

ONLINE SUPPLEMENT

to article in

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How Puerto Rico Became White: Boundary Dynamics and Intercensus Racial Reclassification

Mara Loveman

University of Wisconsin, Madison

Jeronimo O. Muniz

University of Wisconsin, Madison

Section A.

This supplement describes the methods we used to evaluate the hypothesis that differential rates of population growth by “race” contributed to the whitening of Puerto Rico between 1910 and 1920. As described in the published article, we weighed the contribution of demographic processes to the whitening of Puerto Rico by comparing the difference between the projected and observed populations of Puerto Rico in 1920 in two different scenarios: (1) a race-neutral scenario (no differentials in rates of mortality, fertility, or net migration corresponding to racial category) and (2) a race-specified scenario (differential mortality, fertility, and net-migration by racial category). Because there are no previously published estimates of race-specific mortality, fertility, or net migration for this period of Puerto Rican history, we estimated each of these in turn and then incorporated them into our projection model. In the following, we report our estimates of mortality, fertility, and net migration rates for the population as a whole and by racial category. We then describe the methods used to project the 1910 population of Puerto Rico forward ten years in both the race-neutral and race-specified projection scenarios.

MORTALITY ESTIMATES FOR PUERTO RICO IN 1910

Life tables describe the mortality experience of specific populations. There are no previously published life tables for 1910 to 1920 Puerto Rico, so we began our demographic analysis by estimating sex- and race-specific life tables for Puerto Rico’s 1910 population. We first estimated sex-specific life tables for the population as a whole, and then for those classified as “white,” “mulatto/a,” and “black” in 1910. We constructed these life tables using data available in Vázquez-Calzada (1988:221–23).

Vázquez-Calzada reports age-specific mortality rates in 1903 and 1930 Puerto Rico for both sexes combined. These data served as input to interpolate life tables for each sex in 1910. Life tables for each sex were estimated by solving a system of equations.¹ For each racial category, we estimated life tables using Brass’s method of indirect child

¹ As death rates ($m_{x,t}^{M,F}$) at age x and at time t are available for males and females (superscripts M and F) in Vázquez-Calzada (1988) for 1930, we obtained these same rates for 1910 by solving the system:

$$\left\{ \begin{array}{l} \frac{m_{x,t}^M}{m_{x,t}^F} = \frac{m_{x,1930}^M}{m_{x,1930}^F} \\ \frac{m_{x,t}^M + m_{x,t}^F}{2} = m_{x,t} \end{array} \right. \quad (1)$$

$$\quad \quad \quad (2)$$

Assumptions:

- (a) Equation 1 assumes that the ratio between sex-age specific death rates in 1910 and 1920 was the same as the one observed in 1930.
- (b) Equation 2 assumes that the age-specific death rate in the total population is equal to the average of both sexes.

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mortality (Brass et al. 1968) available in the software MORTPAK (United Nations 1988:26). We used the Coale-Demeny West pattern of mortality to describe the distribution of deaths beyond childhood (United Nations 1983). Preliminary results showed that the choice of the mortality pattern (UN general, South or North) made little difference.

We found that those classified as white in 1910 had lower mortality than those classified as mulatto or black, and women had, on average, lower mortality than men. Our estimates yielded the following life expectancies for Puerto Ricans in 1910: Among women—38.18 years for those classified as white, 31.58 for those classified as mulatta, and 24.07 for those classified as black. Among men—36.56 years for those classified as white, 31.32 for those classified as mulatto, and 25.06 for those classified as black. Our results for life expectancy in the total population are consistent with published numbers for Puerto Rico in the beginning of the twentieth century (Vázquez-Calzada 1988:223–27). The estimated racial disparities in life expectancy are consistent with race-specific estimates for the U.S. population in this same time period. Farley (1970:67) reports that life expectancy at birth for black women born in the United States between 1910 and 1920 was only 25 years. (Male life expectancies are not reported because of undercount problems.) Eblen (1974:307–08), however, reports life expectancies at birth around 33 years for black men and 36 years for black women living in the United States during 1900 to 1910.

