

ONLINE APPENDIX FOR

“Did The Americanization Movement Succeed? An Evaluation of the Effect of English-Only and Compulsory Schooling Laws on Immigrants”

By ADRIANA LLERAS-MUNEY AND ALLISON SHERTZER

DATA APPENDIX II: COMPULSORY SCHOOLING AND STATE CONTROL DATA

State-Level Data

Share Republican ballots was taken from ICPSR Dataset 8611, Electoral Data for Counties in the United States: Presidential and Congressional Races, 1840-1972, PIs Jerome M. Clubb, William H. Flanigan, and Nancy H. Zingale. We used turnout for congressional races in 1910, 1920, and 1930.

Data on state per capita income were taken from the BAE and indexed to 2000 dollars. State per capita income was interpolated for 1910. Sources: Table XLII, page 249, "Income in the Various States. Its Sources and Distribution in 1919, 1920 and 1921," by Maurice Leven, National Bureau of Economic Research, Inc. 1925 (1910 and 1920 values); Table 1, page 4, "State Personal Income: Estimates for 1929-82 and a Statement of Sources and Methods," U.S. Department of Commerce, Bureau of Economic Analysis, U.S. G.P.O. Washington D.C. 1984 (1930 values).

Share of population Catholic was taken from ICPSR Dataset 8, Censuses of Religious Bodies, 1906-1936, United States Department of Commerce, Bureau of the Census. Values for 1910, 1920, and 1930 were interpolated/extrapolated using the censuses from 1906, 1916, and 1926.

Variables on enrollments, the foreign-born, Germans, non-German foreign born, blacks, individuals over the age of 65, individuals under the age of 14, and population in urban areas were computed from the respective IPUMS samples for each year.

Data on schools per square mile was taken from Adriana Lleras Muney's work on compulsory schooling; see her 2002 paper for details on the construction of these variables. We extrapolated to estimate the 1910 values for schools per square mile.

Data on private enrollment shares were collected from several editions of the Biennial Survey of Education prepared by the U.S. Bureau of Education. 1930 values were interpolated using values from 1924 and 1936.

Data on manufacturing employment per capita were provided by Claudia Goldin and Lawrence Katz from their work on the high school movement.

Compulsory Schooling and Child Labor Laws

The compulsory schooling and child labor law data used in the paper were provided by Claudia Goldin and Lawrence Katz from their work on the role of state compulsion on the high school movement. See their 2008 paper for details on the classification of the entry age, work permit age, and continuation school variables.

APPENDIX TABLE I: COMPULSORY SCHOOLING LAWS IN THE UNITED STATES, 1910-1939

(ENTRY AGE TO WORK PERMIT ELIGIBILITY AGE WITH CONTINUATION SCHOOL IN PARENTHESES IN A COLUMNS, ENGLISH LAW IN PARENTHESES IN B COLUMNS)

