

Orchestrating Even More Impartiality: Blind Auditions Led Orchestras to Hire More Asian Musicians, Too

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Abstract: Goldin and Rouse (2000) showed that advent of blind auditions caused major orchestras to hire more women musicians. Blind auditions had a similar effect for Asian musicians.

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Goldin and Rouse (2000) found that when orchestras moved to blind auditions, the number of female musicians they hired rose substantially. We extend their results to show that the same thing happened with Asian musicians: following introduction of blind auditions, the number of Asian musicians also rose substantially and immediately. This suggests that before the blind auditions orchestras discriminated against Asian players. If so, the discrimination in question occurred outside the South, after the passage of the Civil Rights Act of 1964, in a highly skilled occupation, and in a field where most of the audience was highly educated.

The reason we cannot be sure about discrimination is that part of the increase in hiring of Asian musicians may have occurred because blind auditions may have caused the number of Asians who auditioned to increase, and the greater number of auditionees may have been responsible in part for the rise in hiring. Because they had data on auditionees, Goldin and Rouse could establish that blind auditions increased the number of female auditionees, and that part of the rise in female hiring was due to increased number of auditionees. We do not have data on auditionees and so do not know whether Asian auditionees increased the way female auditionees did.

Even if the number of Asian auditionees increased, it is unlikely that the increase in Asian musicians hired was not due at least partially to a reduction in discrimination. First, the increase in hiring may have been larger than the increase in auditionees, and the marginal auditionees may have been well qualified than the inframarginal auditionees. That was what Goldin and Rouse found for women. Second, even if the possible increased number of auditionees were completely responsible for the increased number of hires, the number may have increased because Asian musicians perceived a reduction in discrimination (even if one did not occur). Auditioning is expensive, and musicians who think they will be discriminated against may decide not to audition for that reason. In that sense, we can say that the increase in hires was due to a combination of a reduction in actual discrimination and a reduction in anticipated

discrimination. (To see this argument in an extreme and hypothetical case : Suppose that originally orchestras had big signs that said, ‘No women or Asians need apply,’ but in fact if any had applied the people making the hiring decisions would have treated them fairly. Then the signs are removed, and more women and Asians audition and get hired. Even though we cannot in this case directly attribute the increased hiring to changed dispositions to hire on the part of the people making the hiring decisions—hence, discrimination by them—we can attribute it to a reduction in the signals about discrimination. Similarly, for women and Asian musicians, to the extent that blind auditions encouraged more auditions, it was by reducing the signals about discrimination.)

1. Literature review

We draw on two strands of literature: that on orchestras, and that on labor market discrimination against Asians.

Goldin and Rouse (2000) examined how the introduction of blind auditions affected the hiring of female musicians at top American orchestras, as we have noted. We follow much of their identification strategy and use some of their data; the main difference is that we look at Asians rather than women. They also use two data sets: one on auditions, and one orchestra rosters. The audition data set is confidential and we have nothing like it, and so we cannot replicate any of their results from this data set. We have replicated most of their data on orchestra rosters, and extended their results to include Asians.

The literature on labor market discrimination against Asians is more varied. Banerjee et al. (2018) is the paper most closely related to this. In a large Canadian resumé audit dealing with skilled positions, they find that large employers were 20 percent less likely to seek interviews with applicants with Asian-sounding names, and small employers were 40 percent

less likely. In contrast, we look at real Asians rather than resumé with Asian-sounding names, actual performance of job tasks rather than claims about experience, hiring decisions rather than call-backs for interviews, and consequential rather than hypothetical transactions.

Most of the rest of the papers on Asian labor market experience look at data sets where individuals are not linked to specific employers, and so cannot test for disparate treatment. Examples are Junanker et al. (2006) for Australia, Arabsheibani and Wang (2010), Hilger (2016), Hisnanick (2003), Yoo (2009), Weinberger (1998), and U.S. Commission on Civil Rights (1988).