Life tables by sex and racial category for 1910 Puerto Rico are presented in Tables S1 to S8. As usual, the functions of the life table are age (x), mortality rate between ages x and $x + n$ (${}_n m_x$), mortality probabilities (${}_n q_x$), a hypothetical number of people that will survive to age x if mortality remains constant (l_x), the number of people dying in the age interval x to $x + n$ (${}_n d_x$), the number of person-years (${}_n L_x$), the cumulative number of person-years at age x (T_x), life expectancy at age x (e^o_x), and a separation factor describing how deaths are distributed over the interval (${}_n a_x$).

Table S1. Life Table for All Women, Puerto Rico 1910

Age x	${}_n m_x$	${}_n q_x$	l_x	${}_n d_x$	${}_n L_x$	T_x	e^o_x	${}_n a_x$
0	0.0665	0.2656	100,000	26,559	399,284	3,531,700	35.32	1.21
5	0.0107	0.0520	73,441	3,820	357,655	3,132,416	42.65	2.50
10	0.0073	0.0357	69,621	2,488	341,885	2,774,761	39.86	2.50
15	0.0115	0.0562	67,133	3,770	326,885	2,432,876	36.24	2.67
20	0.0186	0.0890	63,363	5,637	303,123	2,105,991	33.24	2.57
25	0.0196	0.0932	57,726	5,382	275,051	1,802,869	31.23	2.48
30	0.0202	0.0962	52,344	5,038	249,004	1,527,817	29.19	2.48
35	0.0213	0.1012	47,306	4,787	224,476	1,278,813	27.03	2.48
40	0.0230	0.1088	42,519	4,625	201,000	1,054,337	24.80	2.49
45	0.0260	0.1219	37,894	4,620	177,920	853,337	22.52	2.50
50	0.0298	0.1387	33,274	4,615	154,796	675,417	20.30	2.49
55	0.0337	0.1554	28,659	4,454	132,124	520,621	18.17	2.49
60	0.0403	0.1829	24,205	4,427	109,865	388,497	16.05	2.48
65	0.0710	1.0000	19,778	19,777	278,632	278,632	14.09	14.09

Table S2. Life Table for White Women, Puerto Rico 1910

Age x	${}_n m_x$	${}_n q_x$	l_x	${}_n d_x$	${}_n L_x$	T_x	e^o_x	${}_n a_x$
0	0.0597	0.2432	100,000	24,317	407,490	3,818,364	38.18	1.20
5	0.0093	0.0454	75,683	3,434	369,830	3,410,874	45.07	2.50
10	0.0063	0.0312	72,249	2,255	355,608	3,041,044	42.09	2.50
15	0.0100	0.0489	69,994	3,422	342,010	2,685,437	38.37	2.67
20	0.0161	0.0777	66,572	5,172	320,333	2,343,426	35.20	2.58
25	0.0171	0.0821	61,400	5,040	294,324	2,023,093	32.95	2.49
30	0.0178	0.0854	56,360	4,813	269,695	1,728,769	30.67	2.49
35	0.0191	0.0910	51,547	4,691	245,975	1,459,073	28.31	2.49
40	0.0209	0.0993	46,856	4,654	222,664	1,213,099	25.89	2.50
45	0.0239	0.1129	42,202	4,764	199,143	990,435	23.47	2.51
50	0.0277	0.1296	37,438	4,853	175,058	791,292	21.14	2.50
55	0.0316	0.1463	32,585	4,767	151,008	616,235	18.91	2.50
60	0.0380	0.1734	27,818	4,824	126,962	465,227	16.72	2.49
65	0.0680	1.0000	22,994	22,992	338,265	338,265	14.71	14.71

