

**The Result of KEEPING TIME: Methods to Identify and Study Artist  
Populations : the Case of Jazz Musicians**

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**Abstract**

In 2002, the Research Center for Arts and Culture at Columbia University's Teachers College created a study of jazz musicians in four U.S. Metro Areas: Detroit, New Orleans, New York and San Francisco. Commissioned by the National Endowment for the Arts, the study used a methodology never before applied to the arts: Respondent-driven sampling (RDS). This technique relies on a robust contact pattern and uses modest incentives to help develop long referral chains within a respondent community. It has afforded the arts community the very first statistically valid projection of the "number of artists" in a given community (outside the U.S. census) and has provided substantial information on the social networks of jazz musicians. The challenges and advantages of using this methodology on jazz musicians in four Metro Areas: Detroit, New Orleans, New York and San Francisco are investigated, as well as the potential for using RDS on a national population of storytellers.

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In 2000, the National Endowment for the Arts commissioned the Research Center for Arts and Culture at Columbia University's Teachers College to undertake a study of jazz artists in four U.S. Metro Areas: Detroit, New Orleans, New York and San Francisco.

The original purpose of the study was twofold:

- 1) to create a context that documents how jazz operates and is organized in each of the study cities, what are the conditions of jazz artists in each location, what resources, support systems and life mechanisms are employed in each site, and what are their major challenges?
- 2) to develop a detailed needs assessment from jazz artists themselves, by collecting data to determine their current situation and most pressing needs. Using the results from both of these approaches will help us answer the question, what suggestions can we make for future support of jazz artists?

Respondent-driven sampling (RDS) relies on a robust contact pattern and used modest incentives to help develop long referral chains within the jazz community itself. The fact that subjects must know each other was a good fit for jazz musicians who have tightly-knit communities of players in all the study cities. Ensemble playing, pickup groups, and informal apprenticeships illustrate this.

Developed over the last decade, this iterated form of chain-referral sampling was created by Douglas Heckathorn for use with hidden populations of HIV drug injectors. Heckathorn's model relies on the "small world problem" now commonly known as "six degrees of separation," that any two people in the country are connected by no more than six network links, so that, in theory, everyone could be reached by an expansive chain-referral sample after only a few sets of waves (Heckathorn and Jeffri, 2001).

This paper will focus on the advantages and challenges of using this methodology on artists.

## **Methods to Reach Artists**

As the literature in the field amply demonstrates (Alper and Galligan, Bradshaw, Jeffri, Karttunen, Throsby, Wassall), there have been decided limitations to the methods used to survey artists regardless of the academic background of the researcher or the country in which he conducts research. Researchers have difficulty in identifying samples consistent with definitions of artists based on theoretical considerations or applied policy concerns. A method new to the arts, Respondent-driven sampling, both eliminates traditional bias and reaches artists at all strata of society through peer recruitment.

### **Respondent-driven Sampling**

For the jazz study, the challenge was to create appropriate criteria to screen jazz musicians while being as inclusive as possible, while not requiring every interviewer to be a jazz expert or jazz musicians to demonstrate they could play jazz. Additionally, some musicians eschew the word jazz, refuse to call 'blues' a part of jazz, and refuse to define themselves as artists. The goal was to include as many jazz musicians as possible, including those who might object to being defined as jazz artists, but whom we might solicit because of the peer referral process. Members of the jazz community helped to form the following criteria:

- 1) Do you consider yourself a jazz musician?
- 2) Did you earn more than 50% of your personal income in the last six months as a jazz musician or in jazz-related activities?
- 3) Have you been engaged in your art/jazz more than 50% of the time during the last year?
- 4) Have you performed in/with a jazz band at least ten times during the last year?
- 5) Have you performed with or without a jazz band for pay at least ten times during the last year?

6) Have you produced a documented body of work that is considered (self or externally) jazz? (performances, compositions, collaborations, arrangements, recordings)

The design principle of Respondent-driven sampling is that, if the biases associated with chain-referral sampling are understood, the sampling process can be redesigned (through a Markov chain process) to eliminate those biases that are not inherent in the method, and to quantify and control those that are inherent, thereby making chain-referral sampling a statistically valid sampling method.

The creation of long referral chains weakens the biases wave by wave until a point of equilibrium is reached. These long referral chains penetrate deeper and deeper into the community, by the use of modest incentives, and recruitment quotas prevent the monopolization of recruitment rights. Quantitative variables help determine the clustering of groups together and their analysis in terms of the jazz community's social structure.