	<u>English-only Law</u>		<u>Compulsory Schooling Laws</u>		
	<u>Year of Passage</u>		1910	1920	1930
	Public Schools	All Schools			
Alabama	1919	1919	-. , (no)	8-14, (no)	8-14, (no)
Arizona	1913	1913	8-14, (no)	8-14, (yes)	8-14, (yes)
Arkansas	1919	1919	8-14, (no)	7-14, (no)	7-14, (no)
California	1872	1872	8-14, (no)	8-14, (yes)	8-15, (yes)
Colorado	1908	1919	8-14, (no)	8-14, (no)	8-14, (no)
Connecticut	1923	1923	7-14, (no)	7-14, (yes)	7-14, (yes)
Delaware	1919	1919	7-14, (no)	7-14, (no)	7-14, (yes)
Florida	n/a	n/a	-. , (no)	8-12, (no)	7-14, (yes)
Georgia	n/a	n/a	-. , (no)	8-12, (no)	8-14, (no)
Idaho	1919	1919	8-14, (no)	7-14, (no)	8-14, (no)
Illinois	1919	1919	7-14, (no)	7-14, (no)	7-14, (yes)
Indiana	1889	1919	7-14, (no)	7-14, (no)	7-14, (no)
Iowa	1897	1897	7-14, (no)	7-14, (no)	7-14, (yes)
Kansas	1876	1915	8-14, (no)	8-14, (no)	7-14, (no)
Kentucky	n/a	n/a	7-14, (no)	7-14, (no)	7-14, (no)
Louisiana	1898	1918	-. 14, (no)	7-14, (no)	7-14, (no)
Maine	1919	1919	7-14, (no)	7-14, (no)	7-15, (no)
Maryland	n/a	n/a	8-12, (no)	7-13, (no)	7-14, (no)
Massachusetts	1902	n/a	7-14, (no)	7-14, (yes)	7-14, (yes)
Michigan	n/a	n/a	7-14, (no)	7-15, (no)	7-15, (yes)
Minnesota	1913	n/a	8-14, (no)	8-14, (no)	8-14, (no)
Mississippi	n/a	n/a	-. , (no)	7-12, (no)	7-14, (no)
Missouri	n/a	n/a	8-14, (no)	8-14, (yes)	7-14, (yes)
Montana	1907	1917	8-14, (no)	8-14, (yes)	8-16, (yes)
Nebraska	1913	1919	7-14, (no)	7-14, (yes)	7-14, (yes)
Nevada	1919	1919	8-14, (no)	8-14, (yes)	7-14, (yes)
New Hampshire	1919	1919	8-14, (no)	8-14, (no)	8-14, (no)
New Jersey	n/a	n/a	7-14, (no)	7-14, (yes)	7-14, (yes)
New Mexico	1911	n/a	7-. , (no)	7-. , (yes)	6-14, (yes)
New York	1909	1909	7-14, (no)	8-14, (yes)	7-14, (yes)
North Carolina	n/a	n/a	8-12, (no)	8-14, (no)	7-14, (no)
North Dakota	1918	1918	8-14, (no)	7-14, (no)	7-14, (no)
Ohio	1910	1919	8-14, (no)	8-15, (no)	6-16, (yes)
Oklahoma	1907	1919	8-14, (no)	8-16, (yes)	8-14, (yes)
Oregon	1919	1919	9-14, (no)	9-14, (yes)	7-14, (yes)
Pennsylvania	1919	1921	8-14, (no)	8-14, (yes)	8-14, (yes)
Rhode Island	1909	1909	7-14, (no)	8-14, (no)	7-15, (no)

South Carolina	1918	1919	.-12, (no)	8-14, (no)	8-14, (no)
South Dakota	1918	1919	8-14, (no)	8-15, (no)	8-14, (no)
Tennessee	n/a	n/a	8-14, (no)	8-14, (no)	7-14, (yes)
Texas	1914	n/a	.-., (no)	8-12, (no)	8-15, (no)
Utah	1907	n/a	8-., (no)	7-14, (yes)	8-14, (yes)
Vermont	n/a	n/a	8-12, (no)	8-15, (no)	8-14, (no)
Virginia	n/a	n/a	8-12, (no)	8-14, (no)	7-14, (no)
Washington	1912	n/a	8-14, (no)	8-14, (yes)	8-14, (yes)
West Virginia	1919	n/a	8-12, (no)	8-14, (no)	7-14, (yes)
Wisconsin	1854	n/a	7-12, (no)	7-14, (yes)	7-14, (yes)
Wyoming	n/a	n/a	7-., (no)	7-., (no)	7-14, (no)

Notes: Data on compulsory schooling laws was provided by Golding and Katz (2008). Data on English laws were collected from state records (see Data Appendix I for details).

APPENDIX TABLE II: EFFECT OF ALL-SCHOOL ENGLISH LAW EXPOSURE ON LITERACY AND ABILITY TO SPEAK ENGLISH FOR SUBSAMPLES OF IMMIGRANT CHILDREN AGED 10-16, 1910-1930

(PROBIT REGRESSION WITH MEAN MARGINAL EFFECTS REPORTED)

Dependent variable:	Literacy=1			Fluency=1		
	Effect	N	Mean Literacy	Effect	N	Mean Fluency
Panel A: all foreign born						
Baseline	0.003 (0.002)	12211	0.943	0.002 (0.003)	13560	0.857
Center cities residents only	0.005 (0.001)***	5780	0.968	0.003 (0.002)	6877	0.907
Non-German only	0.003 (0.002)	11544	0.941	0.002 (0.003)	12876	0.854
Panel B: Non-English speaking origin						
Baseline	0.002 (0.003)	11049	0.934	0.002 (0.003)	11980	0.837
and in U.S. <= 5 years	0.015 (0.012)	3675	0.905	0.018 (0.013)	4134	0.719
and in U.S. > 5 years	0.001 (0.002)	6361	0.950	0.001 (0.002)	7653	0.900
and parents illiterate	0.006 (0.003)*	5530	0.881	0.001 (0.005)	5808	0.767
and parents not fluent	0.006 (0.003)*	6739	0.900	0.004 (0.004)	7352	0.744