2. Orchestras and auditions

The orchestral hiring process is complex and consists of multiple rounds of auditions. Goldin and Rouse (2000) provide a detailed account of how audition procedures evolved during 1950s and 1990s in American symphony orchestras. Overall, there was a gradual democratization in the hiring process. Before 1960s the hiring of new players largely depended on the will of the music director, namely the chief conductor of the orchestra. Music directors back then were disciplinarians at best and authoritarians at worst. One crucial task for the music director/chief conductor is to ensure each member of the orchestra executes the instructions given from the podium. For many years music directors retained complete control over orchestral personnel. Music directors decided which musician to hire or to fire¹. Auditions often were mere formalities.

The Boston Symphony Orchestra (BSO) initiated the policy of blind auditions in 1952, although the actual reason for the change remains unknown. During 1960s and 1970s, orchestral musicians and the musicians' unions began to challenge the authoritarian control of the music director over the orchestra's hiring and firing of the players. "Blind auditions" were introduced

¹ They are almost always non-Hispanic whites.

as a way to curtail the music director's autocratic power. Most other top American orchestras slowly followed BSO's example in 1970s and 1980s.

Today, orchestras have evolved to a more democratic process of hiring. Typically, it is led jointly by an audition committee composed of elected orchestra members and the music director, partly because of the pressure from musicians' unions. Applicants go through three rounds of live-auditions: the preliminary, the semi-final and the final. However, in many cases especially of the top orchestras, there is a pre-screening round before the preliminary, and a trial period if the candidate passes the final of the live-auditions. The pre-screening round requires prospective applicants to submit résumés and audition tapes/videos before they can be invited to play in the live-auditions; the trial asks the final candidate to play with the orchestra in regular rehearsals and concerts before being formally offered the position. Douglas Yeo (2018), a bass trombonist of Boston Symphony Orchestra from 1985 to 2012, offered a comprehensive summary of the existing audition system in the U.S. on his personal website².

“In terms of maximizing efficiency and reducing costs, the role of pre-screening is to limit the number of applicants to perform in the live-auditions in front of a jury. It is a cost-saving strategy to both the orchestra and the applicants. Orchestras endure high costs in order to hold live-auditions that span several days; the applicants endure high costs in traveling expenses and accommodations. The role of trials is thus to ensure that the player whom the audition committee has selected in the final is actually a good fit for the orchestra. Because the full-time orchestral jobs in top orchestras are tenured positions, orchestras do not want to hire a virtuoso soloist but who is unable to adapt his or her playing for an orchestral environment.”

The high cost to applicants that Yeo discusses is one reason why musicians who think that they might be discriminated against might be reluctant to audition.

² Douglas Yeo, “Symphony Auditions: Preparation and Execution” *Douglas Yeo Trombone* online, accessed December 10, 2018, http://www.yeodoug.com/resources/symphony_auditions/yeoauditions.html.

It is important to note that what we (and Goldin and Rouse) call “blind auditions” are not totally blind. First, the pre-screening and the trial remain non-screened. During the trial period, the final candidate is invited to participate in orchestral rehearsals and concerts as a regular member of the orchestra. This process cannot be “blind” and serves an important purpose of testing whether the player can integrate with other players of comparable abilities and experiences.

Name	Code	Preliminaries	Semi-finals	Finals
	A	Blind since 1973	Blind (varies) since 1973	Not blind
SANFRAN	B	Blind since at least 1967	Use of screen varies	Blind 1967–1969; since winter 1994
NYPHIL	C	Blind since at least 1979 (definitely after 1972)	Not blind: 1991–present; Blind: 1984–1987	Not blind
	D	Blind since 1986	Blind since 1986; varies until 1993	1st part blind since 1993; 2nd part not blind
	E	Use of screen varies until 1981	Use of screen varies	Not blind
STLOUIS	F	Blind since at least 1972	Blind since at least 1972	Blind since at least 1972
PITTS	G	Blind since 1986	Use of screen varies	Not blind
CSO	H	Blind since 1970	Not blind	Not blind
MET	I	Blind since 1979	Blind since 1979	Blind since fall 1983
BSO	J	Blind since 1952	Blind since 1952	Not blind

CLEVE	K	Not blind	Not blind	Not blind
Known Identity:				
SANFRAN: San Francisco Symphony Orchestra				
NYPHIL: New York Philharmonic				
STLOUIS: St Louis Symphony Orchestra				
PITTS: Pittsburgh Symphony Orchestra				
CSO: Chicago Symphony Orchestra				
MET: Metropolitan Opera Orchestra or MET Orchestra				
BSO: Boston Symphony Orchestra				
CLEVE: Cleveland Orchestra				
Unknown Identity³ :				
LAPHIL: Los Angeles Philharmonic				
DSO: Detroit Symphony Orchestra				
PHILLY: Philadelphia Orchestra				