The practical application of the method in the jazz community worked as follows: A City Coordinator and staff in each city invited 6-8 jazz musicians ('seeds') who are centrally connected and positioned within the community. After communicating the altruistic purposes of the study, the staff interviewed each of these musicians one-on-one with a 118-question survey instrument. Each 'seed' was then paid \$10 for his interview and given four coupons with which to recruit more jazz musicians to interview. After the successful completion of three of these recruits' interviews, the 'seed' was paid an additional \$15 per interview up to four interviews. Each 'recruit' then became a 'recruiter' after his own interview and followed the same patterns and received the same incentives. These modest incentives did several things:

- 1) they sent a signal to the jazz musicians' community that their time and their contribution were meaningful;

- 2) by being modest in amount, they prevented people trying to make a major portion of income through this project;
- 3) by limiting the number of coupons to four per person, the bias of oversampling one particular group was eliminated.

The number of jazz musicians interviewed in the four Metro Areas were: 264 in New York, 300 in San Francisco, 110 in New Orleans and 59 in Detroit, a total of 733.

Tying together the recruiter and the recruit through a system of coupons and modest incentives results in the identification of pre-existing social relationships and allows the identification of homophily—or the tendency to recruit persons like oneself. Homophily can tell us about the social structure of the jazz community.

*Social Structure:* Blau (1977) and Rapoport (1979) have defined social structure with a precise meaning when defined quantitatively. A system lacks structure if social relationships are randomly formed. As described in Heckathorn and Jeffri, individuals are “indifferent between ties formed within and outside the group,” thus, “the proportion of in-group ties equals the proportional size of the group.” (Heckathorn and Jeffri, 2001)

### **Advantages and Challenges of RDS**

*Identifying jazz musicians:* A primary advantage of RDS is the musicians’ referral and coupon system. In past artist studies, only the artists who joined organizations, or were most vocal or visible or marketed, were included in a sample. By using jazz musicians both to identify and recruit other musicians, the validation from within the field strengthens the likelihood of reaching the target sample and reaches out to those artists who do not join organizations, who operate at the grassroots, community level as well as well-known artists.

*Selecting a Sample:* Traditional ways that artists have been identified show the need for a different method:

General population surveys: a very large sample would be required to ensure that even a small number of jazz musicians were sampled.

Household surveys, random digit dialing (phone surveys): privacy concerns and unstable living arrangements (several families living in one apartment even when one name appears on the lease, for example), prevent reaching the desired population. The U.S. census does not have the capability of separating out jazz musicians from other types of musicians or composers. (Even the musicians' union cannot separate out jazz musicians from other musicians.) Here, there are two common dilemmas. The researcher using data from census and employment surveys ensures a representative sample of a population defined in a rigorous, consistent way. The definition of artist, however, frequently departs from the one the researcher would have chosen himself. Typical difficulties include: undercounting artists with multiple jobs and sporadic employment; and overestimating income for those artists who derive at least some income from their art. Census categories can change overtime making comparability impossible, and often do not isolate the particular kind of artist under scrutiny music. For countries outside the United States, census data are collected differently and, in some countries like Finland, official records rely on a combination of census data and official registers. For the studies he has conducted for the Australia Council, economist David Throsby, at a meeting of artist researchers in Princeton in May 2000, remarked on the difficulty in targeting a representative sample of artists, even in a country where government subsidy is the principle vehicle for artist support.

Location sampling: Identifying locations where members of the desired population can be found and then deploying interviewers requires large and public locations, and mitigate against a representative sample. (For example, not all jazz musicians attend jazz festivals.)

Institutional samples: This is the traditional method for studying artist populations, but it is an inaccurate representation since the sample is based only on those who belong to the institutions from which the sample is taken. This is true of membership lists and directories of professional organizations. For the researcher relying on organizational or membership lists or directories (including union membership lists), while these often include a broad range of artists, they do not provide a known, consistently defined population we can call representative of the artist community. Common disadvantages with this approach include oversampling of the “joiners” and of artists in fields where membership in unions is strongly regulated like symphony orchestra musicians, and undersampling of artists who are “isolates” like painters.

Chain-referral sampling is a form of convenience sampling about which no claims of representativeness can be made. Especially the most familiar snow ball sampling, while considered a form of convenience sampling, cannot claim representativeness of its subjects. Since the choice of initial subjects cannot be random, the sample begins with a bias and, as the sample expands during subsequent waves, additional biases occur. These include volunteerism (more cooperative subjects agree to participate, thereby underrepresenting less cooperative ones), differentials in both recruitment and network size—with some groups recruiting more peers than others; and groups with larger personal networks recruiting more peers, resulting in oversampling of these groups; and differences in homophily “or the tendency toward in-group recruitment, because groups with greater homophily will be over-sampled.” (Heckathorn and Jeffri, 2001)

A system can be considered structured if it reflects homophily or heterophily. Homophily refers to the tendency to form within-group ties and has historical basis in social class, prestige, age, education, race and ethnicity. (Heckathorn and Jeffri, 2001; McPherson and Smith-Lovin, 1987). Heterophily is a tendency to form ties outside



the group. Social structure, then, is based on both the form of relationship and the type of group.

