Adoption and Adult Outcomes in the Early 20th Century

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Orphan train sponsored by the Children's Aid Society

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Historical Adoption

Constructing the Dataset

Cross-Sectional Analysis

Longitudinal Analysis

Pragmatic vs. Sentimental Adoption

Introduction

- How does being raised in a non-traditional family influence adult outcomes?
- The answer helps us better understand child development, nature versus nurture, and the economics of the family
- We take a historical perspective on this question with a focus on adopted children in the early 20th century when the nature of adoption was changing
- We build a longitudinal dataset of adoptees and their siblings by linking across censuses
- This allows us to assess how adopted children fare relative to the general population and relative to non-adopted siblings

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Our new longitudinal dataset of adopted children and their siblings helps us investigate several questions about early-20th century adoption:

- Which types of families adopted children?
- How were those children treated by their adoptive households?
- How did those childhood experiences translate into long run outcomes?

Answers to these questions help us get at bigger issues of the economics of the family and the consequences of the shift from pragmatic to sentimental adoption in the US. Adoption and Adult Outcomes in the Early 20th Century

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Preview of Results

- As children, adopted individuals were less likely to attend school, less likely to be literate, and more likely to be idle
- These differences persisted into adulthood with adopted individuals having lower overall educational attainments and lower incomes
- Family formation patterns of adopted individuals also differed: they tended to have higher rates of marriage and larger household sizes
- These effects were somewhat larger in situations where adoption was more likely to be pragmatic rather than sentimental

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Modern Adoption

- Modern studies tell us that there are negative consequences associated with being raised by non-biological parents
- Clinical studies suggest higher rates of behavioral, schooling, and drug problems among adopted and stepchildren
- Survey data reveals lower food expenditures and health investments in non-biological children
- Longitudinal studies show lower educational attainments for these children
- Some evidence that these worse outcomes are due to selection rather than differential treatment
- We want to extend these studies to the early twentieth century

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Changing Institutions, Attitudes and Economies

- The early 20th century saw a variety of changes that fundamentally affected adoption and the economics of the family
- Families and jobs were moving from farms to cities changing the costs and benefits of children
- Attitudes to and laws governing child labor and compulsory schooling were changing
- Rates of infant and child mortality were declining dramatically
- The legal institutions related to adoption changed dramatically from the mid-1800s to the early 1900s
- Overall, it is a chance to witness the shift from pragmatic to sentimental adoption

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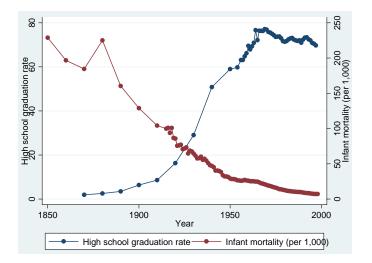
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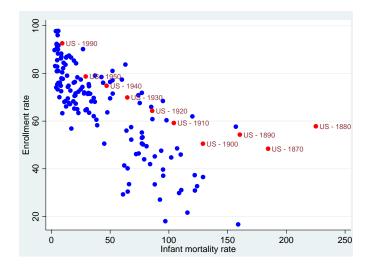
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Adoption in Mid 19th Century

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Changing Institutions, Attitudes and Institutions

From "The Best Method of Disposing of Our Pauper and Vagrant Children" (C.L. Brace, 1859):

"The Emigration-plan of the Children's Aid Society, is simply to connect the supply of juvenile labor of the city with the demand from the country, and to place unfortunate, destitute, vagrant, and abandoned children at once in good families in the country." Adoption and Adult Outcomes in the Early 20th Century

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Adoption in the Late 19th Century

Homes for Children A company of homeless children from the East will arrive at TROY, MO., ON FRIDAY, FEB. 25th, 1910 These children are of various ages and of both sexes, having been thrown friendless upon the world. "They'came under the suspices of the Children's Aid Society of New York. They are we we were the the the state of this community are asked to assist the agent in finding good homes for them. Persons so over faking these children must be recommended by the local committee. They must treat the -children in every way as members of the family, sending them to school, church, Sabbath school and properly clothe them until they are 17 years old." The following well-known clittens have agreed to act as a local committee to aid the agents in securing homes: (O. H. Avery E. B. Woolfolk H. F. Childers Wm. Young G. W. Colbert Applications must be made to, and endorsed by, the local committee. An address will be made by the agent. Come and see the children and hear the address. Distibution will take place at the Opera House Friday, Feb. 25, B. W. TICE and MISS A. L. HILL, Agents, 105 E. aand St., New York City. REV. J. W. SWAN, University Place, Nebraska, Western Agent.