Table S3. Life Table for Mulatta Women, Puerto Rico 1910

Age x	${}_n m_x$	${}_n q_x$	l_x	${}_n d_x$	${}_n L_x$	T_x	e^o_x	${}_n a_x$
0	0.0767	0.2976	100,000	29,756	387,819	3,157,668	31.58	1.23
5	0.0128	0.0622	70,244	4,366	340,305	2,769,849	39.43	2.50
10	0.0087	0.0427	65,878	2,810	322,365	2,429,544	36.88	2.50
15	0.0139	0.0673	63,068	4,243	305,441	2,107,179	33.41	2.67
20	0.0224	0.1060	58,825	6,237	278,913	1,801,738	30.63	2.56
25	0.0233	0.1099	52,588	5,781	248,285	1,522,825	28.96	2.47
30	0.0238	0.1124	46,807	5,261	220,683	1,274,540	27.23	2.46
35	0.0247	0.1161	41,546	4,825	195,508	1,053,857	25.37	2.47
40	0.0260	0.1222	36,721	4,486	172,296	858,349	23.37	2.48
45	0.0289	0.1347	32,235	4,343	150,265	686,053	21.28	2.49
50	0.0328	0.1514	27,892	4,224	128,824	535,788	19.21	2.48
55	0.0367	0.1681	23,668	3,979	108,321	406,964	17.19	2.48
60	0.0435	0.1959	19,689	3,858	88,677	298,643	15.17	2.47
65	0.0754	1.0000	15,831	15,830	209,967	209,967	13.26	13.26

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Table S4. Life Table for Black Women, Puerto Rico 1910

Age x	${}_n m_x$	${}_n q_x$	l_x	${}_n d_x$	${}_n L_x$	T_x	e^o_x	${}_n a_x$
0	0.1038	0.3735	100,000	37,348	359,963	2,407,134	24.07	1.25
5	0.0188	0.0896	62,652	5,614	299,225	2,047,171	32.68	2.50
10	0.0127	0.0615	57,038	3,508	276,420	1,747,946	30.65	2.50
15	0.0204	0.0974	53,530	5,214	255,423	1,471,526	27.49	2.66
20	0.0327	0.1512	48,316	7,305	223,566	1,216,103	25.17	2.53
25	0.0333	0.1535	41,011	6,295	188,908	992,537	24.20	2.44
30	0.0334	0.1539	34,716	5,342	159,856	803,629	23.15	2.43
35	0.0334	0.1536	29,374	4,513	135,281	643,773	21.92	2.43
40	0.0337	0.1551	24,861	3,855	114,459	508,492	20.45	2.45
45	0.0361	0.1652	21,006	3,470	96,216	394,033	18.76	2.46
50	0.0399	0.1812	17,536	3,177	79,604	297,816	16.98	2.46
55	0.0439	0.1974	14,359	2,834	64,597	218,212	15.20	2.46
60	0.0510	0.2255	11,525	2,599	50,985	153,616	13.33	2.45
65	0.0870	1.0000	8,926	8,925	102,631	102,631	11.50	11.50

Table S5. Life Table for All Men, Puerto Rico 1910

Age x	${}_n m_x$	${}_n q_x$	l_x	${}_n d_x$	${}_n L_x$	T_x	e^o_x	${}_n a_x$
0	0.0715	0.2800	100,000	28,002	391,689	3,431,500	34.32	1.13
5	0.0115	0.0559	71,998	4,024	349,930	3,039,811	42.22	2.50
10	0.0081	0.0395	67,974	2,688	333,150	2,689,881	39.57	2.50
15	0.0095	0.0462	65,286	3,018	319,314	2,356,731	36.10	2.64
20	0.0176	0.0842	62,268	5,244	298,697	2,037,418	32.72	2.59
25	0.0173	0.0828	57,024	4,719	273,105	1,738,721	30.49	2.45
30	0.0167	0.0803	52,305	4,201	250,959	1,465,615	28.02	2.49
35	0.0190	0.0908	48,104	4,367	229,725	1,214,656	25.25	2.53
40	0.0232	0.1096	43,737	4,792	206,906	984,931	22.52	2.54
45	0.0293	0.1367	38,945	5,324	181,612	778,025	19.98	2.54
50	0.0371	0.1697	33,621	5,707	153,860	596,413	17.74	2.50
55	0.0432	0.1950	27,914	5,442	125,856	442,553	15.85	2.48
60	0.0520	0.2298	22,472	5,165	99,251	316,696	14.09	2.46
65	0.0796	1.0000	17,307	17,308	217,445	217,445	12.56	12.56

