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Bringing Intergenerational Social Mobility Research into the Twenty-first Century: Why Mothers Matter

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Table S1. Log-Linear Models: Comparing Various One-Parent and Joint-Parent Class Origin Measures

Model	Description	χ^2	L^2	df	BIC	p vs. 9	Model p
<u>Men</u>							
1	Full Interaction (= saturated model)						
2	Class Interaction	100.3	100.0	80	-531.4	.01	.06
3	Mother + Father	121.3	129.7	125	-856.8	0	.58
4	Higher Class + Lower Class	139.3	136.0	125	-850.5	0	.18
5	Equal Mother + Father	159.2	159.3	150	-1024.5		.29
6	Equal Higher + Lower Class	159.2	159.3	150	-1024.5		.29
7	Higher Class Dominance	239.0	229.0	150	-954.8		0
8	Lower Class Dominance	216.8	213.3	150	-970.5		0
9	Father-Only	192.5	198.9	150	-984.9		.01
10	Mother-Only	349.8	337.7	150	-846.1		0
11	Independence	498.9	493.5	175	-887.6		0
<u>Women</u>							
1	Full Interaction (= saturated model)						
2	Class Interaction	85.7	96.2	80	-539.4	0	.31
3	Mother + Father	125.7	138.1	125	-855.1	0	.47
4	Higher Class + Lower Class	130.9	135.6	125	-857.7	0	.34
5	Equal Mother + Father	151.5	166.2	150	-1025.7		.45
6	Equal Higher + Lower Class	151.5	166.2	150	-1025.7		.45
7	Higher Class Dominance	192.2	198.6	150	-993.3		.01
8	Lower Class Dominance	166.0	175.6	150	-1016.3		.18
9	Father-Only	196.8	203.5	150	-988.4		.01
10	Mother-Only	188.8	202.5	150	-989.4		.02
11	Independence	302.5	310.6	175	-1079.9		0

Note: [F][M][FM][D] are fitted in all models. N = 2,676 (men); N = 2,824 (women).

Table S2. Core Model of Social Fluidity (Erikson and Goldthorpe 1992): Comparing Various One-Parent and Joint-Parent Class Origin Measures

Model	Description	χ^2	L^2	df	BIC	p vs. 1	p vs. 9	Model p
<u>Men</u>								
1	Full Interaction	161.7	170.6	123	-800.2		.02	.01
2	Class Interaction	186.8	190.2	149	-985.7	.81	0	.02
3	Mother + Father	192.5	196.7	165	-1105.5	.97	0	.07
4	Higher Class + Lower Class	213.6	215.7	165	-1086.5	.34	0	.01
5	Equal Mother + Father	218.3	218.0	170	-1123.7	.46		.01
6	Equal Higher + Lower Class	229.5	227.9	170	-1113.7	.14		0
7	Higher Class Dominance	310.4	302.1	170	-1039.6	0		0
8	Lower Class Dominance	263.2	261.7	170	-1080.0	0		0
9	Father-Only	234.9	241.0	170	-1100.6	.02		0
10	Mother-Only	389.7	372.5	170	-969.2	0		0
11	Independence	498.9	493.5	175	-887.6	0		0
<u>Women</u>								
1	Full Interaction	149.3	163.1	123	-814.2		0	.05
2	Class Interaction	186.8	197.3	149	-986.6	.13	0	.02
3	Mother + Father	185.6	197.9	165	-1113.2	.78	0	.13
4	Higher Class + Lower Class	190.7	201.7	165	-1109.3	.62	0	.08
5	Equal Mother + Father	200.3	209.7	170	-1141.1	.49		.06
6	Equal Higher + Lower Class	198.2	207.6	170	-1143.2	.58		.07
7	Higher Class Dominance	225.7	231.2	170	-1119.6	.02		0
8	Lower Class Dominance	205.9	218.5	170	-1132.3	.19		.03
9	Father-Only	242.4	247.8	170	-1103.0	0		0
10	Mother-Only	209.3	224.2	170	-1126.6	.08		.02
11	Independence	302.5	310.6	175	-1079.9	0		0

Note: [F][M][FM][D] are fitted in all models. N = 2,676 (men); N = 2,824 (women).

