

Additional tables referred to in the footnotes,
or referenced in the text as 'available from the author.'

Addenda for:

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Age and education for US born married couples in their 20s, 1980 census.

Husband's Race	Wife's Race	Husband's mean age	Wife's mean age	Husband's mean education	Wife's mean education	Sample Size
White	White	25.68	24.36	13.01	12.73	279,608
Black	White	25.56	24.23	12.75	12.43	900
All Others	White	25.39	23.95	12.62	12.37	5,595
White	Black	25.37	24.35	12.77	12.72	226
Black	Black	25.79	24.42	12.27	12.39	24,306
All Others	Black	25.19	24.30	12.33	12.35	139
White	All Others	25.47	24.25	12.83	12.44	5,145
Black	All Others	25.59	24.13	12.71	12.27	340
All Others	All Others	25.35	24.14	11.67	11.51	10,695

Note: "All Others" includes Hispanics, Asians, and all other racial and ethnic groups other than non-Hispanic White and non- Hispanic Black.

Source: IPUMS. Mean educational attainment in years based on 23 category variable HIGRADEG.

Re-examination of the status comparisons from Table 2, with recently married Black-White couples from the 1970 and 1980 censuses. (No support for Status- Caste Exchange)

Trial	1) all		2) <10 yrs		3) <5 yrs		4) <10 yrs	
	Hispanics included? Yes		Yes		Yes		No	
	1970	1980	1970	1980	1970	1980	1970	1980
Census Sample N	530	5,089	281	2,974	188	1,880	211	2,607
Mean Education Gap, years (Black-White) ^a	-0.28*	-0.04	-0.36*	0.004	-0.29	-0.02	-0.33	-0.07
Pct Both spouses have same education	25.3	28.5	26.3	30.4	25.5	31.4	28.4	30.5
Pct Black spouse has more education	36.4	36.4	35.2	36.3	35.6	35.1	34.6	35.1
Pct White spouse has more education	38.3	35.2	38.4	33.3	38.8	33.6	37.0	34.5
Total	100%	100%	100%	100%	100%	100%	100%	100%
Mean occupational status gap (1-100, Black- White) ^c	-2.27	-5.17***	-2.19	-5.43***	-1.75	-5.81***	-3.46	-5.42***
N both spouses report an occupation	395	4,086	240	2,568	164	1,655	185	2,277
Pct Both spouses have same status (within 2 points)	16.2	14.8	16.7	15.0	17.1	16.0	15.0	15.0
Pct Black spouse higher status (by more than 2 points)	41.0	35.8	41.7	35.4	42.1	34.4	42.7	35.4
Pct White spouse higher status (by more than 2 points)	42.8	49.5	41.7	49.7	40.9	49.7	42.2	49.5
Total	100%	100%	100%	100%	100%	100%	100%	100%

* P < 0.05, ** P < 0.01, *** P < 0.001 (two tailed tests, null hypothesis of status gap=0).

^a Educational gap and comparisons based on the maximum number of education categories available, i.e. 23 categories

^c Occupation status, a 1-100 scale is the Duncan SEI score for each person who reports an occupation

Trial (1) replicates the all ages, all marital duration data from Table 2

Trial (2) includes persons married for the first time (for at least one spouse) within 10 years before the census.

Trial (3) includes persons married for the first time (for at least one spouse) within 5 years before the census.

Trial (4) excludes the Hispanics from 'White' and 'Black' categories, as in Tables 1 and 3-5.

Note: Black-White couples here include couples of all ages born in the US.

Note: 1980 is a 5% sample, 1970 is a 1% sample.

Compare to Table 2: Status comparisons for married couples, U.S. Census 1910-1990 1% samples, broken down by gender (Statistics that are consistent with Status- Caste Exchange in Bold)

