# De-stereotyping Public Performance Evaluation <br> Yixin Liu and Chengxin Xu 

## Supplemental Information

## Appendix A: Study 1 <br> Appendix A1: Experimental intervention

After a brief introduction to the American high school scenario, we randomly assigned subjects into one of the following three conditions.
Group 1: Separate Evaluation Condition: Black School
School A

Race majority of students: Black

Students' average SAT scores:
Evidence based Reading and Writing: 615; Math: 530
Imagining that all school expenses are covered by government money (e.g., voucher), to what extent
would you consider sending your kid to this school?

| Impossible       <br> 0 10 20 30 40 50 60 | 70 | 80 | 90 | 100 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Group 2: Separate Evaluation Condition: White School
School A
Race majority of students: White
Students' average SAT scores:
Evidence based Reading and Writing: 615 ; Math: 530

## Group 3: Joint Evaluation Condition

|  | School <br> A | School <br> B |
| :---: | :---: | :---: |
| Race majority of students | White | Black |
| Students' average SAT evidence-based reading <br> and writing | 615 | 615 |
| Students' average SAT math | 530 | 530 |

Please indicate your opinion on School A and B.
How well do you think each school is doing?

| Very <br> bad <br> 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | Very <br> good <br> 100 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| School A |  |  |  |  |  |  |  |  |  |

Imagining that all school expenses are covered by government money (e.g., voucher), to what extent would you consider sending your kid to this school?

| Impossible |  |  |  |  |  |  |  | Very possible |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 010 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| School A |  |  |  |  |  |  |  |  |  |

School B

[Manipulation check] So far, which information have you seen in the previous part of this survey?

- I only saw School A, and its race majority of students was white.
- I only saw School A, and its race majority of students was black.
- I only saw School A, and its race majority of students was Hispanic.
- I saw two schools. The race majority of students in School A was white, and that of School B was black.


## Appendix A2: Characteristics of sample

Table A1. Study 1 Sample
Note: $P$-values are generated from ANOVA $F$-tests.

|  | Total Sample |  | Separate Evaluation |  |  |  | Joint Evaluation |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $N=988$ |  | Black School White School |  |  |  | $N=341$ |  |  |
|  |  |  | $N=316$ |  | $N=331$ |  |  |  |  |
|  | Frequency | \% | Frequency |  | Frequency |  | Frequency | \% | $P$-value |
| Female | 520 | 53 | 178 | 57 | 166 | 50 | 176 | 52 | 0.25 |
| Male | 466 | 47 | 137 | 43 | 164 | 50 | 165 | 48 | 0.25 |
| White | 656 | 67 | 221 | 70 | 219 | 67 | 216 | 63 | 0.20 |
| Black | 130 | 13 | 37 | 12 | 38 | 12 | 55 | 16 | 0.14 |
| Hispanic | 87 | 9 | 24 | 8 | 31 | 9 | 32 | 9 | 0.65 |
| Asian | 85 | 9 | 27 | 9 | 27 | 8 | 31 | 9 | 0.92 |
| Other | 28 | 3 | 7 | 2 | 14 | 4 | 7 | 2 | 0.17 |
| Age: 18-29 | 353 | 36 | 109 | 34 | 116 | 35 | 128 | 38 | 0.68 |
| 30-49 | 494 | 50 | 162 | 51 | 168 | 51 | 164 | 48 | 0.68 |
| $\geq 50$ | 141 | 14 | 45 | 14 | 47 | 14 | 49 | 14 | 1.00 |
| Income: $<\$ 25 \mathrm{k}$ | 175 | 18 | 55 | 17 | 57 | 17 | 63 | 19 | 0.90 |
| \$25k to \$75k | 503 | 51 | 164 | 52 | 168 | 51 | 171 | 50 | 0.92 |
| $\geq \$ 75 \mathrm{k}$ | 308 | 31 | 97 | 31 | 105 | 32 | 106 | 31 | 0.95 |
| College degree | 592 | 60 | 189 | 60 | 197 | 60 | 206 | 60 | 0.98 |
| Conservative | 219 | 22 | 74 | 23 | 67 | 20 | 78 | 23 | 0.58 |
| Liberal | 462 | 47 | 139 | 44 | 151 | 46 | 172 | 50 | 0.22 |
| Moderate | 307 | 31 | 103 | 33 | 113 | 34 | 91 | 27 | 0.09 |
| Parenthood | 443 | 45 | 141 | 45 | 152 | 46 | 150 | 44 | 0.88 |

## Appendix A3: Manipulation check (MC) and attention test (AT)

Figure A1. Study 1: Racial Stereotype
Note: This figure is generated with the sample who passed both MC and AT. Bars are $95 \%$ confidence intervals.