In “blind” auditions, a screen is placed between the jury and the auditionee so that the jury members cannot identify the auditionee. The true identity of the auditionee is replaced by and corresponds to an individual number assigned by the orchestral manager in advance of the audition. Orchestras began to adopt the use of screens in live- auditions at different pace since the 1970s. Thus, only the orchestral manager knows the true identities of the auditionees. Table 1, reconstructed after Goldin and Rouse (2000), states the years in which major American orchestras adopted screens. In Goldin and Rouse (2000), the identities of individual orchestras were masked and replaced by letters due to confidentiality. After contacting orchestral archives individually, the identities of 8 out of 11 orchestras were uncovered. For three orchestras we

³ The respective departments of these three orchestras did not respond to the email inquiries with regard to the years of their implementations of ‘blind auditions’.

don't when the "blind" policy was implemented because of non-response and non-disclosure by their archive departments.

It is important for identification that orchestras did not adopt blind auditions for any reason that would also induce them to hire more Asian musicians. Goldin and Rouse (2000, p. 723) write: "Of particular concern is that more meritocratic orchestras adopted screens earlier, producing the curious result that the screen increased the likelihood that women were hired." They show that the time of adoption the screen is not related to the number of women members, or the "Big Five" status of the orchestra, and is slightly negatively related to the proportion of new members. Hence they do not believe that endogeneity provides any threat to identification for their project.

