sociological science

Supplement to:

Lee, Jennifer, and Van C. Tran. 2019. "The Mere Mention of Asians in Affirmative Action." Sociological Science 6: 551-579.

Online Supplement for "The Mere Mention of Asians in Affirmative Action"
Includes: Appendix A, B and C
Appendix A: Supplementary Tables A1 to A4

Table A1: Descriptive Statistics for All Variables by Race

Dependent variables	White	Asian	Black	Latino	NHPI
Frame 1: Asians not mentioned in frame (i.e. control condition)					
% Support	26.7	27.8	61.5	33.0	44.0
% No opinion	6.1	14.6	14.1	20.4	26.8
% Oppose	66.9	57.5	24.3	46.6	29.2
Frame 2: Asians as aggrieved victims alongside whites					
% Support	32.9	28.0	66.8	31.9	16.8
% No opinion	7.4	17.0	10.3	20.6	17.2
% Oppose	60.0	55.0	22.8	47.5	66.0
Frame 3: Asians as aggrieved minorities alongside blacks					
% Support	23.4	33.2	61.1	32.2	24.8
% No opinion	18.1	14.8	2.3	20.7	10.4
% Oppose	58.4	51.9	36.6	47.1	64.8
Independent variables	White	Asian	Black	Latino	NHPI
Demographic characteristics					
First generation	3.9	78.6	10.4	49.3	24.9
Second generation	8.6	17.4	13.4	31.4	23.5
Third-and-higher generation	87.4	4.0	76.2	19.2	51.6
Age*	54.3	50.2	49.96	45.53	46.5
	(20.5)	(20.6)	(21.1)	(20.2)	(19.8)
Female	49.9	51.7	50.0	46.2	46.7
Democrats	56.2	44.5	67.9	56.3	44.0
Republicans	36.7	29.2	25.5	22.7	38.7
Independents	7.3	26.3	6.6	21.0	17.3
Less than high school	6.5	11.3	12.1	29.7	9.5
High school graduate	28.9	14.8	30.9	29.2	39.3
College graduate or more	64.6	73.9	57.0	41.0	51.2
Income, less than 20K	8.9	15.0	17.0	22.5	9.7
Income, $20K - $50K	20.2	20.2	36.2	29.7	20.8
Income, $50K - $75K	22.1	14.3	12.9	15.8	12.9
Income, $75K - $100K	16.4	9.9	7.7	9.1	14.9
Income, $100K - $125K	7.3	8.8	6.9	3.0	20.5
Income, $125K - $250K	7.1	11.3	3.1	4.4	9.6
Income, more than $250K	6.7	5.6	4.9	1.5	3.4
Income, missing	11.4	14.9	11.3	14.0	8.2

Home ownership	71.1	62.4	56.2	50.4	67.3
Married or living as married	62.2	59.1	38.5	48.9	57.1
In a serious relationship	4.4	9.3	16.1	15.1	21.6
Not in a serious relationship	33.1	30.4	44.2	35.2	16.2
Living in California	7.9	34.0	5.7	27.4	29.9
Self-interest and group interests					
Benefited from affirmative action	13.8	10.6	19.1	16.9	17.4
Perceived discrimination* (standardized)	0.21	-0.16	0.74	0.17	0.24
	(1.06)	(0.83)	(1.29)	(1.09)	(1.15)
Racial linked fate* (0-3 ordinal scale)	0.68	1.23	1.62	1.41	1.39
	(1.06)	(1.17)	(1.24)	(1.24)	(1.23)
Racial identity strength* (0-3 ordinal scale)	0.59	1.39	2.04	1.83	1.80
	(0.82)	(0.98)	(1.06)	(0.91)	(0.99)
Equity-enhancing policies* (standardized)	-0.54	0.02	0.41	0.13	-0.24
	(1.28)	(0.92)	(0.79)	(0.90)	(1.13)
N	383	3,963	363	1,042	112

Source: 2016 National Asian American Survey.
Notes: Descriptive statistics are weighted statistics. For all continuous and ordinal variables (*), standard deviations are in parentheses immediately below mean values. For dichotomous or categorical variables, all figures are percentages.