## Appendix B: Study 2

Appendix B1: Experimental intervention
After a brief introduction to the American high school scenario, we randomly assigned subjects into one of the following three conditions. The students' average SAT scores in below graphics are random numbers between 1000 to 1190 .
Group 1: Separate Evaluation Condition: Black School
School A

Race majority of students: Black

Students' average SAT scores: 1109


Imagining that all school expenses are covered by government money (e.g., voucher), to what extent would you consider sending your kid to this school?


Group 2: Separate Evaluation Condition: White School
School A

Race majority of students: White

Students' average SAT scores: 1025
How well do you think this school is doing?

| Very bad |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |

Imagining that all school expenses are covered by government money (e.g., voucher), to what extent
would you consider sending your kid to this school?


## Group 3: Joint Evaluation Condition

|  | School A School B |  |
| :---: | :---: | :---: |
| Race majority of students | White | Black |
| Students' average SAT score | 1158 | 1121 |

Please indicate your opinion on School A and B.

How well do you think each school is doing?

| Very <br> bad <br> 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | | Very |
| ---: |
| good |
| 100 |

Imagining that all school expenses are covered by government money (e.g., voucher), to what extent would you consider sending your kid to this school?

| Impossible |  |  |  |  |  |  |  | Very possible |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 010 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| School A |  |  |  |  |  |  |  |  |  |

[Manipulation check] So far, which information have you seen in the previous part of this survey?

- I only saw School A, and its race majority of students was white.
- I only saw School A, and its race majority of students was black.
- I only saw School A, and its race majority of students was Hispanic.
- I saw two schools. The race majority of students in School A was white, and that of School B was black.


## Appendix B2: Characteristics of sample

Table B1. Study 2 Sample
Note: $P$-values are generated from ANOVA $F$-tests.

|  | Total Sample | Separate E | Evaluation | Joint Evaluation |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Black School | White School |  |  |
|  | $N=1002$ | $N=330$ | $N=338$ | $N=334$ |  |
|  | Frequency \% | Frequency \% | Frequency \% | Frequency \% | $P$-value |
| Female | 47347 | 15245 | 16550 | 15647 | 0.42 |
| Male | 52953 | 18655 | 16550 | 17853 | 0.42 |
| White | 68869 | 23168 | 22368 | 23470 | 0.80 |
| Black | 9610 | 319 | 3410 | 31 | 0.85 |
| Hispanic | 778 | 278 | 22 | 28 | 0.69 |
| Asian | 11712 | 3912 | 4313 | 3510 | 0.58 |
| Other | 232 | 103 | 72 | 6 | 0.59 |
| Age: 18-29 | 30531 | 9829 | 10632 | 10130 | 0.66 |
| 30-49 | 53854 | 19257 | 17955 | 16750 | 0.18 |
| $\geq 50$ | 15616 | 4714 | 4313 | 6620 | 0.04 |
| Income: $<\$ 25 \mathrm{k}$ | 11912 | 4614 | 27 | 4614 | 0.04 |
| \$25k to \$75k | 51752 | 16248 | 18356 | 17251 | 0.15 |
| $\geq \$ 75 \mathrm{k}$ | 36436 | 12938 | 11936 | 11635 | 0.63 |
| College degree | 63463 | 21162 | 21264 | 21163 | 0.86 |
| Conservative | 25025 | 7823 | 8726 | 8525 | 0.61 |
| Liberal | 47547 | 16248 | 16048 | 15346 | 0.76 |
| Moderate | 27628 | 9729 | 8325 | 9629 | 0.49 |
| Parenthood | 52052 | 15546 | 18957 | 17653 | 0.01 |

## Appendix B3: Manipulation check (MC) and attention test (AT)

Figure B1. Study 2: Racial Stereotype
Note: This figure is generated with the sample who passed both manipulation check and attention test. Bars are $95 \%$ confidence intervals.



Figure B2. Study 2: Students' Major Race, SAT, and their Effects on Outcomes
Note: This figure is generated with the sample who passed both manipulation check and attention test. Bars are $95 \%$ confidence intervals.


