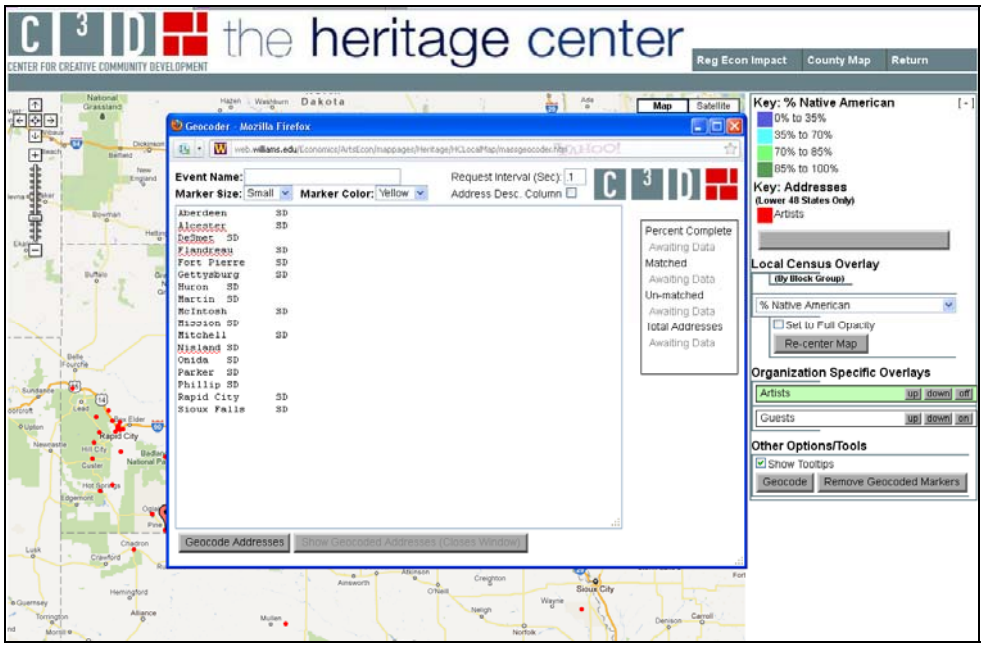
<u>How to add new address data to the map</u>

In order to describe how to add new data to the Heritage Center's map, we must work with a hypothetical situation. Let us say that the Heritage Center wishes to use local fairs in South Dakota as a dual resource for identifying developing Native American artists and for increasing knowledge of the Heritage Center's annual summer art show. The first step might be to identify fairs in South Dakota in August and then compare their location with the location of artists who have already exhibited at the Heritage Center. It is possible to create such a map using the 'Geocode' button included on the Heritage Center's map page.

Click on the "Geocode" button and a new window opens. The Heritage Center can copy the addresses of South Dakota towns that will host a fair from many formats such as an Excel spreadsheet or a Notepad text file and paste them into the Geocoder box. For the example below we pasted names of 17 towns in South Dakota hosting a fair in August 2012.[5] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the towns (we chose small) and the color of the markers (we chose yellow). Figure 4 shows what the computer screen for the Heritage Center's interactive program looks like at this point.

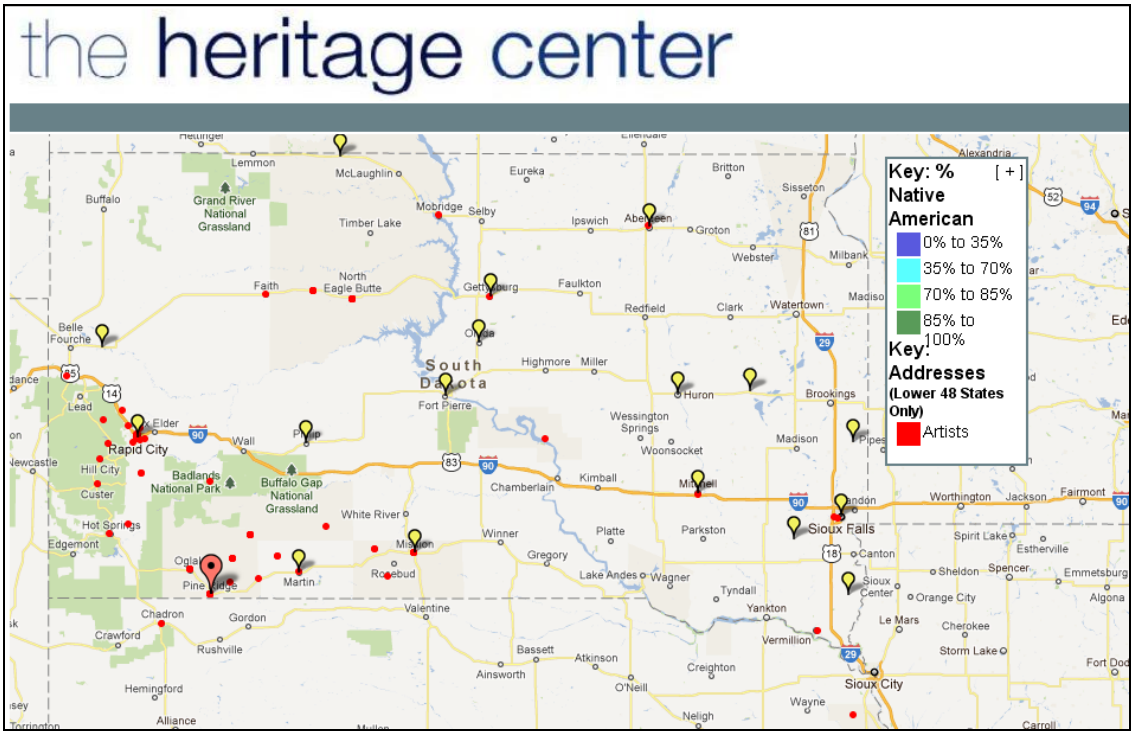
[5] We used addresses of fairs provided at http://www.southdakotafairs.com/dates.htm, accessed 2/23/2012. The list of towns is provided in Appendix A so you can practice with the Geocoder. You should copy just the name of the town and the state to paste into the Geocoder, not the dates or the name of the fair.

Figure 4: Adding South Dakota Towns with a Fair



Click the 'Show Geocoded Addresses' button. The Geocoder box closes and the South Dakota towns hosting fairs in August 2012 are visible on the map. The towns can be shown by themselves or with the other address lists. Figure 5 shows the towns with fairs mapped with the Artists list turned 'on'.

Figure 5: August Fairs mapped with Heritage Center Artists



The yellow markers in Figure 5 identify South Dakota towns with fairs during August 2012. Clicking on any of the markers opens a bubble with the name of the town. In some cases there is the additional option of viewing archived photos of the area through Google Maps Streetview.

Unlike address maps created by us for the Heritage Center, these address markers will not save permanently when the map is closed. You will want to save a copy of the addresses as an Excel spreadsheet or other file so that you may use them again in the Geocoder. You will also want to capture images of the map when it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

How to prepare a map for inclusion in a report

Lastly, we describe how to prepare a map created with the interactive map tool for inclusion in a report.[6] We will discuss the map of South Dakota towns with fairs in Figure 5 above. We have already provided the step by step instructions for creating that map. Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner. Finally, right click on the map and choose 'Borders and Shading'. Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 5 above was formatted.[7] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for the Heritage Center. The map tool is meant to be an additional resource for the Heritage Center to explore its position in its community, in South Dakota, and in the Native American art community. The tool is free, publicly available, and interactive. With the discussion here to guide you, you can visit the Heritage Center's interactive map tool at http://web.williams.edu/Economics/ArtsEcon/Heritage.html and explore variables and relationships among Census data, exhibiting artists, and its guest list. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to the Heritage Center in the future, and it will be possible for addresses related to new initiatives to be mapped.

[6] These instructions are for a PC.

[7] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on your configuration of programs on your machine.

Appendix A
South Dakota Fairs August 2012

Sample data[8] to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/Heritage/HCLocalMap/HCLocalMap.htm

Town	State	Name of Fair	Aug Dates
Aberdeen	SD	Brown County Fair	13-19
Alcester	SD	Union County Fair	2-5
DeSmet	SD	Kingsbury Co 4H Achievement Days	TBA
Flandreau	SD	Moody County Fair	1-4
Fort Pierre	SD	Prairie Winds 4H Achievement Days	TBA
Gettysburg	SD	Potter County Fair	4-7
Huron	SD	South Dakota State Fair	30-Sept 3
Martin	SD	Bennett Co Fair, Rodeo and PowWow	8-12
McIntosh	SD	Corson County Fair	10-12
Mission	SD	Todd County 4H Fair	10-11
Mitchell	SD	Corn Palace Festival	22-26
Nisland	SD	Butte Lawrence County Fair	17-20
Onida	SD	Sully County Fair	10-12
Parker	SD	Turner County Fair	13-16
Phillip	SD	Haakon Jackson County Fair	9-11
Rapid City	SD	Central States Fair	17-26
Sioux Falls	SD	Sioux Empire Fair	4-12

[8] Copy and paste on the name of the town and state into the Geocoder, not the name of the fair or the dates.

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Using ISDA's Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of ISDA through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC)[1], participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how data on artists and programming can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The map tool created for ISDA was developed to assist the organization in documenting and articulating its community setting and national visibility. The map tool can be found on ISDA's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/ISDALINC.html. There you will find an ISDA map option with an overlay of Census variables for Pima County, and a map option with an overlay of Census variables for the five mile (local) area around ISDA.[2] We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show where in the county one is developing partners or attracting participants; other times the local area may be of greater interest. In this paper we will work with the Pima County map, but everything presented here also applies to the 5 mile radius map.

We do not provide interpretations of the many interesting aspects of ISDA's online map here. Rather this paper presents a description of how to use the online, interactive map tool to explore questions about ISDA's neighborhood and visibility that might arise. This brief paper provides information on how to use the online mapping tool to:

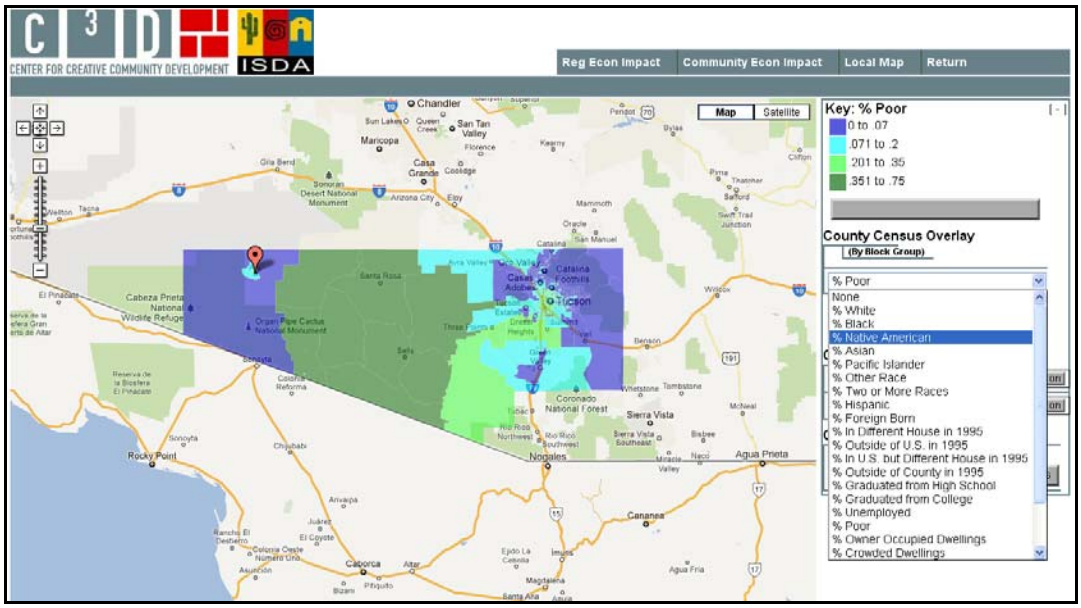
- change the Census variables displayed on the map;
- change the address lists displayed on the map;
- add new address data to the map; and
- create a copy of the map to include in a report.

How to change the Census variables displayed on the map

ISDA's interactive map has 23 Census variables available for viewing. The default variable when the map opens is percent poor. Clicking on the drop-down box in the right hand window shows the choice of Census variables, as shown in Figure 1.

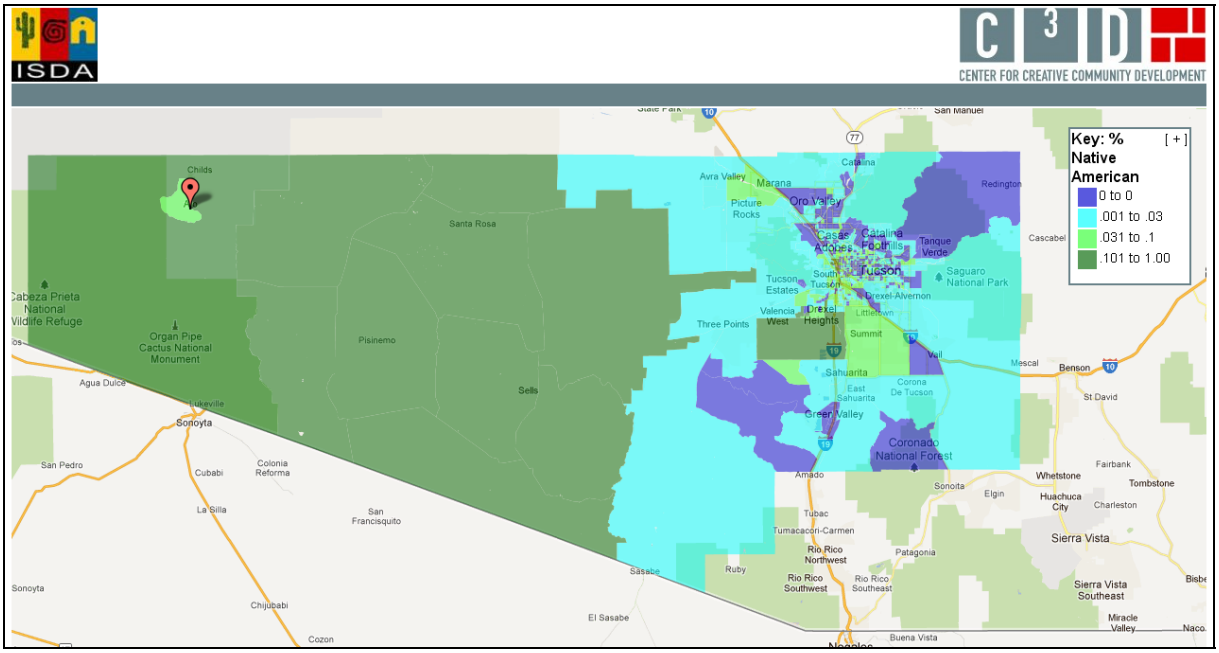
[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
[2] The Census overlay does not make a perfect circle with 5 mile radius around ISDA. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more jagged display.

Figure 1: Change the Census Variables Displayed on the Map



On the interactive map, select '% Native American' from the list. Figure 2 presents Census block groups shaded according to the percentage of residents who identify as Native American. ISDA is located in Ajo just west of the vast tribal lands of the Tohono O'odham Nation. This is apparent in the map in Figure 2. The western part of Pima County has a majority of Native American residents; the eastern part of the county has a significantly lower percentage of Native American residents.

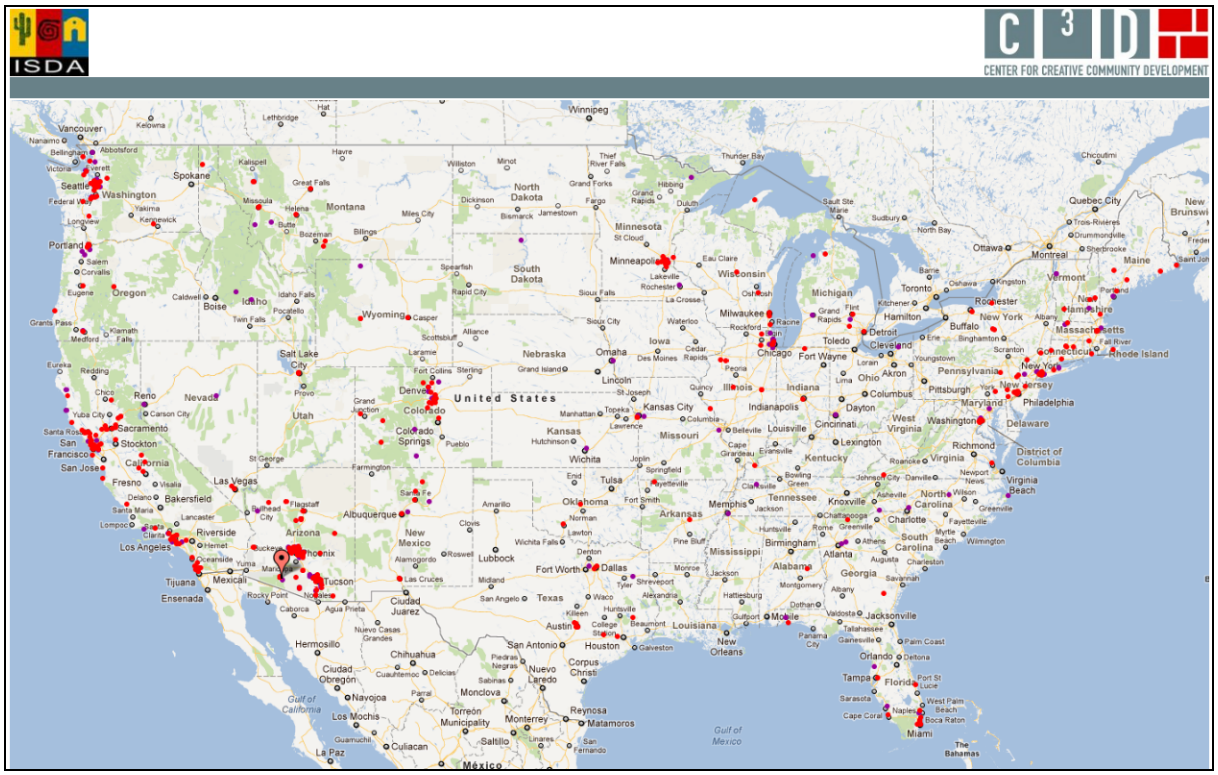
Figure 2: Pima County % Native American



How to change the address lists displayed on the map

A major project undertaken by ISDA was the conversion of the historic Curley School in Ajo to artist live/work space. As the project was underway, and since, there have been inquiries from around the United States concerning residence in the Curley School. Two lists of addresses were mapped for ISDA: inquiries between 2005 and 2007 when work on the project was ongoing, and inquiries from 2007 to 2011 when the Curley School was available for residency. The default when the map opens is that neither list of addresses is displayed. To choose an address list click the "on" button next to the list name. For this example, turn 'on' both Inquiries lists and zoom out to the national level. The map of Curley School inquiries is shown in Figure 3 below. It is helpful in addressing the question of whether there has been a significant change in the pattern of inquiries since the Curley School opened as artist live/work space.

Figure 3: Curley School Inquiries



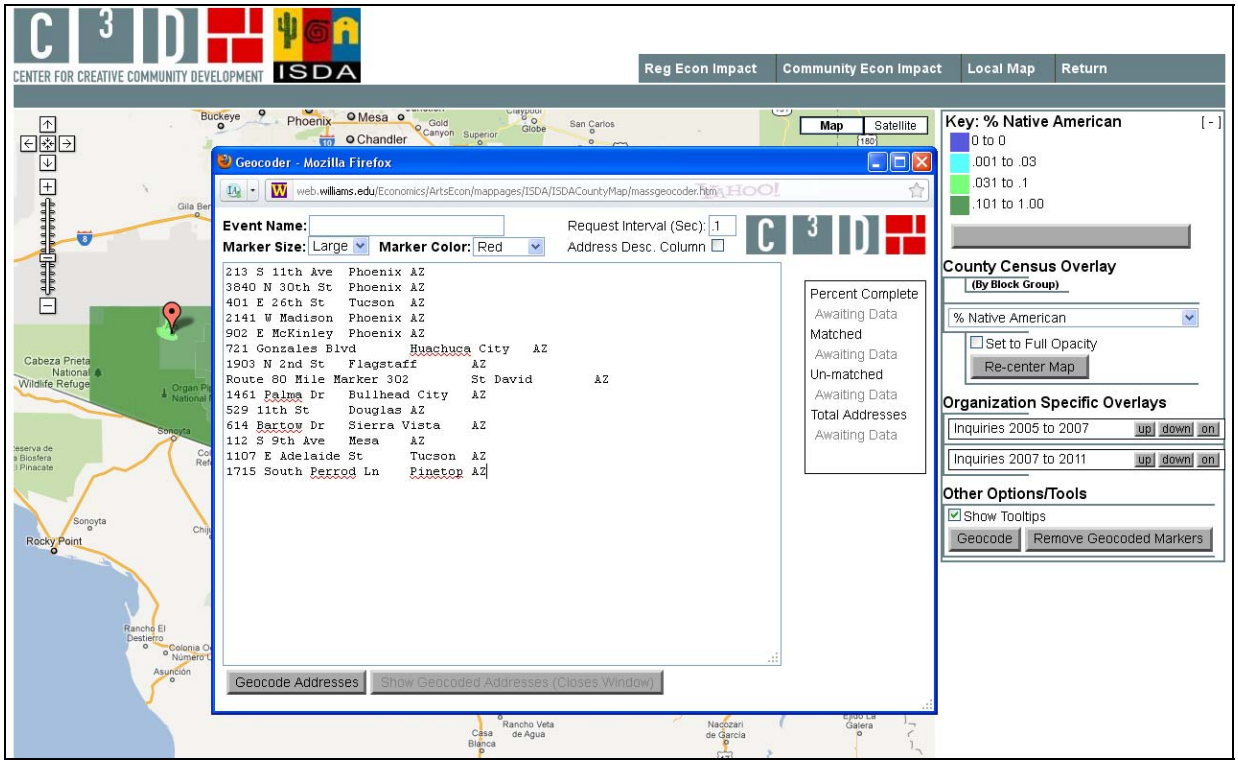
Given how rural and isolated the town of Ajo is, it might be surprising that inquiries about residency in the Curley School remain very national in nature.

How to add new address data to the map

In order to describe how to add new data to ISDA's map, we must work with a hypothetical situation. For our hypothetical case, let us say that ISDA wants to develop an arts and health initiative, and would like to partner with area food assistance programs. As a first step, ISDA might want to see the locations of area food assistance programs. It is possible to do this using the "Geocode" button included on ISDA's map page.

Click on the "Geocode" button and a new window opens. Addresses of area food assistance programs can be copied and pasted into the Geocoder box from many sources such as an Excel spreadsheet or a Notepad text file. For the example below we pasted addresses of 14 area food assistance programs.[3] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the addresses (we chose large) and the color of the markers (we chose red). Figure 4 shows the program at this point.

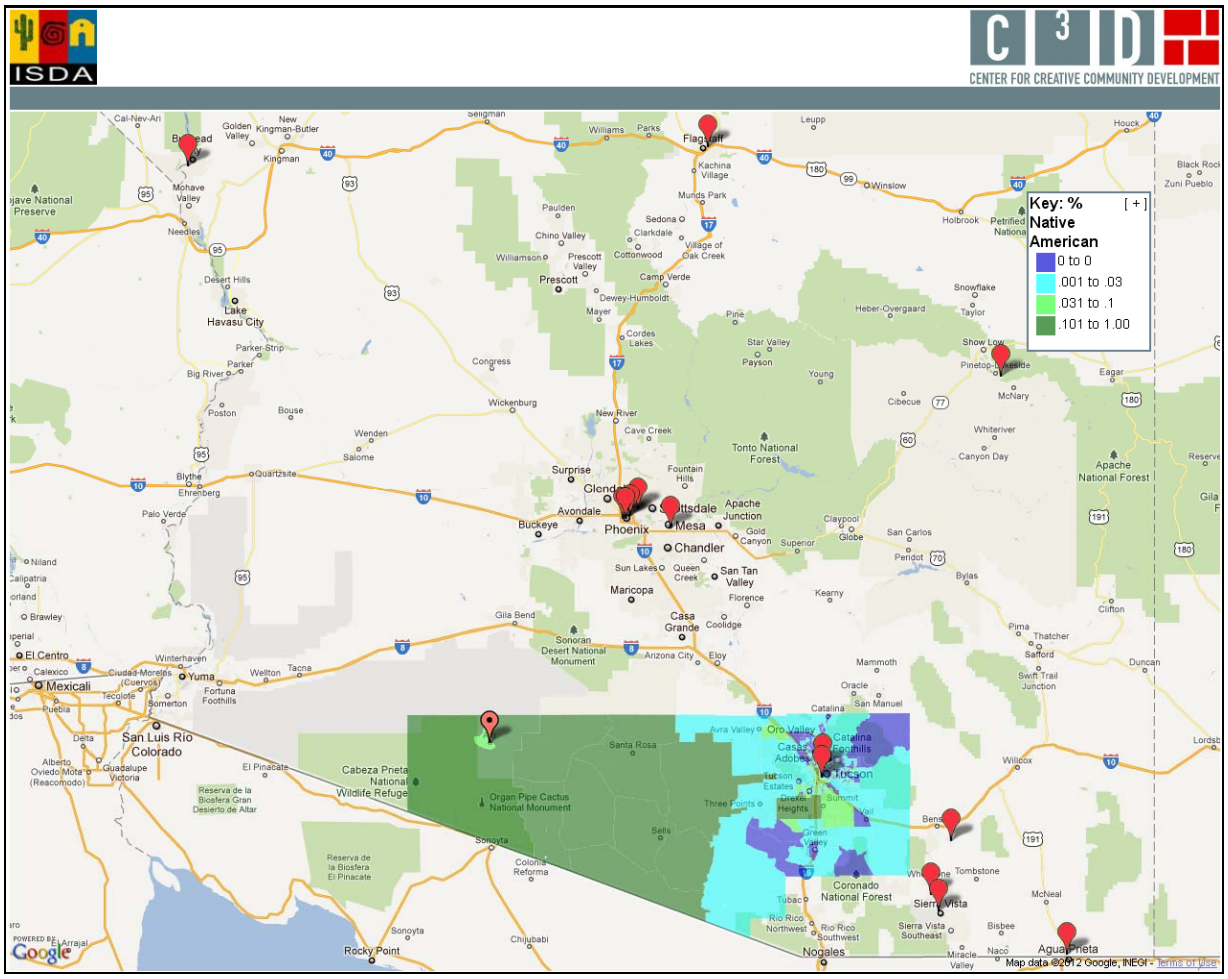
Figure 4: Adding Area Food Assistance Program Locations



Now click the "Show Geocoded Addresses" button. The Geocoder box closes and the new addresses are visible on the map. The food assistance programs can be shown by themselves or with the ISDA address lists.

[3] We used addresses of area food assistance programs provided at http://www.cpes.com/advocacyresources/communityassistance/food_banks.htm, accessed 2/26/12. The list of addresses is provided in Appendix A so you can practice with the Geocoder.

Figure 5: Food Assistance Programs



Unlike address maps created by us as part of ISDA's online map tool, the address markers created using the Geocoder will not save permanently when the map is closed. You will want to save a copy of the addresses as an Excel spreadsheet or other file so that you may use them again in the Geocoder. You will also want to capture images of the map when it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

<u>How to prepare a map for inclusion in a report</u>

Lastly, we describe how to prepare a map created with the interative map tool for inclusion in a report.[4] We will discuss the map of food assistance programs in Figure 5 above. We have already provided the step by step instructions for creating that map.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is

[4] These instructions are for a PC.

now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map image and choose 'Borders and Shading.' Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 5 above was formatted.[5] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for ISDA. The map tool is meant to be an additional resource for ISDA to explore its position in its community and explore questions of its national visibility. The tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to ISDA's interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/ISDALINC.html and explore community demographics and national inquiries. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to ISDA in the future, and it will be possible for addresses related to new initiatives to be mapped.

[5] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on the configuration of programs on your machine.

Appendix A
Food Assistance Programs

Sample data to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/ISDA/ISDACountyMap/ISDACountyMap.htm

Andre House	213 S 11th Ave	Phoenix	AZ
Bread of Life	3840 N 30th St	Phoenix	AZ
Casa Maria	401 E 26th St	Tucson	AZ
Church on the Street	2141 W Madison	Phoenix	AZ
Church on the Street	902 E McKinley	Phoenix	AZ
Cochise County Children's Center	721 Gonzales Blvd	Huachuca City	AZ
Flagstaff Family Food Center	1903 N 2nd St	Flagstaff	AZ
Holy Trinity Monastery	Route 80 Mile Marker 302	St David	AZ
Salvation Army	1461 Palma Dr	Bullhead City	AZ
St. Vincent De Paul	529 11th St	Douglas	AZ
St. Vincent De Paul	614 Bartow Dr	Sierra Vista	AZ
St. Vincent de Paul/Dining Rooms	112 S 9th Ave	Mesa	AZ
The Haven	1107 E Adelaide St	Tucson	AZ
The Love Kitchen, Inc.	1715 South Perrod Ln	Pinetop	AZ

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Using Intersection for the Arts' Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of Intersection for the Arts through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC)[1], participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how data on artists and programming can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The map tool created for Intersection for the Arts was developed to assist the organization in documenting and articulating its community partners and fiscally sponsored programs. The map tool can be found on Intersection for the Arts' 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/Intersection.html. There you will find an Intersection for the Arts map option with an overlay of Census variables for San Francisco County, and a map option with an overlay of Census variables for the five mile (local) area around Intersection for the Arts.[2] We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show where in the county one is developing partners or attracting participants; other times the local area may be of greater interest. In this paper we will work with the San Francisco map, but everything presented here also applies to the 5 mile radius map.

We do not provide interpretations of the many interesting aspects of Intersection for the Arts' online map here. Rather this paper presents a description of how to use the online, interactive map tool to explore questions about Intersection for the Arts' neighborhood, programming, and support systems that might arise. This brief paper provides information on how to use the online mapping tool to:

- change the Census variables displayed on the map;
- change the address lists displayed on the map;
- add new address data to the map; and
- create a copy of the map to include in a report.

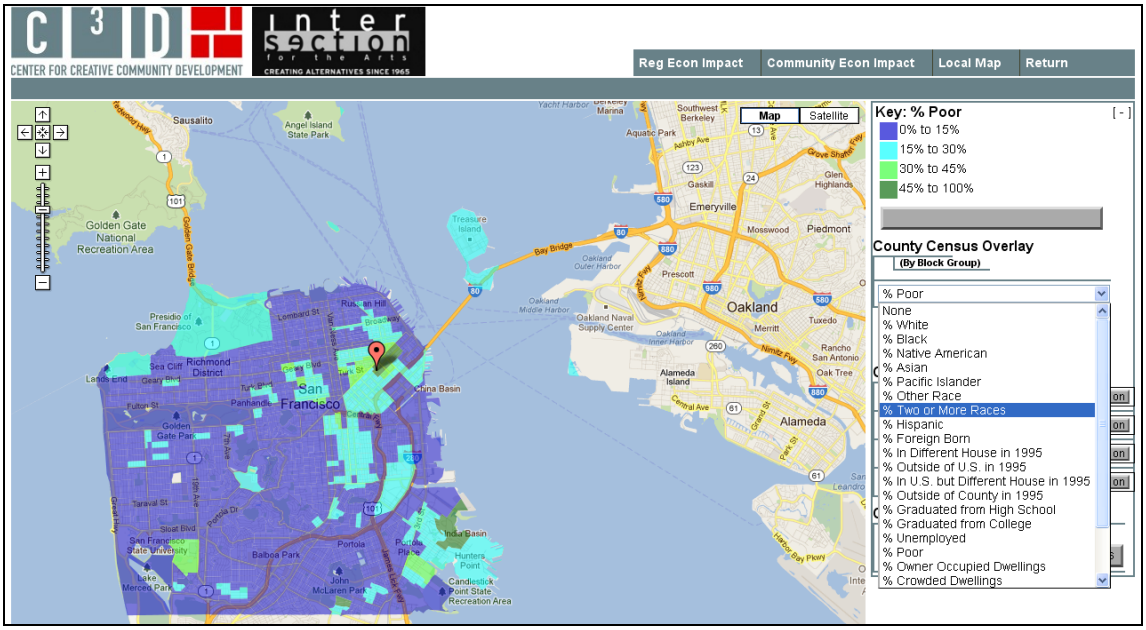
How to change the Census variables displayed on the map

Intersection for the Arts' interactive map has 23 Census variables available for viewing. The default variable when the map opens is percent poor. Clicking on the drop-down box in the right hand window shows the choice of Census variables, as shown in Figure 1.

[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.

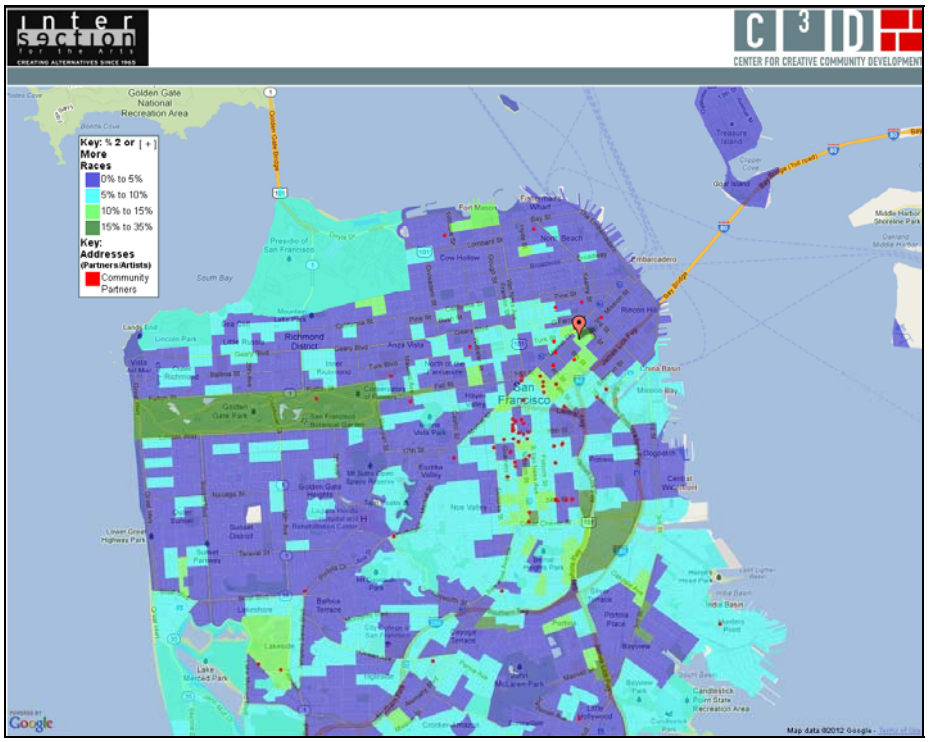
[2] The Census overlay does not make a perfect circle with 5 mile radius around Intersection for the Arts. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more jagged display.

Figure 1: Change the Census Variables Displayed on the Map



On the interactive map, select '% Two or More Races' from the list. Below this click the button to turn 'on' Community Partners. Zoom in a bit to see the neighborhood around Intersection for the Arts. Figure 2 presents Census block groups shaded according to the percentage of residents who identify as multi-racial, and red dots marking Intersection's community partners.