Table A2: Differences in Mean Level of Support for Affirmative Action by Frame and Race

	N	Mean	Std. Err.	Std. Dev.	t-value	p-value
Whites						
Frame 1	132	-0.545	0.068	0.785		
Frame 2	118	-0.339	0.082	0.889	-1.950	0.050
Frame 3	133	-0.323	0.074	0.858	-2.190	**0.030**
Asians						
Frame 1	1,328	-0.218	0.024	0.887		
Frame 2	1,346	-0.240	0.024	0.888	0.650	0.510
Frame 3	1,289	-0.142	0.025	0.914	-2.150	**0.030**
Blacks						
Frame 1	135	0.333	0.074	0.864		
Frame 2	122	0.303	0.081	0.890	0.270	0.780
Frame 3	106	0.340	0.089	0.914	-0.050	0.960
Hispanics						
Frame 1	345	-0.186	0.048	0.883		
Frame 2	360	-0.161	0.047	0.897	-0.360	0.720
Frame 3	337	-0.205	0.047	0.864	0.290	0.770
Full sample						
Frame 1	1,976	-0.195	0.020	0.893		
Frame 2	1,985	-0.200	0.020	0.898	0.160	0.870
Frame 3	1,902	-0.142	0.021	0.910	-1.840	0.060

Source: 2016 National Asian American Survey.
Notes: The dependent variable is a nominal variable. Because Frame 1 is the control, the two t-values within each panel in the table are based on two-tailed t-tests of mean differences between Frame 1 and Frame 2 as well as Frame 1 and Frame 3, for each of the four racial groups and for the entire sample. P-values that reach statistical significance (at the *p<.05 level) are in bold.

Table A3: Multinomial Logistic Regressions on Preference for Hiring and Promotion by Frame: "Support vs. Oppose" Comparison

	Asians not mentioned (i.e. control)			Asians as aggrieved victims			Asians as aggrieved minorities		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Asian vs. White	1.215	2.092	1.881	0.930	1.734	0.862	1.598	3.000*	1.492
	(0.465)	(0.988)	(1.027)	(0.288)	(0.779)	(0.441)	(0.443)	(1.537)	(0.802)
Black vs. White	6.348†	8.969†	3.914†	5.340†	4.795†	2.269	4.174†	4.292†	1.629
	(2.930)	(3.708)	(1.985)	(2.211)	(2.287)	(1.267)	(1.698)	(1.971)	(0.798)
Hispanic vs. White	1.779	2.644*	2.163	1.229	1.137	0.494	1.712	2.060	0.870
	(0.730)	(1.180)	(1.169)	(0.414)	(0.505)	(0.275)	(0.528)	(1.016)	(0.490)
NHPI vs. White	3.792*	6.769†	5.404	0.465	0.573	0.274	0.956	1.202	0.754
	(2.318)	(4.640)	(5.768)	(0.297)	(0.466)	(0.252)	(0.481)	(0.683)	(0.459)
2nd vs. 1st-generation		2.592	2.812*		0.700	0.950		1.877	1.951
		(1.261)	(1.459)		(0.363)	(0.502)		(0.980)	(1.026)
3rd+ vs. 1st-generation		1.741	2.111		1.568	2.396		2.176	2.131
		(0.884)	(1.146)		(0.738)	(1.211)		(1.190)	(1.183)
Age		0.992	0.994		0.998	1.000		1.010	1.008