Table S6. Life Table for White Men, Puerto Rico 1910

Age x	$n\mathbf{m}_x$	$n\mathbf{q}_x$	\mathbf{l}_x	$n\mathbf{d}_x$	$n\mathbf{L}_x$	\mathbf{T}_x	\mathbf{e}^0_x	$n\mathbf{a}_x$
0	0.0643	0.2574	100,000	25,737	400,160	3,656,119	36.56	1.12
5	0.0102	0.0497	74,263	3,693	362,083	3,255,959	43.84	2.50
10	0.0072	0.0355	70,570	2,505	346,588	2,893,877	41.01	2.50
15	0.0091	0.0445	68,065	3,031	333,187	2,547,289	37.42	2.65
20	0.0159	0.0764	65,034	4,970	313,143	2,214,102	34.05	2.58
25	0.0157	0.0753	60,064	4,521	288,828	1,900,960	31.65	2.46
30	0.0152	0.0730	55,543	4,055	267,537	1,612,132	29.02	2.49
35	0.0173	0.0832	51,488	4,282	246,885	1,344,595	26.11	2.54
40	0.0213	0.1013	47,206	4,782	224,314	1,097,710	23.25	2.55
45	0.0273	0.1279	42,424	5,427	198,802	873,396	20.59	2.55
50	0.0349	0.1607	36,997	5,946	170,197	674,594	18.23	2.51
55	0.0411	0.1864	31,051	5,787	140,718	504,397	16.24	2.49
60	0.0499	0.2213	25,264	5,592	112,172	363,679	14.40	2.47
65	0.0782	1.0000	19,672	19,674	251,507	251,507	12.79	12.79

Table S7. Life Table for Mulatto Men, Puerto Rico 1910

Age x	$n\mathbf{m}_x$	$n\mathbf{q}_x$	\mathbf{l}_x	$n\mathbf{d}_x$	$n\mathbf{L}_x$	\mathbf{T}_x	\mathbf{e}^0_x	$n\mathbf{a}_x$
0	0.0816	0.3106	100,000	31,057	380,382	3,132,259	31.32	1.15
5	0.0134	0.0646	68,943	4,456	333,575	2,751,877	39.92	2.50
10	0.0093	0.0453	64,487	2,920	315,135	2,418,302	37.50	2.50
15	0.0115	0.0560	61,567	3,445	299,691	2,103,167	34.16	2.64
20	0.0199	0.0950	58,122	5,523	277,184	1,803,476	31.03	2.57
25	0.0196	0.0931	52,599	4,898	250,500	1,526,292	29.02	2.45
30	0.0189	0.0904	47,701	4,313	227,632	1,275,792	26.75	2.48
35	0.0213	0.1012	43,388	4,392	206,043	1,048,160	24.16	2.52
40	0.0256	0.1206	38,996	4,703	183,368	842,117	21.59	2.53
45	0.0320	0.1485	34,293	5,091	158,870	658,748	19.21	2.53
50	0.0400	0.1817	29,202	5,305	132,705	499,878	17.12	2.49
55	0.0460	0.2062	23,897	4,927	107,020	367,173	15.36	2.47
60	0.0549	0.2408	18,970	4,568	83,211	260,154	13.71	2.45
65	0.0814	1.0000	14,402	14,401	176,943	176,943	12.29	12.29