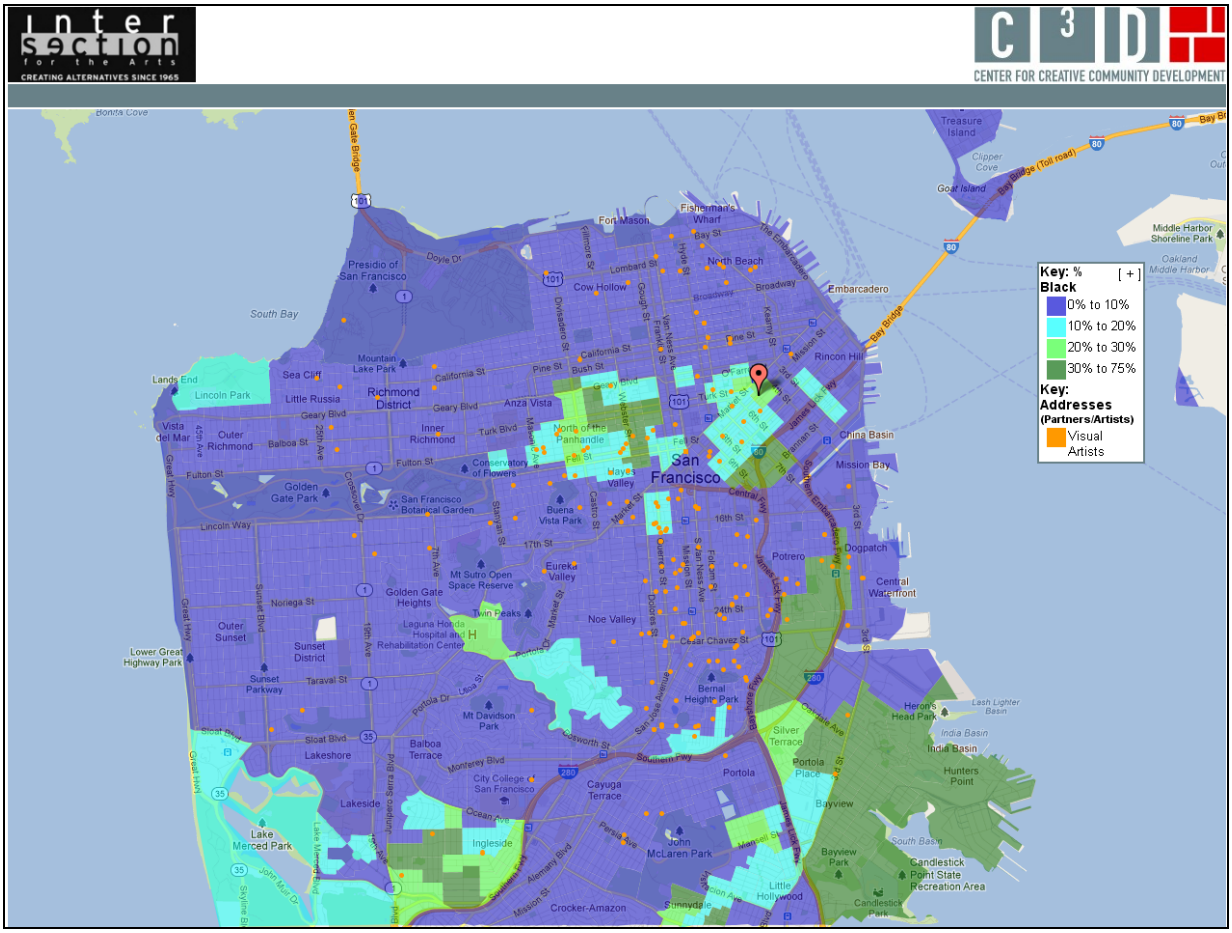
Figure 2: Community Partners and % Multiracial



How to change the address lists displayed on the map

Four lists of addresses were mapped for Intersection for the Arts: community partners; visual artists; fiscally sponsored programs for 2011; and previous fiscally sponsored programs. The default when the map opens is that none of the lists of addresses are displayed. To choose an address list click the "on" button next to the list name. The map of community partners, shown in Figure 2 above, would be useful in a report on collaboration in the city. The artists map, shown in Figure 3 below, would be useful for a discussion of artistic diversity.

Figure 3: Intersection for the Arts' Artists and Percent Black



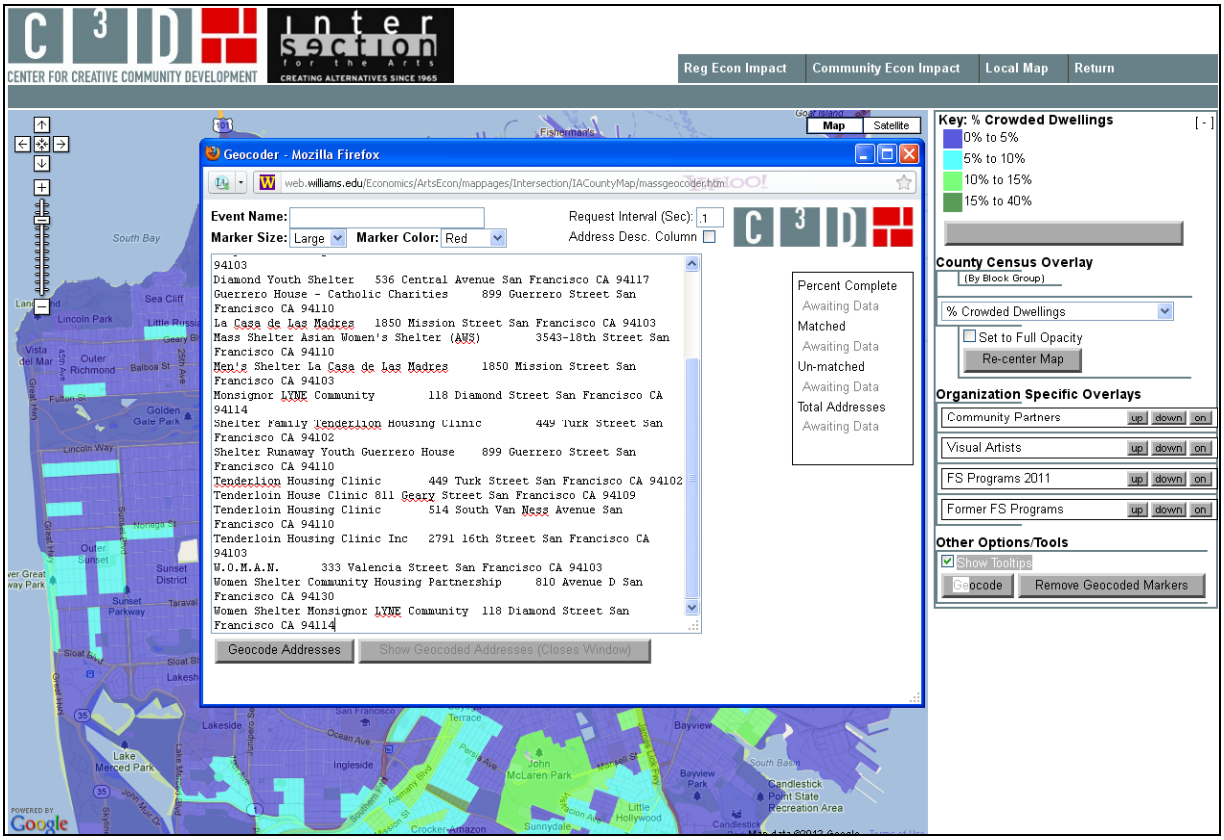
Intersection for the Arts recently moved to a new location in San Francisco. It is not far from its previous location, and some aspects of the neighborhood are similar. One difference, however, is that the new location has a greater percentage of Black residents than the previous one. This is seen in the Census data presented in Figure 3; the orange dots are the locations of visual artists who have worked with Intersection for the Arts. A map such as that in Figure 3 could be used as part of an internal discussion of artist diversity and program planning in the new location.

How to add new address data to the map

In order to describe how to add new data to Intersection for the Arts' map, we must work with a hypothetical situation. For our hypothetical case, let us say that Intersection wants to develop an arts initiative focusing on over-crowded housing and homelessness. As a first step, Intersection might want to know what areas of San Francisco have overcrowded housing conditions and where the homeless shelters in the city are located. It is possible to do this using the "Geocode" button included on Intersection for the Arts' map page.

Click on the "Geocode" button and a new window opens. Addresses of homeless shelters in San Francisco can be copied and pasted into the Geocoder box from many sources such as an Excel spreadsheet or a Notepad text file. For the example below we pasted addresses of 21 homeless shelters in San Francisco.[3] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the addresses (we chose large) and the color of the markers (we chose red). Figure 4 shows the program at this point.

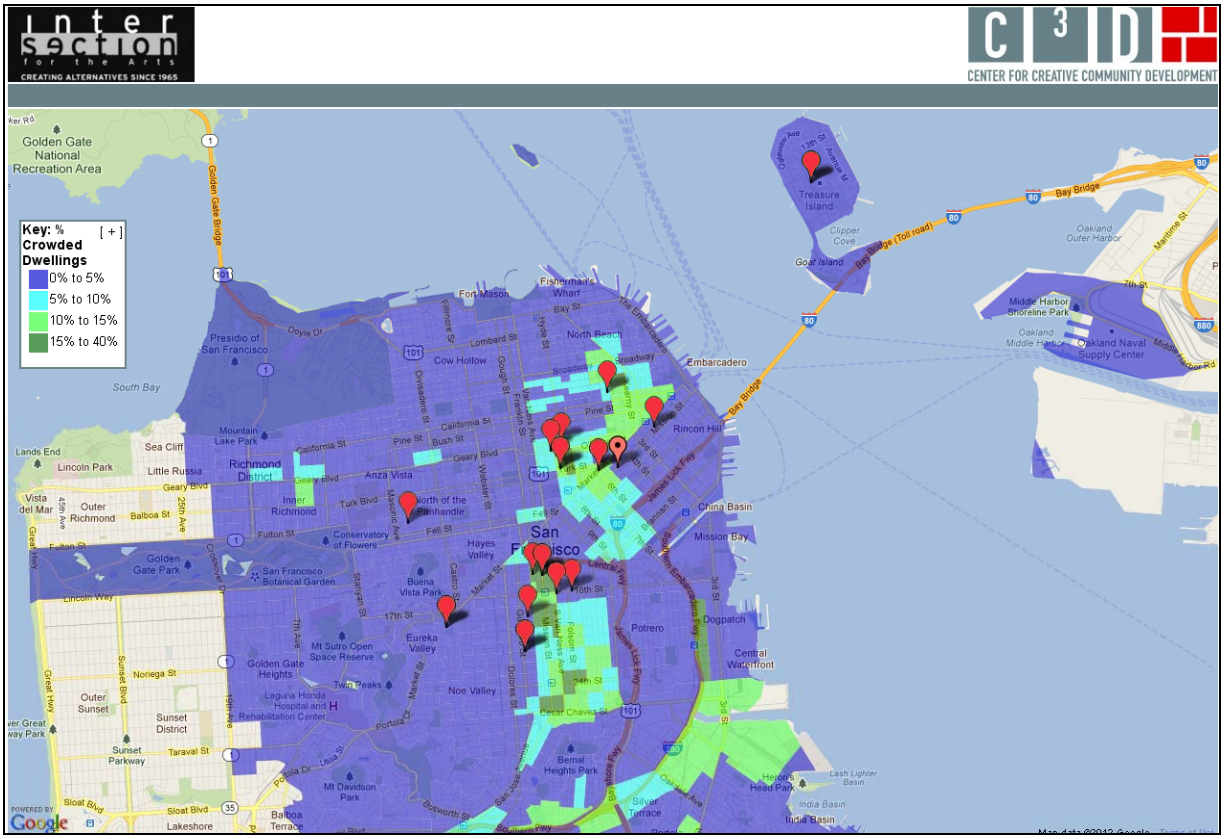
Figure 4: Adding San Francisco Homeless Shelter Locations



[3] We used addresses of homeless shelters provided at http://www.homeless.org.au/directory/us-california-san-francisco.htm, accessed 2/23/12. The list of addresses is provided in Appendix A so you can practice with the Geocoder.

Now click the "Show Geocoded Addresses" button. The Geocoder box closes and the new addresses are visible on the map. The homeless shelters can be shown by themselves or with the Intersection for the Arts address lists. In Figure 5 we see that in the city of San Francisco, homeless shelters tend to be located in the same areas that have higher percentages of individuals living in overcrowded homes.

Figure 5: Homeless Shelters and Overcrowding in San Francisco



Unlike address maps created by us as part of Intersection for the Arts' online map tool, the address markers created using the Geocoder will not save permanently when the map is closed. You will want to save a copy of the addresses as an Excel spreadsheet or other file so that you may use them again in the Geocoder. You will also want to capture images of the map when it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

<u>How to prepare a map for inclusion in a report</u>

Lastly, we describe how to prepare a map created with the interative map tool for inclusion in a report.[4] We will discuss the map of artists and percent Black in Figure 3 above. We have already provided the step by step instructions for creating that map.

[4] These instructions are for a PC.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map image and choose 'Borders and Shading.' Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 3 above was formatted.[5] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for Intersection for the Arts. The map tool is meant to be an additional resource for Intersection for the Arts to explore its position in its new neighborhood and make the case for its impact on San Francisco. The tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to Intersection for the Arts' interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/Intersection.html and explore Census variables in relationship to Intersection for the Arts' programs and artists. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to Intersection for the Arts in the future, and it will be possible for addresses related to new initiatives to be mapped.

[5] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on the configuration of programs on your machine.

Appendix A
Addresses of Homeless Shelters in San Francisco

Sample data to use in Geocoder at
http://web.williams.edu/web/Economics/ArtsEcon/mappages/Intersection/IACountyMap/IACountyMap.htm

American Red Cross of the Bay Area	85 Second Street San Francisco CA 94105
Cameron House	920 Sacramento Street San Francisco CA 94108
Community Housing Partnership	835 Ofarrell Street San Francisco CA 94109
Community Housing Partnership	810 Avenue D San Francisco CA 94130
Compass Community Services	995 Market Street San Francisco CA 94103
Compass Community Services	995 Market Street San Francisco CA 94103
Diamond Youth Shelter	536 Central Avenue San Francisco CA 94117
Guerrero House - Catholic Charities	899 Guerrero Street San Francisco CA 94110
La Casa de Las Madres	1850 Mission Street San Francisco CA 94103
Mass Shelter Asian Women's Shelter (AWS)	3543-18th Street San Francisco CA 94110
Men's Shelter La Casa de Las Madres	1850 Mission Street San Francisco CA 94103
Monsignor LYNE Community	118 Diamond Street San Francisco CA 94114
Shelter Family Tenderlion Housing Clinic	449 Turk Street San Francisco CA 94102
Shelter Runaway Youth Guerrero House	899 Guerrero Street San Francisco CA 94110
Tenderlion Housing Clinic	449 Turk Street San Francisco CA 94102
Tenderloin House Clinic	811 Geary Street San Francisco CA 94109
Tenderloin Housing Clinic	514 S Van Ness Avenue San Francisco CA 94110
Tenderloin Housing Clinic Inc	2791 16th Street San Francisco CA 94103
W.O.M.A.N.	333 Valencia Street San Francisco CA 94103
Women Shelter Community Housing	810 Avenue D San Francisco CA 94130
Women Shelter Monsignor LYNE Community	118 Diamond Street San Francisco CA 94114

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Using MACLA's Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of MACLA through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC)[1], participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how data on community and local support can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The map tool created for MACLA was developed to assist the organization in documenting and articulating its community setting and support. The map tool can be found on MACLA's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/MACLALINC.html. There you will find a MACLA map option with an overlay of Census variables for Santa Clara County, and a map option with an overlay of Census variables for the five mile (local) area around MACLA.[2] We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show where in the county one is developing partners or attracting participants; other times the local area may be of greater interest. In this paper we will work with the Santa Clara County map, but everything presented here also applies to the 5 mile radius map.

We do not provide interpretations of the many interesting aspects of MACLA's online map here. Rather this paper presents a description of how to use the online, interactive map tool to explore questions about MACLA's neighborhood and support systems that might arise. This brief paper provides information on how to use the online mapping tool to:

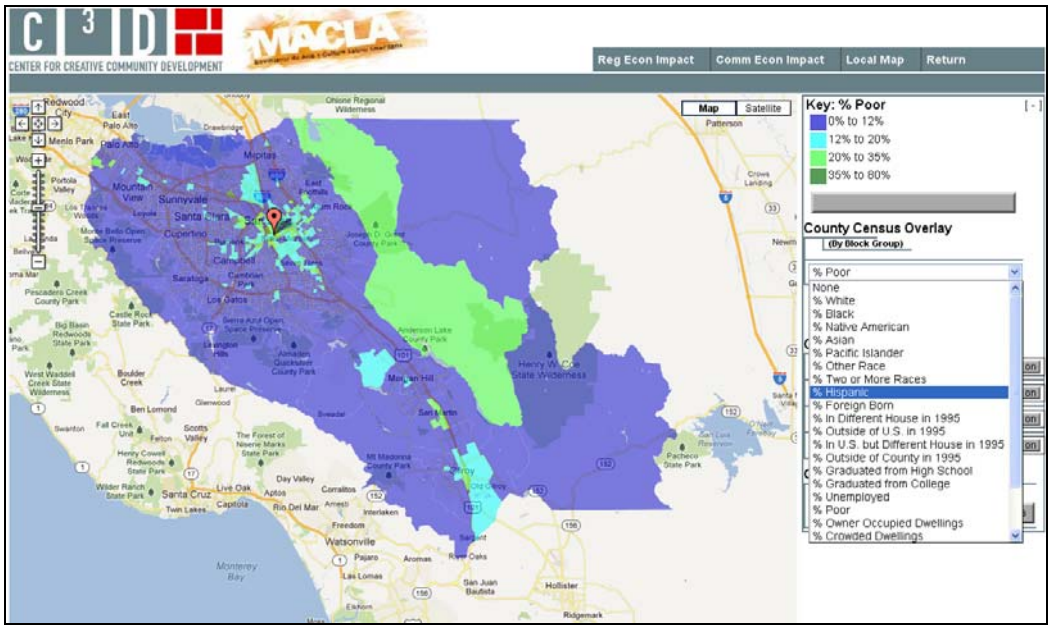
- change the Census variables displayed on the map;
- change the address lists displayed on the map;
- add new address data to the map; and
- create a copy of the map to include in a report.

How to change the Census variables displayed on the map

MACLA's interactive map has 23 Census variables available for viewing. The default variable when the map opens is percent poor. Clicking on the drop-down box in the right hand window shows the choice of Census variables, as shown in Figure 1.

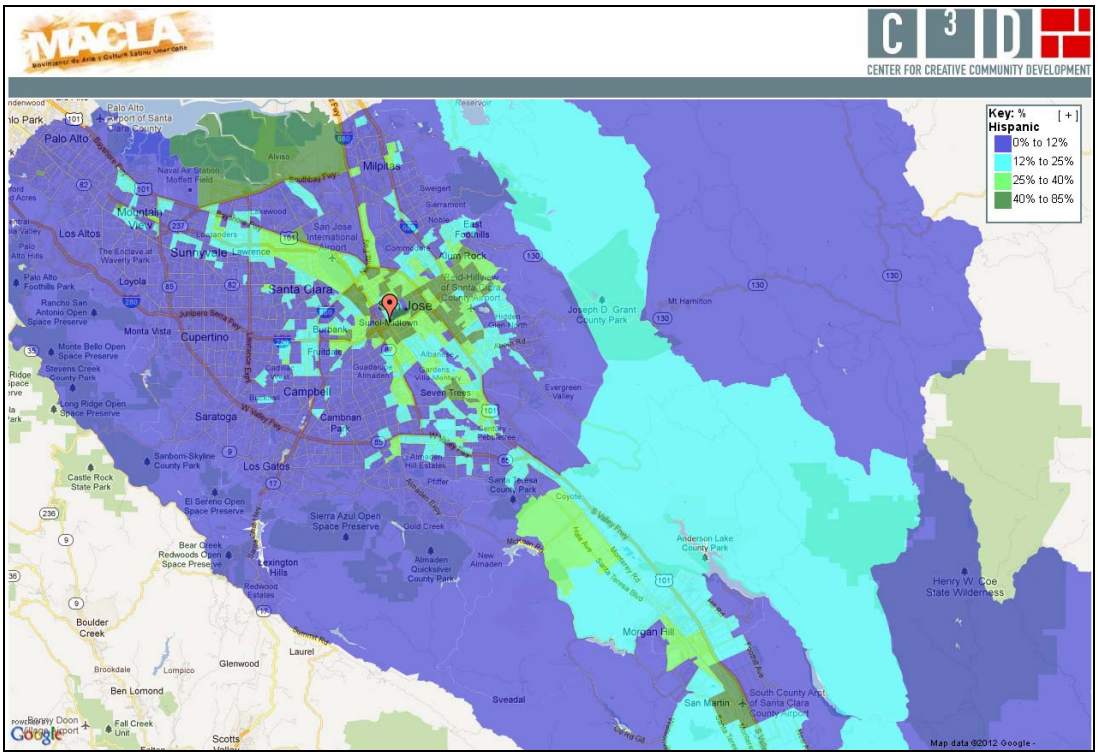
[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
[2] The Census overlay does not make a perfect circle with 5 mile radius around MACLA. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more jagged display.

Figure 1: Change the Census Variables Displayed on the Map



On the interactive map, select '% Hispanic' from the list. Zoom in a bit to see the neighborhood around MACLA. Figure 2 presents Census block groups shaded according to the percentage of residents who identify as Hispanic.

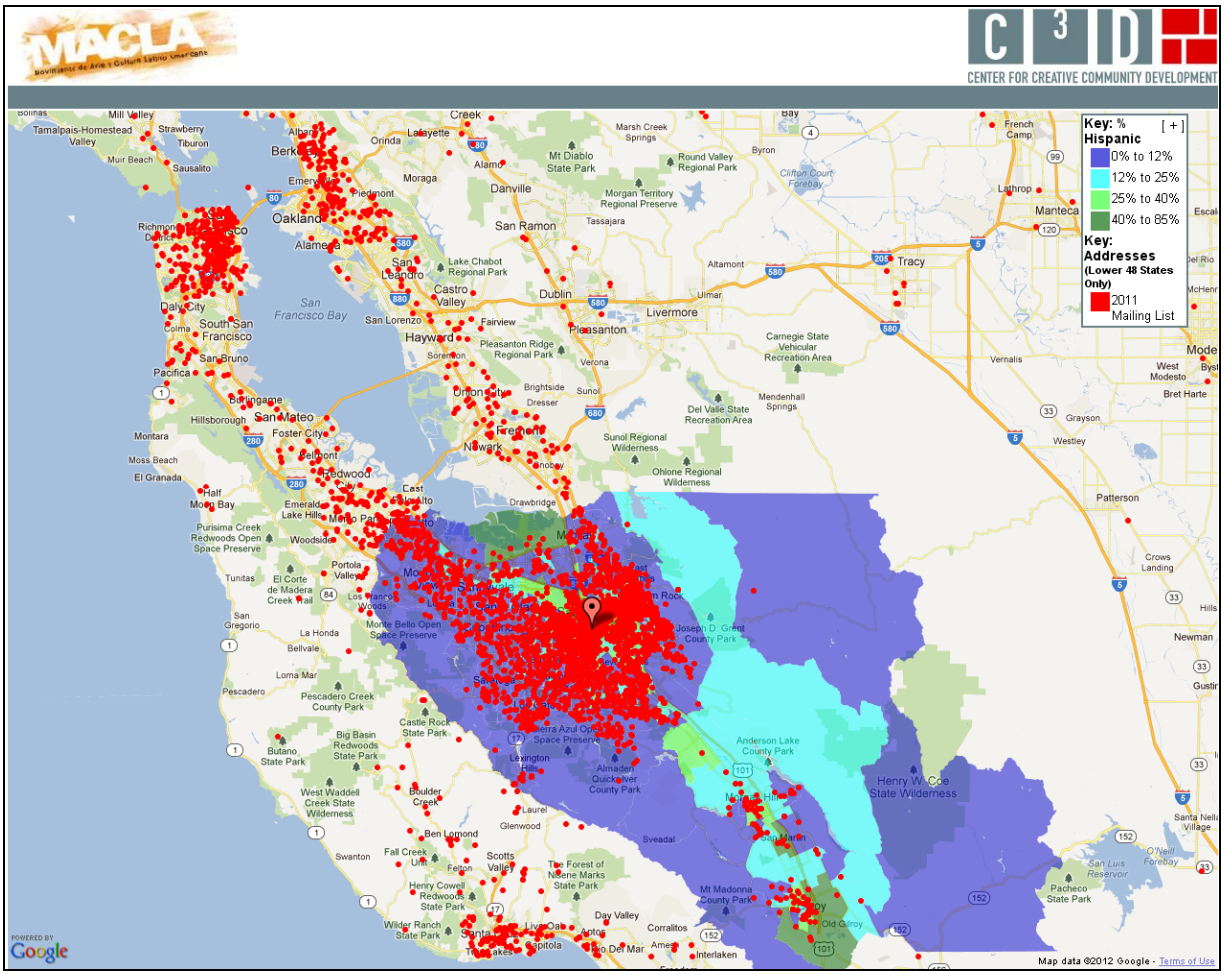
Figure 2: MACLA's Neighborhood and Percent Hispanic



How to change the address lists displayed on the map

Four lists of addresses were mapped for MACLA: its 2011 mailing list; its 2007 mailing list; new additions to the 2011 mailing list; and deletions that occurred from the 2007 mailing list. The default when the map opens is that none of the lists of addresses are displayed. To choose an address list click the "on" button next to the list name. Turn 'on' the 2011 mailing list. The result is shown in Figure 3.

Figure 3: MACLA's 2011 Mailing List



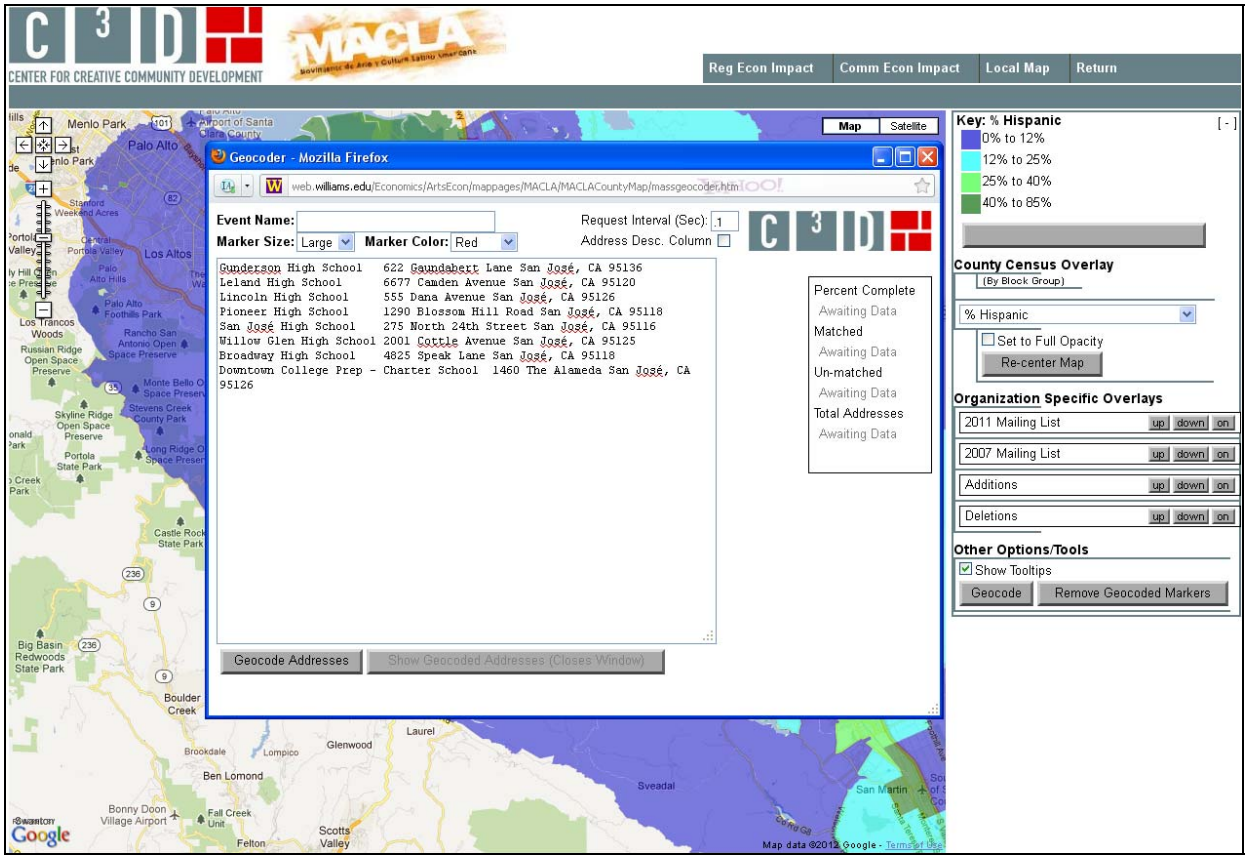
MACLA is a community-based arts organization promoting multicultural arts as a vehicle for civic dialogue and social equity. Rooted in the Chicano/Latino experience, MACLA intersects many communities, cultures, and aesthetic approaches. Given that MACLA's mailing list is based on audience attendance and supporters, Figure 3 shows that not only has MACLA developed a strong following in San Jose but its support extends northward up through San Francisco and to Berkely. For a relatively small cultural arts organization, its visibility in California is significant.

How to add new address data to the map

In order to describe how to add new data to MACLA's map, we must work with a hypothetical situation. For our hypothetical case, let us say that MACLA wants to develop an arts initiative with local area public high schools. As a first step, MACLA might want to know the locations of the high schools in the San Jose Unified School District. It is possible to do this using the "Geocode" button included on MACLA's map page.

Click on the "Geocode" button and a new window opens. Addresses of high schools in the San Jose Unified School District can be copied and pasted into the Geocoder box from many sources such as an Excel spreadsheet or a Notepad text file. For the example below we pasted addresses of the 8 high schools in the district.[3] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the addresses (we chose large) and the color of the markers (we chose red). Figure 4 shows the program at this point.

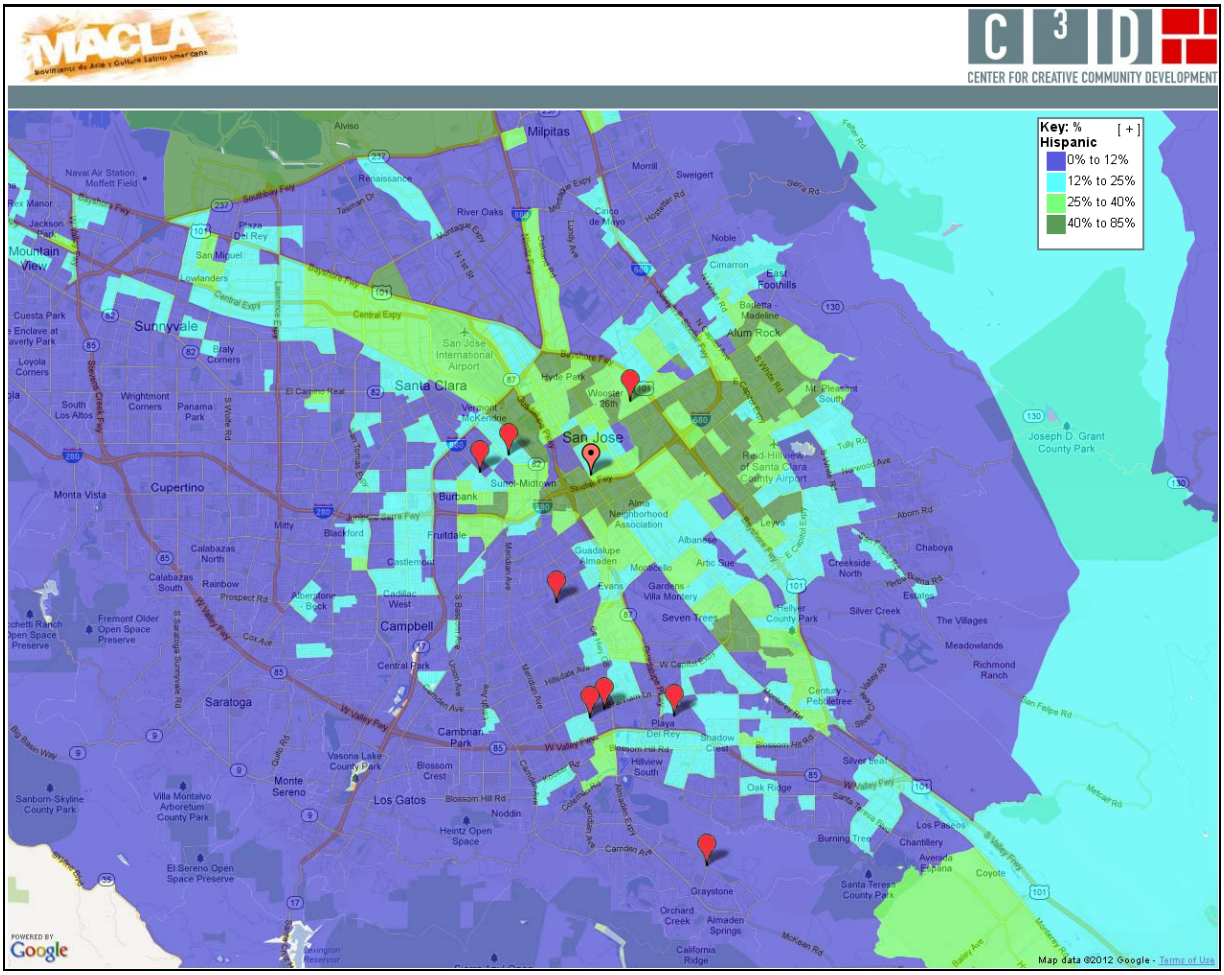
Figure 4: Adding High School Locations



[3] We used addresses of high schools in the San Jose Unified School District available at http://www.sjusd.org/school/district/info/C237, accessed 2/23/12. The list of addresses is provided in Appendix A so you can practice with the Geocoder.

Now click the “Show Geocoded Addresses” button. The Geocoder box closes and the new addresses are visible on the map. If you click on one of the red markers, typically it opens a bubble with the name of the school and its address. In some cases there is the additional option of viewing archived photos of the area through Google Maps Streetview. The new addresses can be shown by themselves or with the MACLA mailing lists.

Figure 5: High Schools in the San Jose Unified School District



Unlike address maps created by us as part of MACLA’s online map tool, the address markers created using the Geocoder will not save permanently when the map is closed. You will want to save a copy of the addresses as an Excel spreadsheet or other file so that you may use them again in the Geocoder. You will also want to capture images of the map when it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

How to prepare a map for inclusion in a report

Lastly, we describe how to prepare a map created with the interative map tool for inclusion in a report.[4] We will discuss the map of MACLA's 2011 mailing list in Figure 3 above. We have already provided the step by step instructions for creating that map.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map image and choose 'Borders and Shading.' Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 3 above was formatted.[5] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for MACLA. The map tool is meant to be an additional resource for MACLA to explore the demographics of its community and its support in the region. The tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to MACLA's interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/MACLALINC.html and explore Census variables in relationship to MACLA's supporters. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to MACLA in the future, and it will be possible for addresses related to new initiatives to be mapped.