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Children's Aid Society, 105 EAST 22D STREET, NEW YORK The Society reserves the right to remove the child previous to legal adoption if at any time the circumstances of the home become such as in the judgment of the Agent are injurious to the child's future prospects. Children are not allowed to correspond with any friends or relatives without obtaining normission to do so from the Society. Valley F

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MORE HOMES SEEK CHILDREN NOW THAN CHILDREN HOMES

The New Theories of Child Culture Encourage City People to Adopt Waifs

A STEADY stream of applicants at the office of Miss Sophie of the Child-Piacing Department of the State Child-Piacing Department of the State Child-Piacing Department drem. In recent years the supply of foster parents has grown util the problem of adoption work has become one of finding enough children for childes about hemes rather than that of finding enough hemes for homeless children.

"There are several reasons for the increased demand," Miss Theis explains. "A good deal of publicity has lately been given to the adoption of children by wealthy people, and these girl or, a boy in the home may be factors. Most persons desirous of adopting children prefer infants, and generally prefer girls to boys. In spite of the great vorue of child adoption, scarcity of homes for children over 6 years, especially for boys around the age of 10, remains.

The matter of choosing the persons who are to be estrusted with walfs calls for a definite child-placing technique, with the proper fitting of the child to the homes as its main objective. By visiting profilered homes and interviewing prospective forter parents and examining their references, the expert is able to decide what is the wise course to take.

New York Times, 1927

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The Changing Nature of Adoption

- All of these changes impact the relative likelihood of pragmatic versus sentimental adoption
- This presents a really fascinating opportunity to study how families respond to these changes
- On the extensive margin, we can examine changes in who adopts and what consequences this has for children
- On the intensive margin, we can look at how adopted children are treated relative to biological children
- Adoption during this period offers a unique view into the economics of the family

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Historical Versus Modern Data

- The early 20th century is a fascinating period of study for adoption and adult outcomes
- However, a historical study is also appealing from a data availability standpoint
- Privacy concerns severely restrict the availability of modern adoption data
- Cross-sectional data on adults rarely identify adoptees
- Longitudinal data have some serious sample size (and potentially selection) issues
- With complete historical censuses and lots of RA time, a historical longitudinal dataset can track thousands of adopted children and their siblings

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Modern Sample Sizes

Some representative sample sizes for modern studies:

- PSID data in Case et al. (2001): 93 individuals with adoptive mothers, 130 with adoptive fathers
- National Health Survey in Warren (1992): 45 adoptees
- Hospital data in Dickson et al. (1990): 44 adoptees
- National Childhood Development Survey: 128 adoptees
- NLSY: 198 adoptees
- Colorado Adoption Project: 183 adoptees

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Historical Adoption Data Sources

- There are a few possible places to look for data on historical adoption
- Records of children's aid societies, orphanages and other institutions can help us look at the pool of potential adopted children and rates of placement
- These are a bit fragmentary, limited in scope, unrepresentative of adoption experiences, and don't give us outcomes
- Instead, we'll focus on federal census records
- IPUMS samples offer an easy way to look at adopted children in their adoptive households
- Complete census returns available through ancestry.com offer a way to track children over time

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- IPUMS provides fully cleaned and coded samples of all of the federal censuses
- From 1880 on, relation to head of household is provided in the census offering a way to identify adopted children
- One big caveat: adoption is self-reported and gets no mention in enumerator instructions
- Nonetheless, we see adopted children in each census
- Even better, we see adopted children with non-adopted siblings letting us potentially control for household characteristics

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Column 4. Relationship to head of family.-Designate the head of the family, whether husband or father, widow, or unmarried person of either sex, by the word "Head;" for other members of a family write wife, father, mother, son, daughter, grandson, daughter-in-law, uncle, aunt, nephew, niece, boarder, lodger, servant, etc., according to the particular relationship which the person bears to the head of the family. Adoption and Adult Outcomes in the Early 20th Century