Table S8. Life Table for Black Men, Puerto Rico 1910

Age x	$n\mathbf{m}_x$	$n\mathbf{q}_x$	\mathbf{l}_x	$n\mathbf{d}_x$	$n\mathbf{L}_x$	\mathbf{T}_x	\mathbf{e}_x^0	$n\mathbf{a}_x$
0	0.1091	0.3846	100,000	38,462	352,416	2,506,051	25.06	1.16
5	0.0184	0.0882	61,538	5,426	294,125	2,153,635	35.00	2.50
10	0.0125	0.0606	56,112	3,398	272,065	1,859,510	33.14	2.50
15	0.0152	0.0734	52,714	3,871	254,365	1,587,445	30.11	2.62
20	0.0261	0.1229	48,843	6,001	229,531	1,333,080	27.29	2.55
25	0.0255	0.1197	42,842	5,127	201,059	1,103,550	25.76	2.44
30	0.0247	0.1164	37,715	4,390	177,433	902,490	23.93	2.46
35	0.0273	0.1277	33,325	4,255	155,975	725,057	21.76	2.50
40	0.0320	0.1481	29,070	4,306	134,615	569,082	19.58	2.51
45	0.0388	0.1768	24,764	4,379	112,868	434,467	17.54	2.50
50	0.0469	0.2098	20,385	4,276	91,090	321,599	15.78	2.47
55	0.0527	0.2322	16,109	3,740	70,997	230,510	14.31	2.45
60	0.0616	0.2659	12,369	3,289	53,386	159,513	12.90	2.43
65	0.0856	1.0000	9,080	9,079	106,127	106,127	11.69	11.69

FERTILITY ESTIMATES FOR PUERTO RICO IN 1910

Fertility estimates for Puerto Rico in the first half of the twentieth century show that a differential between whites and non-whites has existed since 1910, when the number of children under age 5 born to every 1,000 white women ages 15 to 49 was 93.1 percent of the number born to non-whites (Combs and Davis 1951:105). We calculated age specific fertility rates (ASFR) for each racial category in 1910 by adjusting the fertility pattern observed in 1940 Puerto Rico (TFR equal to 5.79 children) by the mean number of children ever born per woman (Mortara 1949). This indirect fertility method can be implemented using the “FERTCB” function available in MORTPAK. We estimated total fertility rates (TFR) of 4.99 for all women in 1910, 4.96 children for women classified as white, 5.01 for women classified as mulatta, and 5.23 for women classified as black.

Table S9. Age-Specific Fertility Rates (ASFR) for All Women, Puerto Rico 1910

Mother's Age Group	Mean Number of Children Ever Born per Woman	ASFR
15-19	0.121	0.096
20-24	1.049	0.258
25-29	2.494	0.260
30-34	3.856	0.208
35-39	5.029	0.131
40-44	5.716	0.038
45-49	6.369	0.007
TFR		4.99

Table S10. Age-Specific Fertility Rates (ASFR) for White Women, Puerto Rico 1910

Mother's Age Group	Mean Number of Children Ever Born per Woman	ASFR
15-19	0.113	0.096
20-24	1.033	0.257
25-29	2.485	0.258
30-34	3.864	0.207
35-39	5.115	0.130
40-44	5.755	0.038
45-49	6.436	0.007
TFR		4.959

Table S11. Age-Specific Fertility Rates (ASFR) for Mulatta Women, Puerto Rico 1910

Mother's Age Group	Mean Number of Children Ever Born per Woman	ASFR
15-19	0.141	0.097
20-24	1.089	0.259
25-29	2.508	0.261
30-34	3.911	0.209
35-39	4.857	0.131
40-44	5.681	0.038
45-49	6.244	0.007
TFR		5.01

Table S12. Age-Specific Fertility Rates (ASFR) for Black Women, Puerto Rico 1910

Mother's Age Group	Mean Number of Children Ever Born per Woman	ASFR
15-19	0.101	0.101
20-24	1.008	0.270
25-29	2.518	0.272
30-34	3.375	0.218
35-39	4.978	0.137
40-44	5.271	0.040
45-49	6.189	0.007
TFR		5.226