[4] These instructions are for a PC.

[5] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on the configuration of programs on your machine.

Appendix A
Area High Schools

Sample data to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/MACLA/MACLACountyMap/MACLACountyMap.htm

Gunderson High School	622 Gaundabert Lane San José, CA 95136
Leland High School	6677 Camden Avenue San José, CA 95120
Lincoln High School	555 Dana Avenue San José, CA 95126
Pioneer High School	1290 Blossom Hill Road San José, CA 95118
San José High School	275 North 24th Street San José, CA 95116
Willow Glen High School	2001 Cottle Avenue San José, CA 95125
Broadway High School	4825 Speak Lane San José, CA 95118
Downtown College Prep	1460 The Alameda San José, CA 95126

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Using MOCAD's Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of MOCAD through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC)[1], participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how data on neighborhood characteristics and visitor origins can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The map tool created for MOCAD was developed to assist the organization in documenting and articulating its community demographics and visitor origins. The map tool can be found on MOCAD's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/MOCAD.html. There you will find a MOCAD map option with an overlay of Census variables for Wayne County, and a map option with an overlay of Census variables for the five mile (local) area around MOCAD.[2] We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show from where in the county one is drawing visitors; other times the local area may be of greater interest. In this paper we will work with the Wayne County map, but everything presented here also applies to the 5 mile radius map.

We do not provide interpretations of the many interesting aspects of MOCAD's online map here. Rather this paper presents a description of how to use the online, interactive map tool to explore questions about MOCAD's neighborhood and visitor patterns that might arise. This brief paper provides information on how to use the online mapping tool to:

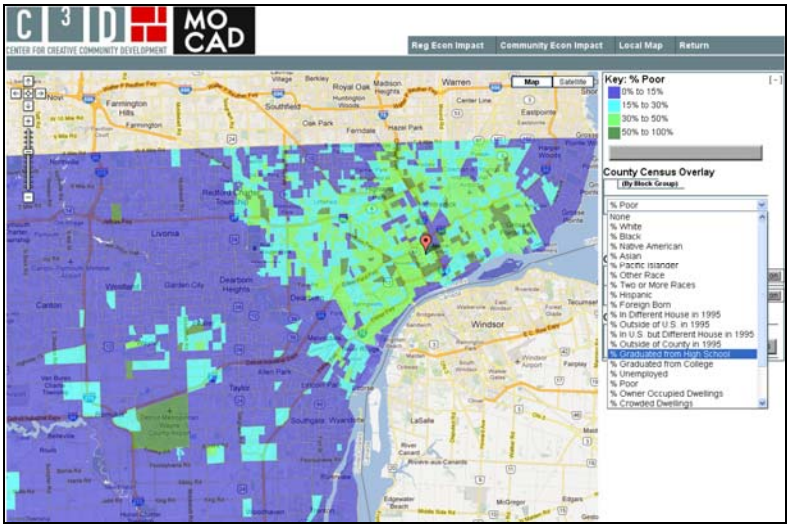
- change the Census variables displayed on the map;
- change the address lists displayed on the map;
- add new address data to the map; and
- create a copy of the map to include in a report.

How to change the Census variables displayed on the map

MOCAD's interactive map has 23 Census variables available for viewing. The default variable when the map opens is percent poor. Clicking on the drop-down box in the right hand window shows the choice of Census variables, as shown in Figure 1.

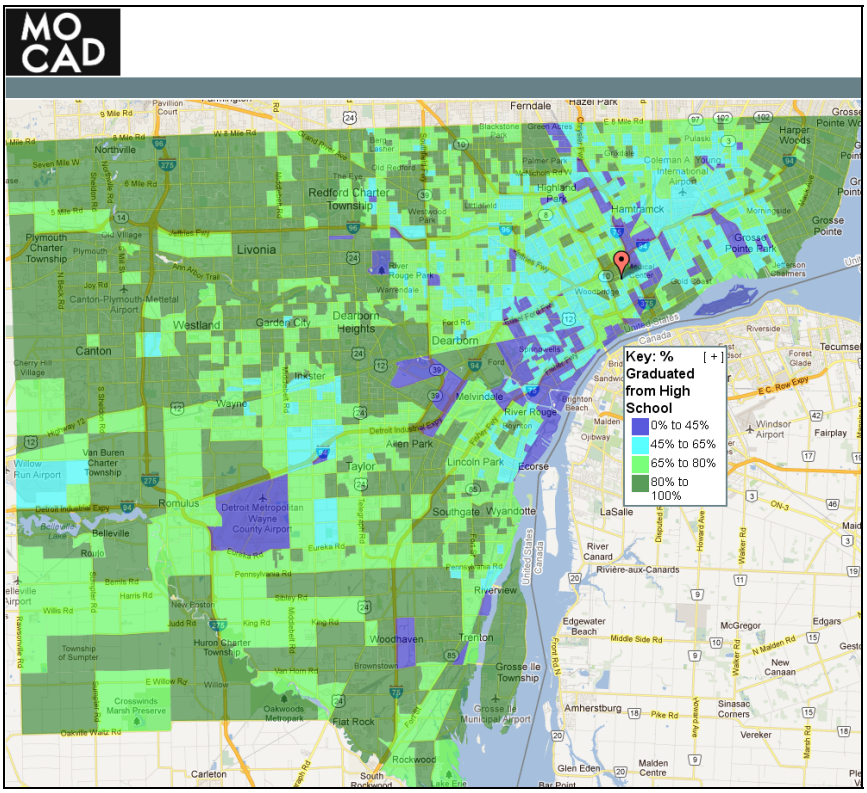
[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
[2] The Census overlay does not make a perfect circle with 5 mile radius around MOCAD. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more jagged display.

Figure 1: Change the Census Variables Displayed on the Map



On the interactive map, select '% Graduated from High School' from the list. Figure 2 presents Census block groups shaded according to the percentage of residents over age 25 who have graduated from high school. Looking at the bright turquoise areas for the moment, we see that the area around MOCAD and downtown Detroit have lower rates of high school graduation, although there are other areas in the county with similar rates.

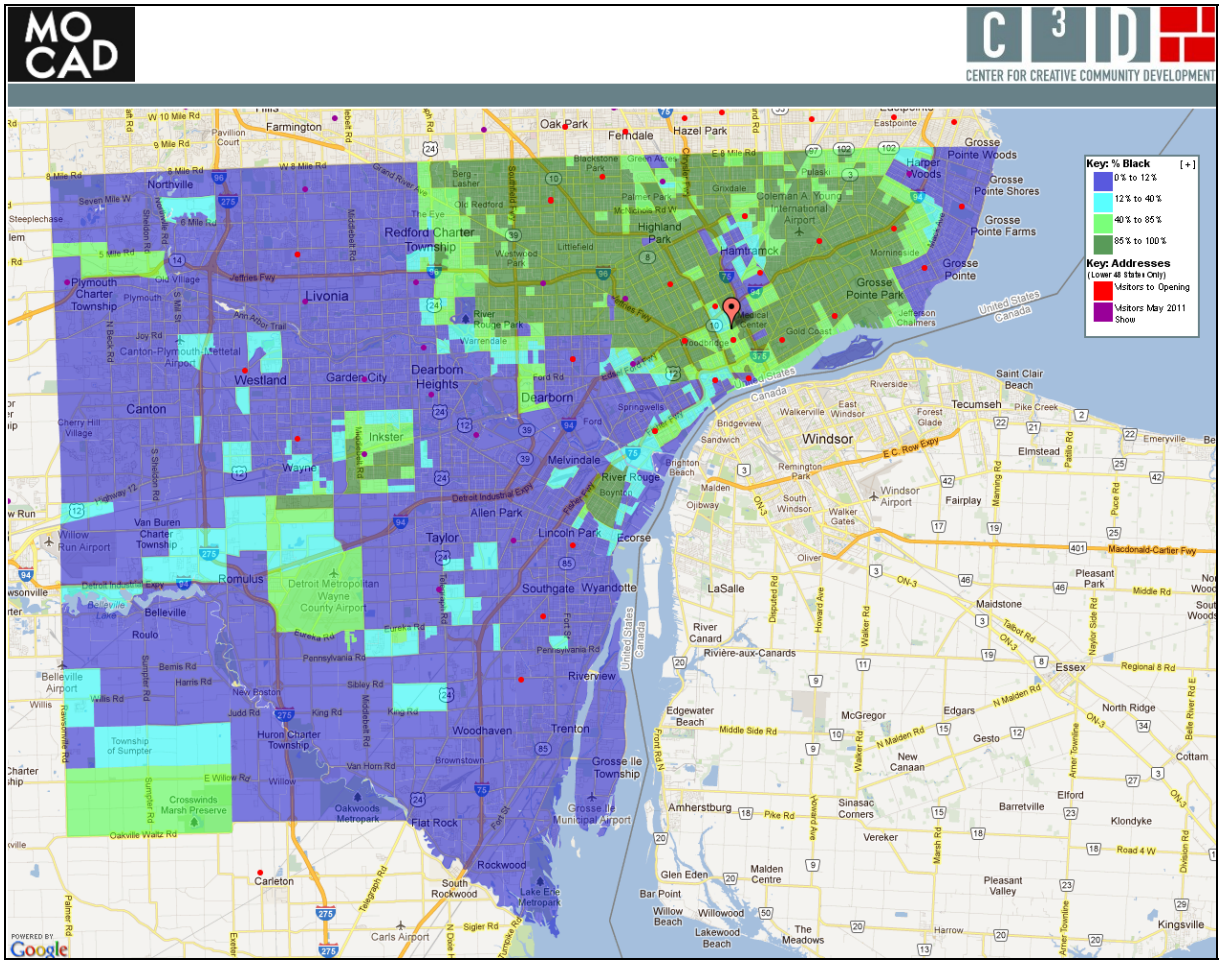
Figure 2: Percent High School Graduation in Wayne County



How to change the address lists displayed on the map

Two lists of addresses were mapped for MOCAD: visitors to the opening event of its May 2011 exhibition; and visitors to the same exhibition after opening day. The default when the map opens is that neither list of addresses is displayed. To choose an address list click the “on” button next to the list name. Turn ‘on’ both lists. Choose ‘% Black’ from the Census variables list. Figure 3 shows the geographical distribution of visitors. It is an interesting map, showing that MOCAD, even though it is relatively new, draws visitors from Detroit and wider communities. Also, even though there is significant ethnic residential segregation in Wayne County, as shown in Figure 3, visitors are drawn from around the county.[3]

Figure 3: MOCAD’s Visitors and Percent Black



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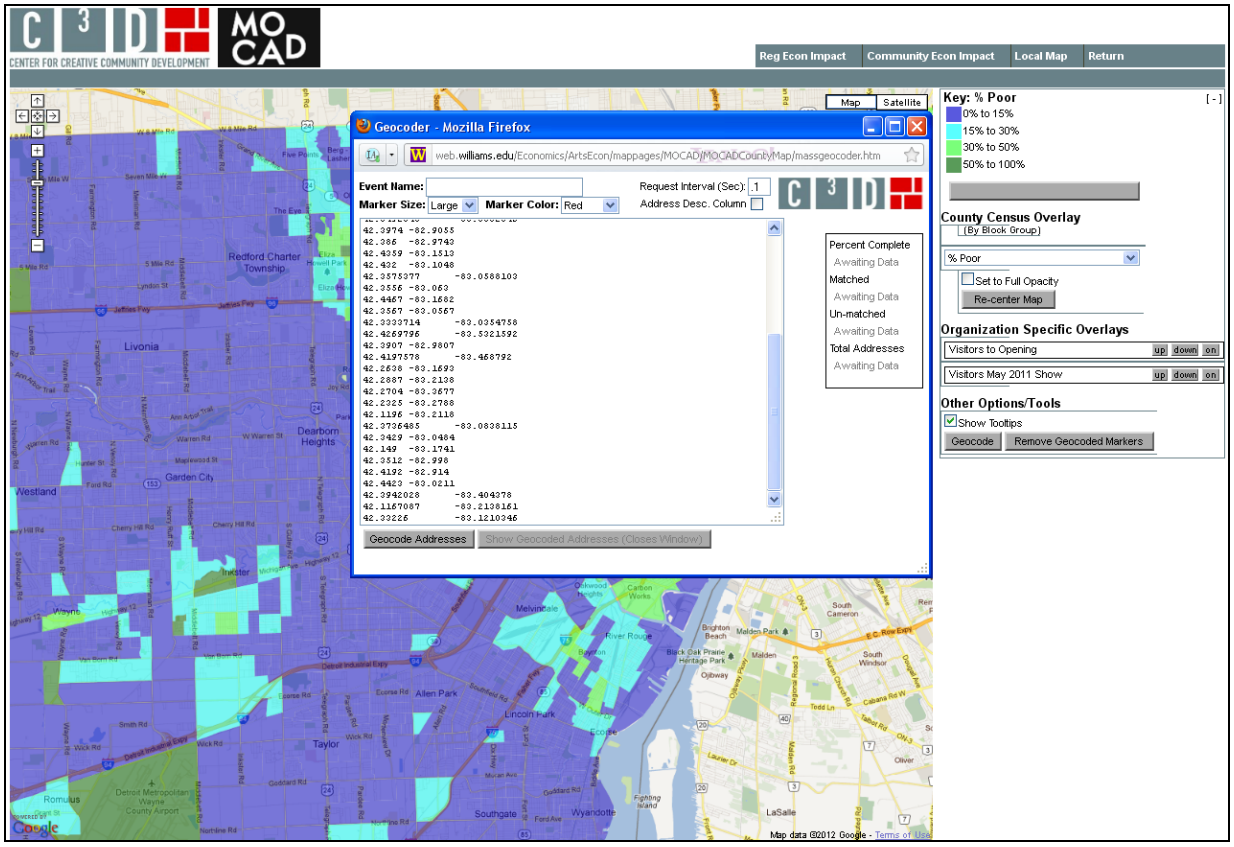
[3] An examination of the US map with the visitors list ‘on’ shows that MOCAD attracts visitors nationally.

How to add new address data to the map

In order to describe how to add new data to MOCAD's map, we must work with a hypothetical situation. MOCAD is close to several hospitals. For our hypothetical case, let us say that MOCAD wants to develop an arts initiative focusing on arts and health. As a first step, MOCAD might wish to know where the hospitals in Wayne County are located. It is possible to do this using the "Geocode" button included on MOCAD's map page.

Click on the "Geocode" button and a new window opens. Addresses of hospitals in Detroit can be copied and pasted into the Geocoder box from many sources such as an Excel spreadsheet or a Notepad text file. For the example below we pasted addresses of 42 hospitals in Wayne County.[4] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the addresses (we chose large) and the color of the markers (we chose red). Figure 4 shows the program at this point.

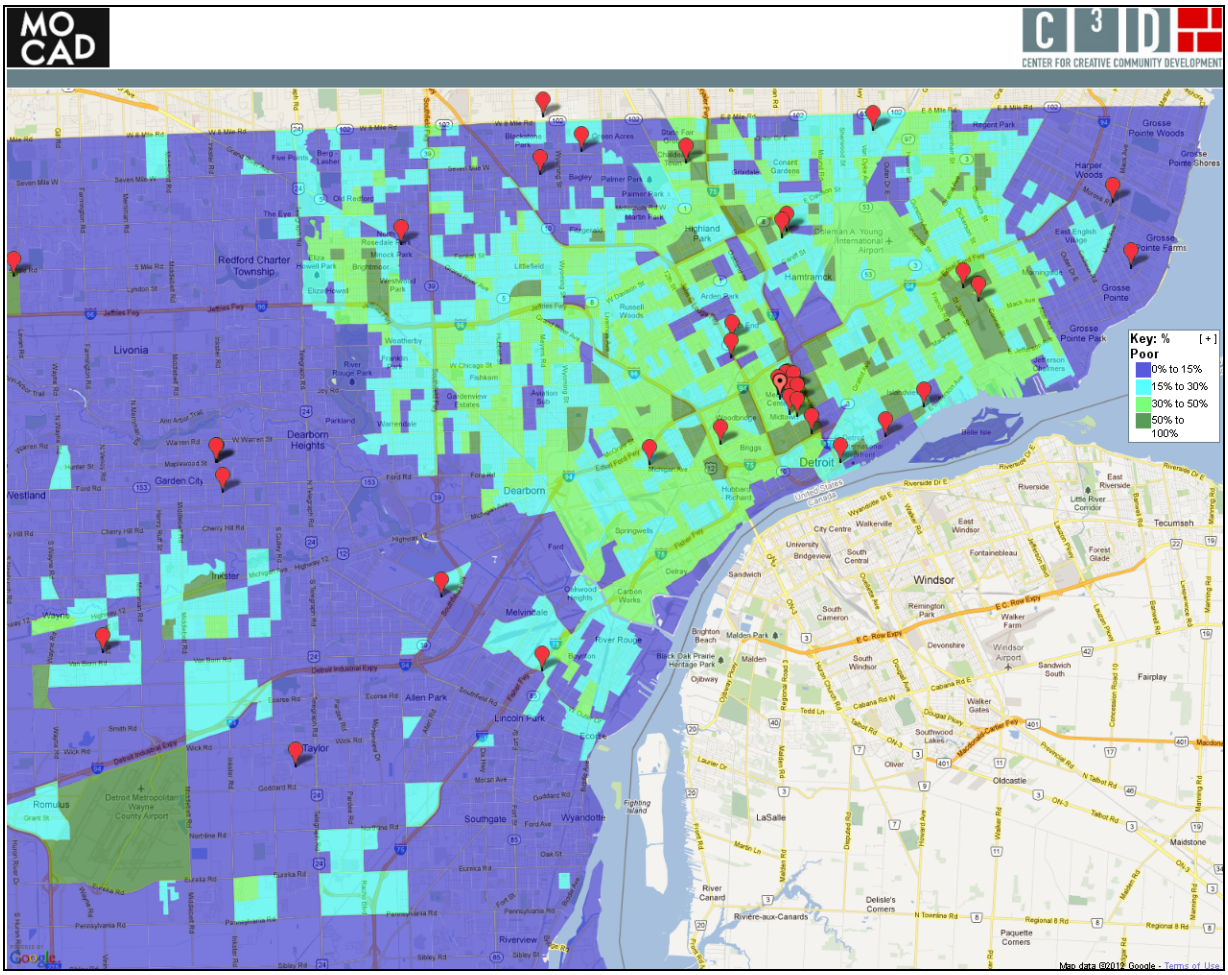
Figure 4: Adding Wayne County Hospital Locations



[4] We used addresses of Wayne County hospitals provided at http://michigan.hometownlocator.com/features/cultural,class,hospital,scfips,26163.cfm, accessed 2/26/12. This list of hospital locations is atypical since it lists location by latitude and longitude rather than street address. The Geocoder can handle either type of address. The list of addresses is provided in Appendix A so you can practice with the Geocoder.

Now click the "Show Geocoded Addresses" button. The Geocoder box closes and the new addresses are visible on the map.[5] Select '% Poor' as the Census variable of interest. The hospitals can be shown by themselves or with the MOCAD visitor lists. Figure 5 shows the location of the subset of hospitals we entered, along with the level of poverty in the area.

Figure 5: Hospitals and Percent Poor



Unlike address maps created by us as part of MOCAD's online map tool, the address markers created using the Geocoder will not save permanently when the map is closed. You will want to save a copy of the addresses as an Excel spreadsheet or other file so that you may use them again in the Geocoder. You will also want to capture images of the map when it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

[5] Because we are working with Latitude/Longitude data in this example, the Geocoder should map all 42 addresses successfully. If you receive a 'Missing Address' message at the bottom of the Geocoder box, it is because you copied a blank line at the end of the list. If you receive a "Too Many Queries" message, it means that the location was not found in the time allotted. In the Geocoder box you will see "Request Interval (Sec)". The default time is .1; change this to .2 (or greater) and run the addresses again. This time the Geocoder should successfully identify all 42 locations.

How to prepare a map for inclusion in a report

Lastly, we describe how to prepare a map created with the interative map tool for inclusion in a report.[6] We will discuss the map of visitors and percent Black in Figure 3 above. We have already provided the step by step instructions for creating that map.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map image and choose 'Borders and Shading.' Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 3 above was formatted.[7] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for MOCAD. The map tool is meant to be an additional resource for MOCAD to explore its position in its neighborhood and to discuss its pattern of visitor origins. The tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to MOCAD's interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/MOCAD.html and explore Census variables in relationship to MOCAD's visitors. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to MOCAD in the future, and it will be possible for addresses related to new initiatives to be mapped.

[6] These instructions are for a PC.

[7] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on the configuration of programs on your machine.

Appendix A
Wayne County Hopitals

Sample data[8] to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/MOCAD/MOCADCountyMap/MOCADCountyMap.htm

Hospital	Latitude	Longitude
Aurora Hospital	42.3395	-83.0889
Botsford General Medicine Center	42.4053	-83.2322
Burton Mercy Hospital	42.3483711	-83.054633
Carriage Hill Clinic	42.3233	-83.3119
Children's Hospital of Michigan	42.3525	-83.0545
Deaconess Hospital	42.3419825	-83.0151973
Department of Veterans Affairs Detroit Medical Center	42.3568	-83.0598
Detroit Receiving Hospital	42.3568	-83.0598
Ford Hospital	42.3669819	-83.0849226
Garden City Hospital	42.3328	-83.3143
Garden City Osteopathic Hospital	42.3323	-83.3149
Grace Hospital	42.3528156	-83.0576991
Grace Hospital	42.428092	-83.1699265
Greater Detroit Hospital	42.4074	-83.0617
Greater Detroit Hospital and Medical Center	42.4096	-83.0592
Harper Hospital	42.3492045	-83.0582546
Henry Ford Cottage Hospital	42.3974	-82.9055
Henry Ford Medical Center Detroit East	42.386	-82.9743
Henry Ford Medical Center Detroit Northwest	42.4359	-83.1513
Henry Ford Medical Center State Fair	42.432	-83.1048
Hutzel Hospital	42.3575377	-83.0588103
John D Dingell Veterans Affairs Medical Center	42.3556	-83.063
Kingswood Hospital	42.4467	-83.1682
Kresge Eye Institute	42.3567	-83.0567
Lakeside Hospital	42.3333714	-83.0354758
Maybury Sanitarium	42.4269796	-83.5321592
Mercy Hospital Detroit	42.3907	-82.9807
Northville State Hospital	42.4197578	-83.468792
Oakwood Downriver Medical Center	42.2638	-83.1693
Oakwood Hospital and Medical Center Dearborn	42.2887	-83.2138
Oakwood Hospital Annapolis Center Wayne	42.2704	-83.3677
Oakwood Hospital Heritage Center Taylor	42.2325	-83.2788
Oakwood Hospital Seaway Center	42.1196	-83.2118

[8] The site that provided the hospital addresses did so with Latitude/Longitude data rather than street addresses. This example demonstrates that the Geocoder can handle either type of address. Indeed it illustrates a strength of the Geocoder – it can quickly move from Latitudes and Longitudes to a map that geographically positions the hospitals at their addresses.

Park Community Hospital	42.3736485	-83.0838115
Rehabilitation Institute	42.3429	-83.0484
Riverside Osteopathic Hospital	42.149	-83.1741
Saint John Detroit Riverview Hospital	42.3512	-82.998
Saint John Hospital and Medical Center Detroit	42.4192	-82.914
Saint John North East Community Hospital	42.4423	-83.0211
Saint Mary Hospital	42.3942028	-83.404378
Seaway Hospital	42.1167087	-83.2138161
Zieger Hospital	42.33226	-83.1210346

Social Networks

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Introduction to Social Networks

We use network analysis to study social structure and the relationship among organizations in a community. As with the economic models and social mapping, we identify and map social networks that are specific to the cultural arts organization under study. Three Space for Change organizations – Heidelberg Project, International Sonoran Desert Alliance (ISDA), and Intersection for the Arts – expressed an interest in an analysis of their social networks. Interactive geographic presentations of the results can be found at www.c-3-d.org. Written reports of the networks are provided in the following pages. We describe, for each organization, the data they provided on the initiatives in which they were currently involved and their partners in these initiatives.

When individuals, representing their organization, meet regularly over time to work on common goals, they share knowledge and experience with one another. They also build trust relationships, not just among themselves but also among their organizations. The resulting social networks allow individuals and organizations to more quickly and effectively respond to challenges (economic downturns, natural disasters, social problems) *and* opportunities (new funding opportunities, a favorable change in legislation). Analyzing an organization's social network allows us to identify possible weaknesses (few connections, or connections only to other similar organizations) and strengths (multiple networks with a variety of organization types in a range of neighborhoods and communities).

We use social network analysis for the three Space for Change organizations to address a specific question arising from other aspects of our work with them. Heidelberg Project attracts a large number of national and international visitors each year to its unique outdoor art site. It does this on a limited budget. We wondered how the Heidelberg Project was working locally in Detroit, and if an analysis of its social network would support our impression of an organization generating maximum results from a minimalist budget. The analysis suggests that the Heidelberg Project is developing its social network, and that it has both organizational and geographic diversity. The limited resources of the Heidelberg Project are visible, however, in the fact that its social network is less complex (i.e. less interconnected) than others we have studied.

International Sonoran Desert Alliance (ISDA) shares in common with one of the other Space for Change organizations – the Heritage Center – geographical isolation and a small population base. We wondered if geographically isolated cultural organizations must, as a result, be socially isolated. Analysis of ISDA's community social network revealed a network that looked similar to other networks we have examined, except that it covered a *much* larger geographical area. Geographically isolated organizations appear to extend their concept of community to include a more encompassing area than organizations located in urban areas.

Intersection for the Arts recently moved from its established location in the Mission District of San Francisco to the South of Market (SoMa) neighborhood close to Downtown. Some press reports have expressed concern that Intersection would, as a result, lose its identity within the city. We thought that an analysis of Intersection's community social network would provide insight into this question. We expected that Intersection had been so embedded in partnerships, social issues, and audience in the Mission District that the move to a culturally and demographically different (although not very distant geographically) neighborhood might indeed be a concern. Analysis of Intersection's social network revealed that Intersection has an extremely well developed network of partners in the greater San Francisco Bay area, including in Berkeley and Oakland. Perhaps even more importantly, Intersection has developed a set of initiatives with these partners, all of which directly flow from and reinforce Intersection's core mission. Intersection's mission is to bring artists and community together in the process of creating art, allowing each voice so that the result is a broadening of the concept of what is possible in art and what is possible in civil society by both groups.

Analyses of the social networks of cultural arts organizations, particularly the geographically-based network analyses we use, continue to be a useful tool in broadening our understanding of the context in which cultural arts organizations work. Geographical social networks, combined with the other economic and social analyses provided for Heidelberg, ISDA, and Intersection, add to our understanding of how cultural organizations shape and impact their communities.

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The Heidelberg Project: Impacting the Detroit Community

Introduction

The Heidelberg Project brings art, social critique, and activism together on two blocks in Detroit -- specifically on Heidelberg Street. Now in its 26th year, the Heidelberg Project was for many of those years the passion of one artist, Tyree Guyton, who grew up on Heidelberg Street. Disheartened as he watched the street empty of one family after another to be replaced by drug squatters or the houses demolished, Guyton began to use the street – and its houses and trees and anything else – as a canvas for what would become an outdoor art environment. In serious conflict with the city of Detroit for more than a decade, the Heidelberg Project garnered world wide attention and soon was attracting visitors from around world while simultaneously being overlooked, dismissed, or embattled in Detroit.

The history of the Heidelberg Project is interesting but there are several specific points about the organization that deserve special attention, especially as relates to its social network. The first point is that for years the organization was not really much of an organization at all, it was a person – Tyree Guyton. As recently as 2010, the most recent year for which IRS Form 990s are publicly available, the annual expenditures of the Heidelberg project were $90,000.The Heidelberg Project is a very small cultural arts organization. The question arises as to whether an organization this small can have a significant impact on its block let alone on the city of Detroit.

The second remarkable point, when taken together with its small budget, is that we estimate (based on a site visit and guest books dating back to almost its start) that the Heidelberg Project attracts approximately 35,000 nonlocal visitors annually. The visibility and draw of the Heidelberg Project for its limited budget is remarkable. Visitors are important for economic impact, but they are, after all, nonlocal visitors. We wondered whether a cultural arts organization such as Heidelberg could have community impact through its local social networks when it operates on such a small budget. That is the question examined in this paper.

We asked the Heidelberg Project to provide us with a list of community initiatives in which they were involved, along with their partners in those initiatives. They provided us with a list of initiatives and events for the period 2010 and 2011. We determined that four of the initiatives satisfied our requirements to be considered part of a social network:

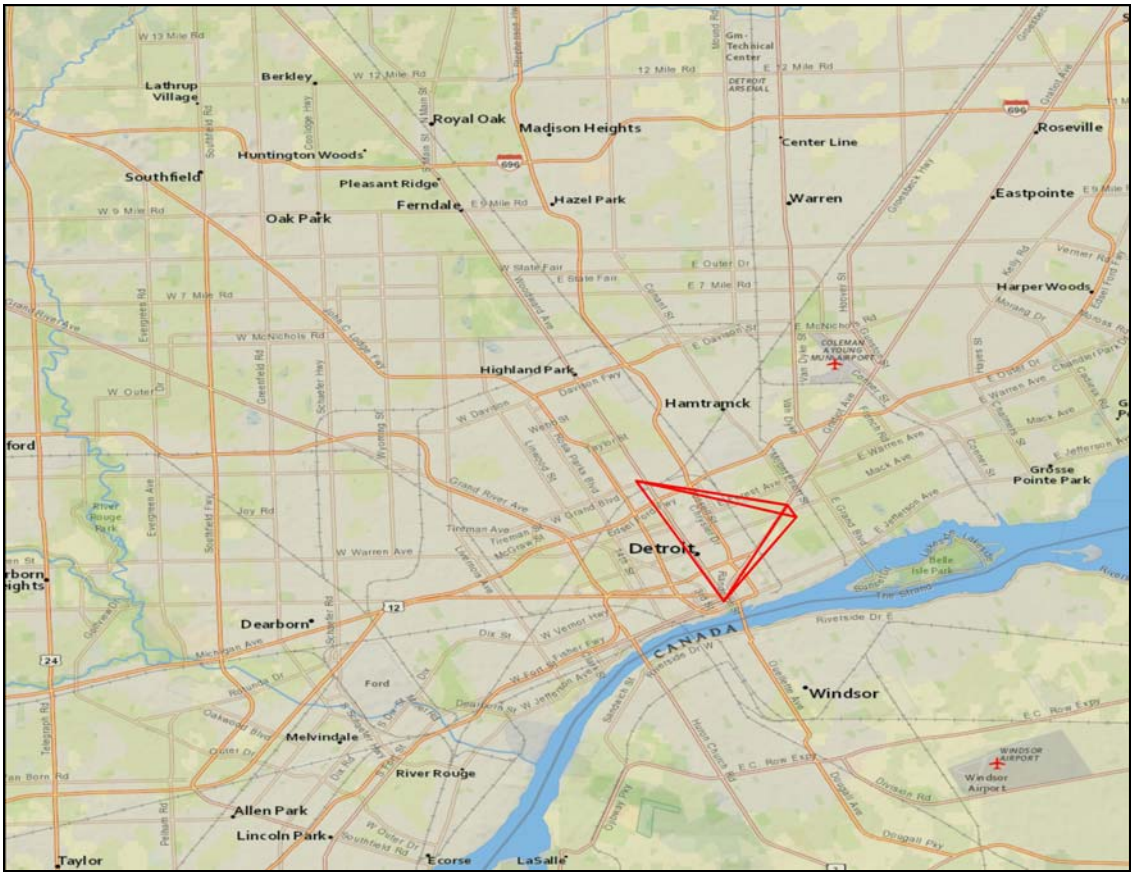
- We could identify a set of specific organizations linked together by virtue of their mutual participation in an initiative.
- The initiative exists over some period of time, requiring more than a single meeting.
- The initiative brought partners together in physical contact with one another, allowing for the possibility of an exchange of information and resources that could allow partners to respond quicker and more effectively to challenges and opportunities.

The four initiatives we identified and present here are the Emerging Artists program; the Young Artists program; ACE2; and Arts Corps Detroit. We discuss each of these networks in turn and provide geographically based maps of the networks.

Emerging Artists Network

Heidelberg's Emerging Artists initiative chooses artists with few or no gallery exhibitions and provides them the opportunity to showcase their work in the Heidelberg Project Gallery. Its partners in the project are local shops that are largely involved in supporting the artist reception. There are four partners in the emerging artists network, which is presented in *Figure 1*(in red).

Figure 1
Emerging Artists Network

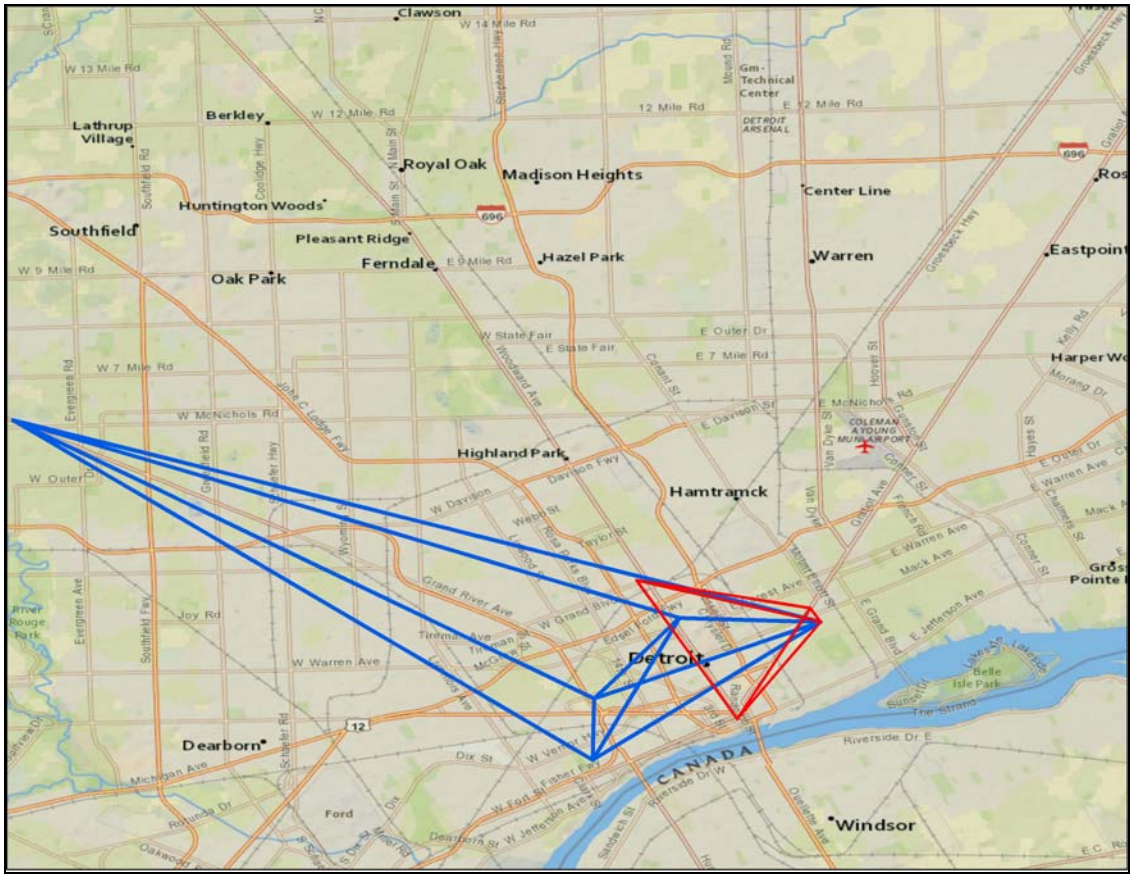


This network is both small and quite local. The distance between Heidelberg Project and the furthest partner is about 4 miles.