		(0.009)	(0.011)		(0.010)	(0.010)		(0.009)	(0.011)
Female		2.772†	2.387*		1.062	0.710		0.626	0.489*
		(1.029)	(0.811)		(0.403)	(0.300)		(0.208)	(0.166)
Republican vs. Democrat		0.387*	0.555		0.966	1.022		0.923	1.285
		(0.156)	(0.239)		(0.416)	(0.516)		(0.350)	(0.623)
Independent vs. Democrat		1.055	1.311		0.440	0.771		0.448	0.679
		(0.495)	(0.643)		(0.313)	(0.483)		(0.230)	(0.357)
High school graduate		0.494	0.515		0.484	0.593		0.548	0.684
		(0.296)	(0.312)		(0.314)	(0.382)		(0.293)	(0.377)
College graduate or more		0.475	0.474		0.279*	0.333*		0.455	0.500
		(0.289)	(0.319)		(0.173)	(0.186)		(0.219)	(0.246)
Income, $20K - $50K		0.626	0.593		1.484	1.209		0.483	0.370
		(0.357)	(0.371)		(0.896)	(0.641)		(0.241)	(0.215)
Income, $50K - $75K		0.663	0.768		0.889	0.696		0.291*	0.167†
		(0.441)	(0.526)		(0.615)	(0.423)		(0.161)	(0.099)
Income, $75K - $100K		1.478	1.379		0.472	0.427		0.585	0.562
		(1.091)	(1.072)		(0.440)	(0.342)		(0.374)	(0.356)
Income, $100K - $125K		1.730	1.447		0.715	0.611		0.267*	0.274
		(1.295)	(1.090)		(0.800)	(0.798)		(0.177)	(0.190)
Income, $125K - $250K		1.333	1.372		3.065	5.441		1.403	1.345
		(1.050)	(1.301)		(3.049)	(4.818)		(1.097)	(1.017)
Income, > $250K		26.08†	1.90*		0.935	1.997		1.948	1.897
		(32.39)	(11.31)		(0.927)	(2.496)		(1.928)	(1.884)
Own home		1.085	1.143		0.578	0.600		0.617	0.627
		(0.375)	(0.431)		(0.229)	(0.225)		(0.209)	(0.217)
In a serious relationship		1.764	1.901		1.802	1.854		2.545	2.988*
		(1.035)	(1.196)		(0.869)	(0.890)		(1.490)	(1.585)
Not in a relationship		1.505	1.262		4.727†	4.166†		2.269*	2.248*
		(0.669)	(0.520)		(1.885)	(1.628)		(0.812)	(0.772)
Living in California		0.798	0.825		0.866	0.736		1.051	0.849
		(0.335)	(0.370)		(0.328)	(0.270)		(0.400)	(0.339)
Benefited from AA policy			3.244†			1.403			6.510†
			(1.244)			(0.884)			(2.968)
Perceived discrimination			1.221			0.682*			0.959
			(0.186)			(0.110)			(0.201)
Racial linked fate			1.106			1.201			1.128
			(0.164)			(0.221)			(0.160)
Racial identity strength			0.866			1.348			1.253
			(0.166)			(0.259)			(0.225)
Equity-enhancing policies			2.557†			2.244†			1.867*
			(0.608)			(0.606)			(0.529)
Log-likelihood	-20409185	-16356064	-14407985	-19453586	-16308151	-14556316	-18897772	-16398755	-14533820
Constant	0.398*	0.311	0.214	0.548*	1.543	0.993	0.400**	0.652	0.661
	(0.147)	(0.340)	(0.244)	(0.154)	(1.820)	(1.045)	(0.099)	(0.731)	(0.960)
N	1,976	1,976	1,976	1,985	1,985	1,985	1,902	1,902	1,902