	1910	1920	1940	Census Year: 1950	1960	1970	1980	1990
Black Husband- White Wife:								
Census Sample N	105	68	288	305	252	422	1042	1761
Mean Husband's Education (years) ^a			6.9		8.1	11.2	12.4	13.1
Mean Wife's Education (years) ^a			7.5		8.8	11.3	12.3	13.0
Education Gap (Husb Ed- Wife Ed) ^a			-0.6**		-0.8**	-0.1	0.1	0.0
Mean literacy gap (1-4 scale) ^b	-0.15	-0.04						
Mean occupational status gap (1-100 scale) ^c	5.0*	1.0	-3.9	2.7	-5.0**	-3.6*	-5.9***	-7.8***
N both spouses report an occupation	38	9	32	74	149	326	819	1520
White Husband- Black Wife:								
Census Sample N	36	55	262	238	301	254	285	657
Mean Husband's Education (years) ^a			6.4		8.0	10.6	12.2	13.2
Mean Wife's Education (years) ^a			7.0		8.6	10.7	12.2	13.3
Education Gap (Husb Ed- Wife Ed) ^a			-0.6**		-0.6**	-0.1	0.0	0.0
Mean literacy gap (1-4 scale) ^b	-0.11	0.38*						
Mean occupational status gap (1-100 scale) ^c	2.4	6.1	1.6	-0.7	3.4*	-0.4	-3.0	-2.8*
N both spouses report an occupation	11	7	47	52	161	175	214	557
Black Husband- Black Wife:								
Census Sample N	10,986	18,665	23,315	37,406	30,457	32,975	34,258	32,922
Mean Husband's Education (years) ^a			5.0		7.3	8.8	10.3	11.7
Mean Wife's Education (years) ^a			6.0		8.4	9.8	11.1	12.3
Education Gap (Husb Ed- Wife Ed) ^a			-1.0***		-1.1***	-1.0***	-0.8***	-0.6***
Mean literacy gap (1-4 scale) ^b	-0.01	-0.12***						
Mean occupational status gap (1-100 scale) ^c	3.7***	-0.7***	0.2	-0.4*	0.0	-3.2***	-5.4***	-7.1***
N both spouses report an occupation	4,741	5,353	5,761	9,881	17,946	22,741	23,365	23,768
White Husband- White Wife:								
Census Sample N	74,961	184,437	261,075	368,681	371,104	404,560	446,126	460,733
Mean Husband's Education (years) ^a			8.2		10.0	11.0	11.9	12.8
Mean Wife's Education (years) ^a			8.5		10.2	11.1	11.9	12.7
Education Gap (Husb Ed- Wife Ed) ^a			-0.3***		-0.2***	-0.1***	0.1***	0.1***
Mean literacy gap (1-4 scale) ^b	0.08***	0.01***						
Mean occupational status gap (1-100 scale) ^c	2.6***	-0.7**	-0.9***	-1.4***	-1.1***	-0.7***	-1.2***	-2.7***
N both spouses report an occupation	4,020	9,441	28,987	64,383	203,984	262,113	281,373	321,039

* P < 0.05, ** P < 0.01, *** P < 0.001 (two tailed tests, null hypothesis of status gap=0), ^a Formal education available for both spouses 1940, 1960-1990 ^b Literacy, a 1-4 scale (1= illiterate, 4= fully literate) available only 1910 and 1920 ^c Occupation status, a 1-100 scale is the Duncan SEI score for each person who reports an occupation

Note: N's are larger in this table than in Table 2 in Text, because this table includes foreign born couples

Note: Of the 30 total statistical tests for Black-White couples, 4 tests favor status-caste exchange.

Replication of Table 5 with simpler status-caste exchange dummy variable, loglinear and negative binomial models (Statistically significant evidence for Status-Caste Exchange in Bold face)

	Model 1	Model 2	Model 3	Model 4	Model 5
Goodness of fit DF	285	260	200	140	103
Goodness of fit Chisquare (L^2)	277,625.5	2,344.7	1,563.3	949.7	133.87
Goodness of fit P	0	0	0	0	0.022
<i>Key Association from Loglinear Models:</i>					
Black- White	-0.60***	-0.62***	-0.62***	-0.59***	-0.94***
Black- White status caste exchange, a simpler dichotomous dummy variable for Black spouse has more education	0.09*	0.29***	0.18**	0.08	-0.02
Educational Homogamy		1.74***	1.73***	1.71***	1.71***
General Racial Endogamy	2.29***	2.26***	2.26***	2.24***	3.02***
Black Endogamy	4.21***	4.32***	4.26***	4.29***	4.06***
<i>Key Associations, plus the Over-Dispersion Parameter Alpha, from Negative Binomial Regression</i>					
Blacks- Whites status caste exchange (parameterized as above)	-0.47	0.13	0.75	-0.02	-0.02
Alpha Overdispersion parameter	0.89***	0.04***	0.02***	0.01***	0

Source: 1980 US Census 5% microdata via IPUMS.ORG.