YAH Network

Heidelberg Project's YAH initiative stands for Young Artists/Young Adults/Young Activists of Heidelberg. It allows young adults between the ages of 18 and 35 to gain professional development in the cultural arts and become leaders in the Detroit community. There are four Detroit partners in the YAH network. Three are cultural arts organizations and the fourth one is Covenant House Michigan, a sanctuary for abused, neglected, or homeless young people. *Figure 2* presents Heidelberg Projects YAH Network (in blue).

Figure 2
YAH (Young Artists/Adults/Activists of Heidelberg) Network

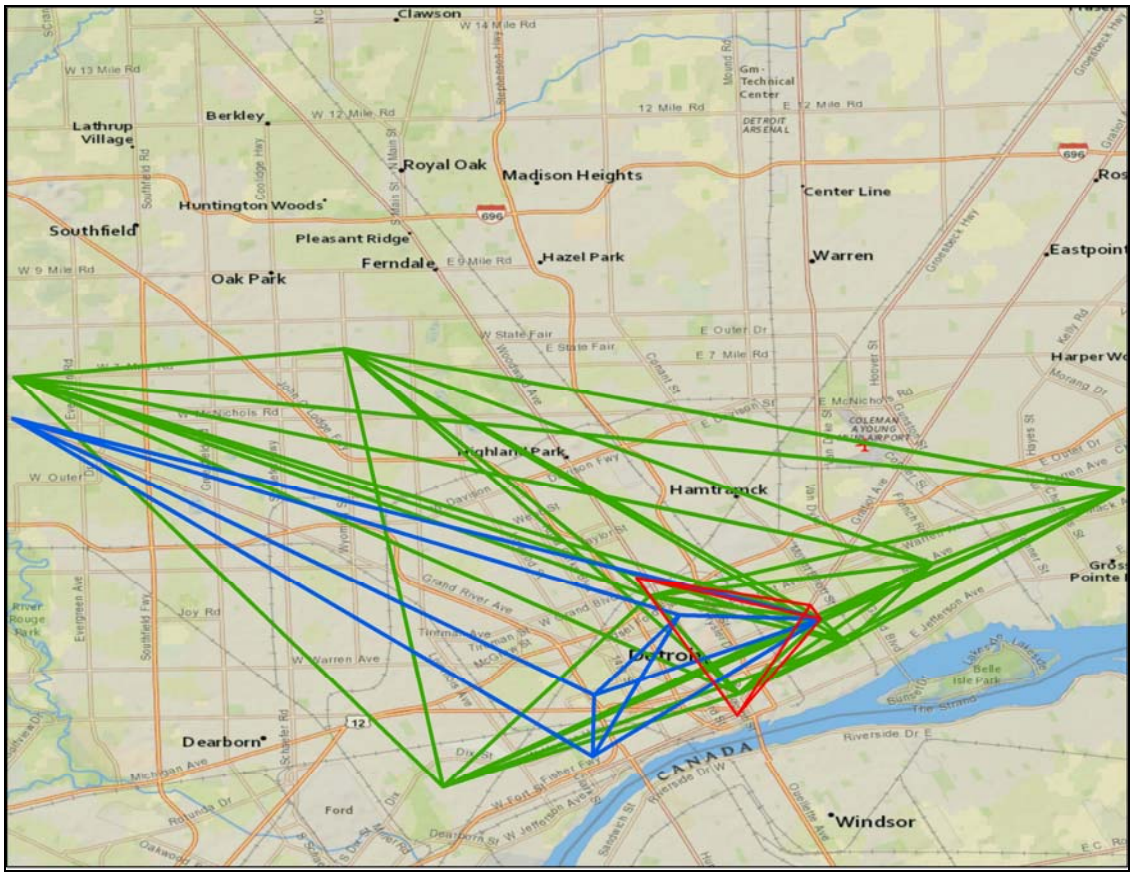


We see in *Figure 2* that Heidelberg's YAH network is not any denser than its Emerging Artists Network, although the geographic area of the network is greater, with the furthest organization about 15 miles from Heidelberg. Additionally, the Heidelberg Project listed the Julliard School in New York City as a partner in the initiative, although the distance involved there was too great to map meaningfully as part of a community network.

ACE2 Network

Heidelberg's ACE2 initiative is short for ACE2: Art, Community and Environmental Education. It is a schools-based program designed to counteract the declining offerings in the arts in public education. The program involves a school visit, presentation and workshop, field trip to Heidelberg Street, and a visit to the artist's studio. *Figure 3* presents the ACE2 network (in green).

Figure 3
ACE2 (Art, Community and Environmental Education) Network

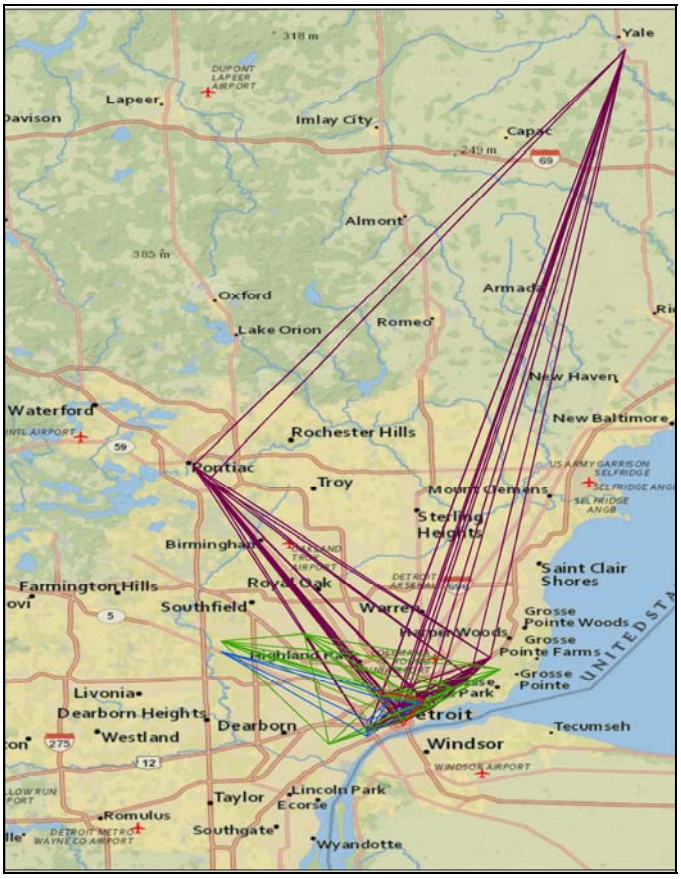


Heidelberg's ACE2 network is more complex and geographically larger than the previous two networks. ACE2 has 8 partners and they include educational institutions, arts organizations, an environmental organization, and a local soup kitchen.

Arts Corps Detroit

Arts Corps Detroit is a service-learning initiative of Wayne State University. It provides students with community-based opportunities to help revitalize Detroit's urban community through the arts. Arts Corps Detroit includes 14 partners. The Arts Corps Detroit social network is presented in *Figure 4*.

Figure 4
Arts Corps Detroit Network



We see in *Figure 4* that the Arts Corps Detroit network is larger than the previous three networks both in terms of the number of partners and in terms of geographical distance covered. The Arts Corps Detroit network goes beyond the city of Detroit, including organizations in Pontiac and Yale, Michigan. Partners include arts, health, and social service organizations. They share in common the goal of utilizing the arts to better meet the needs of individuals they serve.

Conclusions

We began this paper by noting how successful the Heidelberg Project has been at attracting visitors to its site, especially considering how modest its annual budget is. This motivated us to collect data on Heidelberg's social network in Detroit to determine if it had also succeeded at building partnerships within the Detroit community. Such partnerships are important for both the organizations involved and the community because they results in an exchange of ideas and experiences that allow organizations to respond more quickly and effectively to future challenges and opportunities.

We conclude that the Heidelberg Project is succeeding at building a social network. It has attracted partners to its own initiatives and has been invited to join larger initiatives started by others. The number of initiatives with which Heidelberg is involved is in keeping with the modest budget with which it works. The geographical extent of Heidelberg's network, expanding to different neighborhoods in Detroit and beyond, is greater than we expected. The results of Heidelberg's social network analysis are consistent with the visitor data in suggesting that the Heidelberg Project accomplishes an amazing amount on its limited budget.

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The Social Network of a Geographically Isolated Cultural Nonprofit: International Sonoran Desert Alliance

The International Sonoran Desert Alliance (ISDA) develops cultural arts programming with multi-purposed goals. It is an important regional center for the arts, providing artist housing in the re-purposed Curley School, a visiting artists program, and after-school arts initiatives. Located close to the Mexican border and even closer to the tribal lands of the Tohono O'odham Nation, ISDA incorporates cultural preservation as a significant part of its mission. Local culture is inextricably linked to its environment within the 10,000 square mile Sonoran Desert.

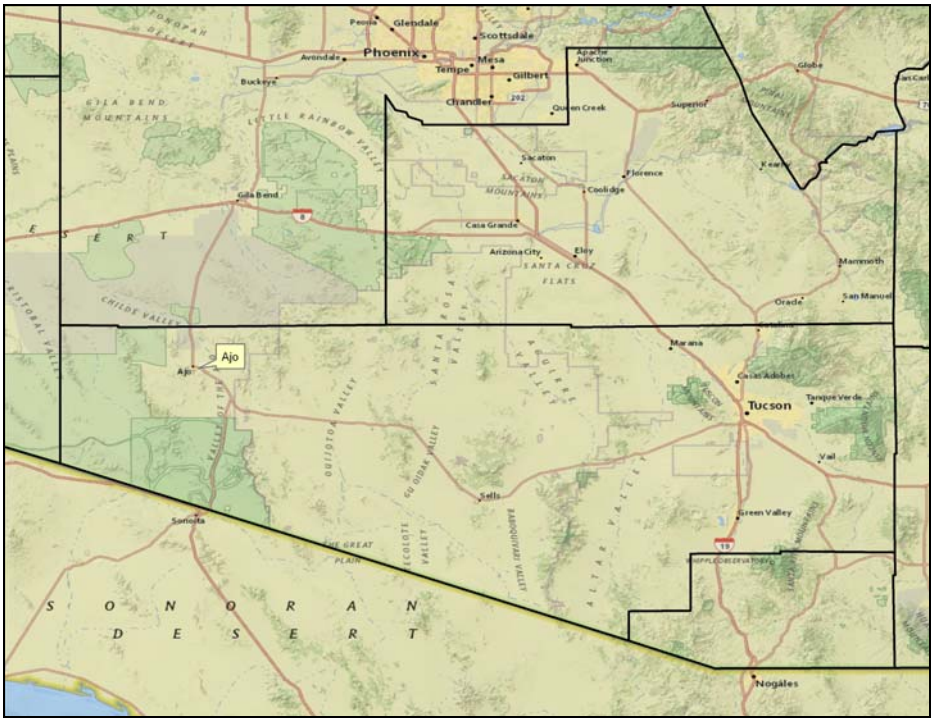
While these facts successfully communicate ISDA as a hard-working nonprofit in a culturally and environmentally interesting environment, they do not adequately capture the truly notable aspects of the environment in which ISDA operates. ISDA is not just in the desert. Phoenix and Tucson, the two closest cities, are in the desert as well. ISDA is located in Ajo, Arizona. Ajo has a population of less than 4,000. It is 43 miles north of the Mexican border; 112 miles south of Phoenix; 135 miles west of Tucson, approximately 90 miles of which are across tribal lands; and 157 miles east of Yuma, AZ.[1] While the small town of Ajo itself has a population density of 132 people per square mile,[2] the population density of the land for more than 100 miles in any direction is less than 2 persons per square mile.[3]

The Research Question

The case of ISDA raises an important question about cultural nonprofits working in geographically isolated settings: must these organizations also work in social isolation? The small size of Ajo seems to limit the number of potential partners in town, and the large distances to the closest population centers seem to present an additional barrier to developing partners. Even ISDA's location within Pima County, and hence its relationship to County government, seems to put it at a disadvantage. *Figure 1* shows the location of Ajo in Pima County.

[1] The miles reported here are by road, not 'as the crow flies'.
[2] Population density is based on US Census data for the year 2000 and reported at http://en.wikipedia.org/wiki/Ajo,_Arizona, accessed 6/13/2012.
[3] The Nature Conservancy. 2000. "Population and conservation in the Sonoran Desert," pp 188-9 in AAAS Atlas of Population and Environment, Paul Harrison, Fred Pearce, and Peter H Raven (eds). Berkeley, CA: University of California Press.

Figure 1
Pima County, Arizona



Pima County, Arizona, extends to the Mexican border. The County seat is Tucson. The map of Pima County presented in *Figure 1* above shows Pima County with Ajo to the west and Tucson to the east. Almost all of the land between the two cities is tribal land of the Tohono O'odham Nation. South and southwest of Ajo are the Organ Pipe Cactus National Monument and the Cabeza Prieta National Wildlife Refuge. We include the counties north of Pima County to show the location of Phoenix, the closest city of significant size to Ajo.

In this paper we discuss the results of determining and mapping ISDA's community partner organizations. We asked ISDA to provide us with a list of the different community initiatives in which they were involved, along with their partners in the initiatives. They provided data on four social networks currently of importance to them:

- Ajo Food Partnership
- Community for All Ages Network
- Shared Asset Measurement Network
- Southwest Rural Policy Network

ISDA is a partner in all of these networks, although they did not initiate all the networks. These social networks represent specific links in time and space to other organizations in a setting in which resources and information are shared. This sharing of resources and information allows all of the organizations in the network to respond more quickly and effectively to new problems and opportunities.

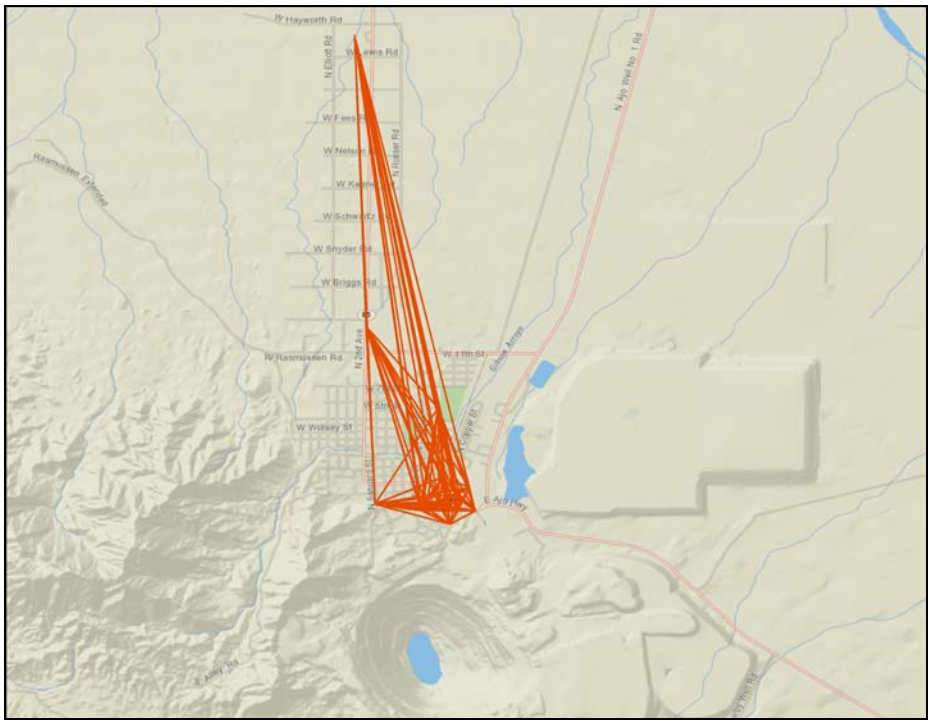
We did not place a geographical restriction on ISDA when requesting data on their partners. We asked for a list of community partner organizations. As we analyzed the data for ISDA's social networks, we realized we had to think of "community" in a new light since the geographical spread of ISDA's social network was much greater than other cultural arts organizations we had studied. We will present the results of ISDA's four social networks in their entirety, but first we examine ISDA's network restricted geographically to Ajo only.

Taking into account Ajo's geographical isolation, ISDA's opportunities for community partnerships seem limited to the town of Ajo and county government offices in Tucson. Let's explore this further by examining ISDA's social network in Ajo. Then we will examine ISDA's full social network.

Ajo Food Partnership

The full name of the Ajo Food Partnership is "Ajo Food Partnership – Creating a Community Food System." The town of Ajo had fallen under the definition of a food desert, with limited access to foods that are local, fresh and healthy. A typical characteristic of a food desert is a food delivery system reliant on long-haul trucks delivering to supermarkets pre-packaged foods with an extensive shelf life. The goal of the Ajo Food Partnership is to bring together small organizations working independently on issues of local food, healthy cooking, and obesity and diabetes to share information and resources and gain visibility for the issues of food and health. Of the four social networks on which we have data, if we limit our focus to the town of Ajo, the only network we see is the Ajo Food Partnership. This network is presented in *Figure 2* (in orange).

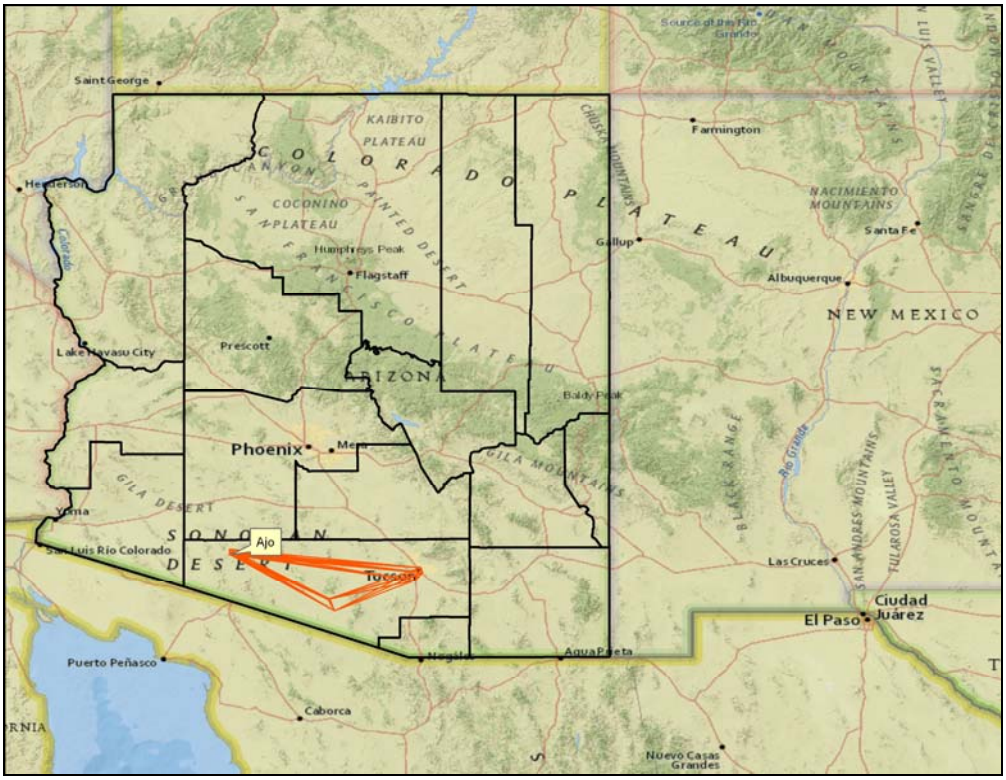
Figure 2
Ajo Food Partnership in the Town of Ajo



ISDA has 16 partners in the Ajo Food Partnership within the town of Ajo. To see the names of these organizations and their location in Ajo, go to our interactive network map at http://web.williams.edu/Economics/ArtsEcon/mappages/ISDA/ISDANetLoc/ISDANetLoc.htm. The food partners in Ajo include the café, grocery store, small food producers, health organizations, the schools, the Ajo Chamber of Commerce, and relevant local Pima County offices.

Now let us examine the full Ajo Food Partnership, no longer limiting our interest to just the town. *Figure 3* presents the full Ajo Food Partnership. We see that the network spans Pima County, but is contained within it. The towns included in the network are Ajo, Tucson, Sells, and Topawa. Sells and Topowa are between Ajo and Tucson, to the south on tribal lands. The network spans 135 miles, a much greater distance than we typically see in a "community" network.

Figure 3
Ajo Food Partnership



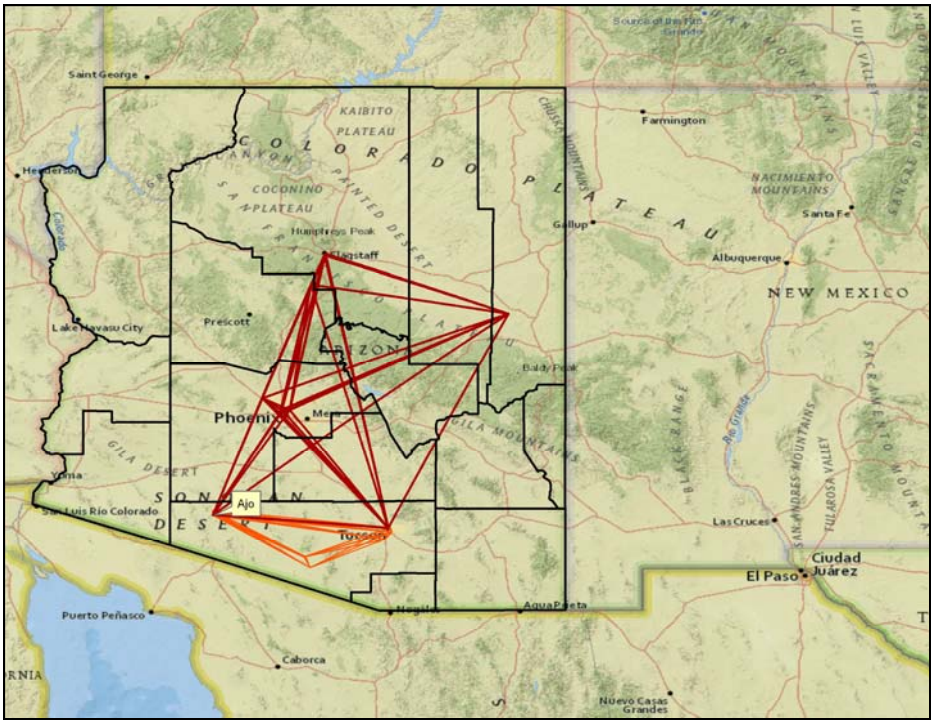
Community for All Ages Network

Community for All Ages is a national program housed at Temple University in Philadelphia, PA. Its mission is to facilitate participating communities in building strong social networks that include all ages and cultures, and in providing opportunities for lifelong civic engagement and learning.[4] ISDA sent us a list of national partners in Community for All Ages, marking those with which they had particularly strong ties. We included all of these in the social network

[4] http://www.communitiesforallages.org/vision, last accessed 6/15/2012.

except for the national Community for All Ages office in Philadelphia and the Center for Assessment and Policy Development in Conshohocken, PA, due to their great distance from ISDA. *Figure 4* presents ISDA's Community for All Ages network (in red) along with the Ajo Food Partnership.

Figure 4
Community for All Ages Network



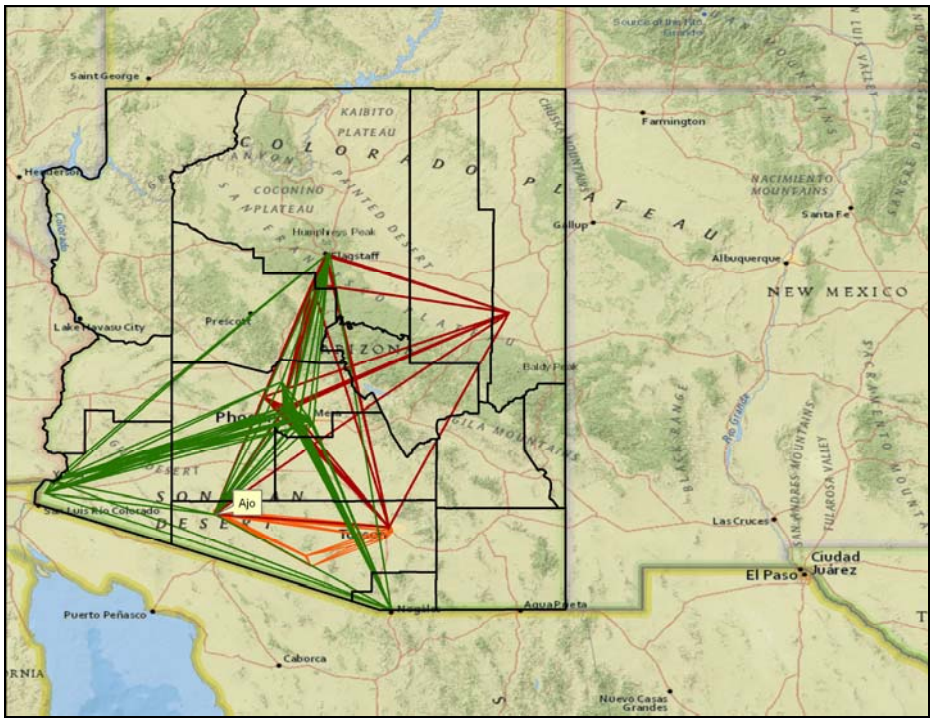
The Community for All Ages network consists of 10 partners with which ISDA has strong ties. They are located in Flagstaff, Phoenix, Tucson, Sedona, St Johns, and Surprise, Arizona. The network consists of community oriented organizations – community action networks, community centers, community development corporations, and community associations.

Shared Asset Measurement Network

The Shared Asset Measurement (SAM) network is an initiative of the Arizona Alliance of Nonprofits. It focuses on nonprofits becoming more effective leaders and fundraisers through data collection and evaluation. A centerpiece of the SAM network is 'using outcome data to communicate impact.'[5] Interestingly, the initiative encourages nonprofits to collect, analyze, and present data to help their own client population think about the assets available to them as well as to better articulate and utilize their own organizational resources. *Figure 5* presents the Shared Asset Measurement network (in green).

[5] http://www.asu.edu/copp/nonprofit/asst/AZNPCR_11_01_26.htm

Figure 5
Shared Asset Measurement Network



The Shared Asset Management network consists of 16 partners of ISDA. It includes organizations in the Arizona cities of Phoenix, Tucson, Nogales, and Window Rock; the New Mexican cities of Albuquerque, Taos, Gallup, and Las Cruces; and Cortez, Colorado. Health, community, and children's organizations are among the organizations in the network.

Southwest Rural Policy Network

The Southwest Rural Policy Network is based in Tucson, AZ.[6] The network facilitates 14 organizations in Arizona, New Mexico, and Southern Colorado in bringing together their experience and expertise as a resource for each other. Each organization works on social issues affecting their local community. The first guiding principle of the network is that each member will fully participate in the network, making this a true social network in the sense that members meet regularly in a shared space. Policy areas include health, economic justice, social justice, and the environment. *Figure 6* presents the Southwest Rural Policy Network (in blue).

[6] http://www.southwestruralpolicynetwork.org/home

Figure 6
Southwest Rural Policy Network

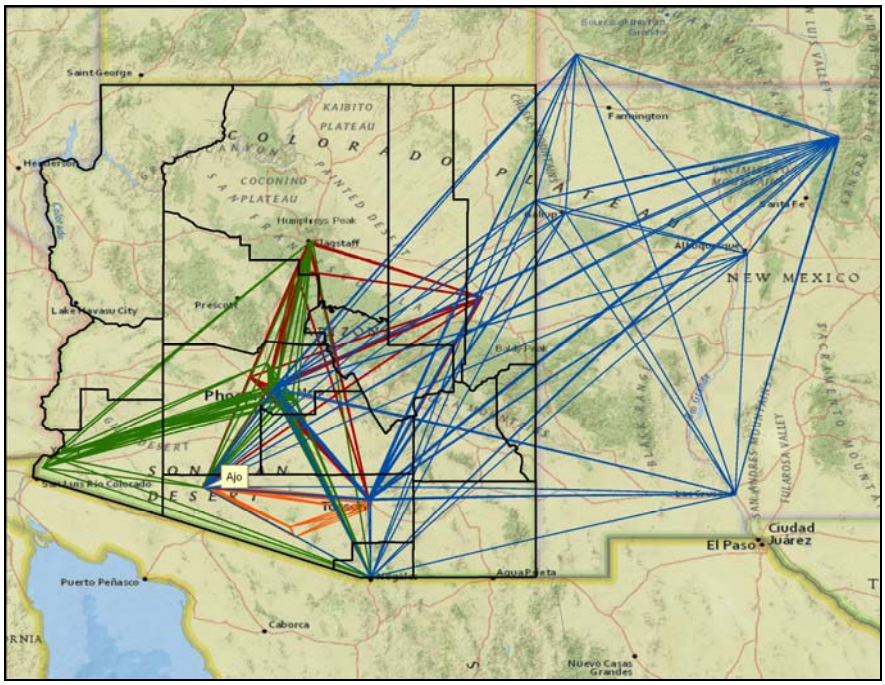


Figure 6 displays the Southwest Rural Policy Network as well as ISDA's 3 other networks. It is the most dispersed of the networks, with partners in Arizona, New Mexico, and Colorado. An examination of the Southwest Rural Policy Network web site, however, confirms that it is an activist network with the central goal of bringing shared resources (especially knowledge and experience) to bear on local issues identified by each partner community.[7]

Conclusions

We began this paper with the question of whether geographically isolated cultural arts organizations must have limited social networks due to the constraints of their isolation. Collecting data on 4 networks identified by ISDA as community partners, we saw that ISDA's partners are spread over a much larger area than typical. The most local network, the Ajo Food Partnership, spans 135 miles in Pima County, from Ajo to Tucson. Two of ISDA's networks – Community for All Ages and Shared Assets Measurement – extend much farther than the county, spanning most of Arizona. The Southwest Rural Policy Network spans parts of Arizona, New Mexico, and Colorado. Its longest span, from Ajo to Cortez, Colorado is more than 500 miles.

An examination of ISDA's social network has revealed that the social networks of geographically isolated cultural nonprofits look very similar to the social networks of organizations in urban areas, except that they are spread over hundreds of miles instead of tens of miles. This dispersion has real consequences for the geographically isolated organization, requiring extra time and resources to find partners and travel to meet with them.

[7] http://www.southwestruralpolicynetwork.org/, accessed 6/15/12.

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The Social Network of Intersection for the Arts

Intersection for the Arts is a San Francisco arts organization with programming designed to provide space for diverse voices in the arts and the community. Founded in the 1960s as a merger of several faith-based programs using art to reach disenfranchised neighborhood youth, Intersection has evolved over the decades to respond to new social issues and challenges while remaining a community based arts organization.[1] In 2011 Intersection moved from its well-established location at 446 Valencia Street to 5th and Mission. This was an 'invited' move, as it were, part of a private/public development collaboration at the site of the San Francisco Chronicle called 5M (for 5th and Mission). The move involved a distance of less than two miles, yet raised some concerns locally that it would "change [Intersection's] identity in unforeseeable ways."[2] An article in Fast Company provided a tangible example of this possibility when it referred to Intersection simply as "a not-for-profit arts incubator."[3]

We collected data and created a social network map of Intersection's partners in its various initiatives. The goal was to examine the geographical distribution of Intersection's network as input in addressing whether its programming partners were so focused on the Mission District that this would create an obstacle to continuity in Intersection's new location. We felt the concern of this was a real one, given the community-based, problem-based nature of most of Intersection's initiatives. What we found surprised us. Intersection has built a strong network of partners in both the arts community and the social change community throughout the greater San Francisco Bay area, including Oakland and Berkeley. While it will have to be sensitive to the changed demographics of its new setting in terms of attracting participants into the site, Intersection's social network suggests that if it chooses to continue with its arts-based social change programming it has an organizational network to support it in its new location.

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[1] http://theintersection.org/about-intersection/vision-statement/history/, last accessed 6/15/2012. A detailed history of Intersection for the Art was published by the San Francisco Chronicle. "Life Met Art Here: Part One", Jesse Hamlin, June 13, 2005, available at http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/06/13/DDGQ4D6RM51.DTL. "Art in a Time for Peace: Part Two", Heidi Benson, June 14, 2005, available at http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/06/14/DDGQ4D70C81.DTL. "The Art of Relocating: Part Three", Steven Winn, June15, 2005, available at http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/06/15/DDG6CD7U7I1.DTL. "Staying Alive: Part Four", Jane Ganahl, June 16, 2005, available at http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/06/16/DDGU8D8DOK1.DTL. "Embraced by the Community: Part Five", David Wiegand, June 17, 2005, available at http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/06/17/DDGOND9ALM1.DTL.

[2] "Intersection for the Arts Moves to New Crossroads", Aimee Le Duc and Reyhan Harmanci, The Bay Citizen, February 15, 2011, available at http://www.baycitizen.org/blogs/culturefeed/intersection-arts-moves-new-crossroads/.

[3] "Brave New Co-working World: The Rent-A-Desk Movement Matures," Christina Chaey, Fast Company, May 1, 2011, available at http://www.fastcompany.com/magazine/155/brave-new-co-working-world.html.

Intersection's previous neighborhood – the Mission District – has been described as culturally eclectic; a "wonderful mishmash"[4]; and "one of The City's most popular and fascinating places."[5] *Figure 1* is a photograph of Intersection's previous building on Valencia Street.

Figure 1
Intersection for the Arts' Previous Location

Intersection's new location is in the South of Market (SoMa) neighborhood, close to downtown. In the 1940s and 1950s SoMa consisted primarily of warehouses, light industry, and San Francisco's transient population. The 1960s and 1970s saw a growth of the gay community in SoMa. Today the area also hosts the civic center, multiple museums including the San Francisco Museum of Modern Art, the old San Francisco Mint, and software and technology companies. *Figure 2* is a photo of Intersection's new location at the San Francisco Chronicle site.

[4] "36 Hours in San Francisco," Chris Colin, The New York Times, September 11, 2008, available at http://travel.nytimes.com/2008/09/14/travel/14hours.html?ref=travel.
[5] "Iconic Mission district transforming into a true melting pot." Chris Roberts, The San Francisco Examiner, 12/18/2011, available at http://www.sfexaminer.com/local/2011/12/changing-demographics-make-iconic-mission-melting-pot.

Figure 2
Intersection for the Arts Current Location

Source: http://stradasf.com/investments/5m-5th-and-mission.html

Intersection's Social Network

A network consists of a set of nodes (dots) and links (lines) that connect those nodes. A wide variety of interactions can be visualized as networks.[6] In this instance, we asked Intersection for the Arts to provide us with a list of initiatives in which it was involved, along with a list of partner organizations in each initiative. For each network, the organizations make up the dots and they are linked to one another by virtue of working on the same initiative.

Intersection for the Arts provided us with partner information on eight initiatives in which it is involved and which it views as central to its work. These initiatives include:

- Theatre
- Leadership Development
- Visual Arts
- Education
- Youth
- Literary
- Open Process
- Community Engagement.