Notes: See Table 2 for sample restrictions and English law variable definition. See Table 3 for specification details. Both panels A and B include state controls; see Table 2 for the list. Standard errors are clustered at the state level (in parentheses). Person weights used in all estimations. *** p<0.01,** p<0.05, * p<0.1

APPENDIX TABLE III: EFFECT OF PUBLIC SCHOOL ENGLISH LAW ON LITERACY AND ABILITY TO SPEAK ENGLISH
 FOR SUBSAMPLES OF IMMIGRANT CHILDREN AGED 10-16, 1910-1930
 (PROBIT REGRESSION WITH MEAN MARGINAL EFFECTS REPORTED)

Dependent variable:	Literacy=1			Fluency=1		
	Effect	N	Mean Literacy	Effect	N	Mean Fluency
Panel A: all foreign born						
Baseline	0.004 (0.012)	12211	0.943	0.024 (0.015)	13560	0.857
Center cities residents only	0.008 (0.021)	5780	0.968	-0.015 (0.022)	6877	0.907
Non-German only	0.001 (0.013)	11544	0.941	0.033 (0.016)*	12876	0.854
Panel B: Non-English speaking origin						
Baseline	0.004 (0.014)	11049	0.934	0.021 (0.018)	11980	0.837
and in U.S. <= 5 years	0.014 (0.038)	3675	0.905	-0.018 (0.039)	4134	0.719
and in U.S. > 5 years	0.009 (0.014)	6361	0.950	0.028 (0.015)	7653	0.900
and parents illiterate	0.009 (0.025)	5530	0.881	0.044 (0.025)	5808	0.767
and parents not fluent	0.006	6739	0.900	0.042	7653	0.744

Notes: See Table 2 for sample restrictions and English law variable definition. See Table 3 for specification details. Both panels A and B include state controls; see Table 2 for the list. Standard errors are clustered at the state level (in parentheses). Person weights used in all estimations. *** p<0.01, ** p<0.05, * p<0.1

APPENDIX TABLE IV: EFFECT OF LAWS ON MALE NATIVE OUTCOMES IN THE 1940 CENSUS AND WW2 ENLISTMENT RECORDS 1904-1924

BIRTH COHORTS

Outcome:	1940 census			WW2 enlistment records	
	Years of school	Employed =1	Log Income in 1939	Years of school	Log occscore
Panel A: matched on state of residence					
Age for work permit	0.087*** (0.017)	-0.002 (0.006)	0.010 (0.011)	0.040* (0.020)	0.003 (0.002)
Age must enter school	-0.010 (0.046)	0.005 (0.006)	0.003 (0.014)	0.004 (0.018)	-0.001 (0.002)
Continuation school law	-0.028 (0.038)	0.016* (0.008)	0.028 (0.019)	0.017 (0.015)	-0.001 (0.004)
Years exposed to English law	0.005 (0.016)	0.002 (0.003)	0.008 (0.007)	0.001 (0.002)	0.000 (0.000)
<i>Mean outcome</i>	9.89	6.47	0.67	10.77	3.15
<i>N</i>	199025	199025	130896	4643279	4160165
Panel C: Matched on state of birth					
Age for work permit	0.074*** (0.017)	-0.000 (0.010)	-0.002 (0.007)	0.028 (0.021)	0.004 (0.002)
Age must enter school	0.009 (0.028)	0.000 (0.012)	0.004 (0.005)	-0.002 (0.018)	-0.003 (0.002)
Continuation school law	-0.005 (0.055)	0.012 (0.020)	0.012 (0.010)	0.021 (0.013)	0.000 (0.005)
Years exposed to english law	0.010 (0.015)	0.013** (0.006)	0.003 (0.003)	0.003 (0.002)	0.001** (0.000)
<i>Mean outcome</i>	9.89	6.47	0.67	10.77	3.15
<i>N</i>	198805	130752	198805	4646930	4160423

Notes: Individuals born or living in Hawaii, Alaska or DC were dropped. Standard errors are clustered at the state-group level (in parentheses). The specification is identical to Table 6, except that country-of birth is replaced by state of birth. Person weights used in all estimations. *** p<0.01, ** p<0.05, * p<0.1

APPENDIX TABLE V: EFFECT OF STATE-SPECIFIC COHORT TRENDS ON RESULTS (1904-1920 BIRTH COHORTS)