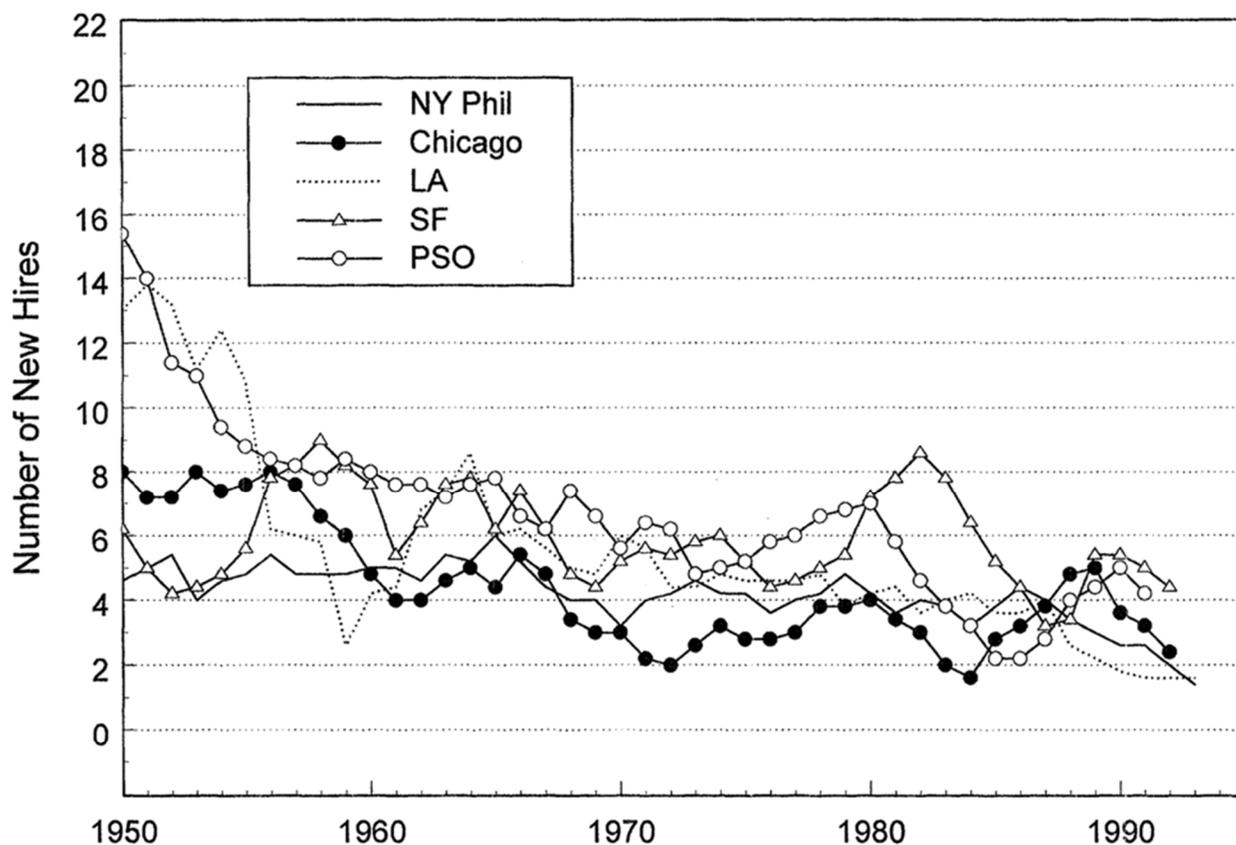


FIGURE 2. NUMBER OF NEW HIRES IN FIVE ORCHESTRAS, 1950 TO 1990's

Source: Roster sample. See text.

Since a full-size symphony orchestra maintains no more than 110 full-time musicians, the success rate for getting an orchestral job in the top orchestras is extremely low. Using the case given by the musicians' union of the Metropolitan Opera Orchestra (MET)⁴, MET received 208 submissions of résumés for an audition held in 2014. The passing rate of résumés is roughly between 0.3 and 0.4; 42 out of 208 were asked to submit additional audition tapes and only 3 out of those 42 applicants were invited to play for the live-audition. The rate of advancing from preliminary to semi-final is $15/67 = 0.224$; the rate of advancing from semi-final to final is $2/15 =$

⁴ William Short, "Auditioning for the MET Orchestra," *The Metropolitan Opera Orchestra Committee* online, April 17, 2014, <http://www.metorchestramusicians.org/blog/2014/4/16/auditioning-for-the-met-orchestra>

0.133. Finally, the orchestra had to choose 1 winner for the position out of 2 final candidates. The success rate of this audition is $1/208 = 0.0048$.

Becoming a member of a top orchestra takes a long time. Good instrumentalists begin to learn to play the instrument around the age of five. At the age of eighteen, they go to conservatories for four years of advanced training before becoming qualified orchestral players. It is rare for a young instrumentalist to play in a major orchestra as the first job. Because the success rate of orchestral auditions is really low, after graduation, they try out multiple auditions wherever there is a vacancy. They gain practical experience by auditioning and probably work as substitute players for about 2 years during the same time. They would most likely win a position in smaller regional orchestras that pay per service (rehearsals plus concerts). If they want to play in major orchestras that provide tenure contracts, they would continue to audition for at least two years, depending on job availability and luck. Eventually, for ones who persist, they would land positions in top orchestras after eight to ten years after graduating college. So the “gestation period” for orchestral members is on the order of 25 to 30 years. For large numbers of Asians to be entering major orchestras in the 1980s, for instance, learning Western classical instruments would have had to have been popular among Asian populations in the 1950s.

3. Data and methods

Goldin and Rouse (2000) collected data from two sources: the audition records of individual auditionees obtained from orchestra personnel managers and orchestra archives; the personnel rosters of orchestras obtained by collecting musicians’ names from concert programs. Of the two types of data, only the personnel roster data were public; the actual audition records were

confidential. The absence of the actual audition records prevents us from estimating the probability of an individual being advanced from an audition round at an orchestra.

Therefore, our dependent variables will simply be the number or proportion of Asians hired each year. The number of Asians hired is the product of the number of Asians who apply and the probability that an Asian will be hired conditional on applying. Variation in the number of Asians hired can be due to variation in either the number applying or conditional probability of being hired. But the number applying is plausibly an increasing function of the conditional probability of being hired, and so the product should also be an increasing function of the conditional probability of being hired. The number applying also depends on the number of qualified musicians, but that number should not increase discontinuously.

Two articles “Asian American ethnic identification by surname” (Lauderdale and Kestenbaum 2000)⁵ and “Development and Validation of a Surname List to Define Chinese Ethnicity” (Quan et al. 2006)⁶ conveniently compiled for us lists containing characteristic ethical Asian surnames. We used the appendix of the two studies on the identification of Asian-American surnames to identify the Asian orchestral members in our data.