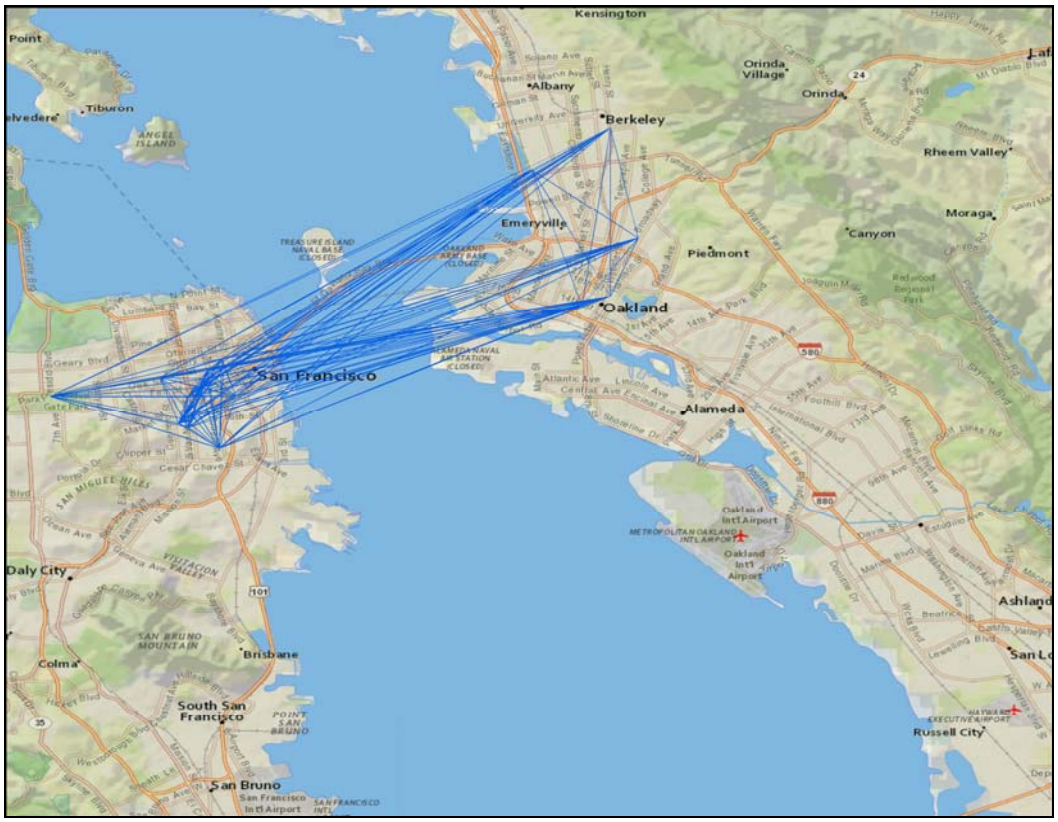
[6] For an in depth discussion of social networks and how they can be used to increase our understanding of cultural organizations, see the following papers, posted on our web site at www.c-3-d.org. "The potential of social network analysis for research on the cultural sector", 2010, Kay Oehler and Stephen C. Sheppard. "Network analysis and the social impact of cultural arts organizations." 2007. Kay Oehler et al.

There are ninety-five organizations that partner with Intersection in their eight initiatives. They are a wide variety of organizations including arts, activist, youth, and education organizations. We will discuss each initiative in turn and provide geographic maps of the networks. The social networks for Intersection are dense enough that they cover the maps on which they are placed. Let us start with a simple map of the San Francisco Bay area. *Figure 3* presents such a map. We see the city of San Francisco to the west, and Berkeley and Oakland across the Bay to the east.

Figure 3
The San Francisco Bay Area

Theatre Network. Intersection's theatre initiative supports innovative performances dealing with timely issues. The theatre initiative supports new forms of theatre, re-envisioning of existing works, and the development of new voices for theatre. There are 19 partners in this initiative with Intersection. *Figure 4* presents the network map for the theatre initiative (in blue).

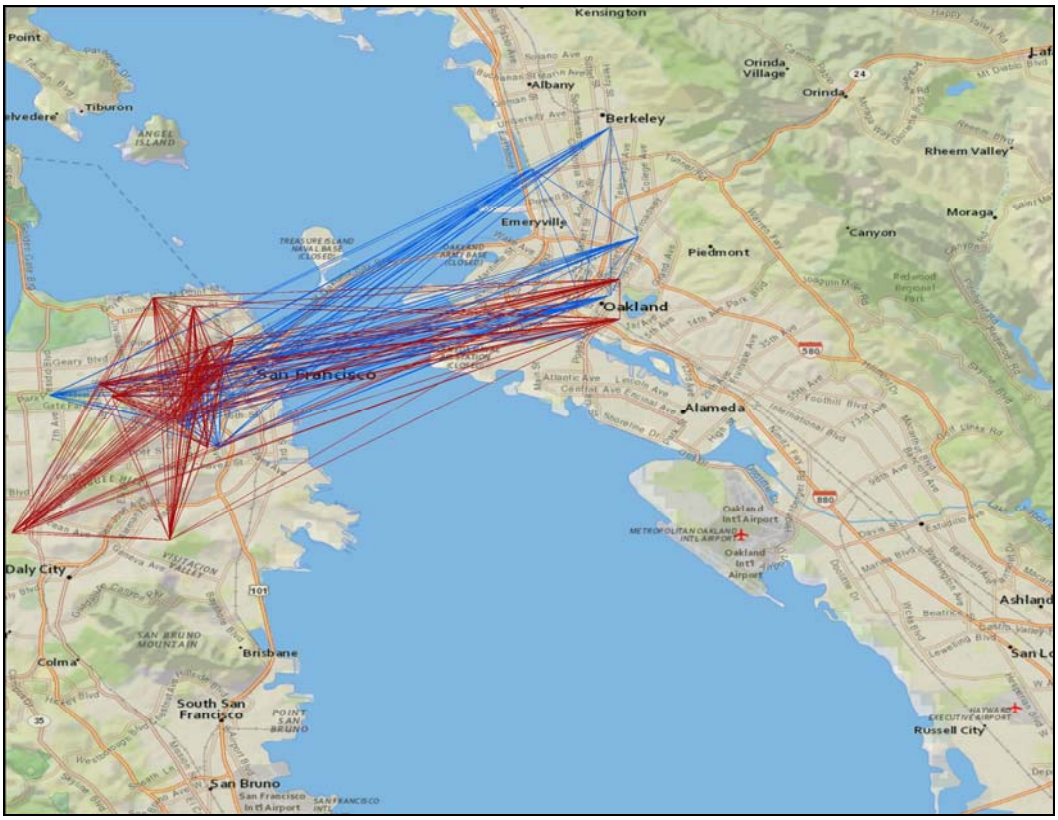
Figure 4
Theatre Network



One striking aspect of Intersection's theatre network, as shown in *Figure 4*, is that is has a much larger geographical reach than we expected. In addition to the 14 partner organizations in San Francisco, there are 2 partners across the San Francisco Bay in Berkeley and 3 in Oakland. The other notable thing about Intersection's theatre network is the range of organization types. At least four of the partners are theater organizations; at least five partners focus on social issues such as human rights, the prison population, services for women, and social justice. Intersection's theatre initiative is a performance-based theater program. It is also part of Intersection's larger mission of arts-based community change and activism.

Leadership Development Network. Intersection's leadership development initiative involves a four-month internship in all aspects of producing and administering activities across artistic boundaries. There are 21 partner organizations in the leadership development network with Intersection. *Figure 5* maps the leadership development network (in red) and presents it along with the theatre network.

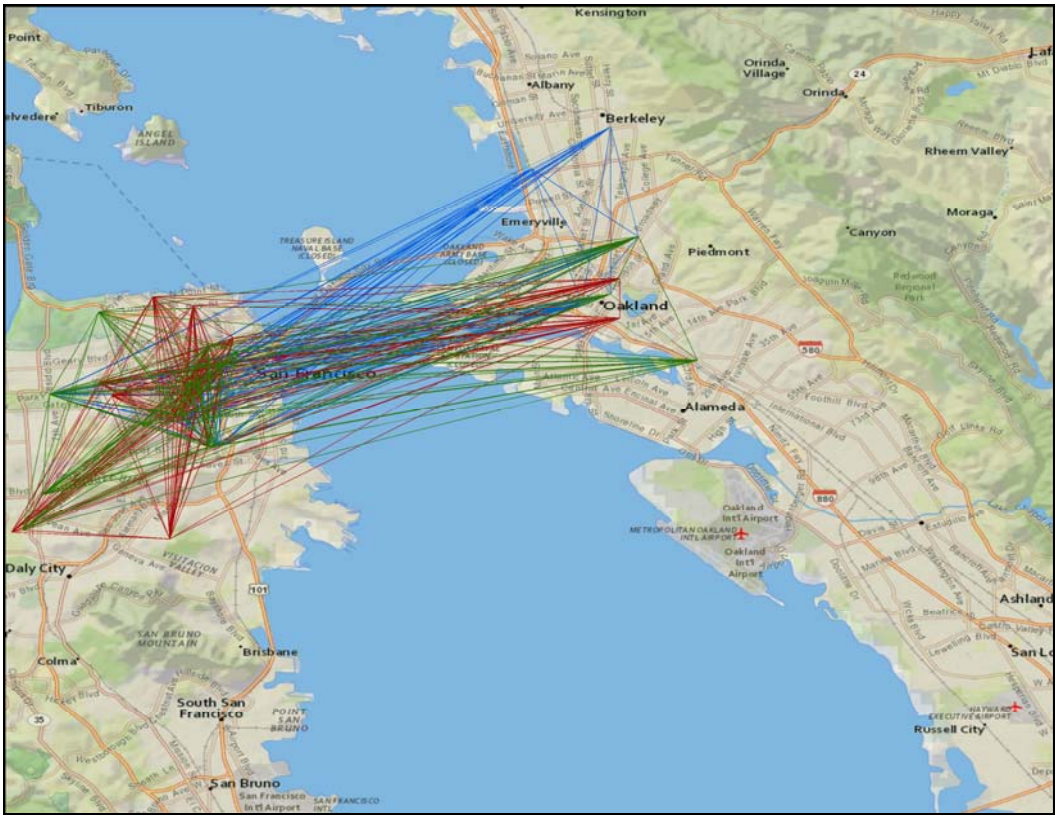
Figure 5
Leadership Development Network



We see in *Figure 5* that the leadership development network has a wide geographic spread in San Francisco and also reaches across the Bay to organizations in Oakland. Of the 22 partner organizations, 20 are located in San Francisco and 2 are located in Oakland. Partners include other arts organizations (such as the Oakland Museum of California, the San Francisco Art Institute, and San Francisco State University Art Gallery) that would benefit from experienced arts administrators as well as youth oriented organizations such as Larking Street Youth Services, Boys and Girls Club, and Oasis for Girls.

Visual Arts Network. Intersection's visual arts network centers on the Gallery at Intersection. The Gallery presents new exhibits of artists who interpret and transform society through their art. There are 17 partners in Intersection's visual arts initiative. *Figure 6* adds the visual arts network (in green) to the map of Intersection's networks.

Figure 6
Visual Arts Network

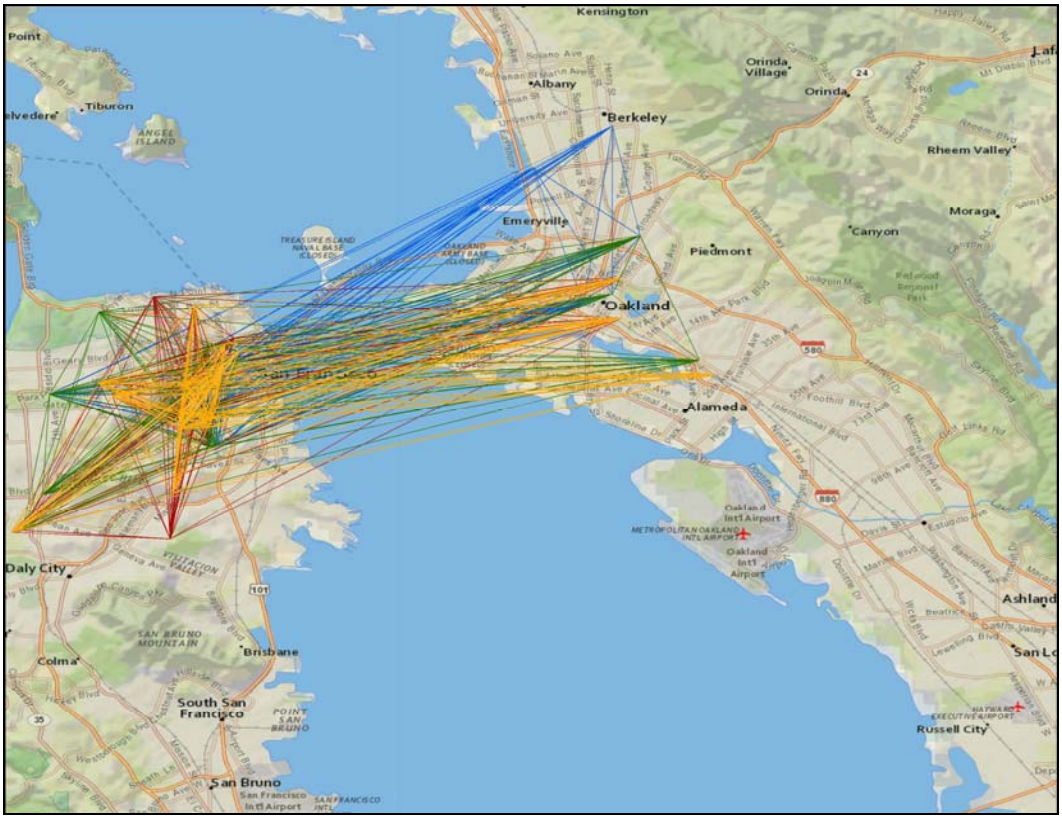


We see in *Figure 6* that Intersection's visual arts network crosses the Bay to Oakland, as did the other networks discussed. Of the 17 partner organizations, 3 are located in Oakland, and the remainder in San Francisco. The list of partner organizations includes arts organizations such as East Side Arts Alliance and San Francisco Art and Film, as well as social change organizations including legal services, youth services, and human rights.

Education Network. Intersection's education initiative highlights the process of creating new art. It is multidimensional in that it includes workshops, artist talks, and tours. It is multidisciplinary in that it engages a range of arts programming. It is activist because it seeks to cultivate an artistic environment that generates "more inclusive world views, and broader aesthetic, social, political, and cultural perspectives."[7]

Intersection's education network has 26 partners. Three partners are located in Oakland and the remainder in San Francisco. Partners include arts organizations (such as the San Francisco Art Institute and the Oakland Museum of California), educational institutions (such as the University of San Francisco and the Urban School of San Francisco), and social activist organizations (such as the collectively owned Modern Times Bookstore and the Freedom Archives). *Figure7* displays Intersection's education network (in orange).

Figure 7
Education Network

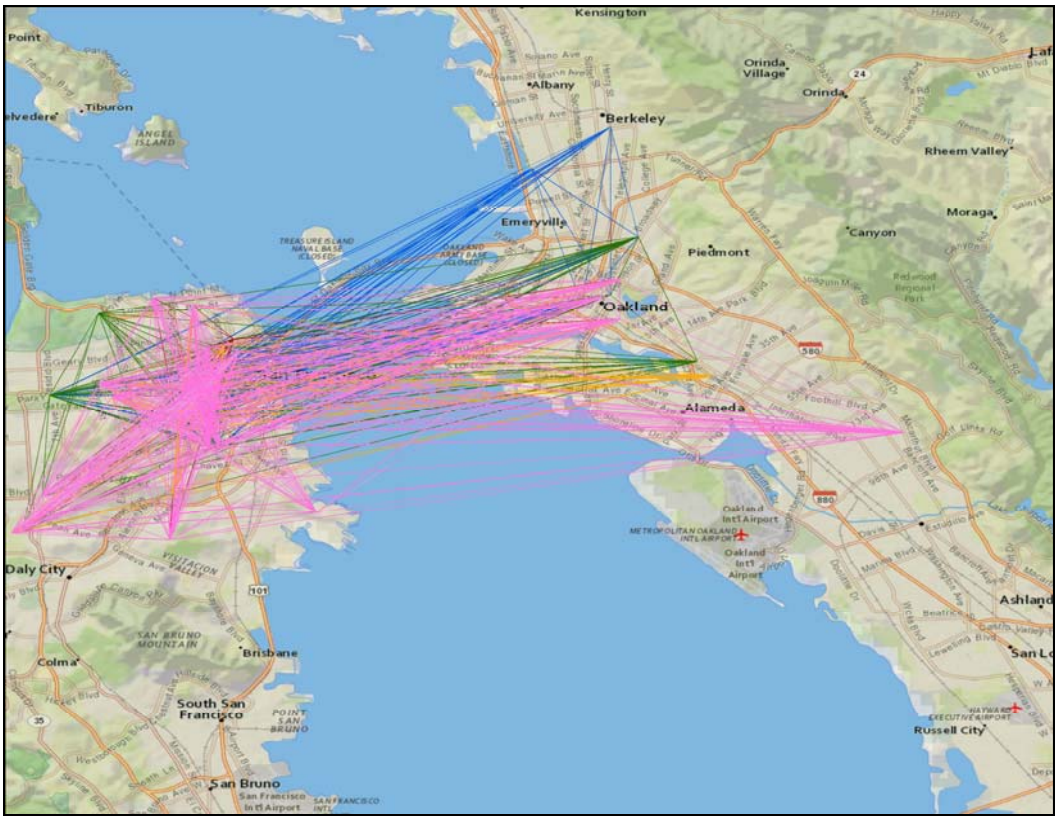


Intersection's education network includes three partners in Oakland, including an arts organization (Oakland Museum of California), an activist organization (Mujeres Unidas y Activas), and an activist arts organization (Youth Movement Records). The remaining partners are in San Francisco.

[7] http://theintersection.org/programs/community-engagement/, accessed 6/15/2012.

Youth Network. Central to Intersection's approach to its mission of positive social change through active exposure to art is to involve youth in its programming efforts. Intersection's youth program is designed to ensure the involvement of youth in all of its other initiatives. There are 35 partners in Intersection's youth network. Thirty-one partners are located in San Francisco and 4 are in Oakland. *Figure 8* presents Intersection's youth network (in pink).

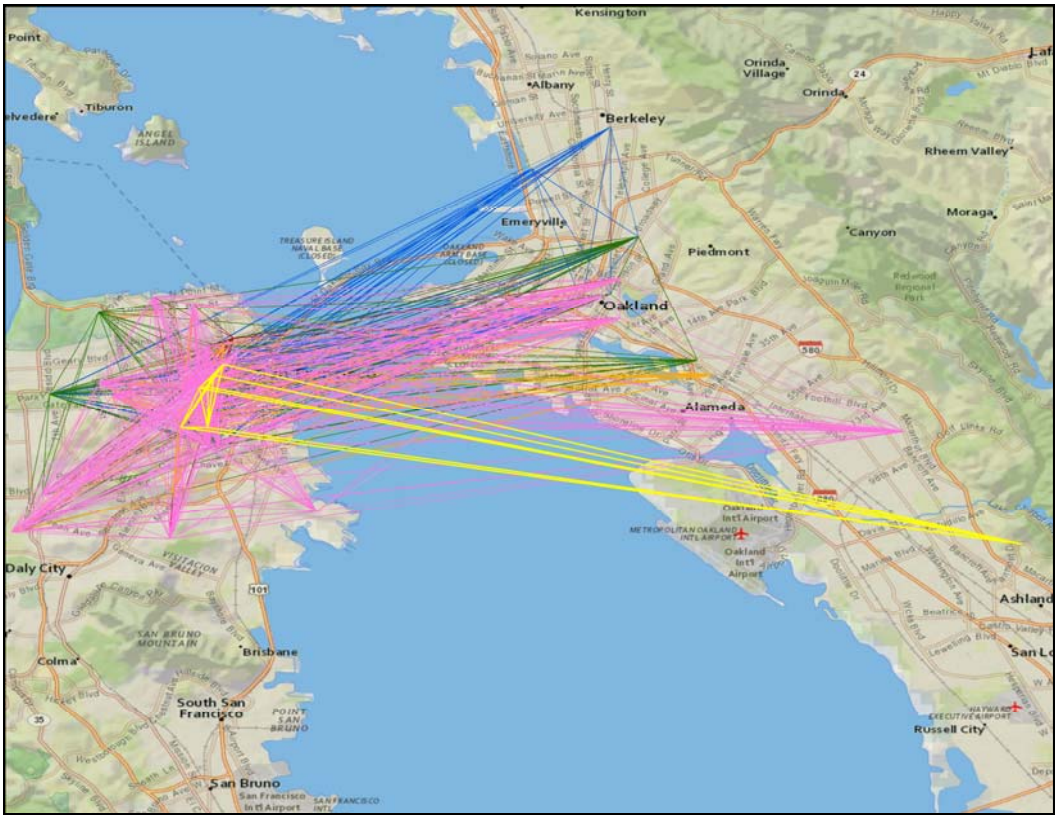
Figure 8
Youth Network



The Youth Network consists predominantly of organizations that give voice to young people in the San Francisco Bay area (Youth Outlook, Youth Radio, Youth Speaks, and Youth Uprising, as examples), provide services to at-risk or underserved youth (Boys and Girls Club, Girls 2000, and Larking Street Youth Services, for instance), or are organizations with access to many young people (Mission High School, San Francisco Art Institute, and the University of San Francisco).

Literary Network. Intersection's literary series is the "oldest independent reading series in California."[8] Its goal is to sustain the tradition of live literary experiences and expand the boundaries of literature. Intersection's literary network includes 7 partners, 1 in San Leandro and 6 in San Francisco. The literary network is displayed in *Figure 9* (in yellow).

Figure 9
Literary Network

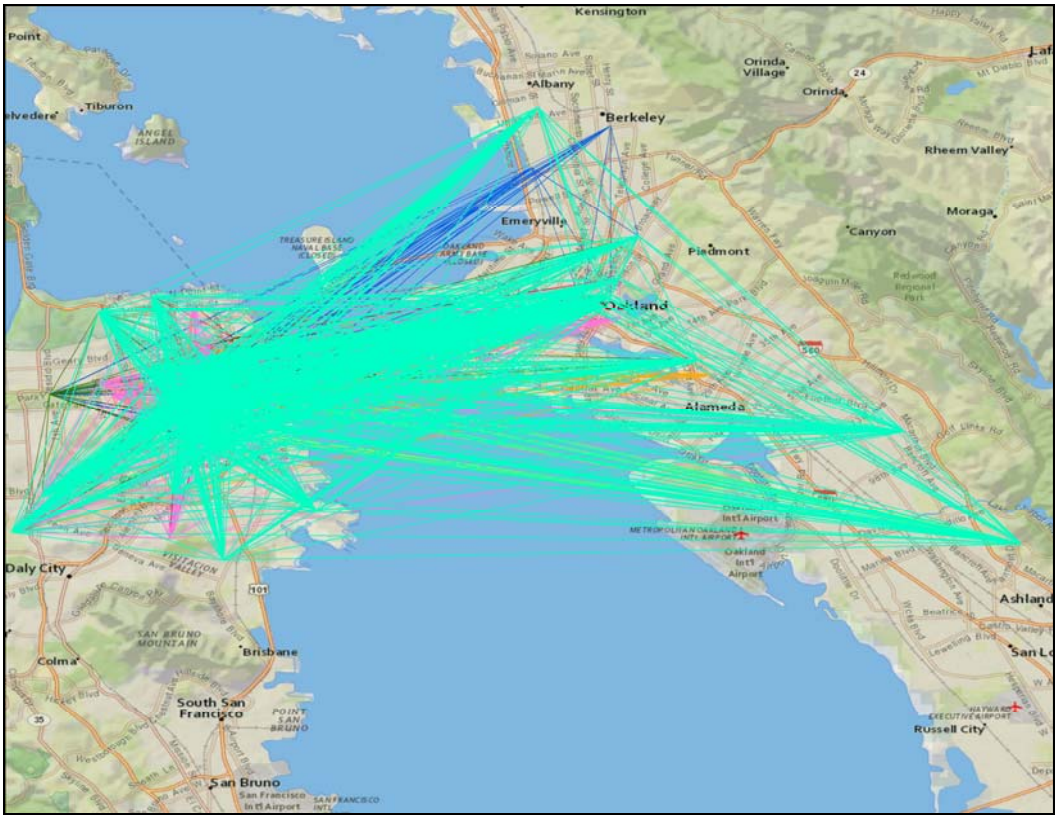


Intersection's literary network is the smallest one in terms of partners. There are only 7 partners, 5 of which have a literary orientation: 826 Valencia, a writing center for students and their teachers; the Alameda County Library Write to Read program; McSweeney's bookstore; Streetside Stories, which focuses on literacy through storytelling; and Youth Outlook, a literary journal reporting on current issues and events through the voices of young people. More general partners include the Kearny Street Workshop, an Asian American multidisciplinary arts organization; and West Bay, offering services to San Francisco's Filipino community.

[8] http://theintersection.org/programs/literary-series/

Open Process Network. Intersection's open process series is designed to bring the stories and experiences of people in the community into the play writing process, encouraging new perspectives, while simultaneously sharing new work and the creative process with the community. The open process network has 61 partner organizations, 10 of which are in Oakland, 1 is in Berkeley, 1 is in San Leandro, and the remainder in San Francisco. Intersection's open process network is provided in *Figure 10.*

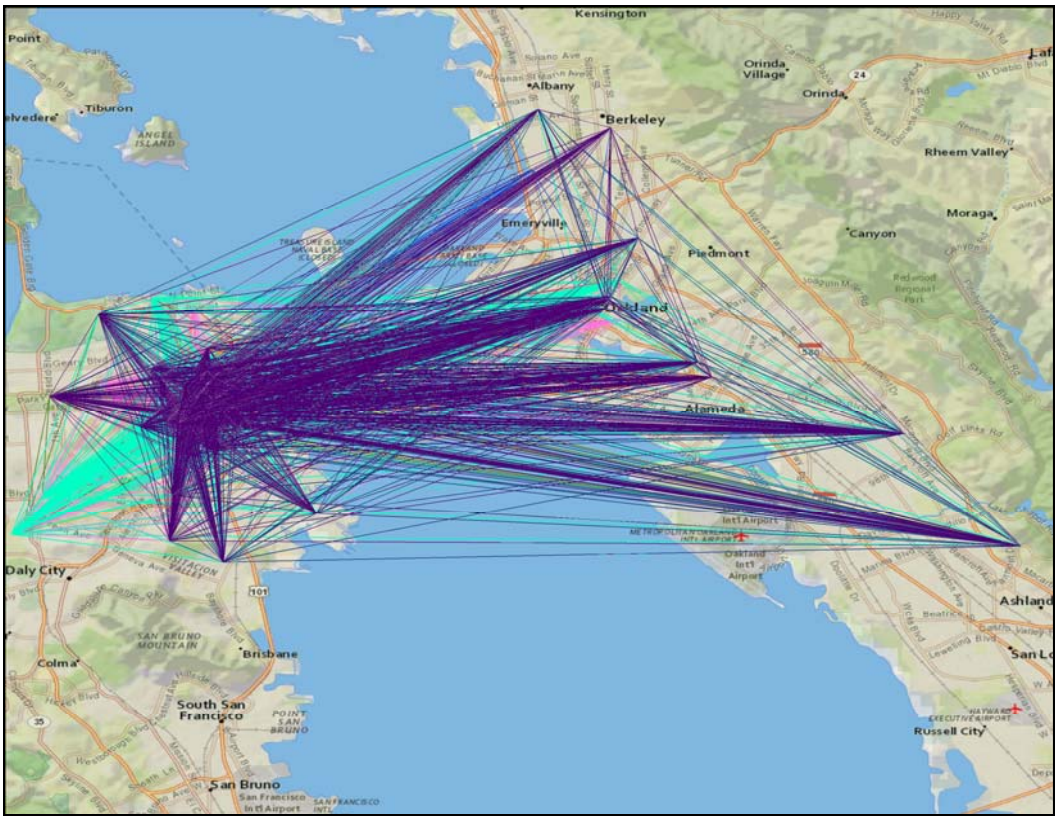
Figure 10
Open Process Network



The Open Process network is one of Intersection's two densest networks because it is so closely tied to its core mission of bringing artists and community together to envision a better society (and better art). As a result, this network includes a wide range of partner organizations. It includes organizations that focus on the needs of African immigrants; the homeless or marginally housed; at-risk young people; prisoners; and battered women. There also organizations like Freedom Archives that documents and preserves the history of social justice movements since the 1960s. There are also arts organizations and educational institutions. The breadth of partners allows for many different mixes of voices and perspectives as Intersection plans arts programming.

Community Engagement Network. Intersection's open process network, above, and community engagement network are its most extensive networks because they go to the core of Intersection's mission to bring art and community together to create both new art and new more equitable forms of society. The community engagement program seeks to maximize the exposure of both art makers and community members to artistic and civic processes, informing them both and bringing them together into the same realm. *Figure 11* shows the density and geographic range of the community engagement network (in purple).

Figure 11
Community Engagement Network



The community engagement network consists of 64 partners – 9 in Oakland, 2 in Berkeley, 1 in San Leandro, and the rest in San Francisco. A wide range of partners are included, representing both artists groups and many community voices. Organizations represent prisoners, women's shelters, single-room-occupancy hotels, youth organizations, theater, arts, high school and higher education, and the County library.

We have shown the geographic network maps of the eight initiatives identified by Intersection. *Table 1* brings together an overview of the numbers of organizations involved in each network, the distribution of organizations among San Francisco, Oakland, and Berkeley, and the range of organization types included in the network. To examine Intersection's networks more closely, and to see the names of each organization included in each network, visit our two interactive network maps at http://web.williams.edu/Economics/ArtsEcon/Intersection.html.[9]

Table 1
Distribution of Partners in Intersection's Eight Networks

Network	Partners	SF	Oakland	Berkeley	San Leandro	Arts	Activist	Youth	Edu-cation
Theatre	19	14	3	2	0	x	x	x	
Leadership Development	22	20	2	0	0	x	x	x	x
Visual Arts	17	14	3	0	0	x	x	x	x
Education	26	23	3	0	0	x	x	x	x
Youth	35	31	4	0	0	x	x	x	x
Literary	7	6	0	0	1	x		x	x
Open Process	61	49	10	1	1	x	x	x	x
Community Engagement	65	53	9	2	1	x	x	x	x
Total Net	95	79	12	3	1	x	x	x	x

Conclusion

We began this paper with the question of whether Intersection for the Arts' recent move from the Mission District to the South of Market (SoMa) neighborhood involved a large enough cultural and demographic change to engender concern that Intersection would need to rebuild its programming and would struggle to maintain the identity it has spent five decades developing. When we began, we assumed that Intersection's social network would be very local, and would have been built to meet the needs of a very local community. What we found from an examination of Intersection's network of partners is that this is not the case.

We were surprised to see that each of Intersection's eight networks included partners across the San Francisco Bay in Berkeley, Oakland, or San Leandro. Between San Francisco and these three cities there exists both a geographical barrier (the Bay) and differences in governmental jurisdictions (counties). It requires openness and conscious decision-making for an organization in a large urban area such as San Francisco to cross these 'natural' barriers in its network building.

[9] The online map tool is limited to displaying a maximum of four networks. Intersection's network is displayed in two interactive maps.

Intersection has developed a variety of initiatives focusing on different art forms and strengthening different aspects of its core mission. Each initiative seems designed to meet the core goal of bringing artists and community together in ways that challenge and stretch both, allowing the artist to be citizen and the citizen to be artist. In doing so, art and civil society each benefit and can envision alternative models. Each of 8 initiatives we examined includes a variety of arts, activist, youth, and education organizations as partners. Only the theatre initiative does not include a formal educational partner, and only the literary initiative does not include an explicitly activist partner. All of the results from an examination of Intersection's partnership network suggest that Intersection has built a broad, resilient network based on its core mission that is well suited for continuing its mission in its new location.

Research Paper: Social Networks

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The Potential of Social Network Analysis for Research on the Cultural Sector

October 2010

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The Potential of Social Network Analysis for Research on the Cultural Sector

Introduction

In this paper we lay out the promise and advantages of using social network analysis in the study of cultural arts organizations. We have two goals. First, we want to broaden use of social network analysis by applying it to cultural arts organizations, an area that has seldom been studied with network analysis (Prell and Skvoretz 2008). Second, we want to increase our knowledge of the impact of cultural arts organizations on their communities.

As part of showing the potential of social network analysis in the study of cultural arts organizations we discuss three social network analyses we have undertaken: Ashé Cultural Arts Center (Ashé) in New Orleans; Movimiento de Arte y Cultura Latino (MACLA) in San Jose; and the Massachusetts Museum of Contemporary Art (MASS MoCA) in North Adams, Massachusetts. The social networks we describe range from very simple to quite detailed. Each analysis was crafted to answer questions specific to that organization, its setting, and its challenges. The analyses share the goal of increasing our understanding of the impact of cultural arts organizations on their local communities.

What is network analysis?

Every individual (and every organization) has links to others. Individuals are linked to some people by virtue of kinship. Individuals are linked to other people through their place of work. There may or may not be overlap between these two networks. Other common places where individuals are linked to one another are schools, places of religious worship, and places where individuals volunteer. While we all belong to social networks, the analysis of these networks requires the researcher to articulate which of the many potential networks is being studied and then to collect appropriate data on the network. Social scientists can formalize social networks, collect data on them, map them, and use the characteristics of social networks in further analyses.

All networks have in common the fact that they are made up of a set of nodes (dots) and links (lines) that connect the nodes. In order to successfully complete a network analysis the researcher needs to know, ideally at the outset, who the actors are being studied – whether individuals or organizations – and what the actions or relationships are that connect the actors to one another. That is, the researcher needs to know what the nodes and lines will represent in the network analysis.

Network analysis is one of a set of tools available to study and articulate social structure and the relationships among actors – whether these actors are individuals, groups, or countries. We choose a particular research tool, like social network analysis, because we think it will further our understanding of the social world. Network analysis has been used in the social sciences to study many questions, including the impact of kinship relations on individuals (Kana'iaupuni et al. 2005) and societies (Padgett and Ansell 1993); the political influence of academics (Griffiths 2010); the role of social networks in the transmission of job information (Calvo-Armengol and Jackson 2007; Reingold 1999; van der Klaauw and van Ours 2003); and the increasing importance of networks for criminal and terrorist activities (Arquilla and Ronfeldt 2001).

As with other social science research tools, there is a basic template for network analysis, and there exists specialized computer software programs for calculating network statistics and visualizing networks. The same way that a regression analysis can be run successfully in a variety of programs, a network analysis can be completed using one of a range of software programs. We use UCINET (Borgatti et al. 1999), Pajek (Batagelj and Mrvar 1996) and NetMiner (Cyram 2005) for our analyses. There are useful guides for using the software (De Nooy, Mrvar and Batagelj 2005); for technical aspects of networks (Wasserman and Faust 2006); and for general introductions to social networks (Degenne and Forse 2004; Scott 2009). Once the network programs have determined the linkages among individuals or groups, it is possible to calculate a broad array of statistics describing the network. We use ArcMap (Esri 2006) to map the network geographically.