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Table S3. Design Matrices for Class Origin Measures

<u>Higher Class Dominance</u>		<i>Father's Class Position (F)</i>					
<i>Mother's Class Position (M)</i>		I	II	IIIab	IVab	V/VI	VIIa
I	I	1	1	1	1	1	1
	II	1	2	2	2	2	2
	IIIab	1	2	3	4	3	3
	IVab	1	2	4	4	4	4
	V/VI	1	2	3	4	5	5
	VIIab	1	2	3	4	5	6
<u>Lower Class Dominance</u>		<i>Father's Class Position (F)</i>					
<i>Mother's Class Position (M)</i>		I	II	IIIab	IVab	V/VI	VIIa
I	I	1	2	3	4	5	6
	II	2	2	3	4	5	6
	IIIab	3	3	3	3	5	6
	IVab	4	4	3	4	5	6
	V/VI	5	5	5	5	5	6
	VIIab	6	6	6	6	6	6
<u>Full Interaction</u>		<i>Father's Class Position (F)</i>					
<i>Mother's Class Position (M)</i>		I	II	IIIab	IVab	V/VI	VIIa
I	I	1	2	3	4	5	6
	II	7	8	9	10	11	12
	IIIab	13	14	15	16	17	18
	IVab	19	20	21	22	23	24
	V/VI	25	26	27	28	29	30
	VIIab	31	32	33	34	35	36
<u>Class Interaction</u>		<i>Father's Class Position (F)</i>					
<i>Mother's Class Position (M)</i>		I	II	IIIab	IVab	V/VI	VIIa
I	I	1	7	8	9	10	11
	II	7	2	12	13	14	15
	IIIab	8	12	3	16	17	18
	IVab	9	13	16	4	19	20
	V/VI	10	14	17	19	5	21
	VIIab	11	15	18	20	21	6

I: Professional, Higher Level
 II: Professional, Lower Level
 IIIab: Routine Nonmanual and Service
 IVab: Self-Employed
 V/VI: Technical and Skilled Manual Labor
 VIIab: Unskilled Manual and Farm Labor

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Table S4. Unadjusted Class Origin and Destination Scores for Selected Models

Men						
Table 2, Model 9: Conventional Model			Table 2, Model 3: Mother + Father Model ^a			
	Class Destination (v _i)	Father's Class (u _i)		Class Destination (v _i)	Father's Class (u _i)	Mother's Class (u _h)
I	-.55	-.60	I	-.57	-.57	-.67
II	-.26	-.37	II	-.25	-.35	-.36
IIIab	-.08	-.10	IIIab	-.17	-.19	.02
IVab	-.17	.08	IVab	-.02	.12	.11
V/VI	.41	.45	V/VI	.30	.45	.44
VIIab	.65	.54	VIIab	.70	.55	.46
Table 3, Model A1: Conventional Model			Table 3, Model A4: Mother + Father Model ^a			
	Class Destination (v _i)	Father's Class (u _i)		Class Destination (v _i)	Father's Class (u _i)	Mother's Class (u _h)
I	-.55	-.60	I	-.56	-.59	-.68
II	-.30	-.29	II	-.30	-.26	-.35
IIIab	-.04	-.18	IIIab	-.10	-.25	.03
IVab	-.15	.08	IVab	-.06	.09	.11
V/VI	.39	.43	V/VI	.33	.43	.45
VIIab	.66	.57	VIIab	.69	.58	.45
			Home			-.01
Table 4, Model 1: Conventional Model			Table 4, Model 2: Mother + Father Model ^a			
	Class Destination (v _i)	Father's Class (u _i)		Class Destination (v _i)	Father's Class (u _i)	Mother's Class (u _h)
I	-.58	-.49	I	-.62	-.46	-.65
II	-.33	-.38	II	-.33	-.34	-.47
IIIab	.21	-.29	IIIab	.09	-.38	.04
IVab	-.22	.15	IVab	-.06	.18	.15
V/VI	.32	.46	V/VI	.26	.46	.23
VIIab	.60	.55	VIIab	.65	.54	.49
			Home			.20
			Table 4, Model 3: Mother + Father Model with Noncustodial Parents ^a			
	Class Destination (v _i)	Father's Class (u _i)		Class Destination (v _i)	Father's Class (u _i)	Mother's Class (u _h)
I	-.58	-.48	I	-.58	-.48	-.65
II	-.34	-.36	II	-.34	-.36	-.50
IIIab	.03	-.43	IIIab	.03	-.43	.00
IVab	-.08	.10	IVab	-.08	.10	.13
V/VI	.28	.36	V/VI	.28	.36	.28
VIIab	.68	.41	VIIab	.68	.41	.34
Home			Home			.08
Noncustodial		.39	Noncustodial		.39	.33