Source: 2016 National Asian American Survey.
Notes: All coefficients are relative risk ratios. Robust standard errors are in parentheses. For education, the reference is "less than high school." For income, the reference is "less than $20K." For relationship, the reference is "married or living as married." †p<.01, *p<.05.

Table A4: Multinomial Logistic Regressions on Preference for Hiring and Promotion by Frame: "No opinion vs. Oppose" Comparison

	Asians not mentioned (i.e. control)			Asians as aggrieved victims			Asians as aggrieved minorities		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Asian vs. White	2.811†	2.732	1.738	2.511*	1.521	1.216	0.924	0.757	0.694
	(1.038)	(1.480)	(1.113)	(1.048)	(0.814)	(0.705)	(0.299)	(0.438)	(0.450)
Black vs. White	6.407†	5.765†	3.013	3.682*	3.704*	5.549*	0.200*	0.200*	0.142*
	(3.247)	(3.132)	(2.041)	(2.096)	(2.166)	(3.745)	(0.131)	(0.145)	(0.133)
Hispanic vs. White	4.830†	3.491*	3.110	3.529†	1.877	1.885	1.420	0.883	0.995
	(1.952)	(1.945)	(2.057)	(1.594)	(1.023)	(1.169)	(0.512)	(0.495)	(0.666)
NHPI vs. White	10.13†	7.035*	4.355	2.120	2.484	3.794	0.517	0.544	0.662
	(6.805)	(6.538)	(5.131)	(2.020)	(2.881)	(5.308)	(0.529)	(0.818)	(1.232)
2nd vs. 1st-generation		3.569*	3.176*		0.397	0.684		0.445	0.392
		(1.918)	(1.825)		(0.212)	(0.370)		(0.302)	(0.332)
3rd+ vs. 1st-generation		1.909	2.420		0.707	0.987		0.868	0.966
		(1.110)	(1.590)		(0.343)	(0.508)		(0.483)	(0.607)
Age		1.001	1.000		0.996	1.002		0.991	0.990
		(0.013)	(0.013)		(0.012)	(0.011)		(0.011)	(0.011)
Female		4.732†	4.229†		1.448	1.058		1.059	0.815
		(1.891)	(1.750)		(0.698)	(0.501)		(0.448)	(0.350)
Republican vs. Democrat		0.438	0.653		2.108	2.422		0.564	0.846
		(0.218)	(0.357)		(1.027)	(1.188)		(0.297)	(0.418)
Independent vs. Democrat		2.153	2.565*		0.901	1.005		0.584	0.714
		(1.069)	(1.199)		(0.507)	(0.519)		(0.271)	(0.355)
High school graduate		0.734	0.681		0.312	0.397		0.919	0.892
		(0.405)	(0.389)		(0.208)	(0.265)		(0.464)	(0.494)
College graduate or more		0.634	0.591		0.425	0.522		0.608	0.655
		(0.352)	(0.335)		(0.239)	(0.270)		(0.335)	(0.384)
Income, $20K - $50K		0.883	1.367		0.839	0.578		0.181*	0.185†
		(0.580)	(0.888)		(0.422)	(0.317)		(0.128)	(0.115)
Income, $50K - $75K		0.404	0.504		0.886	0.911		0.306	0.203*
		(0.308)	(0.378)		(0.635)	(0.619)		(0.223)	(0.134)
Income, $75K - $100K		1.586	1.711		0.676	0.701		0.087*	0.037†
		(1.364)	(1.433)		(0.907)	(0.844)		(0.086)	(0.039)
Income, $100K - $125K		0.572	0.722		0.099*	0.075*		0.886	0.885
		(0.510)	(0.700)		(0.091)	(0.079)		(0.944)	(0.921)
Income, $125K - $250K		0.107*	0.128		3.194	4.486		0.058†	0.041†
		(0.105)	(0.136)		(2.742)	(3.967)		(0.0472)	(0.037)
Income, > $250K		0.208	0.097*		0.022†	0.052*		0.313	0.113
		(0.234)	(0.103)		(0.026)	(0.072)		(0.403)	(0.148)
Own home		0.982	1.151		1.234	1.410		1.839	1.749
		(0.433)	(0.542)		(0.507)	(0.575)		(0.783)	(0.681)
In a serious relationship		3.510	4.382*		6.401*	8.225†		0.081†	0.041†
		(2.516)	(3.254)		(4.984)	(5.795)		(0.073)	(0.042)
Not in a relationship		0.739	0.607		4.772*	3.901*		1.503	1.088
		(0.352)	(0.293)		(3.017)	(2.288)		(0.765)	(0.519)
Living in California		1.779	1.724		1.850	1.724		1.475	0.991
		(0.918)	(0.899)		(0.822)	(0.820)		(0.814)	(0.557)
Benefited from AA policy			3.122*			2.514			4.720*
			(1.634)			(1.425)			(3.601)
Perceived discrimination			0.809			0.544*			0.575†
			(0.164)			(0.143)			(0.121)
Racial linked fate			0.960			0.881			0.607*
			(0.150)			(0.165)			(0.120)
Racial identity strength			0.890			0.789			0.845
			(0.190)			(0.173)			(0.235)
Equity-enhancing policies			2.124†			2.440†			1.768†
			(0.482)			(0.645)			(0.330)
Log-likelihood	-20409185	-16356064	-14407985	-19453586	-16308151	-14556316	-18897772	-16398755	-14533820
Constant	0.091†	0.035†	0.022†	0.123†	0.104*	0.061†	0.309†	0.980	2.742
	(0.032)	(0.044)	(0.031)	(0.049)	(0.100)	(0.061)	(0.093)	(1.158)	(3.190)
N	1,976	1,976	1,976	1,985	1,985	1,985	1,902	1,902	1,902

Source: 2016 National Asian American Survey.
Notes: All coefficients are relative risk ratios. Robust standard errors are in parentheses. For education, the reference is "less than high school." For income, the reference is "less than $20K." For relationship, the reference is "married or living as married." †p<.01, *p<.05.

Appendix B: Sampling procedure in 2016 NAAS

In our Methods section, we point out that accurately sampling the U.S. Asian population poses unique challenges (Lee et al. 2018). We also presented demographic statistics that point to the strikingly high-quality nature of the 2016 NAAS data—broadly representative of the U.S. population in the 2016 ACS. Below, we provide further details of the sampling procedures and the response rates of 2016 NAAS, to expand on our methods section and on our survey quality.