In what follows we present social networks for Ashé Cultural Arts Center, MACLA, and MASS MoCA. Each network was created with the purpose of addressing a question or issue specific to that organization. Ashé wished to document its role as a space provider that brought groups and individuals together after Hurricane Katrina. MACLA wanted to document their leadership and collaboration in community initiatives extending beyond Latino issues and arts activities. MASS MoCA wanted a community social network to understand and document, among other things, linkages between its town of North Adams and neighboring Williamstown. One of the strengths of network analysis is that it is flexible in terms of the kinds of questions that can be addressed, and the analysis can be responsive to the context within which the organization operates.

Case Study 1: Ashé Cultural Arts Center

In 2003 Ashé Cultural Arts Center was a small program, located in central city New Orleans. Its goal was to bring social and economic development to the Oretha C Haley Boulevard corridor in central city New Orleans through theater, art exhibits, workshops, and community meetings. Ashé has always emphasized the importance of space, and its ability to offer space for multiple purposes within the neighborhood, as reflected in the following statement in a 2003 funding request:

> Ashé Cultural Arts Center "serves as the facilitating force in a space where diverse circles can connect, expand and open up to each other. Ashé is where the creative and environmental influence of a place creates possibility and opportunity for personal, community and social change." (Ashé Cultural Arts Center 2003:2).

Figure 1 is a photograph of the building in which Ashé is located today. It owns its space as a commercial condominium unit, and shares the building with two other commercial units and 30 residential condominium units.

When Hurricane Katrina hit in August 2005, the future became uncertain for New Orleans, its arts organizations, and Ashé. By the time of Katrina, Ashé was experienced as a community facilitator and accepted as a community space, but it also relied heavily on Foundation grants, the need (and hence competition) for which skyrocketed as a result of Katrina. In October 2006, for instance, the Getty Foundation awarded a grant to Ashé and six other New Orleans arts organizations to investigate information- and cost-sharing initiatives "to help them cope with the city's much-changed cultural landscape in the aftermath of Hurricane Katrina" (Kennedy 2006).

Figure 1
Ashé Cultural Arts Center, New Orleans

Photo: Ashé Cultural Arts Center. Source: http://www.gchp.net/projects/gchp_presentation.pdf

In its announcement of the awards, the Getty Foundation acknowledged that some cultural arts organizations would not remain viable in the New Orleans' post-Katrina environment. Ashé not only survived, but it grew significantly during the period 2005 to 2008. One piece of its survival was the fact that it continued to evolve as a space that brought together community, political, and religious leaders to discuss both immediate post-Katrina needs and the future of New Orleans.

The upheaval caused by Hurricane Katrina made it impossible for Ashé to dedicate resources to any form of data collection. By 2009, however, it was possible to obtain some limited data. One dataset was a spreadsheet of groups that had reserved meeting space at Ashé during 2008.[1] We limited our attention to outside groups (events that were not part of Ashé's programming). We did not include the family celebrations held at Ashé during the year, such as funerals, weddings, or birthday parties. We also excluded groups without specific geographic locations, such as bands with a web site for contact, but no band address.

We were left with 38 distinct groups that requested meeting space at Ashé during 2008. The nature of the data is such that each of the 38 groups is connected to Ashé by virtue of their use of

[1] In researching the events, it was evident that some events were cosponsored by several or even numerous groups. Groups that cosponsor an event are, in reality, linking to each other as well as to Ashé in a social network. Information on co-sponsorship was not consistently available, however, and it was not possible to create this type of more complex network map. The data we had consisted of the name of the primary organization associated with an event.

the space, but they are not connected to each other in the dataset. As such, the data are limited in terms of the type of analysis that can be done. We focus on the original question of space. The map presented in *Figure 2* shows Ashé's foundation in its neighborhood and its role as a space for groups with an interest in New Orleans.

Figure 2
Local Organizations Requesting to Use Ashé's Meeting Space, 2008

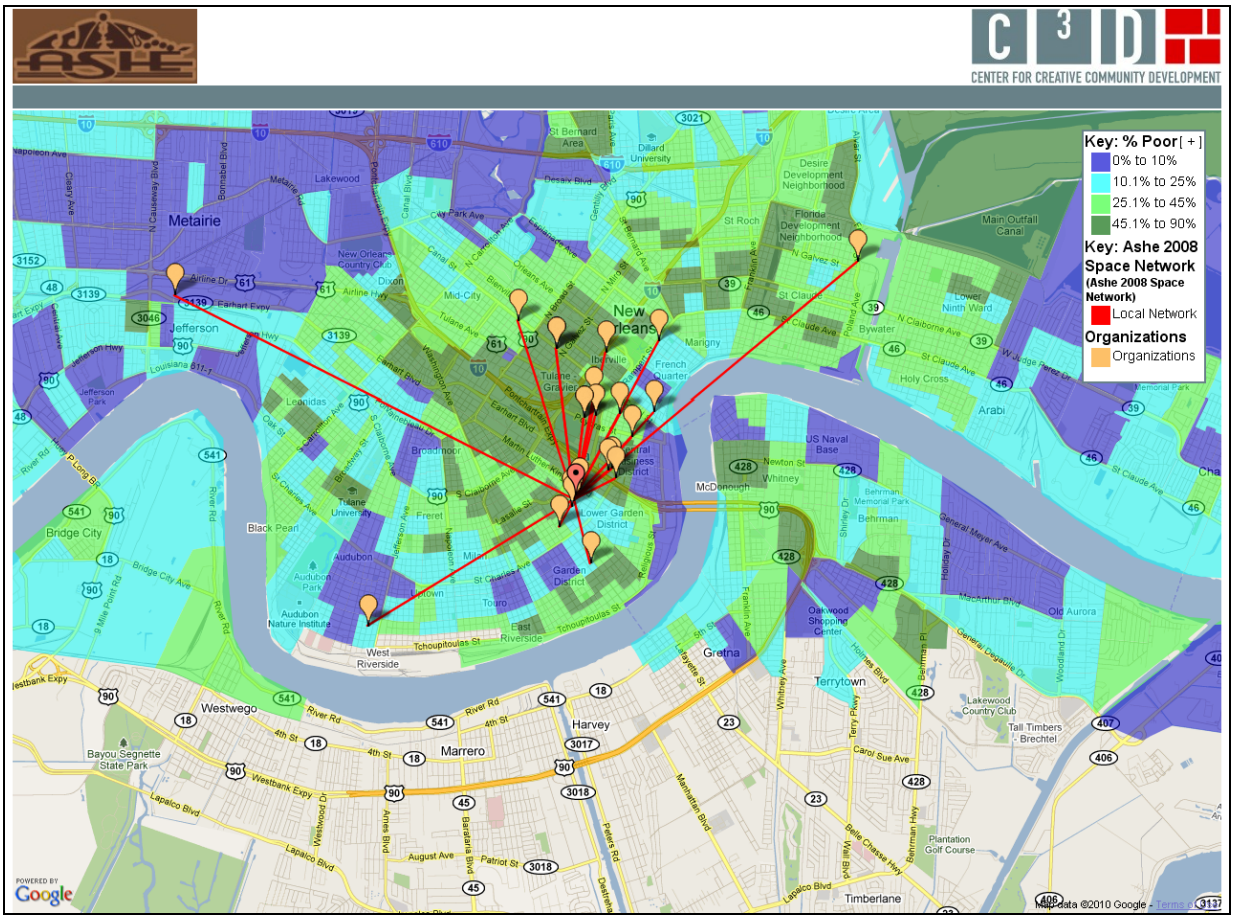


Figure 2 is a geographic presentation of Ashé's network of local organizations that requested to use its space in 2008. *Figure 2* presents Ashé's local network placed over a Census block map of the neighborhood showing poverty levels. Groups requesting to use Ashé's space in 2008 are located in neighborhoods of all wealth levels. Ashé is situated on Oretha C Haley Boulevard and is marked on the map with the dark orange bubble. The dark purple areas are the wealthiest neighborhoods, with fewer than 10% of residents living in poverty. One such neighborhood is Metairie, to the northwest of Ashé. The teal-colored neighborhood to the east of Ashé has poverty rates of 10 to 25%, while the lime-green area to the west of Ashé has poverty rates of 25 to 45%. As you proceed north on Oretha C Haley Boulevard, toward the Central Business District and the Superdome, poverty rates range between 45 and 90%.

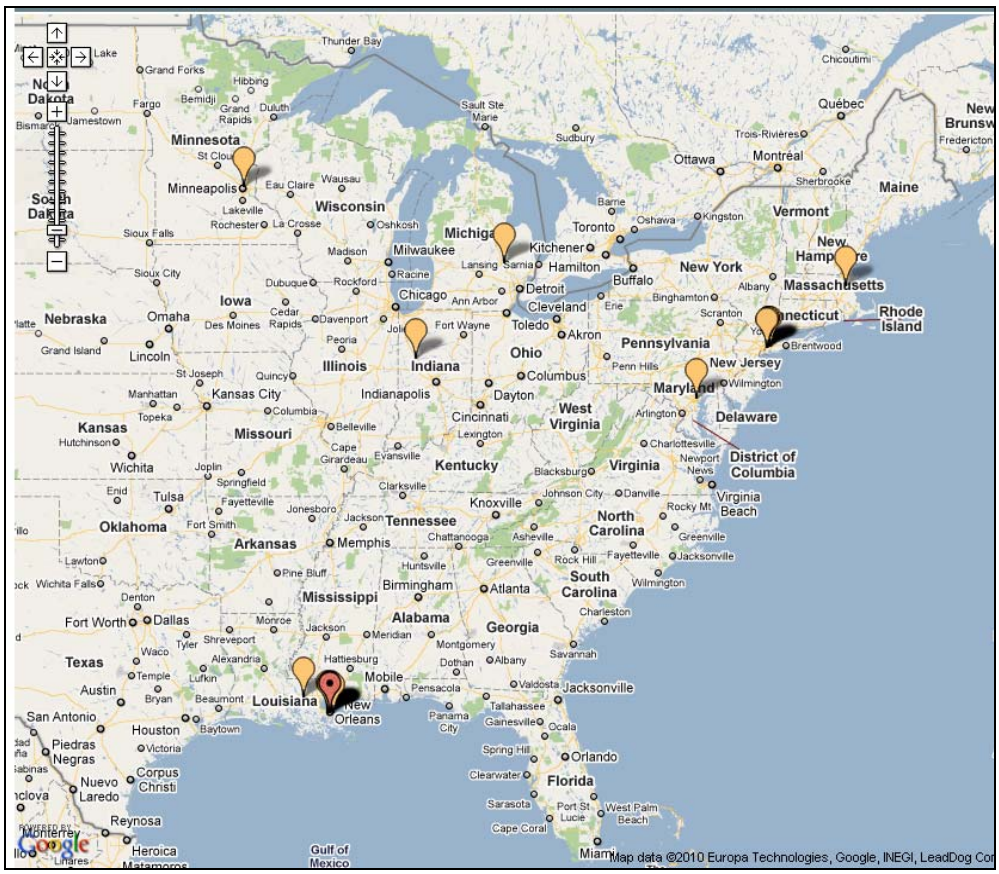
Local organizations' requests for use of Ashé's space typically fell into one of two categories – students/youth; and human rights/displaced persons. One example of a local organization

requesting to use space is Advocates for Environmental Human Rights. In January 2008 Advocates for Environmental Human Rights, which is located northeast of Ashé near Lafayette Square, held a workshop at Ashé titled, "A framework for durable solutions: Human rights, displacement & disaster recovery." This workshop, facilitated by a local organization, brought together residents of the community with United Nations representative Walter Kalin to discuss issues and options of pressing importance to the community – internally displaced persons.

In addition to local organizations' requests to utilize Ashé's space, national organizations also requested use of space. These requests typically fell into one of three categories : to hold a press conference or an opening or closing meeting of a much larger conference; as a private meeting space for Foundations assessing needs in the area; or to hold a small workshop or conference of relevance to the region. National requests for meeting space at Ashé, presented in *Figure 3*, add an important piece to our understanding of the role of Ashé in both the local and the national discussion of rebuilding New Orleans.

Figure 3 is a map of organizations' requesting use of Ashé's space in 2008, zoomed out to include requests from outside Louisiana. These requests all came from organizations located on the East coast and in the Midwest.

Figure 3
National Requests to Use Ashé's Space, 2008



One example of a request by a group from outside Louisiana to use Ashé's space is the request from the Japan Society to reserve space in April 2008. Although many cities, including New Orleans, have chapters of the Japan Society, this request was from the national organization in New York City. The Japan Society held an international-level public forum as part of its exchange program, "Learning from Disaster: Miyakejima and New Orleans." Eight Japanese responders to the 2000 eruption of the Miyakejima volcano and eight American responders to Hurricane Katrina in 2005 were brought together to share their experiences and to contribute to improving response to future disasters.[2] A photo from the forum is presented in *Figure 4*. In addition to participants in New Orleans, individuals off-site also participated via a link at Meiji University in Tokyo, making it an international forum at several levels.

Figure 4
Learning from Disaster Forum, New Orleans

Japan Society forum, site visit, April 2008. Source: http://www.japansociety.org/event_detail?eid=2f9dd3bc

After the destruction wrought by Hurricane Katrina, New Orleans was in a vulnerable position, as were many of its core institutions, from hospitals to schools to cultural arts organizations. There was a serious concern that local people and local organizations could be shut out of the conversation on the current needs and future directions of the city.

Ashé responded to one immediate need by providing public space in which these discussions could take place. At the same time, it faced the same challenges as the city as a whole. The circumstances that made documentation all the more important for making their case to outside funding agencies were the same circumstances that made data collection impossible. They simply didn't have the resources. Our example has shown how network analysis can be used to organize and present the simplest data to document the groups using Ashé's space and the type of public discussions taking place in New Orleans as it sought to define its future.

[2] A brief overview of the program can be found at http://www.japansociety.org/event_detail?eid=2f9dd3bc, last retrieved on 9/29/2010.

Case Study 2: MACLA

Movimiento de Arte y Cultura Latino Americana (MACLA), founded in 1989, is a contemporary arts space in San Jose. MACLA is located at the intersection of S 1st Street and E William Street, just a few blocks southwest of San Jose State University and not far from downtown. While the entire area is relatively compact, the area to the east of MACLA, along E William and E Reed Streets has its own unique character compared to nearby residential areas. As MACLA states, the ten blocks that make up the William/Reed corridor consist of a mixed-use "conglomerate of apartments, mom-and-pop businesses, and empty lots" (MACLA 2003:2). *Figure 5* is a photograph of the building in which MACLA is located.

Figure 5
MACLA, San Jose

Like many cultural arts organizations, MACLA was engaged in a variety of community initiatives. It was concerned, however, about the lack of community coherence in the William/Reed corridor and the need for shared community dialogue about issues of local importance to the corridor. Internally, the small businesses and individuals who inhabited the ten-block area saw it simply as their location, not their neighborhood. Externally, city officials saw it as part of nearby South University, which was a well-defined neighborhood. Most of San Jose did not seem to see it at all.

Along with continuing its involvement in ongoing initiatives, MACLA wanted to develop new initiatives aimed at developing a sense of shared identity to the William/Reed corridor, resulting in improved economic cooperation and improved local articulation of concerns and problem-solving capacities. In order to develop the resources for a William/Reed corridor business district, it was necessary to broaden the perception of MACLA as an interest-based organization with interests only in the Latino and cultural arts arenas.

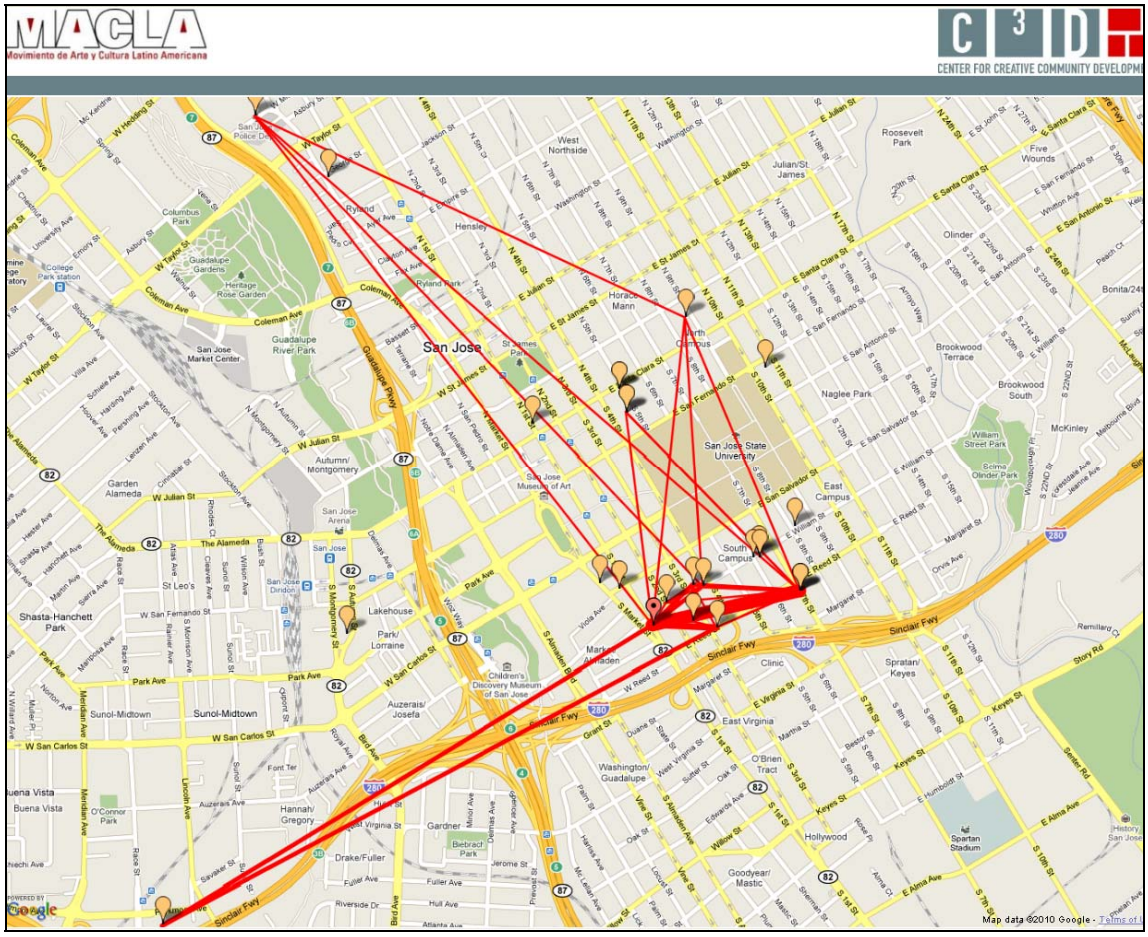
MACLA faced several practical issues in developing its William/Reed corridor initiatives. One issue involved case-making both along the corridor and to city government that the corridor was a distinct socioeconomic area, and that both the area and the city would benefit from developing

it as such. The other issue centered on whether MACLA had the capacity to initiate the types of programs that would provide an inclusive identity to the William/Reed corridor.

As part of creating a social network map for MACLA, we were provided a list of community events and initiatives in which MACLA participated in 2007. The data included where the event occurred; the organization that initiated the event; the purpose or goal of the event; and a list of all the community organizations that participated in the event. After looking at the data and talking with MACLA we coded each event as belonging to one of three possible types of initiatives: community engagement; economic development; and neighborhood identification.

Community engagement initiatives included those that brought people together to work toward a common good. Sometimes the event had a very concrete outcome such as neighborhood beautification. Sometimes the outcome was less visible, such as the community talks that brought residents together to discuss local concerns while also building capacity to visualize solutions locally rather than rely solely on city government or other outside entities. *Figure 6* shows the network for those events that were coded as part of community engagement initiatives.

Figure 6
MACLA Community Engagement Network



The community engagement network presented in *Figure 6* shows that while there is significant involvement with organizations close to MACLA, there is also a geographic spread of organizations with which MACLA participated in community engagement events.

In terms of the network map itself, thicker lines mean a greater number of links between two organizations. If an organization participated in one initiative with MACLA during the period the line will be relatively thin. If the organization participated in four initiatives with MACLA the line will be thicker. It is also the case that in MACLA's community engagement network some of the lines make triangles. An advantage of having data on all participants in an event is that we can map the links among participants in addition to their links to MACLA. If MACLA participates at an event with the Police Department and the San Jose Downtown Association, these three organizations will be linked in a triangle-shaped figure. The Police Department and the San Jose Downtown Association are linked to each other as well as to MACLA by virtue of participating in the event.

There are statistical measures that can be used to calculate characteristics of networks. One such measure is the density of a network. Density is the proportion of all possible links among organizations in the network that *can* exist that actually *do* exist. The density of MACLA's community engagement network is 0.462. If every organization in the community engagement network was connected to each other, the density of the network would equal 1. The density score of 0.462 means that 46% of the possible links in the network exist.

It may be easier to understand the concept of density in MACLA's community engagement network if we look at the network without the geographical component. *Figure 7* is the non-geographic map of MACLA's community engagement network.

Figure 7
Non-geographic Map of MACLA's Community Engagement Network

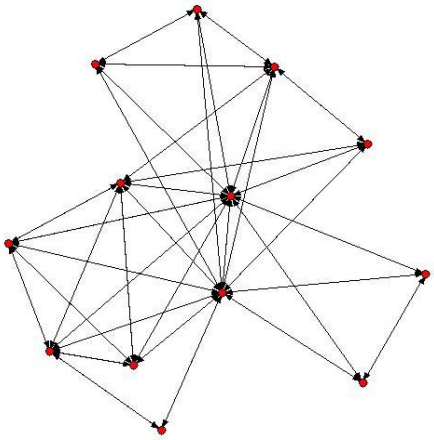


Figure 7 shows that the community engagement network is well interconnected. Three clusters of organizations – to the left, above, and to the right – are highly linked among themselves and to MACLA in the center.

Economic development initiatives were oriented to bringing businesses together for the common goal of strengthening the economic health of the William/Reed corridor. The initiatives included street banners for the corridor that would hang from street lamps and provide a coherent identity to the corridor. Another economic development initiative was the creation of a William/Reed corridor business directory that would provide visibility to the businesses located along the corridor. *Figure 8* presents the network created by MACLA's participation in events with the goal of economic development.

Figure 8
MACLA Economic Development Network

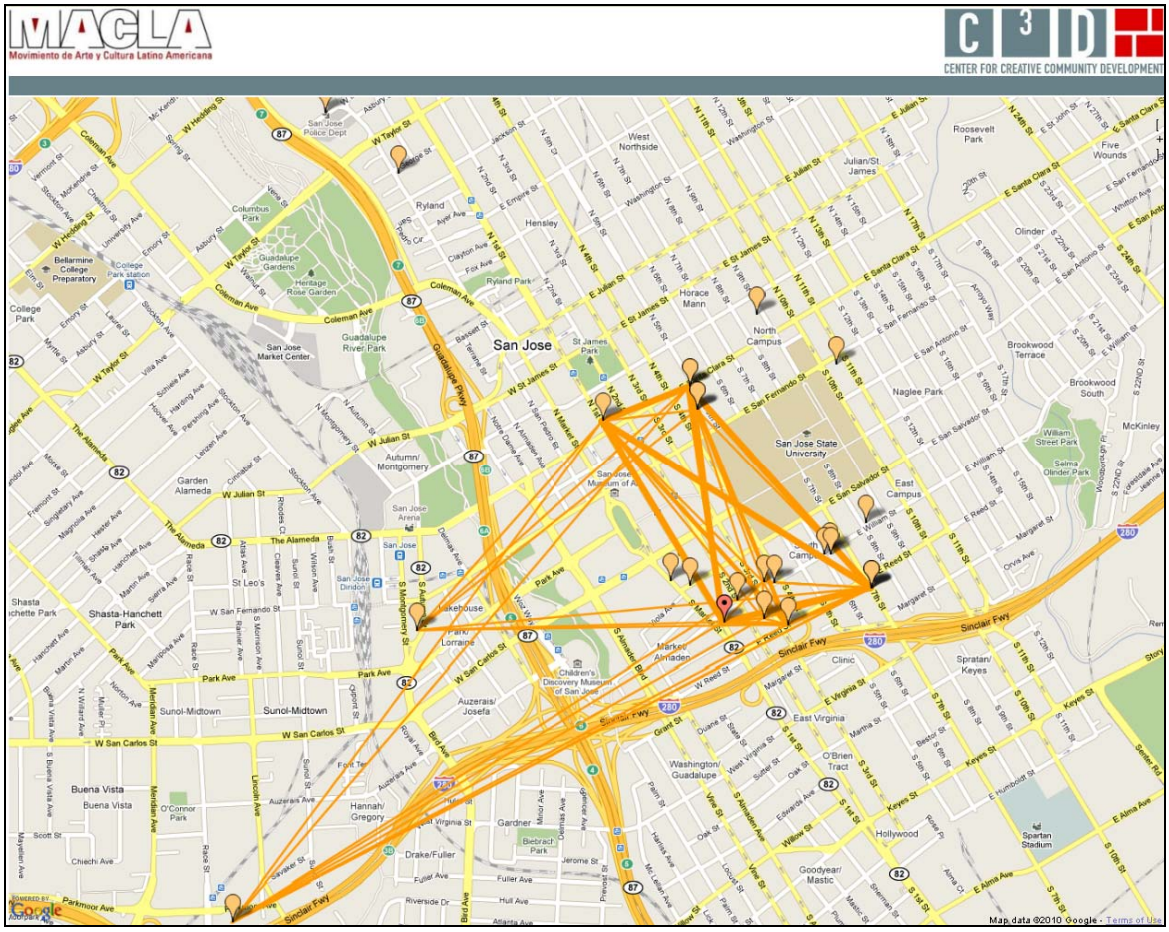


Figure 8 differs from *Figure 6* in several ways. First, the thickest lines are not those directly around MACLA but those somewhat further away, making a parallelogram on the map. A thicker line connecting two organizations means they participated in more initiatives together, and in this sense the link between them is stronger. It is also the case that more of the organizations in the economic development network link to organizations to the west of the William/Reed corridor, with none linking further to the north outside of the core network.

The density of MACLA's economic development network is 0.848. This means that 85% of all possible connections between organizations in the network exist. The geographical presentation

of the network in *Figure 8* makes it difficult to see just how interconnected the organizations are in the economic development network. *Figure 9* is the non-geographic map of MACLA's economic development network.

Figure 9
Non-geographic Map of MACLA's Economic Development Network

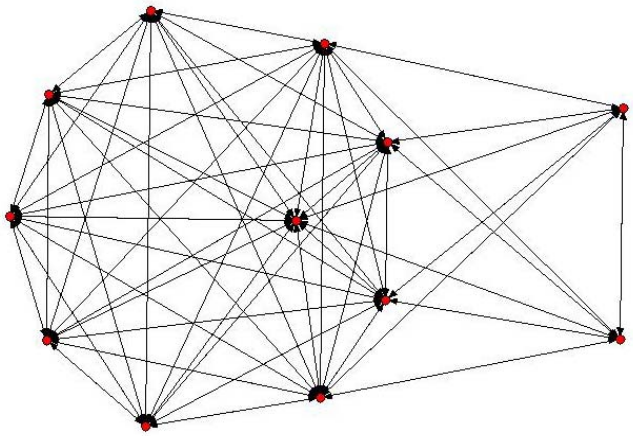


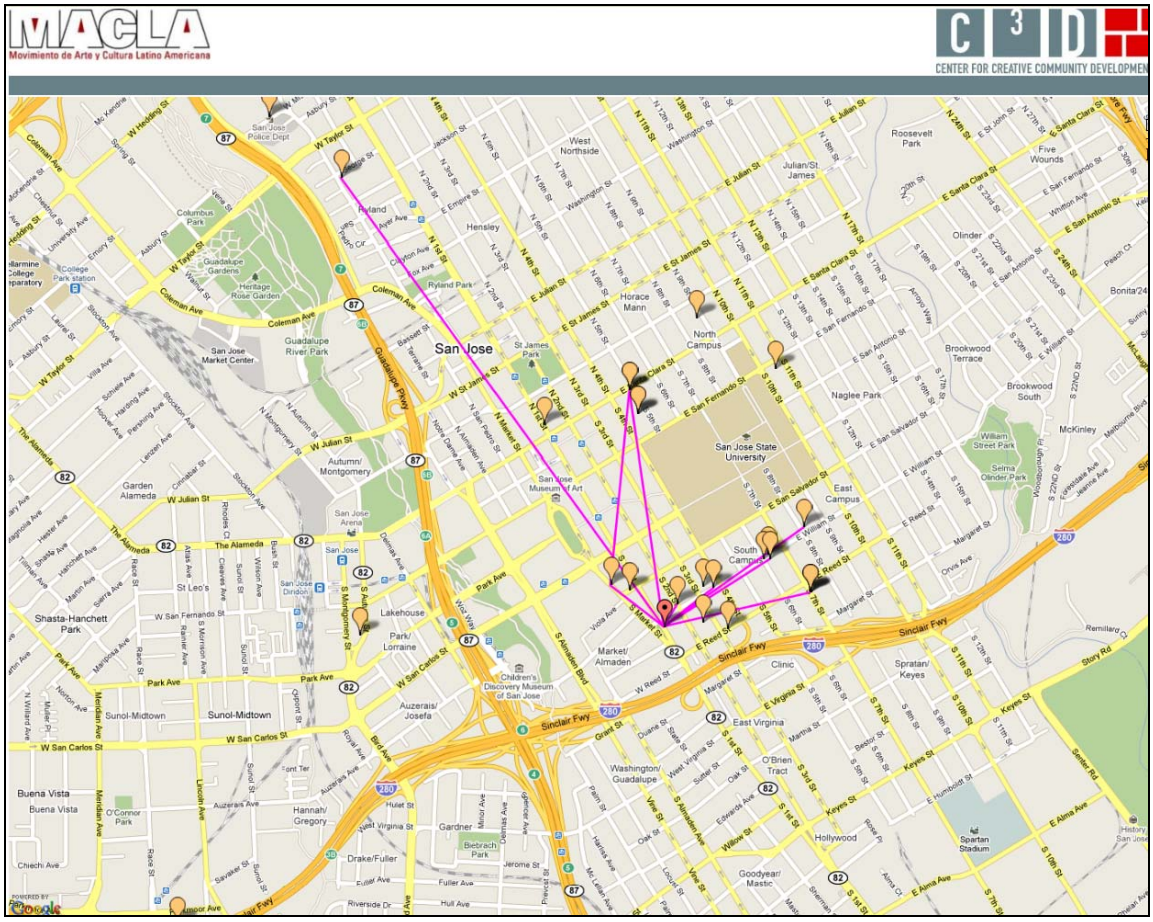
Figure 9 makes it clear just how interconnected the organizations are in MACLA's economic development network. Only the two organizations to the far right in *Figure 9* have fewer links than the others, and even they are connected to each other and 5 other organizations.

The highly interconnected aspect of MACLA's economic development network is not surprising for at least two reasons. One is that one of the initiatives – the creation of a William/Reed corridor business directory – was a central initiative of MACLA during this period. Much of their energy in the community was focused on bringing businesses together to increase visibility of businesses in the corridor. The other reason that *Figure 8* may show significant involvement of organizations outside of the William/Reed corridor is as an indication of an existing economic development network within San Jose.

Neighborhood identification initiatives involved cooperating with small family owned businesses in the corridor on facade repair and improvement. Torn awnings were repaired and broken storefront windows replaced. *Figure 10* presents MACLA's neighborhood identification network.

The neighborhood identification network has quite a different shape than MACLA's other two networks. It looks more like Ashé's network in that, with one exception, each organization is linked to MACLA but not to each other. This general shape is what we call a star network.

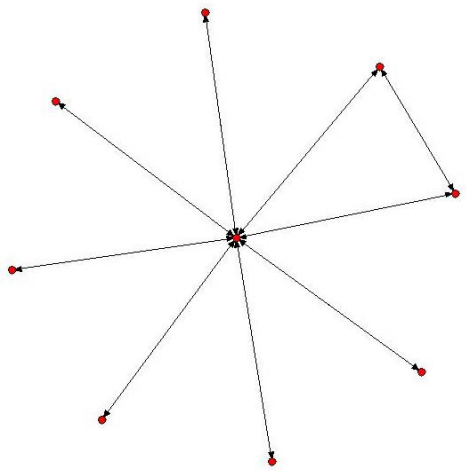
Figure 10
MACLA Neighborhood Identification Network



The neighborhood identification network makes an important point about network analysis. It is not necessarily the case that more is better. In this instance MACLA's neighborhood identification network is simple and loosely connected because it was documented at the start of the initiative. MACLA's goal is to help build cooperation among William/Reed corridor businesses and soften the feeling of isolation or competition. In this first period, that meant MACLA reaching out unilaterally to each of the businesses with offers of help. It is not often that we have the opportunity to map a network at its start. The goal is for this network to develop over time into a more complex network with businesses offering mutual aid on projects.

The density measure for the neighborhood identification network is 0.25. *Figure 11* is the non-geographic map of the neighborhood identification network. The star-like nature of the network is quite clear in *Figure* 11. MACLA is located in the center of the network, and each organization links to it. There was one event that involved two other organizations that can be seen in the triangle part of the network.

Figure 11
Non-geographic Map of MACLA's Neighborhood Identification Network



We coded the data from MACLA as belonging to one of three sets of initiatives in which they were active in 2007. We have seen interesting differences in the networks MACLA has built with the different initiatives. The economic development initiative reflects the densest network, probably because of existing economic networks in San Jose that could be activated. The neighborhood identification network is the sparsest because it was captured at the very beginning of a new initiative.

It is also possible to study MACLA's total network as a whole. Doing so documents MACLA's partners throughout the community on a variety of initiatives throughout the year. *Figure 12* presents MACLA's total network. The density of MACLA's total network is 0.371. This means that 37% of all possible links between organizations exist. We have placed the network over a Census map of median property value by Census block-group. This allows us to see that not only do the organizations in MACLA's network spread geographically over the city of San Jose, but they are also in different kinds of neighborhoods. From this map we see that while the William/Reed corridor is in an area of low property values, MACLA also has access to organizations in wealthier areas of the city; this means access to additional resources, information, and human capital.

We provide the non-geographic map of MACLA's total network in *Figure 13* for the sake of symmetry with its sub-networks. As we close our example of MACLA's network, however, we would like to focus on the geographic maps and the practical value they had for MACLA. Remember that one of MACLA's serious obstacles in creating the William/Reed corridor was demonstrating it had the capacity to be an inclusive community leader. The network maps presented here demonstrated that they were involved in initiatives on a number of fronts – community, economic and neighborhood; that they had a wide variety of partners; that their partnerships spanned socio-economic boundaries in San Jose; and that their partnerships extended beyond Latino and arts-oriented initiatives.