NET MIGRATION ESTIMATES FOR PUERTO RICO BETWEEN 1910 AND 1920

We estimated net migration rates to and from the island of Puerto Rico using data available in the Public Use Micro-Samples of the 1920 Puerto Rican Census and the 1920 mainland U.S. Census. According to the 1920 Puerto Rican census, 2,185 individuals immigrated to the island between 1910 and 1920. Of these, 2,000 were classified as white

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in the 1920 census (1095 from Spain, 180 from Cuba, 150 from Venezuela, 115 from the Dominican Republic, and the remainder from 21 other countries). During the same decade, the mainland U.S. census counted 7,873 Puerto Rican emigrants to the United States.² Of these, 6,561 were classified as white on the U.S. mainland census; 909 as Spanish (these were write-in responses), and 403 as black. These numbers come from the 1920 U.S. Census (<http://www.ipums.org>; Ruggles et al. 2004), representing all individuals who reported Puerto Rico as “place of birth” and whose year of arrival in the continental United States was between 1910 and 1920. Combining emigration and immigration numbers, we find that between 1910 and 1920 there was a net outflow from Puerto Rico of 4,561 whites and 218 non-whites.

Table S13 shows the distribution of net migrants by sex and age in each racial category (not including Spanish write-in responses) between 1910 and 1920. These numbers should be taken as rough estimates, due to two important caveats. First, these numbers do not include emigration flows to places other than the United States. Emigration to the United States accounts for the vast majority of all emigration from Puerto Rico in this decade (Duany 2000; Vázquez-Calzada 1988), but at least some migrants likely went elsewhere. Second, the racial differentials in net migration rates must be interpreted with caution, given that those Puerto Ricans who left the island for the United States may have been racially reclassified in the 1920 census on the mainland. Indeed, there is good reason to believe such reclassification routinely occurred (Duany 2002; Rodríguez 2000).

Table S13. Net Migrants by Age, Racial Classification, and Sex, Puerto Rico, 1910 to 1920

Age group	WHITE		MULATTO (A)		BLACK	
	Men	Women	Men	Women	Men	Women
0-4	50	-384	-	-	-	-
5-9	-343	-162	-	10	-	-
10-14	-263	-132	-	-	-	-
15-19	-415	-253	-	10	-	10
20-24	-1510	-445	-	30	-202	10
25-29	-159	-516	10	-	-85	-
30-34	170	-1	10	-	-101	-
35-39	-16	-11	20	10	10	-
40-44	115	-157	-	-	-	10
45-49	-41	-46	10	10	-	-
50-54	-61	15	-	-	-	-
55-59	10	20	-	-	-	-
60-64	20	30	-	10	-	-
65 and more	-101	25	-	-	-	-
Total	-2544	-2017	50	80	-378	30

DEMOGRAPHIC PROJECTION

To evaluate the contribution of the estimated racial differentials in rates of population growth to the whitening of Puerto Rico’s population between 1910 and 1920, we compared the projected racial composition of the population in 1920 in a scenario with no racial differentials to a scenario with race-specific mortality, fertility, and migration incorporated into the model. We projected the population forward using the cohort component method described in Preston, Heuveline, and Guillot (2001:119–29).

² Large-scale emigration to the United States began after the 1920s (Duany 2000:15; Senior 1947). By 1944, approximately 90,000 Puerto Ricans had emigrated to the United States (Vázquez-Calzada 1998:283–88).

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Our preliminary projection underestimated the size of the enumerated population by 1.2 percent; we projected a total population of 1,263,954 in 1920, whereas the enumerated population in 1920 was 1,279,275. The difference between the total enumerated and projected populations in 1920 could be due either to assumptions of the model or to coverage errors in the 1910 census.

The cohort component method assumes a stable mortality schedule over the decade. This is a reasonable assumption in our case because mortality rates were very similar in 1910 and 1920 Puerto Rico. In the total population, age-specific death rates had an average absolute decline of 2.8 deaths for every 1,000 persons of reproductive age (between ages 15 and 50). According to Vázquez-Calzada (1988:218), from 1910 to 1914, the crude death rate was 22 for every 1,000 persons, and between 1920 and 1924 it was equal to 21.2 per 1,000. Combs and Davis (1951:105) provide similar estimates: 23.4 per 1,000 in 1910 and 22.3 per 1,000 in 1920.