+P<0.1 * P<.05 ** P<.01 *** P<.001, 2 tailed tests. 324 cells. N=578,994.

Note: These are loglinear models with ordinary standard errors, and negative binomial models with ordinary standard errors as in Table 5. Except for the definition of the status-caste exchange parameter, all models the same as Loglinear models from Tables 3 and 5 in the text.

Status-Caste exchange for US born couples married in the 1970s, from the 1980 census. Coefficients and standard errors from Loglinear Models estimated with bootstrap methods, compare to Tables 3 and 5 (No Support for Status- Caste Exchange)

Model Number (Same as Models in Table 3)	(1)	(2)	(3)	(4)	(5)
Goodness of fit DF	285	260	200	140	103
Goodness of fit Chisquare (L ²)	277,491.9	2,372.4	1,569.7	948.8	130.96
<i>Key Associations:</i>					
NH Black- NH White	-0.55**	-0.54***	-0.56***	-0.56**	-0.99***
NH Blacks- NH Whites status caste exchange (standard error in parenthesis)	0.136 (0.090)	0.070 (0.044)	0.018 (0.078)	-0.053 (0.154)	-0.06 (0.097)
General Racial Endogamy	2.29***	2.26***	2.26***	2.24***	3.02
Black Endogamy	4.20***	4.32***	4.27***	4.30***	4.06***

Source: 1980 US Census 5% microdata via IPUMS.ORG,
 +P<0.1 * P<.05 ** P<.01 *** P<.001, 2 tailed tests. 324 cells. N=578,994. Bootstrap iterations=200.

Re-examining Tables 3 and 5 with a reduced dataset
 Reduced dataset excludes couples with non-Black or non-White spouses.
 Coefficients from loglinear and negative binomial models
 (Support for Status- Caste Exchange in Bold)

Model Number	(1)	(2)	(3)	(4)
Goodness of fit DF	119	94	35	25
Goodness of fit Chisquare (L ²)	258,887	874.1	119.2	50.0
Goodness of fit P	0	0	0	0.002
Simplified Model Hierarchical Description†	HRace*HEd WRace*WEd Black*White	Model 1 plus Hed*Wed	Model 1 plus HBlack*Hed*Wed WBlack*Hed*Wed	Model 1 plus HBlack*Hed*Wed WBlack*Hed*Wed
	Black-White Status-Caste Exchange			Black*White*Hed Black*White*Wed
<i>Key Associations, from Loglinear Model with Ordinary Standard Errors</i>				
Black- White	-4.99***	-5.01***	-5.00***	-5.21***
Blacks- Whites status caste exchange	0.14***	0.07***	-0.19	-0.18
<i>The Same Key Associations, plus the Over-Dispersion Parameter Alpha, from Negative Binomial Regression</i>				
Black- White	-4.96***	-4.92***	-5.00***	-5.21***
Blacks- Whites status caste exchange	0.04	0.04	-0.19	-0.18
Alpha Overdispersion Parameter	0.91***	0.026***	0	0
Likelihood Ratio Chisquare Test compared to Loglinear Model (one df)	250,000	401.9	0	0

Source: 1980 US Census 5% microdata via IPUMS.ORG,
 +P<0.1 * P<.05 ** P<.01 *** P<.001, 2 tailed tests. 144 cells, reduced from 324. N=540,852 reduced from 578,994.
 White and Black are Non-Hispanic White and Non-Hispanic Black
 Note: fit statistics at the top of the table apply to the loglinear models

An Expanded Table 6, with different measures of status-caste exchange
(Coefficients in Bold are consistent with status- caste exchange)