## Appendix C: Study 3 <br> Appendix C1: Experimental intervention

In the introduction section, subjects read:
Now, we invite you to share your opinion of high schools. Please imagine that you are under the situation that you are choosing a high school for your kid. Consider the following information carefully and answer related questions.
[Treatment] Only subjects in the demand group read the following information:
(The purpose of this exercise is so we can measure whether school's race majority of students affects how likely people are to make judgment of a high school. We expect that people prefer schools where majority students are White than schools where majority students are Black because of the historical advantages White students have on education outcomes.)

NOTE: There are no right or wrong answers for these questions.
In the next page, we show the same information as Study 2. The students' average SAT scores in below graphics are random numbers between 1000 to 1190 .

|  | School A School B |  |
| :--- | :---: | :---: |
| Race majority of students | White | Black |
| Students' average SAT score | 1158 | 1121 |

Please indicate your opinion on School A and B.


Imagining that all school expenses are covered by government money (e.g., voucher), to what extent
would you consider sending your kid to this school?

| Impossible |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | ---: |
| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

School A


School B
$\rightarrow$
[Follow up question] If you had to guess, what do you think the researchers conducting this study are trying to learn by having you state opinions for both schools? (Randomized question order)

- Whether people favor schools which race majority of students are White
- Whether people favor schools which students' average SAT scores are high
- Whether people favor schools which are tuition fee-free
- I don't know


## Appendix C2: Characteristics of sample

Table C1. Supplemental Study Sample
Note: $P$-values are generated from t-tests.

| Total Sample Demand Group Control Group |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $N=200$ | $N=115$ | $N=85$ |  |
|  | Frequency \% | Frequency \% | Frequency \% | $P$-value |
| Female | 10251 | 5649 | 4654 | 0.45 |
| Male | 9849 | 5951 | 3946 | 0.45 |
| White | 15376 | 9179 | 6273 | 0.31 |
| Black | 126 | 54 | 78 | 0.25 |
| Hispanic | 158 | 87 | 78 | 0.74 |
| Asian | 168 | 76 | 911 | 0.25 |
| Other | 42 | 43 | 00 | 0.08 |
| Age: 18-29 | 6533 | 3631 | 2935 | 0.63 |
| 30-49 | 11156 | 7061 | 4149 | 0.09 |
| $\geq 50$ | 2312 | 98 | 1417 | 0.05 |
| Income: < 25 k | 3417 | 1614 | 1821 | 0.19 |
| \$25k to \$75k | 11357 | 6860 | 4553 | 0.35 |
| $\geq \$ 75 \mathrm{k}$ | 5226 | 3026 | 2226 | 0.95 |
| College degree | 10854 | 6154 | 4755 | 0.80 |
| Conservative | 4522 | 2824 | 1720 | 0.47 |
| Liberal | 9648 | 5447 | 4249 | 0.73 |
| Moderate | 5930 | 3329 | 2631 | 0.77 |
| Parenthood | 10653 | 6456 | 4249 | 0.38 |

## Appendix D Demographic Questions

Study 1-3 shared the same set of demographic questions. These questions were asked after experimental interventions.

Are you...

- Male
- Female

Do you consider yourself to be..

- White, not Hispanic or Latino
- Black, not Hispanic or Latino
- Hispanic or Latino
- Asian, not Hispanic or Latino
- Other

Your age: $\qquad$
Which state do you live in?
Do you have any children in the following school-age categories? (Check all that apply)

- Pre-school
- Elementary school
- Middle/intermediate school
- High school
- High school graduate/college
- NONE OF THE ABOVE or NO CHILDREN

What was your total household income before taxes during the past 12 months?

- Less than $\$ 25,000$
- $\$ 25,000$ to $\$ 34,999$
- $\$ 35,000$ to $\$ 49,999$
- $\$ 50,000$ to $\$ 74,999$
- \$75,000 to \$99,999
- $\$ 100,000$ to $\$ 149,999$
- $\$ 150,000$ or more

What is the highest level of education you have completed?
Less than high school

- High school/GED
- Some college
- 2-year college degree
- 4-year college degree
- master degree
- doctoral degree
- Professional Degree (JD, MD)

When comes to social issues, I am...

- Very liberal
- Liberal
- Moderate
- Conservative
- Very conservative
[Attention test] This is just to screen out random clicking. Please move the slide to the answer of the following question: $17+63=$ ?