Coverage errors in the 1910 census could also contribute to the 1.2 percent shortfall of our projection in relation to the enumerated population in 1920. However, there does not appear to be any significant difference in coverage between the 1910 and 1920 censuses (Alberto Palloni, personal communication). In a report to the director of the U.S. Census in Washington, DC, the supervisor of the 1910 Census of Puerto Rico wrote: “I am absolutely satisfied that the enumeration work in Porto Rico has [sic] about as complete as it could possibly have been made” (Skinner 1910:12). Of course, the report must be read with caution given the obvious interest its author had in portraying the 1910 Census as a success. The lack of alternative and independent data sources for the same period makes it difficult to assess the completeness of the 1910 census. Even if other data sources were available, however, statistical methods for identifying coverage errors are not exempt from problems referring to the correlation of omission probabilities across data sources (correlation bias) (Preston et al. 2001:213).

To account for sources of uncertainty in our projection model, we adjusted our age-specific fertility and mortality rates upward by a fixed constant before applying the cohort component projection method; such that the total projected population equaled the total enumerated population in 1920. Our approach to making the projected and enumerated total populations equivalent follows Hout and Goldstein (1994:67). In our case, we adjusted the age-specific fertility rates by a constant equal to 1.1408 and the age-specific mortality rates by a constant equal to 1.11596. In this scenario, life expectancy at birth was equal to 32.43 years for women and 31.6 for men; total fertility rate (TFR) was equal to 5.69 children and net migration rates varied by age and sex.

Table S14. Projected versus Enumerated Population by Race, Puerto Rico, 1910 to 1920

	White	Mulatto	Black	Total
Enumerated 1910	721,590	340,240	50,235	1,112,065
Enumerated 1920	947,835	282,230	49,200	1,279,275
Projected 1920 (unadjusted)	837,180	376,965	49,809	1,263,954
Projected 1920	831,244	391,711	56,320	1,279,275

Next, we compared our original (race-neutral) projection scenario to a scenario with our estimates of racial differentials in rates of population growth incorporated into the model. To make the total projected 1920 population equivalent to the total observed population in this race-specified model, race-specific life expectancy and fertility were weighted by adjustment factors to increase the size of each racial group proportionately, while still preserving the effects stemming from interracial differences in mortality and fertility. After applying the adjustment factor for mortality (1.11589), life expectancy at birth was estimated at 35.2 years for women classified as white in 1910, 28.8 years for mulattas, and 21.6 years for blacks. Among men, life expectancy was slightly lower for whites (33.8) and mulattos (28.6) and slightly higher for blacks (22.6). After applying the adjustment factor for fertility (1.1396), race-specific total fertility (TFR) was estimated at 5.65 children for whites, 5.71 for mulattas, and 5.95 for blacks. The projected population of Puerto Rico in 1920 when racial differentials in rates of population growth are taken into account is reported in row C of Table 1, on p. 921 of the printed article.

Section B.

Table S15 reports results of the multinomial regression used in the counterfactual analysis described on p. 928 of the printed article. The model estimates the likelihood of being classified as white, mulatto, or black in 1910 and 1920 taking into account the influence of relevant sociodemographic variables.