Model Description	Model Q1		Model Q2	
	<i>Qian's Quasi Symmetry Model</i>	<i>Same as Qian's Quasi Symmetry model, but with Black-White status-caste exchange term added</i>	<i>A Better Fitting Model</i>	<i>Same as previous, but with Black-White status-caste exchange term added</i>
			HRace*HEd*WE ^d *Year WRace*HEd*WE ^d *Year Racial Endogamy (each)*Year Racial Endogamy (each)*HEd Racial Endogamy(each)*WE ^d Black*White*Year HBlack*WWhite Hispanic*White HHispanic*WWhite	
df	354	353	251	250
L ²	1954.4	1915.1	278.13	277.4
Model P by LRT	0	0	0.115	0.112
BIC	-2707.2	-2733.4	-3027.1	-3014.7
Coefficient for Black Endogamy			6.36***	6.36***
Coefficient for Black- White interaction	-5.30***	-5.31***	-1.75***	-1.75***
Black- White Status-Caste Exchange		0.16***		-0.05
<i>Hypergammy Ratios:</i>				
Black Men, White Women 1980	1.56^a		0.94	
Black Men, White Women 1990	1.57		1.06	
White men, Black Women 1980	.81		1.02	
White Men, Black Women 1990	.97		1.25	

N= 523, 542

^a Differs from the original text (Qian 1997:273) due to a typo in the original. Black and White are Non-Hispanic Black and Non-Hispanic White.

Racial Endogamy (each)=0 for non endogamous marriage, and takes on a different nominal value for each of the 4 kinds of racial endogamy.

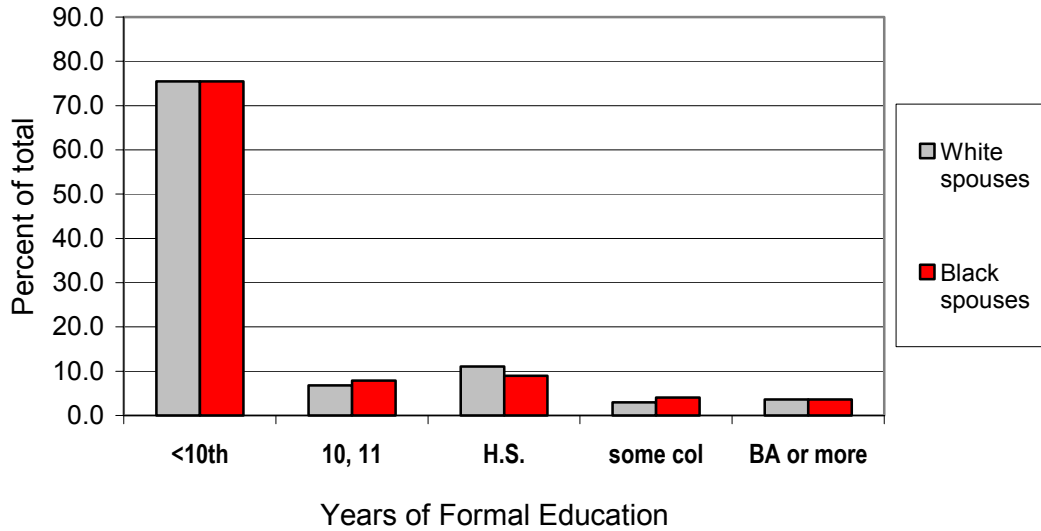
An expanded Table 7, with different measures of status-caste exchange
 (Coefficients in Bold are significant and consistent with status- caste exchange)

Model Description	Model F1 <i>Fu's model 2a:</i>	<i>Fu's model F1 with a different measure of status-caste exchange</i>	Model F3 <i>A better fitting model by LRT</i>	Model F4	<i>Compare to Model F4</i>
	HRace*HEd WRace* WEd HEd*WEd Black*White	HRace*HEd WRace*WEd HEd*WEd Black*White	HRace*HEd*WEd WRace*HEd*WEd Black*White*HEd Black*White*WEd	HRace*HEd*WEd WRace*HEd*WEd Black*White*HEd Black*White*WEd	HRace*HEd*WEd WRace*HEd*WEd Black*White*HEd Black*White*WEd
	Fu's interactions	Black-White Status Caste Exchange (graduated)	Fu's interactions	Black-White Status-Caste Exchange (graduated)	Black-White Status-Caste Exchange (dichotomous)
Residual df	35	38	9	9	8
L ²	215.6	268.8	14.6	14.6	14.1
Model P by LRT	0	0	0.10	0.10	0.08
BIC	-241.9	-228.0	-103.1	-103.1	-90.5
Black- White interaction	-5.08***	-4.67***	-4.86***	-4.88***	-4.90***
<i>Fu's 4 interaction terms:</i>					
Fu 1	0.021		-0.044		
Fu 2	-0.293***		-0.070		
Fu 3	-0.105***		-0.071		
Fu 4	-0.117*		-0.008		
Black-White Status Caste Exchange		0.15***		0.14	0.07