The 2016 NAAS was conducted by Catalist—a premier data and survey research firm—which specializes in sampling smaller racial and ethnic groups such as Asian Americans, using a propriety sampling procedure referred to as the *Catalist Ethnicity Model*. Specifically, Catalist has developed a suite of national models that predict the relative likelihood of membership in an Asian ethnicity such as Vietnamese, as opposed to the broad racial category of Asian American and Pacific Islander (AAPI). The final product for each Ethnicity Model is a score between 0 and 100 indicating the relative likelihood that someone belongs to a particular ethnicity. Each model is scored nationally, where 0 indicates that an individual is least likely to belong to a particular ethnicity, while 100 indicates that a person is most likely to belong to that ethnicity. These scores are not probabilities but relative likelihoods: a person with a score of 100 is not 100% likely to be Vietnamese – rather, they are more likely to be Vietnamese than people with lower scores.

Catalist Ethnicity Models are constructed using the range of individual and geographic data available. These models rely especially upon first, middle, and last names; Census data; and other individual-level demographics. As such, the models are more likely to find individuals of a particular ethnicity if the individual has a name that is discernibly associated with that ethnicity. Overall, the data used to build and validate Catalist Ethnicity Models come from three sources.

1. AAPI-Civic Engagement Fund, in partnership with 17 community-based organizations, provided high-quality name data on almost 90,000 AAPI individuals, as well as surname lists for Laotian, Hmong and Vietnamese individuals. These lists were useful because they included names that were discernibly associated with specific AAPI ethnicities, as the participating organizations work directly with immigrant and refugee communities.

2. Catalist used the California voter file's Country of Origin field to validate whether the models correctly identified particular ethnicities from data containing individuals of both AAPI and non-AAPI origin. California is home to the largest Asian American population.

3. Catalist used Census data to investigate whether each model identified people both in low and high population-density areas for each ethnicity.

Catalist Ethnicity Models substantially increase the odds of identifying U.S. individuals by their specific ethnicities. While there are publicly available datasets, such as the Census, that can help to target these individuals, such data only identify the share of particular ethnicities by census tract. By contrast, the Catalist Ethnicity Model uses a broad range of characteristics about individuals to pinpoint them with a high relative likelihood of belonging to a particular ethnicity, not just in high-density areas but also in low-density areas where these individuals could not be identified using only Census or other geographic data.

Appendix C: Details and procedures for the construction of index measures

The *perceived discrimination index* combines six survey questions on "important ways that some people have been treated poorly or unfairly" and is standardized. The questions were randomized and the response categories are dichotomous.

1. Have you ever been unfairly denied a promotion?
2. Have you ever been unfairly fired from a job?
3. For unfair reasons, do you think you have ever not been hired for a job?
4. Have you ever been unfairly stopped, searched, questioned, physically threatened or abused by the police?
5. Do you think you have ever been unfairly prevented from moving into a neighborhood because the landlord or a realtor refused to sell or rent you a house or apartment?
6. Have you ever moved into a neighborhood where neighbors made life difficult for you or your family?

The Cronbach's alpha for these six questions is 0.7. We use principal component analysis (PCA), a statistical technique for data reduction, to identify the component behind the measures. Our analyses reveal one component with an eigen value greater than one (2.4). We compute the PCA scores using the Varimax rotation (orthogonal rotations of the axes) which maximizes the variance of the squared loadings summed over the columns. We adopt the Kaiser-Meyer-Olkin (KMO) test to measure sampling adequacy for each variable in the model and to also capture the proportion of variance among the variables that might be common variance. The KMO statistic ranges from 0 to 1, with higher values (above 0.7) indicating that variables have a lot in common to support PCA analyses. For our index, the KMO values range from a low of .77 for questions on unfair hiring and unfair promotion to a high of .83 for questions on unfair police treatment.

The *commitment to equity-enhancing policies* index combines six questions on "the role of the U.S. federal government in the economy and views on policies related to the economy and inequality." The six questions were randomized with ordinal responses on a 5-point scale, from "strongly agree" to "strongly disagree." This index is also standardized.

1. The federal government should do more to reduce income differences between the richest and the poorest households.
2. The federal government should do more to regulate banks.
3. The federal government should raise the minimum wage to allow every working American a decent standard of living.
4. The federal government should increase income taxes on people making over a million dollars a year.
5. The federal government should do more to discourage big American companies from hiring foreign workers to replace workers in the U.S.
6. The federal government should enact major new spending that would help undergraduates pay tuition at public colleges without needing loans.

We adopt the same PCA procedures. The Cronbach's alpha is also 0.7. Our PCA analyses reveal one component with an eigen value greater than one (2.5). For this index, the KMO values range from a low of .71 for question on discouraging companies from hiring foreign workers to .84 for question on regulating banks.