Table S15. Coefficients from Multinomial Logit Model: Racial Classification of All Individuals, Puerto Rico, 1910 to 1920

	1910		1920	
	Mulatto	Black	Mulatto	Black
1 if male	-.029*	-.095**	.010	-.047
	(.01)	(.03)	(.02)	(.03)
Age of the person in years	.002	.017***	-.001	.025***
	(.00)	(.00)	(.00)	(.00)
Age squared in years	.000	.000**	.000	.000
	(.00)	(.00)	(.00)	(.00)
1 if literate ^a	.469***	-.214***	-.403***	-.197***
	(.02)	(.04)	(.02)	(.04)
1 if living in consensual union	.383***	.268***	.329***	.314***
	(.03)	(.05)	(.03)	(.05)
1 if married	-.477***	-1.077***	-.451***	-.908***
	(.02)	(.05)	(.02)	(.05)
1 if divorced or widowed	-.422***	-1.112***	-.304***	-.757***
	(.04)	(.08)	(.04)	(.08)
1 if African-descent region	.769***	1.437***	.958***	1.694***
	(.05)	(.07)	(.05)	(.07)
1 if coffee region	-.935***	-1.188***	-.831***	-1.206***
	(.02)	(.04)	(.02)	(.05)
Constant	-.440***	-2.688***	-.836***	-3.105***
	(.02)	(.05)	(.04)	(.07)
Pseudo R2 ^b		.048		.043
Number of cases in the sample ^c		109,710		104,808

Notes: Numbers in parentheses are standard errors. White is the base outcome.

^a Individuals who know how to read and write, not only one or the other.

^b The poor fit of the model does not detract from our results given that the objective is not to predict individual racial classification in each decade, but to isolate the effect of change in characteristics in the model between 1910 and 1920 on the average likelihood of classification as white.

^c Differs from total sample because of listwise deletion. Because of this sample selection the estimated average probabilities are slightly different from the observed in the whole population.

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

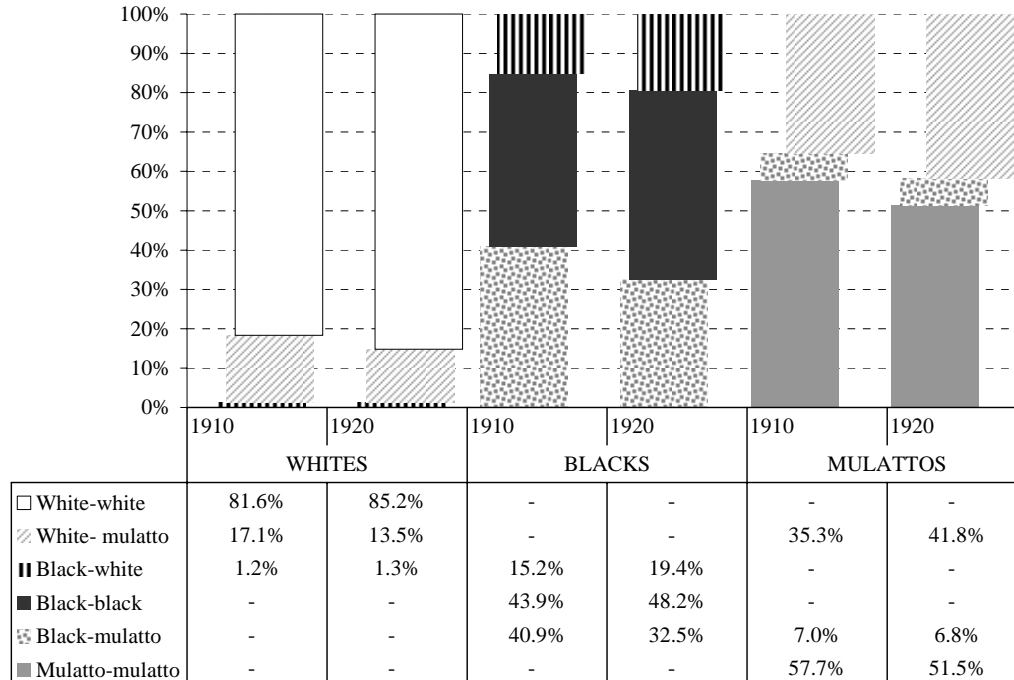
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Section C.

Table S16 provides additional descriptive statistics on union pairings by racial category of partners, as noted on p. 930 of the printed article.

Table S16. Type of union as percent of all unions involving a member of each racial category, 1910 to 1920



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