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Number of adopted children in 11 Owis census samples							
Year	Sample	Number of biological children	Number of adopted children				
1880	10%	2,762,316	7,384				
1890							
1900	1%	349,204	954				
1910	1%	403,692	1,330				
1920	1%	457,338	782				
1930	5%	2,512,650	7,232				
2000	5%	3,873,515	103,051				

Number of adopted children in IPUMS census samples

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	children, 1880-1930 and 2000						
		White HHs					
Year	Biological only	Adopted only	Biological and adopted				
1880	97.15%	0.51%	0.34%				
1890							
1900	97.40%	0.46%	0.19%				
1910	97.18%	0.50%	0.15%				
1920	97.95%	0.20%	0.10%				
1930	97.03%	0.40%	0.14%				
2000	88.21%	2.01%	1.82%				

Distribution of married two-parent households by type of

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	children, 1880-1930 and 2000							
		Black HHs						
Year	Biological only	Adopted only	Biological and adopted					
1880	92.98%	0.72%	0.37%					
1890								
1900	92.86%	1.00%	0.43%					
1910	91.84%	1.34%	0.51%					
1920	93.91%	0.88%	0.36%					
1930	91.74%	1.64%	0.57%					
2000	84.16%	2.27%	1.97%					

Distribution of married two-parent households by type of

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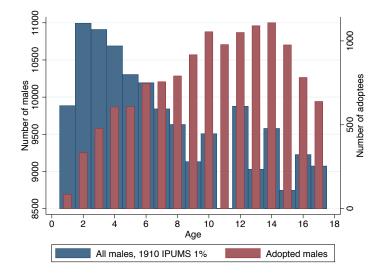
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Adoptee Age Distribution



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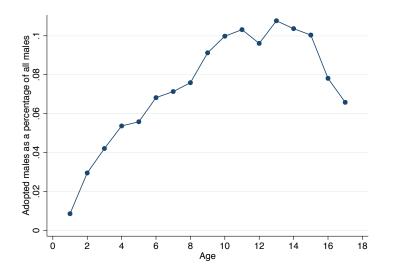
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Constructing a Longitudinal Dataset

- We'd like to see whether any childhood differences in the IPUMS data translate into differences in adult outcomes
- With the 72-year-rule, all censuses are public up to 1940
- This means we can track the same individual across multiple census, observing him as a child and as an adult
- We start by finding all adopted children in the 1910 federal census by searching a digital index of the census
- These children are then found in the 1940 federal census by searching on the basis of name, birth year and birth state
- We can also find their siblings (both biological and non-biological) in the 1940 federal census

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Complete Federal Census Counts of Adoptees

Number of children in nontraditional households in the federal census by census year

	Number of adopted	Number of	Number of boarders under
Census year	individuals	stepchildren	the age of 18
1900	101,764	488,991	356,723
1910	128,755	666,119	324,484
1920	88,416	638,098	253,143
1930	173,485	978,652	260,087
1940	55,220	807,170	40,381

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Adoptive Family in the 1910 Census

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Adopted Siblings as Adults in the 1940 Census

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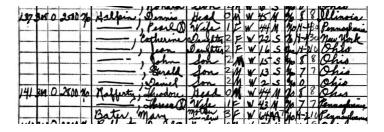
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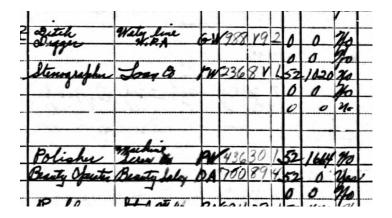
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- Once this linking process is complete, we have longitudinal data on both adoptees and their siblings
- Childhood household characteristics: location, parents' occupations, parents' literacy, family structure, farm status
- Childhood individual characteristics: birth order, school attendance, literacy, occupation
- Adult characteristics: occupation, income, years of schooling, family structure, children ever born, children surviving

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Characteristics of children in 1910 by adoption status and linking outcome