### **How Many Artists?**

For the first time outside the U.S. census (a source which many researchers do not find useful), we are able to project the size of the jazz universe in three of the four Metro areas. Using a method called capture-recapture (Wittes and Sidel, 1968), we used the overlap of the American Federation of Musicians (AFM) union jazz musicians who participated in a parallel this study, and the RDS musicians, to answer the “How Many Artists” question.

By comparing the number of jazz musicians who are union members (New Orleans=1,014; New York=10,499; SF=2,217) with the ones in the RDS survey, the estimated size of the jazz universe is as follows:

New Orleans 1,723

New York 33,003

San Francisco 18,733

### **Affiliation Patterns**

The affiliation patterns of jazz musicians in New York and San Francisco show that they form a fairly integrated community unlike jazz musicians in the Netherlands in a study by Tjeunis Idjens. This community is organized by levels of professional contacts and activity, not so much by choice of musical style. This is reflected in factors such as income from music and the number of groups in which the respondent is involved, and also professional contacts as reflected in network size.

It is well known that, aside from the handful of ‘high earner’ stars, artist income distributions are steeply stratified. 1990 Census figures give the median income for actors and directors as \$22,000; in 1997, Actors’ Equity gave the median income for actors from all sources including work as an actor as \$30,000. Social stratification

involves other dimensions besides income, but when prestige and influence within the profession are correlated with income, generally those with greater prestige tend to have more income and greater influence. In the New York and San Francisco Metro Areas, income from music has a stronger effect on affiliation than do other forms of income. The higher-income-from-music group has the greatest homophily for all but the highest income category. This reflects the greater status in the jazz musician community of those who perform for money. Income from music exhibits a more clear-cut structure in San Francisco. Those who earn more than \$5,000 from music are substantially homophilous (41%) while those who earn \$5,000 or less are substantially heterophilous (146%). As one San Francisco musician says, "The musicians who are doing financially well hang together and form exclusive cliques."

Types of income other than income from music tend to have a smaller effect on homophily in both New York and San Francisco, reflecting the strength of the jazz musician community's focus on commercial performance. (Heckathorn and Jeffri, 2003)

Demographic factors such as race, ethnicity and gender also affect affiliations. By using a breakpoint analysis, numerous instances were revealed of core-periphery structures (or patron-client structures: this structure exists when those of highest status affiliate directly with one another, and people of lower status interact primarily through those of higher status) and cohort structures (or scalar stratification systems: this structure exists when ties are formed with people of similar status). This reinforces the image of U.S. jazz communities as rather highly integrated systems. This is despite some musicians' descriptions of jazz artists as lone wolves, "self-contained and self-assured and unwilling to be in a group." (NYC RDS interview) (Heckathorn and Jeffri, 2003)

Generally in U.S. society, the level of education is correlated strongly with social status. In New York, when respondents were divided into college graduates (36%) and

non-college graduates (64%), education was found to have no significant effect on affiliations. Additionally, in terms of network size—how many jazz musicians do you know who also know you—education was no determinant of network size until the doctoral level. Thus, whether a jazz musician has an eighth grade education or a Master's degree, the size of his network of other jazz musicians will not be influenced. Those with doctoral degrees, however, had networks eight times the size of musicians with other educational levels.

Gender and age are significant factors among jazz musicians in terms of their affiliations. Older musicians exclude younger ones to a substantial degree, whereas younger musicians are inclusive of older ones. This imbalance is possible because older musicians tend to have larger networks, averaging 248 for older versus 147 for younger musicians. Greater professional experience and recognition are likely responsible for these larger networks and because this reflects their greater power, "the older musicians provide an example of what is termed *power homophily*, and the effect is to produce *exclusion homophily* among the younger musicians." (Heckathorn in Jeffri, 2003). Finally, in New York, there is only a moderate level of race-based homophily, supporting the view of jazz musicians as a racially inclusive group.

Affiliation among New York musicians is affected positively by frequency of travel and touring, which may give opportunities to form social bonds, and by union membership, union members having substantially larger networks. It should be noted that none of the 18-24 year old respondents were union members and only 21 percent of those aged 25-34 were union members. For the 35-44 year olds union membership climbs to 41 percent, to 47 percent for those 45-54, 41 percent for those 55-64 and 67 percent for those over 65. Thus, union membership may reflect affiliation by age.