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Table S4. (continued)

Women			Table 2, Model 3: Mother + Father Model ^a		
	Class Destination (v _j)	Father's Class (u _i)	Class Destination (v _j)	Father's Class (u _i)	Mother's Class (u _h)
I	-.43	-.34	I	-.44	-.34
II	-.19	-.48	II	-.26	-.48
IIIab	.28	-.29	IIIab	.26	-.33
IVab	-.52	.20	IVab	-.46	.32
V/VI	.24	.23	V/VI	.27	.19
VIIab	.61	.69	VIIab	.62	.64

Table 2, Model 9: Conventional Model			Table 3, Model B2: Mother + Father Model ^a		
	Class Destination (v _j)	Father's Class (u _i)	Class Destination (v _j)	Father's Class (u _i)	Mother's Class (u _h)
I	-.47	-.54	I	-.48	-.51
II	-.31	-.46	II	-.34	-.46
IIIab	.19	-.04	IIIab	.18	-.11
IVab	-.28	.09	IVab	-.25	.13
V/VI	.13	.33	V/VI	.17	.34
VIIab	.74	.61	VIIab	.73	.62
			Home, <High School		.49
			Home, High School		.13
			Home, Sm. College+		-.70

Table 4, Model 1: Conventional Model			Table 4, Model 2: Mother + Father Model ^a		
	Class Destination (v _j)	Father's Class (u _i)	Class Destination (v _j)	Father's Class (u _i)	Mother's Class (u _h)
I	-.54	-.57	I	-.53	-.57
II	-.41	-.38	II	-.43	-.41
IIIab	.33	.11	IIIab	.25	-.11
IVab	-.20	.07	IVab	-.12	.11
V/VI	.28	.42	V/VI	.18	.45
VIIab	.55	.58	VIIab	.65	.54
			Home, <High School		.58
			Home, High School		.03
			Home, Sm. College+		-.62

Table 4, Model 3: Mother + Father Model with Noncustodial Parents ^a			
	Class Destination (v _j)	Father's Class (u _i)	Mother's Class (u _h)
I	-.53	-.52	-.39
II	-.44	-.40	-.23
IIIab	.21	-.25	.02
IVab	-.12	.03	.07
V/VI	.23	.21	.12
VIIab	.64	.36	.23
Home, <High School			.48
Home, High School			.04
Home, Sm. College+			-.64
Noncustodial		.57	.29

Notes: The scores presented in this table are unadjusted (i.e., $\sum_i u_i = \sum_h u_h = \sum_j v_j = 0$ and $\sum_i u_i^2 = \sum_h u_h^2 = \sum_j v_j^2 = 1$). To produce comparable association parameters, I rescaled the scores to account for the number of origin and destination categories in each model. Rescaling the scores does not change the model fit statistics (Clogg and Shihadeh 1994:51).

^a The underlying u_h and u_i scores presented in the table translate into combined, joint-parent scores, u_{hi} , for the mother + father models as follows: u_h and u_i are adjusted to reflect the extent of mother-respondent and father-respondent association in class position, such that $\sum_i u_i = \sum_h u_h = 0$, $\sum_i u_i^2 = \Phi$ for $u_i v_j$, and $\sum_h u_h^2 = \Phi$ for $u_h v_j$. These adjusted u_h and u_i scores are summed to produce u_{hi} and rescaled so that $\sum_h u_{hi} = 0$ and $\sum_h u_{hi}^2 = 1$.

REFERENCES

Erikson, Robert and John H. Goldthorpe. 1992. *The Constant Flux*. Oxford, UK: Clarendon Press.

Clogg, Clifford C. and Edward S. Shihadeh. 1994. *Statistical Models for Ordinal Variables*. Thousand Oaks, CA: Sage Publications.

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