Dependent variable:	1940 census				WWII records			
	years of school		Log wages		years of school		Log occupation wages	
	1	2	3	4	5	6	7	8
Panel A: Immigrants								
Age for work permit	0.221** (0.098)	0.127** (0.055)	0.085** (0.032)	0.003 (0.037)	0.153*** (0.033)	0.109*** (0.040)	0.019*** (0.006)	0.015** (0.006)
Age must enter school	0.197 (0.166)	0.077 (0.126)	-0.033 (0.040)	-0.020 (0.038)	-0.033 (0.076)	-0.047 (0.060)	-0.004 (0.007)	0.000 (0.003)
Continuation school law	0.292* (0.168)	0.151 (0.125)	0.134*** (0.042)	0.005 (0.049)	0.086 (0.103)	0.091 (0.062)	-0.012 (0.010)	-0.003 (0.009)
Years exposed to English law	0.014 (0.014)	-0.053 (0.035)	0.001 (0.003)	0.010 (0.016)	0.011 (0.010)	0.008 (0.006)	0.001 (0.001)	0.001** (0.001)
Panel B: Natives state-of-birth match								
Age for work permit	0.087*** (0.030)	0.074*** (0.016)	-0.007 (0.010)	-0.000 (0.010)	0.097*** (0.022)	0.028 (0.021)	0.008*** (0.003)	0.004 (0.002)
Age must enter school	0.009 (0.039)	0.009 (0.034)	-0.018 (0.020)	0.000 (0.010)	0.008 (0.032)	-0.002 (0.018)	0.003 (0.005)	-0.003 (0.002)
Continuation school law	0.022 (0.064)	-0.005 (0.040)	0.003 (0.021)	0.012 (0.018)	-0.008 (0.080)	0.021 (0.013)	0.004 (0.007)	0.000 (0.005)
Years exposed to English law	0.004 (0.012)	0.01 (0.014)	0.000 (0.003)	0.013** (0.005)	0.006 (0.007)	0.003 (0.002)	0.001 (0.001)	0.001** (0.000)
Panel C: Natives state-of-residence match								
Age for work permit	0.133** (0.052)	0.086*** (0.018)	0.046* (0.027)	0.011 (0.011)	0.100*** (0.021)	0.040* (0.020)	0.010*** (0.003)	0.003 (0.002)
Age must enter school	0.036 (0.074)	-0.011 (0.047)	-0.013 (0.032)	0.004 (0.014)	0.013 (0.033)	0.004 (0.018)	0.004 (0.006)	-0.001 (0.002)
Continuation school law	0.145 (0.096)	-0.028 (0.038)	0.083** (0.039)	0.028 (0.020)	0.001 (0.074)	0.017 (0.015)	0.005 (0.008)	-0.001 (0.004)
Years exposed to English law	0.013 (0.013)	0.005 (0.016)	0.001 (0.004)	0.008 (0.007)	0.009 (0.007)	0.001 (0.002)	0.001 (0.001)	0.001 (0.000)
State and YOB FE?	Y	Y	Y	Y	Y	Y	Y	Y
State-specific trends?	N	Y	N	Y	N	Y	N	Y

Notes: All specifications for the 1940 use the 1940 survey weights and include state/country of residence, age dummies, a dummy for work permit age missing, a dummy for entry age missing and state-of-residence cohort-specific trends. Individuals born or living in Hawaii, Alaska or DC were dropped. Standard errors are clustered at the state-group level (in parentheses). Person weights used in all estimations. *** p<0.01, ** p<0.05, * p<0.1

APPENDIX TABLE VI: RETURN TO LITERACY AND ABILITY TO SPEAK ENGLISH ON IMMIGRANT ADULTS AGED 18-50 (1910-1930 CENSUSES)

dependent variable = occupation score			
	All Immigrants (1)	English Origin (2)	Non-English Origin (3)
Literate	1.952*** -0.112	3.790*** -0.534	1.941*** -0.11
Speaks English	1.530*** -0.112	0.844 -0.866	1.603*** -0.116
Constant	23.18*** -2.934	9.656 -6.547	26.48*** -3.16
Observations	148,199	19,975	128,224
R-squared	0.139	0.082	0.144

Notes: All regressions include dummies for female, urban residence, year of immigration, years lived in the U.S., year of age, place of birth, state and year fixed effects, and a vector of state controls; see Table 2 for the list. Standard errors are clustered at the state level (in parentheses). Person weights used in all estimations. *** p<0.01, ** p<0.05, * p<0.1

APPENDIX TABLE VII: TRENDS IN EDUCATION LAWS