## Challenges

Since this was the first time this method has been applied to the arts, there are some lessons to be learned from its challenges.

**Contact pattern and use of coupons:** Traditionally in RDS studies, it takes only four “waves” of coupons to reach deep into the community. We found some behavior unique to jazz musicians in each community. First, our assumption that jazz musicians have a high contact pattern because they “hang out together” was only partially true—they DO hang out together. But as the data show, it is often by musical style that they do so. This pattern was also revealed in the mid-1990s in France. In *Les Musiciens de Jazz en France* Philippe Coulangeon showed that both geography and differences in style tended to separate French jazz musicians. This required an increase in the number of coupons from three to four to stimulate participation.

In Detroit, where jazz venues have been declining for a number of years, the jazz community is strong but not cohesive. It is, in fact, a very fragmented community. The Detroit community has been described as including jazz old-timers, established jazz artists, women artists and young emerging jazz artists. While some people might appear in more than one category, there was little communication among the four groups. Jazz musicians neglected to pass out coupons, especially across groups, hence, the small sample of 59 musicians, impossible to use in our results.

Some city coordinators enlisted the help of jazz musicians in “talking up” the study. In San Francisco, a group of “public relations representatives” went out into the jazz community to explain the study and recruit musicians in clubs, bars, festivals, and soundchecks. In New York, several public presentations were made to organizations like International Women in Jazz.

**Location and transportation:** In each city, an interview venue was chosen that would be user-friendly to jazz musicians, but in all cities (and especially Detroit), musicians

lived as much as 1-2 hours away. Often, transportation was a problem. While interviewers tried to be flexible and go to locations where jazz musicians congregate, this was more difficult in Detroit where there are fewer opportunities, fouler weather, poor transportation and a difficult economy.

**Scheduling:** In all cities, jazz musicians would book appointments for interviews and cancel three, four and five times. Often they would not show up when a gig took precedence. Even when City Coordinators phoned to remind musicians of an interview for the following day, the system did not always work.

**Incentives:** The financial incentives were extremely modest. For his own interview and the redeemed coupons of musicians he recruited, a jazz musician could make a maximum of \$70. The incentives were important as a token of appreciation, but we realized they were just a token. In Detroit, this small money was welcomed. In San Francisco, some musicians who often said the money wouldn't even pay for gas, donated it back to the study. In New York, there were complaints that we should have paid union minimum for musicians' time, and indeed, interviews took an average of one to one and a half hours each.

**Computer program:** Dr. Douglas Heckathorn, who originated RDS, also developed a computer program for tracking the coupons. This allows for very important analysis of networks among jazz musicians, but it also required a steep learning curve for the coordinators and their staffs.

**Management of the project:** Before the interviews began, the four City Coordinators were brought to New York for an intensive two-day training session to learn the method, master the computer program, ask questions, and begin to use each other as resources. Several conference calls were held throughout the study period to share new methods and get peer support and advice.

The project was extremely management-heavy, partly because this was a first time methodology to capture artists, but also because it required separate checking accounts and vigilant tracking of coupons, constant scheduling and rescheduling of interviews, and substantial outreach. It was also an expensive study for the arts. While \$70 seems like a small amount, the original target of 1,200 musicians per city made that number rise substantially.

**Responses:** The original plan was to interview 300 musicians per Metro Area, for a total of 1,200. Due to many of the problems listed above, Detroit was unable, at 59 responses, to gather enough information for this report and New Orleans, with only 110 responses, was disappointing.

## **Conclusion**

Despite the management challenges delineated above, Respondent-driven sampling remains an exciting and valuable methodology for surveying artists, one which, under the right conditions, may change the entire face of information gathering from them.

The analysis of social networks provides a deeper look at the relationships of jazz musicians in relation to each other and their community, which appears to be a highly integrated one, racially inclusive, where older musicians exclude younger ones to a substantial degree. This is a community for whom affiliation patterns are strongly affected by touring and travel, and by union membership, and are affected very little by education and income levels. This is important information for managers, funders, policy and decision makers who may assume otherwise, simply because jazz musicians, until now, have been difficult to identify through traditional organizations and groups.

The lessons we have learned about strong contact patterns, project management, attention to detail and local concerns will serve us well as the Research Center for Arts and Culture goes forward on a national study of storytellers. Not only will

we use what we have learned from our study of jazz musicians, we will branch out into potential coupon distribution through the Internet and continue to investigate both the social networks and the universe of artists.

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