N=476,718, * P< .05, ** P<.01, *** P<.001

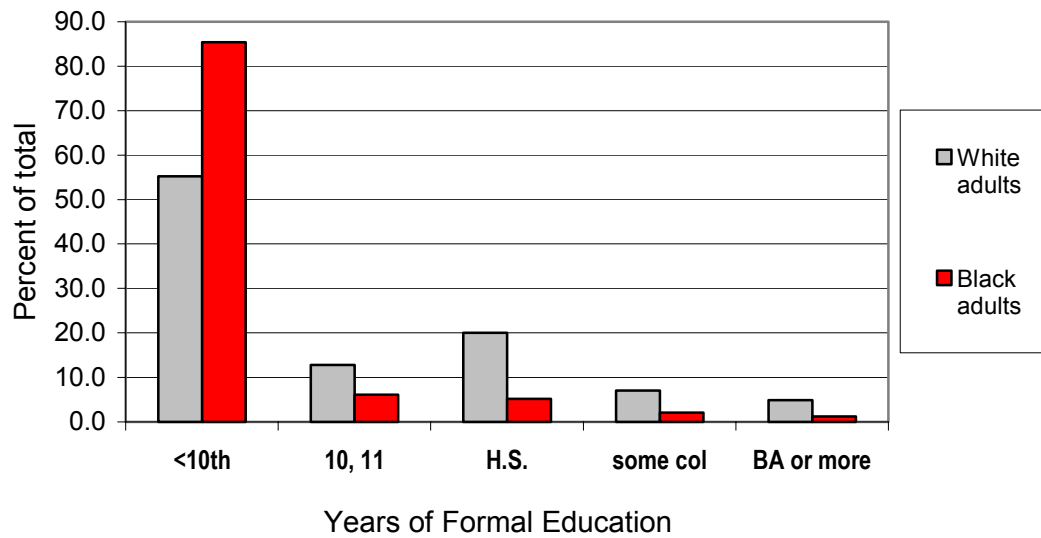
The Educational Distributions of Blacks and Whites, 1940

Black-White Intermarried couples



Note: Black-White intermarried couples from the 1940 census, both spouses U.S. born. Black and White include Hispanics. N=469

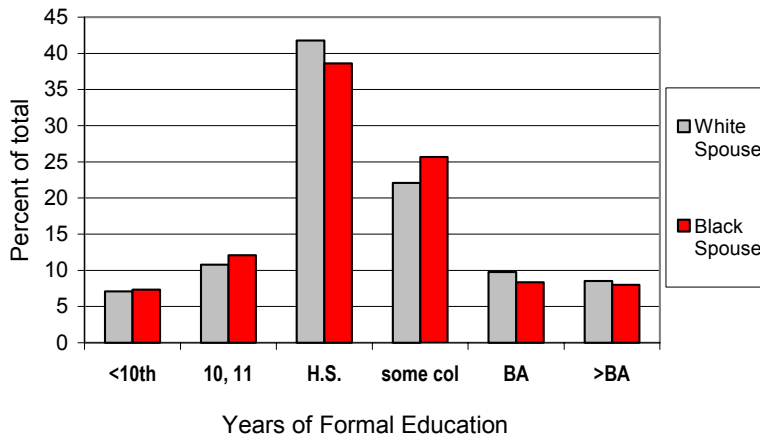
Black and White adults



Note: White and Black US born adults (age 18 or greater) from the 1940 census, regardless of marital status. White N= 716,109, Black N=83,059

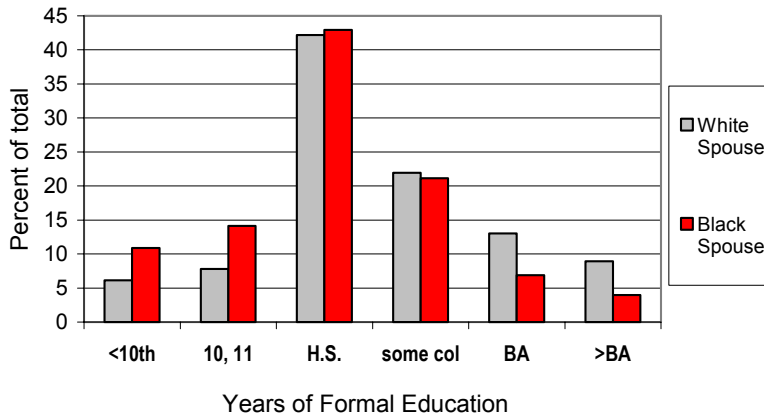
The Educational Distributions of Blacks and Whites, 1980