Although not all roster data share a similar time interval, given that no major orchestras had full-time Asian members before 1940 and all began to have new Asian members after 1950, we readjust a general time interval for all orchestras to be between 1931 and 1995.

Another minor issue with the data is that we were only able to define “blind auditions” in this paper as “any blind auditions” occurred in the hiring process. Due to the limitation of the source data provided by Goldin and Rouse, we were unable to refine our definition of blind audition to

⁵ Diane Lauderdale and Bert Kestenbaum, “Asian American ethnic identification by surname,” *Population Research and Policy Review* 19(3), 2000: 283-300.

⁶ Quan et al., “Development and Validation of a Surname List to Define Chinese Ethnicity.” *Medical Care* 44(4), 2006: 328-33.

be “only blind preliminaries and/or semifinals vs. completely blind auditions” as it was defined by the Table 10 in Goldin and Rouse.

We will test for the effect of blind auditions with two different equations. Because many orchestras did not use screens in the final round, we use the year in which the screen was first used in the preliminary round as the year in which the blind audition policy was implemented.

First, we will use the proportion of members of each orchestra who are Asian in each year as our dependent variable. We call this the Asian rate. We will estimate the following equation by OLS:

$$Y_{it} = \alpha + \beta\delta_{it} + \lambda_t + \gamma_i + \varepsilon_{it} \quad (1)$$

Here, Y_{it} denotes the Asian rate for orchestra i in year t ; δ_{it} is a dummy variable taking the value 1 if and only if orchestra i uses blind auditions in year t ; λ_t are year fixed effects, and γ_i are orchestra fixed effects. We estimate equation (1) for the eight orchestras for which we have data. Our primary interest is in β , the effect on the Asian rate of blind auditions. The rising numbers of Asians with training in Western music should be picked up in the year fixed effects.

Second, we will concentrate on newly hired orchestral members. The Asian rate as we defined it above is a stock not a flow, and blind auditions should affect the flow of Asian members into the orchestra, not the flow out. Hence we will also estimate the following Poisson regression:

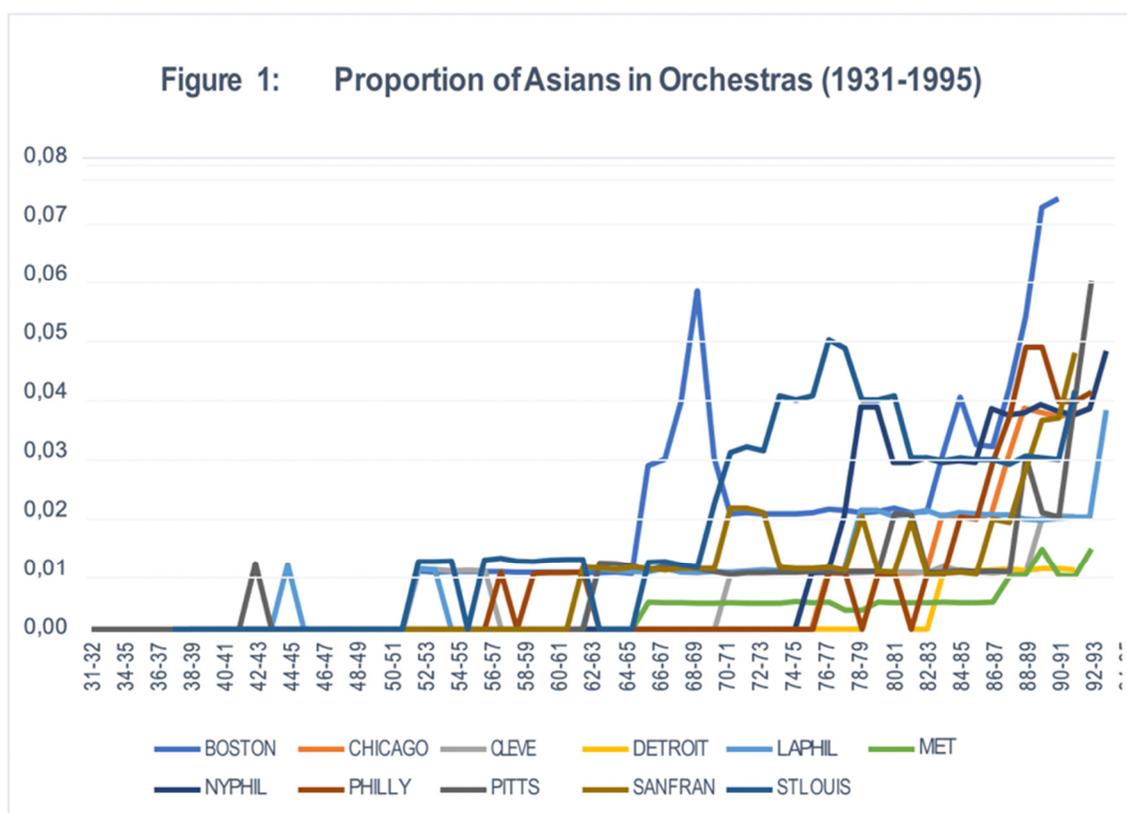
$$E(y_{it}) = \alpha + \beta\delta_{it} + \phi h_{it} + \zeta S_{it} + \lambda_t + \gamma_i \quad (2)$$