Figure 12
All MACLA Initiatives

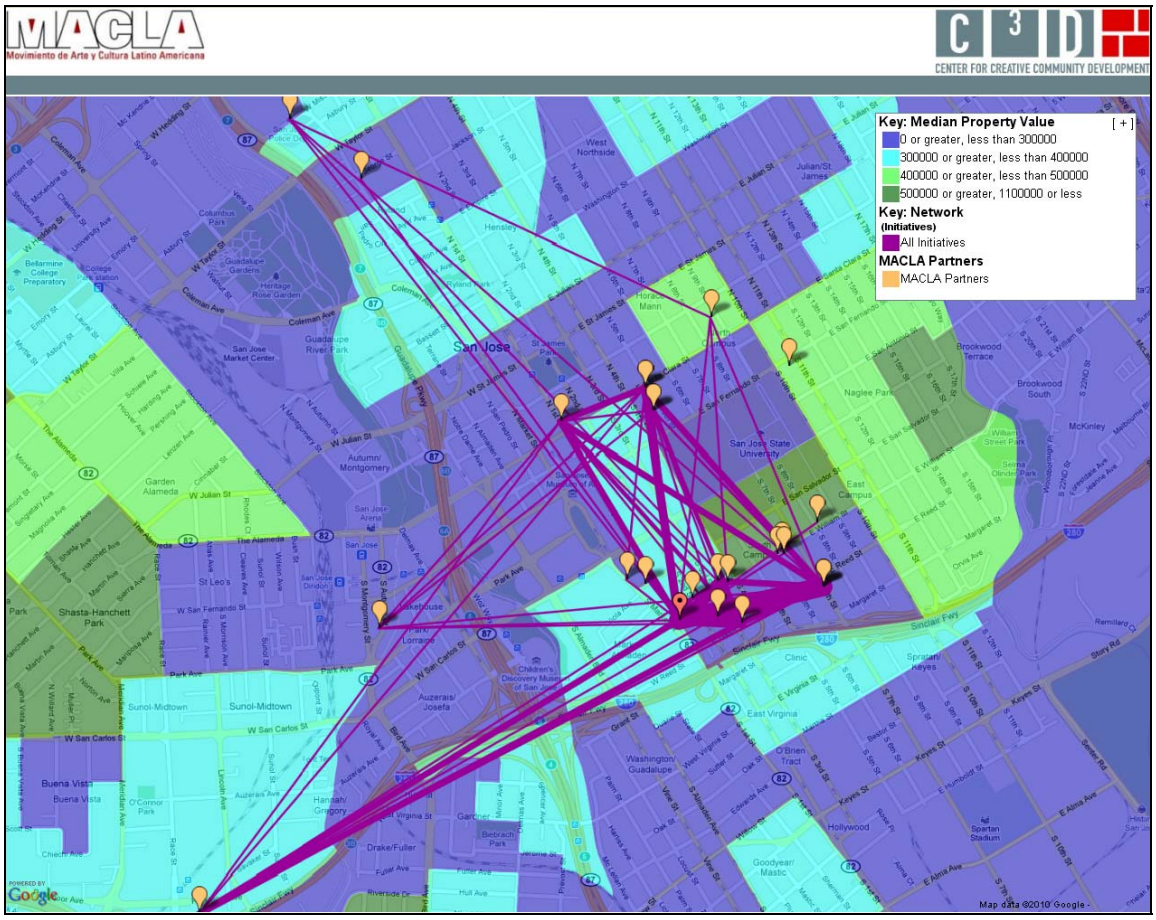
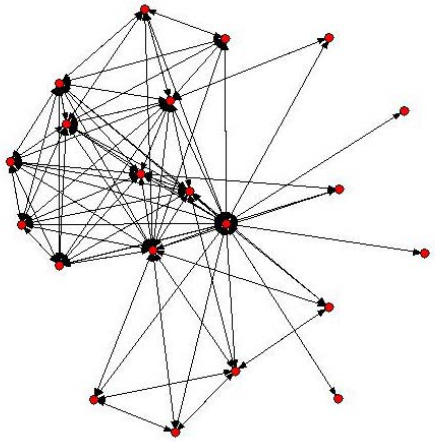


Figure 13 presents the non-geographic map of all of MACLA's initiatives.

Figure 13
Non-geographic Map of All MACLA Initiatives



In the case of MACLA, mapping its social network was useful and had positive consequences. It allowed others in the city to see MACLA in a new light, and opened new opportunities for partnership and leadership in the William/Reed corridor.

Case Study 3: MASS MoCA

In May 1999 the Massachusetts Museum for Contemporary Art (MASS MoCA) opened in North Adams, Massachusetts. Its opening brought to fruition a plan first proposed in 1986, when Sprague Electric closed its gates, ending two centuries of manufacturing on the site, first as cloth mills and then electronics manufacturing.

The mission of MASS MoCA was to become a contemporary museum of national and international repute. Local and state officials hoped, in addition, that it would serve as an economic and social engine for North Adams, a city in northwestern Massachusetts that fell on hard times with the exit of manufacturing from the region. *Figure 14* is a photo of the building in which MASS MoCA is located.

Figure 14
MASS MoCA, North Adams, Massachusetts

At the time it opened, it was not clear that MASS MoCA would succeed (Zukin 1995). The concept of culture as a potential economic engine was still controversial. By 2006 the museum was well-established, and its economic impact on the region had been documented (Sheppard et al 2006.). There was a question, however, as to whether MASS MoCA had made a social impact on the community, and if so, how that could be demonstrated. We chose here to examine the relationships between North Adams and the neighboring town of Williamstown.

We collected data during 2006 and 2007 for as many organizations in North Adams and neighboring Williamstown for which data were available. We sought out publicly available lists of individuals who volunteered, sat on the board, or were employed at each organization. Much

of the data were gathered from the organization's web site or annual reports. Yellow page ads were used to identify professionals in practice, such as physicians, lawyers, and accountants. Theater playbills frequently acknowledge staff, board members, and volunteers. In order for an individual to be associated with an organization, the link had to be more than financial – more than a donation to the organization. We wanted to capture the ways in which organizations in the community were linked with one another through face to face interactions. In this case we chose to focus on employees, volunteers, and board members.

It is important to note that the North Adams network is methodologically quite different from both the Ashé and MACLA networks discussed above. In the case of Ashé we examined organizations that asked to use Ashé's space. In the case of MACLA we analyzed information on initiatives with which MACLA was involved. In both of these examples the relationships being studied were very much driven by the organization and its goals. In the case of MASS MoCA, however, we collected data on the entire community of North Adams and Williamstown, not just MASS MoCA. Instead of focusing on organizational initiatives, such as MASS MoCA's commitment to bring every school child in the area to MASS MoCA at least once annually, we collected data on decisions of individuals throughout the community as to where to work, volunteer, or sit on boards of directors.

Our analysis of North Adams and Williamstown is based on 64 organizations and 4,369 individuals[3] associated with those organizations as employees, volunteers, or board members. Each organization in the data set was coded based on the general sector of the economy to which it belonged.

One advantage of collecting data for the entire community is that it is possible to pull out the primary network[4] of any single organization in the community for study and comparison with the larger network. *Figure 15* shows the total network map for the communities of North Adams and Williamstown. *Figure 16* provides the primary network map for MASS MoCA. The primary network map shows every relationship that involves MASS MoCA in terms of an individual being employed, volunteering, or sitting on the board of MASS MoCA and any other organization in the community. In this way, MASS MoCA's primary network is unique to it, as would any other organization's primary network be.

Figure 15 presents the community network map. North Adams is the town to the east and Williamstown is to the west. The network is mapped over Census data showing the percent poor by block-group. It is unfortunate that we do not have network data for the community from the late 1980s or early 1990s for comparison. It is impossible to overstate the invisible barrier that developed between North Adams and Williamstown after sources of employment disappeared in North Adams with the closing of Sprague Electric, the closing of General Electric's large-power transformer plant, and the disappearance of the remnants of the textile industry (Oehler, Sheppard and Benjamin 2006).

[3] The 2000 Census identifies 11,399 individuals age 18 and older in North Adams and 7,131 individuals age 18 and older in Williamstown, for a total of 18,530. The 4,369 individuals in our dataset correspond to approximately 25% of the adult population of the towns.

[4] We use the term primary network to refer to the network built around a focal organization. The technical term in the network literature is ego-centered network or personal net (Wasserman and Faust, 2006:42).

The unemployment rate in North Adams ran from 25 to 30%, the highest in Massachusetts. High school dropout rates in North Adams were more than five times the state average (Oehler, Sheppard and Benjamin 2006; Boston Globe 1992). The New York Times reported that a developer suggested that the best use for North Adams was to flood it for waterfront property for Williamstown (Kifner 2000). Even assuming this was a rhetorical comment, it captures the despondent state of affairs in North Adams and the large socio-economic gap that had developed between North Adams and Williamstown. A New York Times travel article on traversing Route 2 (the Mohawk Trail) from Boston to the west advised that the traveler turn around before reaching "the post-industrial decay that litters North Adams" (Oehler, Sheppard and Benjamin 2006; Graff 1995).

Figure 15
Total Community Network: North Adams and Williamstown

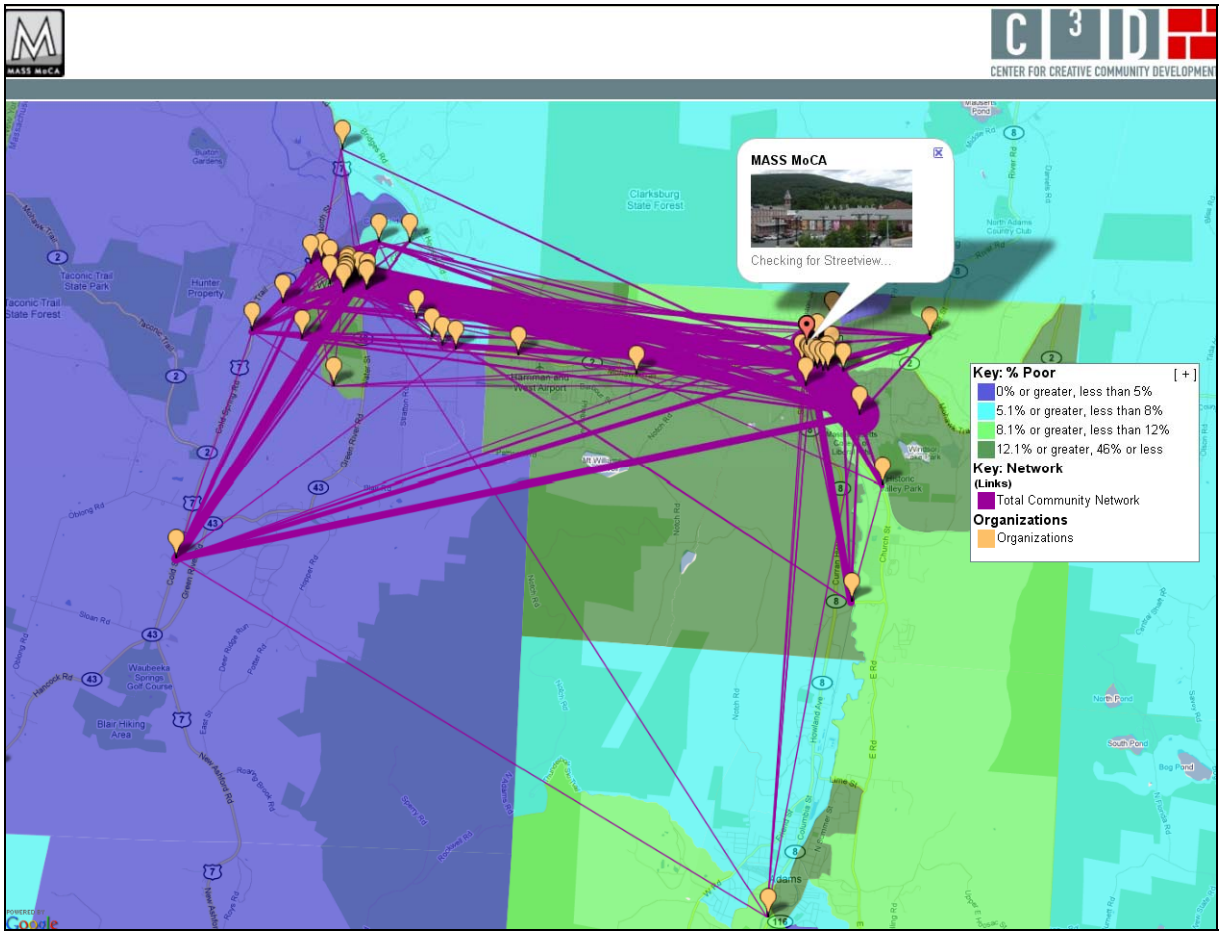
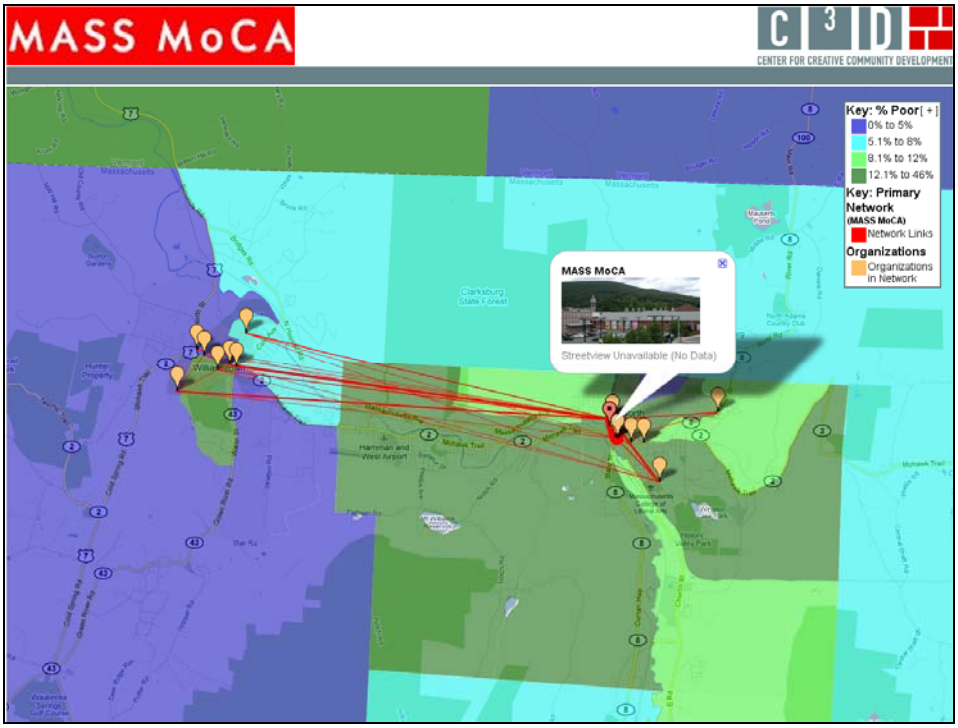


Figure 16
MASS MoCA's Primary Network



Poverty in North Adams historically has been higher than poverty in Williamstown, and remains so today. The community network map in *Figure 15* is striking in the extent to which linkages currently exist between the two towns. Each connecting line on the map represents a link between organizations made by an individual who is employed, volunteers, or is on the board of the two connected organizations. If an individual works at the bank and sits on the board of the Community Chest, then those two organizations are connected by a line representing that individual's participation. The thickness of the line represents the number of individuals linking the two organizations.

Figure 16 presents MASS MoCA's primary network. MASS MoCA's primary network includes fewer organizations than the community network, as would be expected since it is a subset of the community network. Yet what is striking is the extent to which it looks like a subset of the community network – MASS MoCA has linking ties to Williamstown as well as in its local community of North Adams.

While the maps can be visually striking, a question arises as to whether it is possible to demonstrate the linkages between North Adams and Williamstown in a more formal way. It would also be of interest to be able to more precisely compare the relationship of the two towns in the MASS MoCA primary network with the relationship of the two towns in the community network.

It is possible to address these questions by taking a simple network measurement – density – and following its extension in the literature to the more nuanced E-I Index. In order to do so, we must

spend a moment discussing density. One benefit of having network data for the entire community is that it allows for greater use of the statistical measures developed specifically for the study of networks.[5] One such measure is density. Density is the percentage of all possible links in a network that actually exist. By all possible links we mean the number of links that would exist if every organization was linked to every other organization in the network. The density of the North Adams/Williamstown community network is 0.125. This means 12.5% of all possible links that *could* exist among the 64 organizations actually *do* exist.

There is no magic number for density that would allow us to say a network is effective or not (Burt 1995). Individuals and organizations face limited time and resources. They make decisions about how to allocate their time and resources based on an estimation of the mix of activities that will best match their interests and goals. Rather than attempting to link with all the other groups in the community, an individual or organization may decide to link to one or two organizations within each *type* of organization – education, culture, and business groups, for example.

MASS MoCA's primary network consists of 18 organizations – MASS MoCA and 17 organizations linked to it. Small networks tend to have higher density than large networks, so it is expected that the density of MASS MoCA's primary network will be higher than the density of the community network (Cross and Parker 2004:159). It is easer for eighteen organizations to be fully connected than sixty-four. It is also the case that the very nature of a primary network is such that every organization in it is linked to MASS MoCA – that is how we define a primary network. This structure would tend to increase the density calculation for the primary network (Scott 2009:73).

To correct for the fact that all organizations in the primary network connect to MASS MoCA by definition, we disregard the links to MASS MoCA in calculating the density of its primary network. We use only on the links among the other 17 organizations in the primary network. Calculating the density of MASS MoCA's primary network in this manner we find that it is 0.522. This means that over half of all possible connections between organizations that could exist actually do exist. This is higher than we expected and four times higher than the density of the larger community network. MASS MoCA's primary network is a highly interconnected one.

We can learn something about a network by its density measure, but it is difficult to draw conclusions with confidence using density alone. A suggestion to make density a more useful measure "is to divide people into subgroups – by, for example, function or location – and calculate network density figures within and between subgroups" (Cross and Parker 2004:159). These within and between subgroup measures of density are calculated using the E-I Index, where E is the number of external links, or links between organizations in different categories, and I is the number of internal links, or links between organizations in the same category. The index is calculated as (E-I)/(E+I) and ranges from -1 when all links are internal to 1 when all links are external (Krackhardt and Stern 1988).

[5] One network measure is centrality, which calculates how central each organization is in the network. See Oehler, Sheppard, Benjamin and Dworkin 2007 for an earlier analysis of the North Adams community network that includes measures of centrality.

We can use the E-I Index to measure the amount of cross-town links in the community network shown in *Figure 15* and MASS MoCA's primary network shown in *Figure 16.* We coded the organizations in each of these two networks based on their location in either North Adams or Williamstown.[6] We then calculated whether organizations in North Adams linked predominantly to other organizations in North Adams, and whether organizations in Williamstown linked predominantly to organizations in Williamstown.

The E-I Index measures the extent of contact between the two towns and whether the pattern of linkages differs for the community network and MASS MoCA's primary network. *Table1* provides the results of the E-I Index, first calculated from MASS MoCA's primary network and then calculated from the community network.

Table 1
Tendency of Groups to Link Outside of their Town

Town	# of Groups in MASS MoCA's Primary Network	E-I Index Primary Network	# of Groups in Community Network	E-I Index Community Network
North Adams	11	-0.070	34	0.041
Williamstown	7	0.320	29	0.042

Looking at *Table 1* we see that of the 18 organizations in MASS MoCA's primary network 11 are located in North Adams and 7 are based in Williamstown. The E-I Index for those organizations based in North Adams is -0.070. An index of 0 would mean that North Adams organizations in MASS MoCA's primary network are as likely to link externally to Williamstown as they are to link internally in North Adams. The actual index score of -0.070 is very close to this pattern.

The pattern for organizations in MASS MoCA's primary network that are based in Williamstown is different. These organizations have an index score of 0.320. An index of 1 would mean that Williamstown organizations in the primary network have all of their links in North Adams. The actual index score of 0.320 indicates that Williamstown-based organizations in MASS MoCA's primary network link to both North Adams and Williamstown, with more of their links going to North Adams.

Looking at the right-hand side of *Table1*, we see that of the 64 groups in the community network, 34 are located in North Adams and 29 are based in Williamstown. Remembering that an E-I Index of 0.00 indicates the same number of external links as internal links, we see that groups located in North Adams have just slightly more links to Williamstown than they do to groups in North Adams. It is extremely interesting that groups located in Williamstown follow the exact same pattern – they have just slightly more links to North Adams than they do to groups in Williamstown.

[6] One organization in the dataset is a charter school based in the neighboring town of Adams, serving families of both North Adams and Williamstown. The charter school is not included in this analysis.

How does the E-I Index enhance our interpretation of *Figures 15* and *16*? We now can say with confidence that organizations in North Adams and Williamstown are as likely to link to organizations in the neighboring community as they are to link in their own. The exception is Williamstown-based organizations in MASS MoCA's primary network, which are actually more likely to link to North Adams organizations. The invisible barrier between the two towns that existed in the late 1980s/early 1990s is gone.

Conclusions and Future Directions

The future of network analysis of cultural arts organizations is filled with exciting prospects. Research agendas in the field could include comparative examination of a community network and cultural arts organizations within it; analyzing the impact of micro (individual) and macro (community) networks on individual life outcomes such as happiness; and documenting the evolution of a network during a time of stress. In terms of data available to us, these three prospects could take the following concrete forms:

1. The community network data we have collected for North Adams and Williamstown has great potential for further analysis. We can study the community network further, and we have the ability to study the primary networks of each of the 64 organizations included in the community network. In addition to having coded each organization in terms of the town in which it is located, we have also coded the organizations based on their economic sector, such as culture, education, and business. We can address questions about whether cultural arts organizations link only among themselves, or the extent to which they link to other sectors. We can also explore other distinctions such as whether the organization is nonprofit, for-profit, or governmental. The community network data would allow us to empirically address some of the most frequent misunderstandings about cultural arts organizations, including that they connect only to each other for mutual benefit.
2. We have begun network analysis on another dataset that covers three live-work artist spaces. In the survey that generated this data, artists were asked questions that covered three areas: individuals within the building with whom they were linked; organizations within the city with which they linked; and their satisfaction with their live-work space. Successful analysis of these data would allow us to estimate the impact of an individual's social network and the network of the building as a whole on individual satisfaction. This would be very important for demonstrating that spaces like artist live-work spaces and the connections that are made within them have a real effect on individuals.
3. We have 2007 data on the primary network of a museum in a large urban area. The opportunity exists to repeat the method used to collect 2011 data for the same museum. This would give us two points in time to study changes in the network during an extremely important period – the recent/current recession. We have additional data on the general environment of nonprofits in the city during this period, as well as general economic data for the city. This project would allow us to greatly enhance our understanding of the evolution and devolution of nonprofits during times of economic crisis.

In this paper we provided an overview of social network analysis. We presented three examples, ranging in complexity, of how social network analysis can fruitfully be applied to the study of

cultural arts organizations. As a result of our ongoing work on cultural arts organizations we have reached the following conclusions concerning the use of social network analysis:

1. Social network analysis includes a rich range of statistical tools that can be used to formally document cultural arts organizations' involvement in their community. It is a welcome additional methodology for demonstrating the social impact of cultural arts organizations. It supplements contextual histories of cultural arts organizations, and allows for specific hypotheses to be tested in a scientifically acceptable way.
2. Rich data allow for rich analyses. The more complete the data are, the more questions that can be examined. The more that data collection has been thought out in advance, the more likely the cultural arts organization and the researcher can return to the data time and again to address new questions that arise.
3. At the same time, it is important to stress that even the simplest data can be useful in documenting the goals of the organization and its progress toward those goals. Networks mapped geographically can be important tools for articulating the role of the cultural arts organization in its community.
4. Networks created at the beginning of an initiative can play a vital role in documenting change that occurs in the community as a result of the initiative. Measurement of a network over time can document and articulate the community impact of the initiative. It is unfortunate that the vast majority of evaluation of initiatives occur at the end of their funding cycle, thus missing the opportunity to trace changes in the community over time.

We have presented evidence that social network analysis can increase our knowledge of cultural arts organizations and their impact on their communities. We presented results from three social network analyses we have undertaken: Ashé Cultural Arts Center in New Orleans; MACLA in San Jose; and MASS MoCA in North Adams, Massachusetts. Through discussion of these case studies we have shown the range of data that can be used in network analysis and the way in which formal network measures can be utilized. We focused on geographic presentation of network maps as a particularly useful format.

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Research Paper: Gentrification

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Why is Gentrification a Problem?

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1. Introduction

Social and political concerns with gentrification have waxed and waned since the term was first coined in 1964 to describe the movement of middle class families into the former working-class neighborhoods of London. Since the term "gentrification" was first used, the phenomenon has been a source of debate for both scholars and policy makers in the US, Europe and elsewhere. Some authors have viewed it as a beneficial (or at worst neutral) undoing of the "white flight" abandonment of central city neighborhoods that took place in many cities during the period from the mid-1940s through the late 1960s. Perhaps this gentrification would return some wealth, tax base and a modicum of affluence to urban neighborhoods that had been hard hit by loss of businesses, jobs and tax-payers.

Alternatively, gentrification has been viewed (at a minimum) as an unfortunate desecration of interesting and "authentic" urban neighborhoods, a dilution of vibrant ethnic neighborhoods into something that is bland and uninteresting. At worst, the critics of gentrification have viewed the phenomenon as a major source of disadvantage for low income urban residents who, having established a community with all of its complex social networks must now see it torn apart as they are displaced – either by choice or compulsion – to move to other housing that is less desirable or alternatively remain behind to pay higher rents in a neighborhood they no longer feel is their own.

One other perspective deserves separate mention. This is that gentrification may or may not be unfortunate for the original or displaced residents, but that it is a "natural" or even "organic" part of urban development. Thus Brueckner and Rosenthal (2009) see gentrification as a natural consequence of the process of ageing with a durable housing stock, and present a model that has gentrification as a predicted outcome that can be expected to eventually take place in all cities. A related perspective might accept that gentrification has adverse consequences, but that policies designed to prevent any gentrification would be worse. Such anti-gentrification policies might encourage an urban environment in which economic classes or ethnic subgroups have particular neighborhoods to which they are entitled; and where one ethnic group is entitled others may be excluded. From this, it is feared, it is a short step to say that these are the neighborhoods to which they should be restricted.

Recent history presents a variety of perspectives about who constitutes the "gentrifiers" and the "displaced". In 1983, for example[1], a proposal by then New York City mayor Ed Koch to build 117 apartments for artists in the lower east side of Manhattan was defeated after an acrimonious hearing by the city Board of Estimate. One opponent called the proposal "a scam … that would gentrify a neighborhood with the young, the white and the rich." A supporter, a gallery owner in SoHo, defended the plan to use federal housing funds to build the units saying that "… artists, by their nature, are an integrated race of people." Almost three decades later, artists living in the area have been mostly pushed out of the neighborhood, and complain about being displaced by gentrification.

Much of the research that has been done concerning gentrification has focused on whether gentrification imposes particular harm on poor households, and whether these households are displaced into worse housing situations. Thus Schill and Nathan (1983) conducted surveys of

[1] See Carroll (1983)

displaced residents from gentrifying neighborhoods in five different cities. They found that displaced residents did not live in worse conditions following their moves. The majority of the displaced reported increased levels of satisfaction with their home and neighborhood and commute times were more likely to decrease after the move.

Subsequent careful research has continued to find only limited evidence that the displaced poor are disadvantaged relative to their previous housing arrangements, although this may depend on the particular urban context. Atkinson (2000) found substantial displacement occurring in London, with most of the displacement among those employed in unskilled or semi-skilled occupations. In the US context, however, Freeman and Braconi (2004) presented data that suggested the poor are not differentially likely to be displaced, and Vigdor (2002) examined Boston data that suggested that while some displacement does take place the poor are not clearly harmed by the displacement.

In this paper we argue that by focusing on the individuals who are displaced from the neighborhoods by gentrification and sometimes only on the displaced poor, analysts have been considering the wrong problem and looking for harm in the wrong places. We argue that gentrification is more interestingly considered as a problem for the neighborhoods and communities that are potentially subject to gentrification, rather than the individual poor households that reside in or might move away from those areas.

In the view presented here, the risk of displacement from gentrification changes the incentives that residents have to engage in any of the variety of activities that can improve a community. These "community improvement actions" are privately-produced public goods. These actions can be difficult and are generally costly to undertake, and they confer benefits on many other residents of the community. They are therefore subject to chronic under-provision, and communities evolve a variety of social mechanisms to reward these actions and try to move provision closer to the socially efficient level. The risk of displacement due to gentrification makes this more difficult and as a result imposes a social cost on the neighborhood. This cost is borne by the community as a whole and not by only those persons who are poor or those who are displaced.

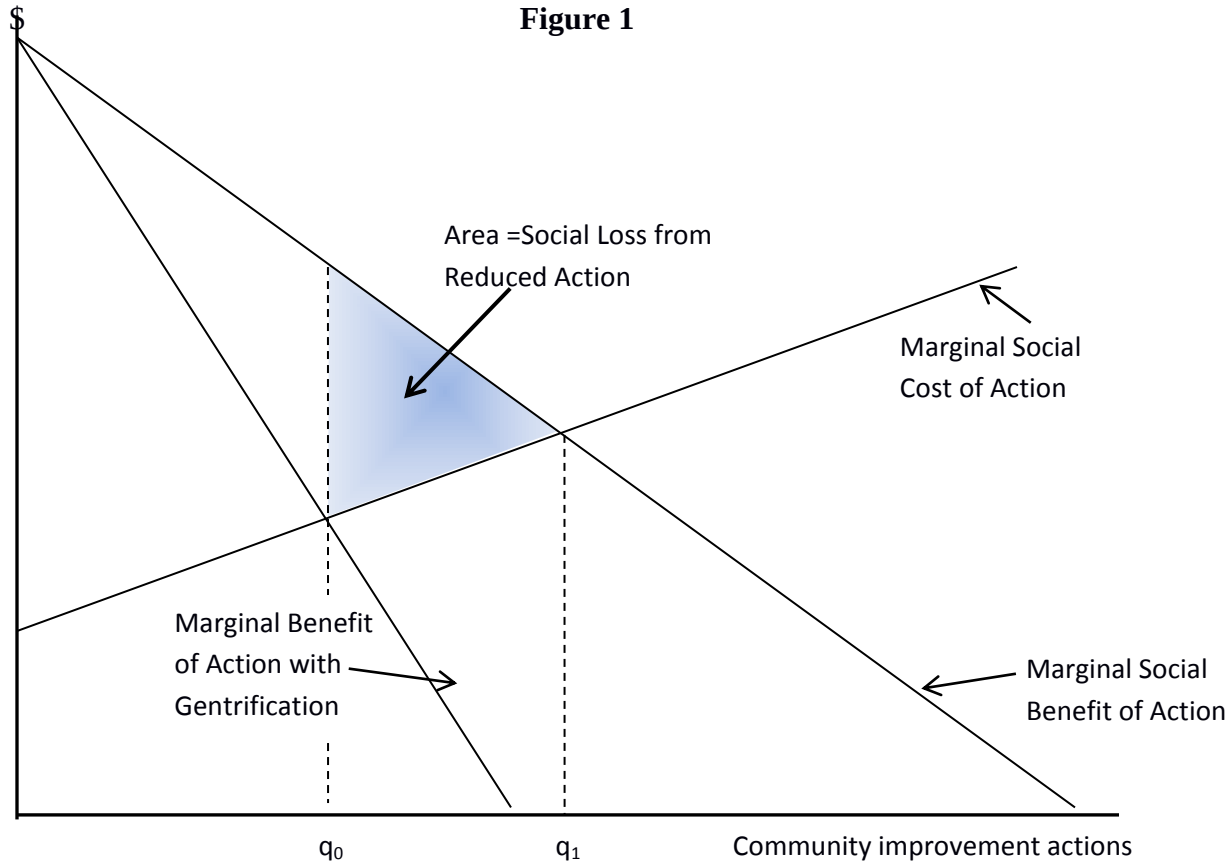
In this view, it need not be surprising that individuals who are displaced might not be made worse off. It is also not required that the poor be more likely to be displaced than middle class residents. These social costs of gentrification can arise in either situation. In fact, if middle class or lower-middle class households are more likely to contribute to or undertake community improvement actions than the poor, then subjecting them to an increased probability of displacement makes the social cost of gentrification more severe.

Measuring the extent of such costs cannot be done by comparing the quality of housing and neighborhoods occupied by displaced households. That is using the wrong counter-factual. Instead we should be asking what levels of community improvement actions would be taking place if neighborhoods were not subject to the elevated levels of turnover that gentrification displacement brings.

2. External costs of gentrification

In order to better understand the potential social cost of community instability, consider Figure 1 below. This diagram is constructed to illustrate in simplified form the relationships between efforts to improve neighborhoods and communities (community improvement) and associated dollar value to represent the costs and benefits of these actions.

Figure 1



In Figure 1, the upward sloping line labeled "Marginal Social Cost of Action" represents the cost to the community of community improvement actions. These actions require resources (even if they are donated or volunteered) and those resources could be used for other purposes. As more resources are applied to community improvement they become more difficult to find, recruit or purchase so the relationship slopes upwards.

There are two downward sloping lines in Figure 1, one labeled "Marginal Social Benefit of Action" and the other "Marginal Benefit of Action with Gentrification". The Marginal Social Benefit line represents the value to the community of undertaking community improvement actions. It is the sum of the benefit experienced by all community members, over a lifetime of living in the community, of the community improvement actions. It is downward sloping under the assumption that the community undertakes the highest priorities in the community first, generating the highest value benefits, then the next highest, and so on. As long as the benefit of a community improvement action exceeds the cost to the community of the resources used in the action, it is desirable to undertake the action. The ideal situation for the community is to engage

in q_1 community improvement actions, undertaking all those community improvement projects that satisfy this "cost-benefit" test.

If the community is well-organized (or perhaps we should say "perfectly" organized) then it will have devised some institutions and methods to support and encourage its citizens to undertake these community improvement actions. It will identify all those persons in the community who stand to benefit from the community improvements and convince them to contribute their own resources, time and efforts towards these actions in an amount that equals their individual marginal benefit of the actions experienced over a lifetime in the community. Even if the community is thus successful in overcoming the "free rider" problem (in which some members of the community do not contribute because they hope to benefit from the efforts and expenditures of others) a problem may arise if many residents are at risk of displacement. Suppose that each private resident believes that there is a 50% chance that he or she will be compelled to leave the community because gentrification forces rents to unaffordable (or unattractive) levels or for other reasons. In such a situation the expected value of the benefits of community improvement actions will be significantly reduced to persons who are at risk of displacement. As a result they will value their own benefits to be received from community improvement at a reduced level, indicated by the Marginal Benefit of Action with Gentrification line.

When a community is subject to gentrification, its residents may value community improvement at less than the true social value. As a result, even if they are persuaded to contribute the full value to them of community improvement, they will only view actions up to amount q_0 as satisfying the cost-benefit test. This is less than the socially efficient amount of community improvement which is represented by q_1. The Marginal Social Benefit of Action represents the "true" social benefit because, even though some existing residents may be forced or induced to leave the neighborhood because of gentrification, they will be replaced by new residents who arrive and will enjoy the benefits of the community improvements undertaken before they arrived. The Marginal Social Benefit of Action takes this benefit received by the "gentrifiers" into account. By undertaking only q_0 community improvement actions rather than the efficient amount q_1, the neighborhood is losing out on the benefits that could be obtained by adding the $q_1 - q_0$ actions where Marginal Social Benefit exceeds the Marginal Social Cost. The amount of the loss is the shaded triangular area in Figure 1 labeled Social Loss from Reduced Action. This social loss is why gentrification is (or might be) a problem even without consideration of the distributional impacts of gentrification or the costs of moving. This social cost arises even if the poor are no more likely to be displaced from a gentrifying neighborhood than middle-class residents.