Black-White Intermarried couples



Note: Black-White intermarried couples married in the 1970s, both spouses U.S. born. Black and White exclude Hispanics. N=2,607

All Black and White Spouses



Note: All Black and White persons married in the 1970s, both spouses U.S. born. Black and White exclude Hispanics. N=1,000,192 for Whites and 101,485 for Blacks

Appendix: Description of the Interaction Terms

1) Racial Endogamy:

		<i>Husband's Race</i>		
		NH White	NH Black	Other
<i>Wife's Race</i>	NH White	1	0	0
	NH Black	0	1	0
	Other	0	0	1

2) Black Endogamy:

		<i>Husband's Race</i>		
		NH White	NH Black	Other
<i>Wife's Race</i>	NH White	0	0	0
	NH Black	0	1	0
	Other	0	0	0

3) Black- White Interaction:

		<i>Husband's Race</i>		
		NH White	NH Black	Other
<i>Wife's Race</i>	NH White	0	1	0
	NH Black	1	0	0
	Other	0	0	0

Each of these interactions takes 1 degree of freedom. When they are combined (as they are in each of the models in Tables 3-5), they yield the 3 degrees of freedom for quasi-symmetrical interactions by race. In this combined context, the Black- White term is properly thought of in comparison to the other off-diagonal cells, i.e. if the Black-White term is negative (as it always is) the odds of Black-White intermarriage are lower than the odds of Black-Other or White Other intermarriages.

1-3) Combined

		<i>Husband's Race</i>		
		NH White	NH Black	Other
<i>Wife's Race</i>	NH White	1	3	0
	NH Black	3	1+2	0
	Other	0	0	1

Black Spouse's Education

4) Black- White Status Exchange

		<i>Black Spouse's Education</i>					
		<10	10,11	HS	Some	BA	>BA
<i>White Spouse's Education</i>	<10	0	1	2	3	4	5
	10,11	-1	0	1	2	3	4
	HS	-2	-1	0	1	2	3
	Some	-3	-2	-1	0	1	2
	col						
	BA	-4	-3	-2	-1	0	1
	>BA	-5	-4	-3	-2	-1	0

Following Fu (2001) I use a graduated interaction term= Black spouse Ed- White Spouse Ed. The term is zero for all couples other than Black-White couples. The graduated status-caste exchange term is treated as a continuous variable, that is it adds only one degree of freedom to the models (and reduces the residual degrees of freedom by 1).

5) Black- White Status Exchange, alternative

		<i>Black Spouse's Education</i>					
		<10	10,11	HS	Some	BA	>BA
<i>White Spouse's Education</i>	<10	0	1	1	1	1	1
	10,11	0	0	1	1	1	1
	HS	0	0	0	1	1	1
	Some	0	0	0	0	1	1
	col						
	BA	0	0	0	0	0	1
	>BA	0	0	0	0	0	0

A simpler interaction term would equal 1 when Black Spouse's Ed> White Spouse's Ed, and equal zero otherwise. This kind of interaction leads to the same conclusions about the absence of status-caste exchange; see the addenda above.

6) Educational Homogamy

		<i>Husband's Education</i>					
		<10	10,11	HS	Some	BA	>BA
<i>Wife's Education</i>	<10	0	0	0	0	0	0
	10,11	0	1	2	3	4	5
	HS	0	6	7	8	9	10
	Some	0	11	12	13	14	15
	col						
	BA	0	16	17	18	19	20
	>BA	0	21	22	23	24	25

The saturated set of educational interactions between husband and wife adds 25 terms to the model (and reduces the residual degrees of freedom by 25). In this set of saturated interactions, there are many different ways to represent educational homogamy. In Tables 3-5 I have chosen (HEd, WEd)=(BA,BA) compared to (BA, Some College), which in the above scheme is term 19-14.