Here, y_{it} denotes the number of Asian orchestral members hired by orchestra i in year t ; h_{it} denotes the total number orchestral members hired by orchestra i in year t ; and S_{it} denotes the total size of orchestra i in year t . Thus we control for both the total number of members hired and the size of the orchestra, as well as using orchestra and year fixed effects.

Thirdly, we use a Probit in addition to the Poisson.

4. Results

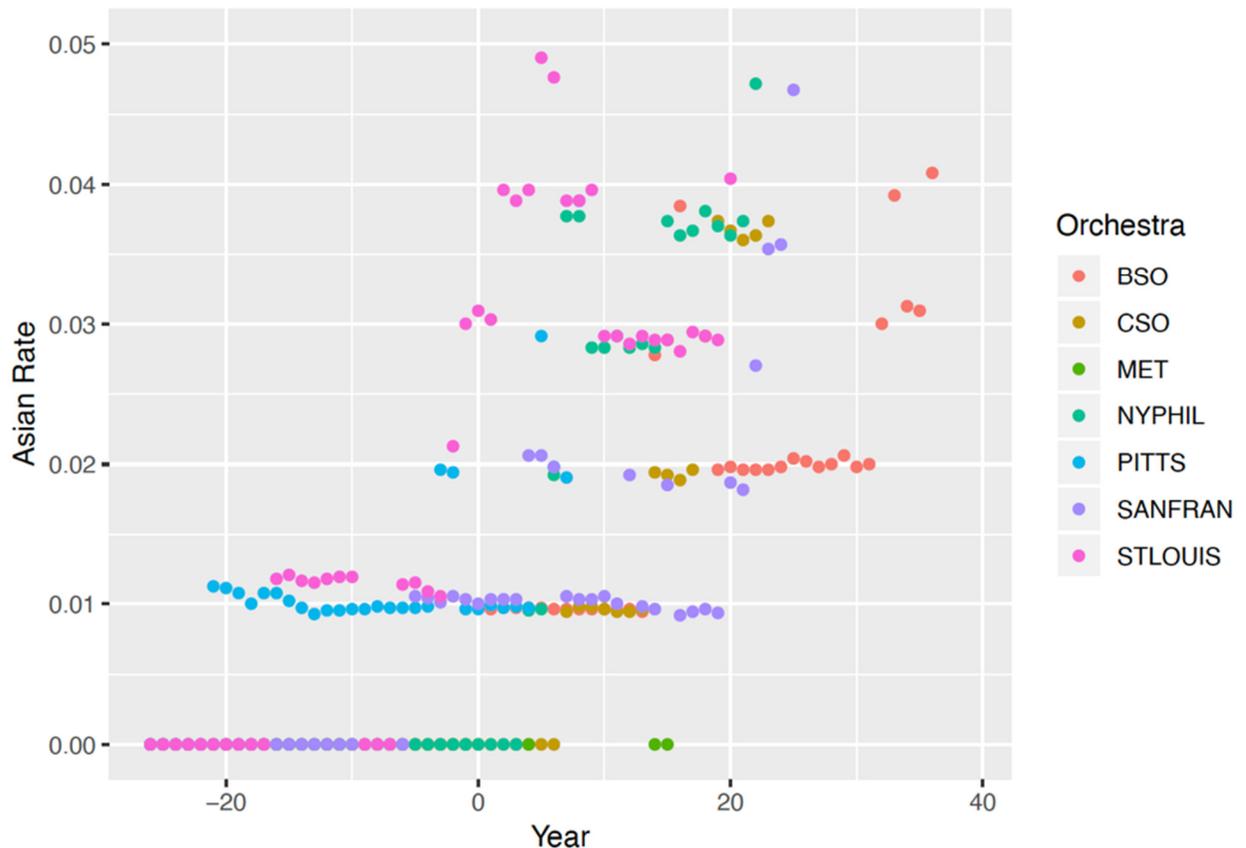
A. The Overall Trend in the Asian rate



Despite the limitation of the existing data, we are able to show the overall trend in the proportion of orchestral players who are Asian, using the roster data collected by Goldin and Rouse (2000). The initial roster data contains annual records of all orchestral personnel of 11

orchestras. Most of the names repeat over a number of years indicating the period in which a particular player was a member of the orchestra. Figure 1 shows graphically the trend over 65 years. A sharp drop or rise implies that an Asian player was hired as a substitute by the orchestra or was offered a one-year contract for that particular year. Major orchestras did not have Asian players until 1950s, and the proportion of Asian players is consistently low between 1950s and early 1980s. The proportion of Asian players started to increase around 1985. This general upward trend coincides with the years in which most of the orchestras began to use screens in live-auditions.

B. Graphical analysis of the effect of blind auditions



From Table 1, seven orchestras changed their audition policy from “not blind” to “blind” in our study period. In Figure 2 we show the Asian rate for these orchestras as a function of years before and after the date on which they first used the screen... Figure 2 shows a substantial increase of the Asian rate and a fairly continuous up-ward trend after $t = 0$. It suggests strongly that blind auditions raised the Asian rate.

C. Regression results

Table 2 summarizes the results of equation (1), the OLS regression for the Asian rate.

Table 2: Regression Results for the Asian Rate		
OLS regression		
	Coefficient	
Any blind auditions	0.00567 (0.00135)	