Traditional analysis of gentrification has tended to neglect this potential cost for one or more of three reasons:

- The possibility that higher risk of displacement would lead to undervaluation of community improvement did not occur to the analyst
- The possibility was recognized, but the analyst assumed that all or most of the community members were home owners, and that the value of community improvement benefits would be reflected in – "capitalized into" – the value of the homes. Community members might not continue to live in the neighborhood but if the actions were

undertaken they would either directly enjoy the stream of benefits OR would sell their home at a higher price reflecting the present value of the stream of benefits and thus get to enjoy the benefits indirectly. In any event their personal evaluation of the benefits would reflect the full value, and the gap between the Marginal Social Benefit and the Marginal Benefit with Gentrification would be very small or non-existent.

- The analyst recognized that not all in the community were home-owners, but assumed that in the case of renter-occupied property the landlord would have an incentive to contribute towards the community improvement actions in amounts reflecting the benefits to be received by current and prospective future tenants, because the value of these benefits could be recovered through higher rents.

The final reason for ignoring the role of gentrification listed above is of particular interest. It is clear that increased risk of displacement and the consequent truncation of enjoyment of the benefits of community improvement actions could potentially lead to undervaluation of the marginal benefits of such actions. It is also clear that the communities that are affected by gentrification contain substantial numbers of residents who rent their dwellings rather than own them. It is possible, however, that the combination of property owners, of both owner- and renter-occupied property, would provide sufficient valuation of the benefits of community improvement actions to yield the efficient amount of efforts towards such actions.

If all property owners reside within the neighborhoods affected this might seem even more likely, but this is generally not the case in large cities where substantial amounts of rental housing are owned by individuals who live elsewhere or even by business entities whose owners reside around the world and may have only a vague notion of which properties their businesses actually own and operate. Nevertheless, community improvement actions do improve the quality of life in neighborhoods, and this does increase the demand for living in those areas. This increase in demand under most circumstances will be reflected in the price of properties and the rents that potential occupants are willing to pay.

This provides an incentive, even for large non-resident landlords, to contribute towards efforts to improve the local community. On the other hand, there are many good reasons to believe that absentee landlords will lack the same motivation that local owner-occupiers or local renters will feel. One reason is that the mechanisms that communities develop for mitigating the free-rider problem are more difficult to apply to absentee landlords. A resident (whether owner or renter) of the neighborhood is more easily identified and linked to specific community improvement actions than a nonresident owner. Whether the community improvement is a new cultural facility or efforts to clean up vacant lots, the organizers of such actions can work to identify those who live near or make use of the improvement and attempt to persuade them to contribute to the community improvement actions. This is difficult or impossible with absentee property owners.

If the renter-occupants of dwellings whose owners are absent have assurance of a long-term place in the community at reasonable rents, the lack of commitment of the property owners may not matter. The community improvement actions can be supported by local residents (either renters or owner-occupiers), and because of their security of tenure in the neighborhood their valuation of the benefits of such actions may approximate the true marginal social benefit. In such circumstances the efficient investment in community improvement actions may take place

despite gentrification that subsequently occurs. The gentrification may occur "organically" through gradual turnover of dwelling units, or through local additions to the housing stock.

Whether this incentive is effective in practice is an empirical question. If increasing the risk of displacement, or increasing the rate of turnover in the local housing market, has little impact on efforts towards community improvements, then gentrification may not generate the type of social cost illustrated in Figure 1 above (or the costs may be very small relative to other inefficiencies in the community).

If, on the other hand, increases in the probability of displacement are associated with significant reductions in efforts devoted to community improvement, then it will be a signal that the problem illustrated in Figure 1 may be working to impose costs on the communities through under-provision of community improvement actions. This would be a cost borne by the neighborhoods and communities affected. It is a real loss in the sense that these neighborhoods are less attractive than they would otherwise be, and the costs required to make them attractive would be less than the value of the community improvement.

Note that if this loss arises it is NOT borne exclusively by households with incomes below the poverty line. It affects all residents of the neighborhood and indeed may affect many neighborhoods that are not currently undergoing gentrification. It would be a cost borne by the entire community or neighborhood, and not only those who are actually displaced or most likely to be displaced.

Where security of tenure is limited and residents understand or believe that they might be put into a situation where they are forced to leave or find it unattractive to remain in the neighborhood because of rent increases, they will have a reduced valuation for the benefits that might be obtained from community improvement. If this reduced valuation is not compensated for by contributions from the owners of the properties where they live, it reduces the amount of community improvement and makes the neighborhoods less attractive. If this reduced valuation is not compensated for by contributions from the owners of the properties where they live, it reduces the amount of community improvement and makes the neighborhoods less attractive than they otherwise would be – in fact less attractive than they SHOULD be. This reduced attractiveness is a cost borne at the neighborhood or community level by all who live there.

How can we know if this is likely to be a problem? As noted above, observing that increasing the risk of displacement is associated with decreasing amounts of community improvement actions would be consistent with the hypothesis that social costs of the type illustrated in Figure 1 would be present in communities subject to gentrification. What data are available to us to measure the level of community improvement actions and the risk of housing market turnover? What data are available to us to correct for other factors that might also influence the observed level of community improvement actions? We turn attention to these questions in the next two sections.

3. Measuring community improvement actions

In order to test the hypothesis that increasing turnover or risk of displacement in the housing market is associated with different levels of community improvement actions, we must identify a source of data that is widely available for US communities and provides a plausible measure of such actions. Since "community improvement actions" can include everything ranging from informally organized neighborhood cleanup crews up to large community development organizations and public agencies with budgets in the millions of dollars, finding systematic and reasonably accurate measurements of these activities is likely to be a problem.

Many of these actions take place without the benefit of formal organizations or budgets. Some are undertaken by commercial enterprises working alone (the local merchant who underwrites the cost of new benches or new playground equipment for the park) or in concert (the local chamber of commerce that organizes efforts to improve conditions in an urban plaza). Many are undertaken through the efforts of the public sector through provision of public services in the form of parks and recreation, or efforts organized via local public schools. Each of these poses practical problems as an indicator of the level of such actions. Informal groups are not monitored and their efforts are infrequently reported in the press. Solo or collective efforts of commercial enterprises may be significant but again there is no formal and separate reporting of such efforts. Public agencies or schools are generally required to make public reports of their expenditures, but typically they do not break out the functions of such expenditures in a way that would permit measurement of the expenditures or per-capita expenditures devoted to community improvement.

Many community improvement actions are undertaken by not-for-profit organizations. These will include a wide range of groups including churches and other faith-related organizations, not-for-profit educational organizations (primary, secondary and post-secondary institutions), arts organizations, environmental organizations, clubs, and organizations created specifically for the purpose of neighborhood improvement and community development. These non-profit organizations are of potential interest because with the exception of churches, those organizations with annual budgets exceeding $25,000 are required to submit reports that include total expenditures and total revenues. Data from these annual reports are public records and are available to researchers in computer-usable form beginning in 1988. The data require time for processing so that the most recent data are generally about 2-4 years prior to the current year (there is some variance because different organizations have different fiscal years for reporting and organizations are able to petition for additional time to complete their reporting obligations).

Some of these organizations pose measurement problems that are similar to those encountered with public agencies. The reported budgets are not presented in detail and such details as are available do not always permit determination of the share of expenditures that have been devoted to community improvement. An alternative approach would be to identify those not-for-profit organizations whose mission and core activities are focused on undertaking actions that will improve a specific neighborhood or community. This is the approach that is used for this study.

The Internal Revenue Service must certify any organization that applies for not-for-profit status as being appropriately dedicated to pursuing core activities that are consistent with the law that allows them to be exempt from taxation. In making this determination the IRS assigns each organization a code that places them within the National Taxonomy of Exempt Enterprises

(NTEE). These so-called NTEE codes cover activities in some detail, distinguishing over 645 distinct categories of activity ranging from "Alliances and Advocacy for the Arts, Culture and Humanities" (A01) through "Mutual and Membership Benefit Organizations for Provision of Cemeteries" (Y50). Data on the assets, expenditures and revenues, physical location and other details about the organizations have been collected from the IRS and are made available to researchers by the National Center for Charitable Statistics (NCCS). In order to improve the quality of the data they make available, researchers at the NCCS have independently checked NTEE code classifications provided by the IRS for over 300,000 different organizations, and in 2007 completed an automated classification tool that uses the organization name and descriptions of the organization's purpose and activities to provide a suggested classification. This is then compared with the original IRS classification and other information to determine a final classification for each organization in the data made available by NCCS.

To construct a measure of the level of community improvement actions, we focus on three categories: "Community and Neighborhood Development Organizations" (S20), "Community Coalitions" (S21) and "Neighborhood & Block Associations" (S22). All of the organizations within these categories are classified as public charities by the IRS and have not-for-profit status under section 501(c)(3) of the Internal Revenue Code, which means that these organizations are exempt not only from taxation on any income or surplus revenue that might be generated, but also that contributions to these organizations may be deducted from the taxable income of the donor.

Broadly speaking, all organizations that qualify for 501(c)(3) status and are designated as "public charities" by the IRS can be thought of as engaging in the private production of public goods. The organizations with NTEE codes S20, S21 or S22 that are the focus of the analysis presented here fit this description. They are engaged in a variety of efforts, public services and activities with the specific goal of improving conditions in the communities where they work. The analysis below will use the number or activity levels of these organizations in each community as a measure of the level of community improvement actions. Table 1 below contains the official description of activities used by NCCS in determining the classification.

Table 1: Types of organizations used in analysis

NTEE Classification	Description of Activity
S20 - Community & Neighborhood Development	Organizations that focus broadly on strengthening, unifying and building the economic, cultural, educational and social services of an urban community or neighborhood. Use this code for community and neighborhood improvement organizations other than those specified below.
S21 - Community Coalitions	Organizations that are designed to increase citizen participation in local policy issues and thereby improve the overall quality of life in a particular state or community.
S22 - Neighborhood & Block Associations	Organizations whose members are residents of a particular community or neighborhood who have joined together to remedy deficiencies in existing neighborhood conditions or to enhance conditions that are currently satisfactory.

These three categories contain a very wide variety of organizations. In the year 2000 there were over 4100 organizations around the US that were in one of these three categories, and were located within the formal definitions of a Metropolitan Statistical Area (MSA) and had a budget of at least $25000. To get some idea of the type of organizations represented in these categories, consider some specific examples.

Neighborhood Development Corporation of Des Moines

Founded in 1999, the Neighborhood Development Corporation of Des Moines, Iowa is a modest organization with activities focused on neighborhoods in Des Moines. The NDC has been working closely with the City of Des Moines with a particular focus to improve and revitalize specific neighborhoods in the city, particularly the East Grand, 6th Avenue Corridor and the Forest Avenue Corridor.

Figure 1: Forest Avenue Corridor in Des Moines, Iowa

Along these streets the NDC has purchased several properties, and is investing to repair and improve the properties to create a "friendly environment through mixed-use residential and commercial development." The neighborhoods where NDC has been active are generally low to moderate income areas that contain structures that are usable but in need of investment. The NDC describes itself as a "… community-focused organization that revitalizes distressed neighborhoods and encourages neighborhood sustainability …. by offering commercial and residential options through building rehabilitation, new construction, and in-fill development."

Neighborhood Development Center, St. Paul, Minnesota

The Neighborhood Development Center was founded in 1993 and describes itself as an organization that "… works in the low-income communities of Saint Paul, Minneapolis and surrounding suburbs … to help emerging entrepreneurs develop successful businesses that serve their communities, and to help build stronger neighborhood economies." They collaborate with other partners in the community to offer a 16 week entrepreneur training course in 20 different ethnic communities and neighborhoods. Since their founding they have provided training to thousands of entrepreneurs, provided financing, consulting and capacity-building for small businesses, and operated several business incubators in targeted inner-city neighborhoods.

Figure 2: Plaza Verde, an NDC incubator

Northern Berkshire Community Coalition, North Adams, Massachusetts

The Northern Berkshire Community Coalition was founded in 1999. A small organization with an annual budget of between $400,000 and $500,000, the coalition brings together several initiatives and groups operating in the region to provide programs to serve young people and families in the region, and broader community goals. Examples of the coalition's programs include the Teen Writing Workshop, which provides a supportive environment for teenagers to create and share their work with guidance and facilitation from a professional creative writer. Each year ends with the publication of the student journal, Somewhere Between, and a public reading. The coalition also organizes monthly meetings in the community to facilitate discussions about topics as wide ranging as income inequality to under-age drinking. The coalition publishes a community resource guide to help identify resources and agencies that can provide help to those in need.

Figure 3: Northern Berkshire Community Coalition online resource guide

FCS Urban Ministries, Atlanta, Georgia

FCS (focused community strategies) Urban Ministries was founded in 1978 and operates with an annual budget of about $1.2 million. FCS envisions its activities as "…reweaving the fabric of urban community by building upon neighborhood strength and by attracting 'strategic neighbors' to move in." Growing out of the faith-based community, the organization now supports a wide variety of community projects ranging from a bike shop and coffee shop to initiatives designed to create and restore mixed-income housing in Atlanta neighborhoods. FCS organizes "Green my 'hood" community work days that bring neighborhoods together to remove refuse, plant gardens and improve the quality and appearance of Atlanta neighborhoods.

Figure 4: Rubbish removal during "Green My Hood" community work

Each of the four organizations briefly described above is classified by the NCCS as an S20, S21 or S22 organization. The descriptions of the organizations make clear that they range from

relatively standard community development corporations, through training and business education and consulting services, provider of educational services and community resources, to organizers of neighborhood cleanup and small local enterprises. What they all have in common is a focus on mobilizing resources to improve, in one way or another, economic and social conditions in specific neighborhoods and communities within the cities where they operate. The analysis below will use the sum of expenditures by all such organizations within an urban area or, the total number of such organizations, per 1000 residents as a measure of the level of private community improvement actions within the city.

4. Data for analysis

Across the US there are some very large organizations of the types discussed in the previous section, but the majority of them are of modest size with budgets much less than $1 million per year. The MSA or Census-defined Metropolitan Statistical Area will serve as our unit of observation for analysis. The data are aggregated across all organizations within a given MSA and the total expenditures per 1000 thousand residents and total number of organizations per 1000 residents is used as the central measure of the level of community improvement actions in each city. Just as the distribution of organization expenditure is skewed, the distribution of cities by expenditures per thousand persons is highly skewed, with most cities having modest levels of a few thousand dollars, but a few cities having very high levels. The distribution is illustrated below in Figure 5.

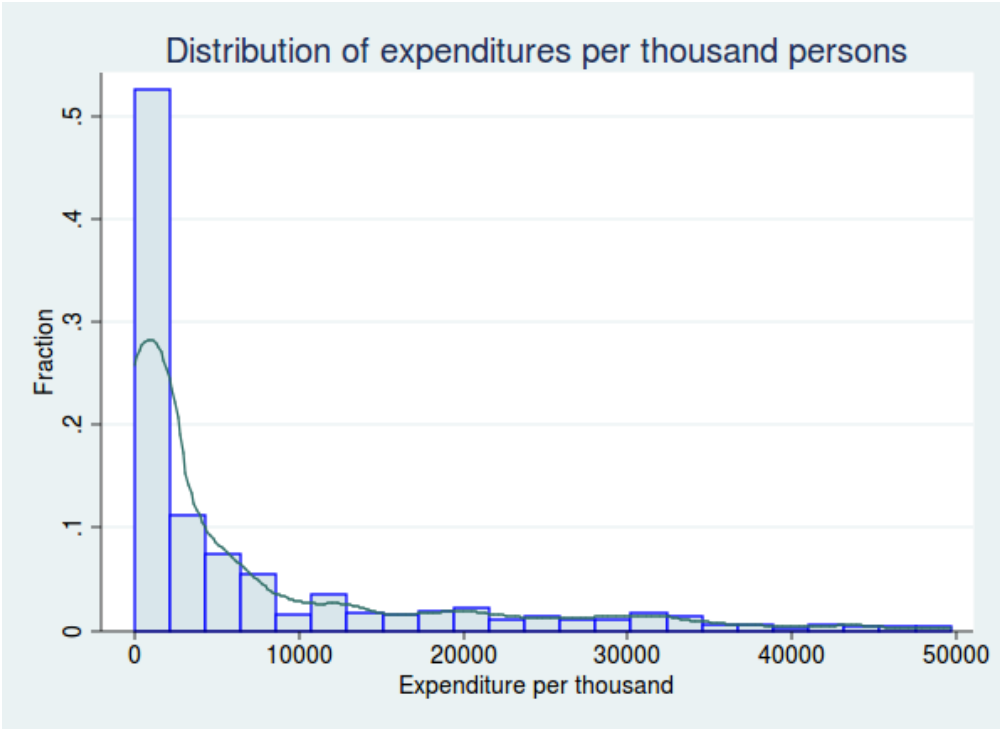


Figure 5: Distribution of MSAs by expenditures of neighborhood organizations per 1000 persons

The distribution of MSAs according to the number of neighborhood improvement organizations is also skewed, although not as much as the distribution by the expenditures per 1000 persons shown in Figure 5. Figure 6 below shows the distribution according to the number of such organizations.

The number of such organizations in an MSA averaged 6 in 1990 but increased to 15 by 2000. This is consistent with a nationwide trend of increasing numbers of not-for-profit organizations as well as increasing numbers of such organizations whose budgets come to exceed the filing threshold due to inflation and the fact that the threshold itself is not indexed for changes in the price level. The inflation adjusted expenditures per thousand residents in the MSA also increased from 1990 to 2000, growing at an inflation-adjusted annual rate of 8.25%. This compares to

average household income which grew during the same time at an inflation-adjusted annual rate of 1.14%. As with the change in the number of such organization, this growth reflects a combination of an increase in the importance of these types of not-for-profit organizations (as perceived by those willing to fund their activities) and an increasing number of organizations being required to file annual returns with the IRS because inflation has pushed their budgets above the filing threshold.

Figures 5 and 6 combine organization data from both 1990 and 2000 in a single graph, and express all expenditure levels adjusted to the price level prevailing in 2000. The data for organization numbers and expenditures are available for more recent years, but the analysis below will combine these data with Census data that are at present only available for 2000 and earlier. Hence the data focus on results for 1990 and 2000 to match available Census data.

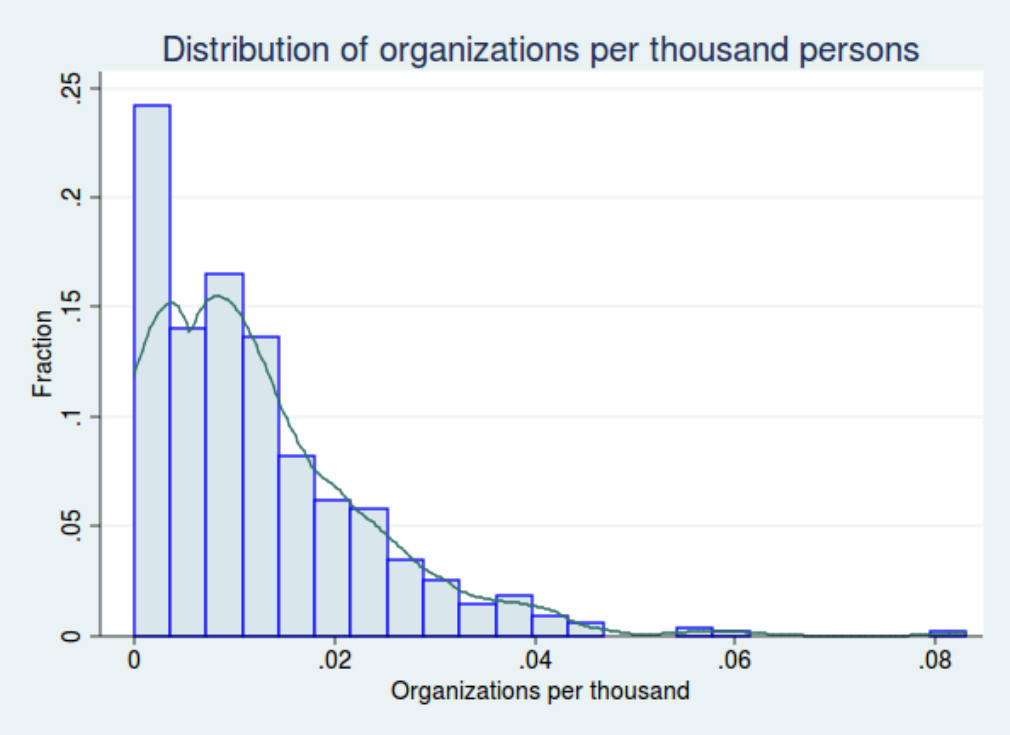


Figure 6: Distribution of MSAs by the number of neighborhood improvement organizations per 1000

The theoretical discussion in section 2 above suggested that the quantity of community improvement actions might be reduced, and the well-being of the community reduced because the risk or process of gentrification limited the attachment of residents to their neighborhoods. This happens primarily via the process of housing market turnover. It is not necessary that this turnover be involuntary. If a process of gentrification brings new residents into urban neighborhoods and for whatever reasons induces the previous residents to move elsewhere, then the previous residents may not be able to enjoy the stream of benefits from community benefit actions. It is the risk or expectation of this that results in the social cost identified.

For this to occur, the new residents attracted to the community must not simply move into housing units that are otherwise vacant. If there is surplus housing available in the neighborhood

then new residents will be able to move in without necessarily causing an existing resident to move and fail to realize the expected benefit of community improvement. Thus the social cost identified above arises only if there is displacement, but in contrast to the arguments put forward in Vigdor (2002) it is not necessary that this displacement be involuntary. What is required is that it must be in some sense anticipated.

A resident who seeks to form an expectation about the probability that he or she is likely to have only a relatively brief period of residency in the neighborhood will have several potential signals to observe. Perhaps the most readily observed is simply the amount of turnover in the local housing market. Urban areas that have ongoing processes of gentrification will have higher proportions of dwellings occupied by persons who have moved to those dwellings recently. Perhaps to distinguish gentrification from a general process of growth of the metropolitan area, the resident might consider the share of dwellings that are occupied by someone who has recently moved from somewhere else in the same MSA. Fortunately, both measures are available to us as part of the Census data. Figure 7 below shows the distribution of MSAs by the rate of housing market turnover. Figure 8 shows the distribution by rates of "local" moves.

Figure 7: Distribution of MSAs by proportion of population moved

We use both the share of population that have moved from any other location within the past 5 years and the share who have moved "locally" – that is moved from another location within the same MSA – within the past 5 years. The hypothesis we wish to examine is whether the level of housing market turnover appears to have a statistically significant negative relationship with the level of community benefit actions.

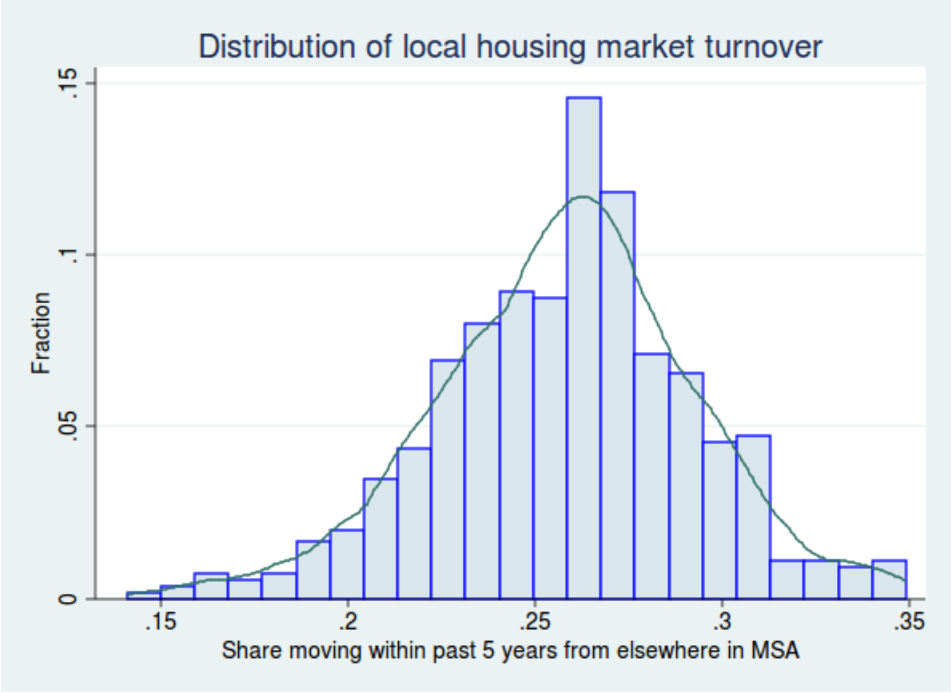


Figure 8: Distribution of MSAs by proportion of "local" movers

Of course the level of community benefit actions are also affected by other factors. They may be affected by the level of need in the community, and also by the level of income and other resources available to deal with these needs. Finally, as discussed in section 2 above, they may be affected by the nature of housing tenure in the city, with higher rates of renter-occupation putting more households at risk of displacement. Because the displacement can be as much of a problem even if the departures are voluntary, it is not clear *a priori* how much of an impact we should expect renter-occupation to have.

To take into account these additional factors, we controlled for the poverty rate (to reflect the level of need), the average household income (to reflect the available resources), and the share of the housing stock that is renter-occupied. We obtained these data for 1990 and 2000 using Census figures for each MSA, and matched them with the expenditure and number of organizations data. As mentioned above, all dollar values were adjusted to 2000 price levels.

Table 2: Descriptive statistics for variables for entire sample

Variable	Mean	Std. Dev.	Min	Max	Obs
Expenditures per thousand	9209	17423	0	132852	550
Organizations per thousand	0.012	0.011	0	0.083	550
Share moved	0.480	0.072	0.273	0.704	550
Share moved locally	0.258	0.034	0.141	0.349	550
Ave household income	48277	7539	31919	83525	550
Share renters	0.309	0.059	0.131	0.521	550
Poverty rate	0.135	0.048	0.052	0.419	550
Number of organizations	10	31	0	457	550

Table 3: Descriptive statistics for variables in 1990

Variable	Mean	Std. Dev.	Min	Max	Obs
Expenditures per thousand	5612	12802	0	97150	275
Organizations per thousand	0.006	0.006	0.000	0.035	275
Pct moved	0.487	0.077	0.273	0.704	275
Pct moved locally	0.260	0.034	0.155	0.344	275
Ave household income	45527	6729	31919	69707	275
Pct renters	0.317	0.059	0.153	0.521	275
Poverty rate	0.140	0.051	0.063	0.419	275
Number of organizations	6	17	0	219	275

Table 4: Descriptive statistics for in 2000

Variable	Mean	Std. Dev.	Min	Max	Obs
Expenditures per thousand	12807	20454	0	132852	275
Organizations per thousand	0.018	0.012	0.000	0.083	275
Pct moved	0.474	0.066	0.286	0.679	275
Pct moved locally	0.256	0.034	0.141	0.349	275
Ave household income	51027	7309	35591	83525	275
Pct renters	0.302	0.058	0.131	0.509	275
Poverty rate	0.129	0.044	0.052	0.359	275
Number of organizations	15	40	0	457	275

Tables 2, 3 and 4 above present descriptive statistics for each of these variables for the entire sample, for 1990 and for 2000 respectively. It is worth looking at these values – at least for the entire sample – to form a sense of what might constitute a "large" change in values of the variable.

One convention is to regard a one standard deviation as a reasonably important change, and a two standard deviation change as large. By these terms a large change in the rate of neighborhood stability would be to move from the sample mean value of 0.48 to a rate below 0.33 or above 0.62. Both of these values are within the range of observed values in the sample. A large change in the rate of neighborhood stability would be a 30% increase or decrease in the rate of recent movers. For local movers, a 27% increase or decrease would be a large change. For the outcome of expenditures or numbers of organizations per 1000 persons, a large increase would be a 378% increase in expenditures or a 184% increase in numbers of organizations. A large decrease would be a decline to zero. Once again both ranges are within the range of observed data for US cities.

We now turn attention to estimating the relationships.

5. Estimated impact

To test the hypothesis that displacement risk could be associated with significant reduction in community improvement actions, we estimate four different models that consider the two possible measures of the level of community benefit actions (expenditures per thousand and number of organizations per thousand) and the two possible measures of displacement risk (percent of the population above age 5 who have moved within the past 5 years, and the percent who have moved within the past 5 years from another location within the MSA). To facilitate comparisons between the estimates, we estimate the relationships in "elasticity" form:

$$ln(expenditures) = \beta_0 + \beta_1 ln(PctMoved) + \beta_2 ln(AveHHInc) + \beta_3 ln(PctRenters) + \beta_4 ln(Poverty)$$

or

$$ln(organizations) = \beta_0 + \beta_1 ln(PctMoved) + \beta_2 ln(AveHHInc) + \beta_3 ln(PctRenters) + \beta_4 ln(Poverty)$$

By estimating a relationship that is linear in the logarithm of the variables, the parameter estimates can be interpreted as elasticities – meaning the percentage change in the expenditures or numbers of organizations generated by a one percent change in the variable of interest. Thus the estimate of β_1 will provide an estimate of the percentage impact of a one percent change in the measure of neighborhood stability. Table 5 presents the estimates, with the column header indicating which measure of community benefit actions is being used and the rows associated with the explanatory variables. Standard errors of the parameter estimates are in parentheses below the parameter estimates themselves, and the number of asterisks indicates a level of statistical significance, with *** signifying that the estimate Is significantly different from zero at the 1% level, ** indicating the 5% level, and * indicating the 10% level. In every case the standard errors of the estimates have been clustered by MSA and calculated to be robust to heteroscedasticity and model specification errors.

Table 5: Estimates of the relationship between displacement risk and community benefit actions

	Expenditures per thousand		Organizations per thousand		Expenditures per thousand		Organizations per thousand	
Share moved (β_1)	-2.4201	***	-1.1696	***				
	(0.739)		(0.283)					
Share local move (β_1)					-1.9585	***	-0.6326	**
					(0.635)		(0.255)	
Ave household income (β_2)	1.4573	*	0.9093	***	1.2679	*	0.7469	***
	(0.871)		(0.271)		(0.764)		(0.283)	
Share renters (β_3)	1.0209	*	0.1536		0.4279		-0.1674	
	(0.606)		(0.227)		(0.560)		(0.217)	
Poverty rate (β_4)	-0.5413		-0.1882		-0.4598		-0.1778	
	(0.469)		(0.165)		(0.438)		(0.162)	
Constant (β_0)	-9.2947		-15.3670	***	-8.6347		-13.9575	***
	(9.121)		(2.801)		(7.976)		(2.993)	
Observations	450		453		450		453	
F	5.82	***	11.61	***	5.41	***	6.99	***
R^2	0.0652		0.0914		0.0567		0.0635	

How should we interpret the analysis reported in Table 5? The results confirm the view of gentrification displacement presented in section 2 above. The estimates show that in cities with a higher share of population who have moved within the last 5 years, there are significantly fewer community and neighborhood improvement organizations per capita, and the organizations that are present have collectively lower expenditures per capita. This is true after adjusting for differences between cities in the level of affluence and ability to pay (as measured by the average household income), the structure of the local housing market (as measured by the share renters) and the level of local need (as measured by the poverty rate).

The same result holds true if we focus exclusively on the share of population that has moved locally (within the urban area). Increasing population displacement is associated with fewer community improvement organizations per capita and smaller combined per-capita expenditures for those organizations. There are only two variables that are statistically significant in every specification of the model: average household income and the measures for risk of displacement. The F tests of joint significance for each model are all significant. The impact of average household income and risk of displacement (housing market turnover) are exactly the signs that we expect. In each model an increase in the risk of displacement is associated with a statistically significant decline in the measure of community benefit actions. While analysis with limited data of this sort cannot prove a causal connection, the results are consistent with the hypothesis advanced above. When gentrification is associated with an increased risk of displacement, it is also associated with reduced levels of community benefit actions and this imposes a social cost on the affected neighborhoods and communities. This result underscores our central point: it is not the gentrification alone that is the source of the problem, but rather the instability and risk of displacement associated with gentrification. This displacement may or may not reduce the well-being of those who are displaced. The more serious and relevant point is that the displacement is

associated with reduced efforts towards improving the communities and making them better places to live.

The estimated impacts are statistically significant. Are these impacts quantitatively important? We noted above that a large increase in displacement risk would be something on the order of a 30% increase in the share of population being recent movers, or a 27% increase in the share of population who had undertaken a move within the MSA during the past 5 years. How much of an impact on community improvement actions would be associated with such increased risk of displacement? The estimates in Table 5 suggest that **a large (two standard deviation) increase in displacement risk would be associated with a 52% to 72% decrease in community benefit expenditures per capita, or a 17% to 35% decrease in the numbers of organizations in the MSA.** For communities that are struggling these could be important.

6. Conclusion

In the introduction to this paper, we advanced the hypothesis that gentrification is more interestingly considered as a problem for the neighborhoods and communities that are potentially subject to gentrification, rather than the individual poor households that reside in or might move away from areas subject to gentrification. The risk of displacement from gentrification was capable of changing the incentives that residents have to engage in any of the variety of activities that can improve a community. The risk of displacement that is characteristic of gentrification imposes a social cost on the neighborhood. This cost is borne by the community as a whole and not by only those persons who are poor or those who are displaced.

In section 2 we presented a theoretical argument to make clear how this social cost might arise. If significant numbers of residents are renters and/or the benefits of community improvement actions are not fully capitalized into property values (or are ignored by absentee landlords) then community improvement actions will be under-provided to the neighborhood. Increasing the risk of gentrification displacement exacerbates this problem and increases the welfare loss borne by then neighborhood.

In section 3 we identified an approach to measure or proxy the level of community improvement actions taking place in communities by measuring the number and activities of a certain subset of not-for-profit organizations. In section 4 we identified other Census data that can be combined with this information to permit an estimate of the extent to which displacement (as proxied by housing market turnover) is associated with reduced community improvement actions.

In section 5 we presented these estimates and found evidence that was consistent with the truth of the original hypothesis presented. What can we say about the consequences and policy implications? As noted above, a large (two standard deviation) increase in housing market turnover (displacement) is associated with a 52-72 percent decline in community improvement expenditures in affected communities. This means fewer programs for neighborhood children, fewer neighborhood cleanup programs, and fewer training opportunities for new businesses. These reductions are felt in the neighborhood by all of the residents. Persons who are displaced and leave might easily manage to move to more stable communities that are less subject to under-provision of these beneficial actions.

How can policy address these problems? There are a variety of ideas that might be applied. Increasing assistance for provision of community improvement actions might help, as might programs designed to increase the probability that residents can remain in the community if they desire. This would include policies to ensure provision of affordable housing and limit involuntary displacement. Such policies could help transform rapid gentrification into a more natural (and unavoidable) process of urban change.

Hopefully these findings can also improve our general understanding of how cities function and how urban political processes work. One economist charged with discussing Vigdor (2002), after the paper was presented began his remarks with “I have always been skeptical of gentrification’s critics. The way some of them carry on ….” This type of sentiment and reaction to the critics of gentrification is not atypical – but it seems a shame to stop with the skepticism rather than continue on to ask why so many are critical and why they sometimes succeed in blocking development seen as contributing to gentrification? In the context of the arguments advanced and

supported above we can view the critics as endeavoring to make a claim to remain in their neighborhoods and reap the benefits of the community improvement actions they have worked hard to provide. In this sense such claims are seen to be less of an annoying mystery, and more a source of economic efficiency.

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