R-squared	0.66107	
Number of observations	463	

Dependent variable is the Asian rate. Controls for year and orchestra. Robust standard error in parentheses.

The coefficient on blind auditions is positive and significant at the 1 percent level. Orchestras with blind auditions have on average one-half more Asian orchestral members in the years in which they have blind auditions. Since even in recent years, orchestras rarely have more than

five or six Asian members, and usually have fewer, this result has economic as well as statistical significance.

Table 3 summarizes the results for the Poisson regression for Asian hires.

Table 3: Regression results for Asian hires		
Poisson regression		
	Coefficient	Coefficient
Any blind auditions	1.3335 (0.3157)	1.77605 (0.37832)
Total hires		0.02571 (0.02651)
Size of the orchestra		0.13123 (0.02884)
AIC	308.78	294.95
Number of observations	334	334

Dependent variable is number of Asian orchestral members hired. Controls for year and orchestra. Standard errors in parentheses.

Once again, blind auditions increase the rate at which Asian orchestral members are hired. The effect is large: about four times as many Asian musicians are hired when blind auditions are used, as when they are not used. Total hires and the size of the orchestra do not have significant effects.

Table 4 summarizes the results for the Probit regression for Asian hires.

Table 4: Regression results for Asian hires		
Probit regression		
	Coefficient	Coefficient
Any blind auditions	0.7692 (0.1816)	1.06984 (0.22300)
Total hires		0.01090 (0.01723)
Size of the orchestra		0.08665 (0.02213)
AIC	263.07	251.5
Number of observations	334	334

5. Conclusion

Both OLS and Poisson results have shown that the use of 'blind auditions' in orchestra's hiring process increases the number of Asian players in top orchestras. Goldin and Rouse (2000) conclude by stating that the introduction of blind auditions helped female musicians in their quest to join top orchestras. We have shown that it helped Asian musicians, too. Neither outcome was anticipated, but both probably made the orchestras better.

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