Adopted		
children	Adopted	
successfully	children who	IPUMS 1%
linked to 1940	could not be	sample of the
census	linked	1910 census
12.38	12.08	9.14
(6.23)	(6.43)	(5.81)
0.71	0.59	0.87
(0.46)	(0.49)	(0.33)
7.00	7.22	6.97
(2.80)	(2.94)	(19.09)
0.33	0.30	0.41
(0.32)	(0.32)	(0.36)
0.19	0.18	0.11
(0.39)	(0.39)	(0.31)
0.23	0.21	0.28
(0.42)	(0.41)	(0.45)
0.24	0.22	0.31
(0.43)	(0.42)	(0.46)
2,511	12,518	194,987
	children successfully linked to 1940 census 12.38 (6.23) 0.71 (0.46) 7.00 (2.80) 0.33 (0.32) 0.19 (0.39) 0.23 (0.42) 0.24 (0.43)	children Adopted successfully children who linked to 1940 could not be census linked 12.38 12.08 (6.23) (6.43) 0.71 0.59 (0.46) (0.49) 7.00 7.22 (2.80) (2.94) 0.33 0.30 (0.32) (0.32) 0.19 0.18 (0.39) (0.39) 0.23 0.21 (0.42) (0.41) 0.24 0.22 (0.43) (0.42)

Notes: Standard deviations given in parentheses. Urban percentage is defined as the percentage of individuals in a county designated as living in an urban area in the IPUMS 1% sample. All samples are restricted to males. The IPUMS 1% sample is restricted to children under the age of 20. Individuals are defined as moving across states if the state of residence in 1910 is different than the birth state given in the census.

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	Adopted						
	children	Adopted					
	successfully	children who	IPUMS 1%				
	linked to 1940	could not be	sample of the				
Variable	census	linked	1910 census				
Percentage living in:							
New England	6.22	4.77	6.08				
Middle Atlantic	11.79	11.13	19.00				
East North Central	15.83	12.18	18.35				
West North Central	15.27	11.81	12.78				
South Atlantic	21.08	25.62	15.10				
East South Central	10.26	13.13	10.56				
West South Central	11.59	15.01	11.42				
Mountain	4.08	3.26	2.73				
Pacific	3.88	3.08	3.93				
Number of observations	2,511	12,518	194,987				

Notes: Standard deviations given in parentheses. Urban percentage is defined as the percentage of individuals in a county designated as living in an urban area in the IPUMS 1% sample. All samples are restricted to males. The IPUMS 1% sample is restricted to children under the age of 20. Individuals are defined as moving across states if the state of residence in 1910 is different than the birth state given in the census.

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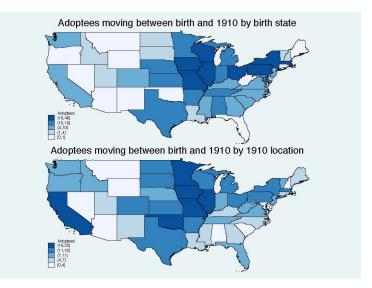
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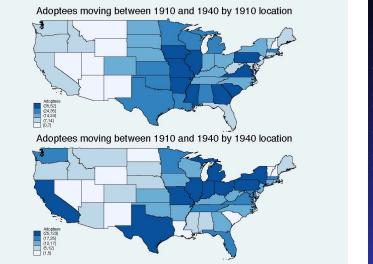
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Characteristics of adult adoptees and adoptee siblings in 1940

		-	IPUMS 1%
		Siblings of	sample of the
Variable	Adoptees	adoptees	1940 census
White (1=yes)	0.71	0.76	0.90
	(0.46)	(0.43)	(0.29)
Number of household members	4.85	4.84	4.27
	(3.00)	(2.95)	(2.34)
Percentage of county that is urban	0.52	0.51	0.56
	(0.33)	(0.33)	(0.33)
Moved across states (1=yes)	0.39	0.42	0.29
	(0.49)	(0.49)	(0.46)
Years of schooling	7.97	8.71	8.77
	(3.35)	(3.23)	(3.65)
Annual income (1940 dollars)	842.58	838.54	830.88
	(949.17)	(1003.76)	(928.29)
Hours worked in past week	44.97	45.10	36.01
	(16.42)	(15.69)	(22.47)
Weeks worked in past year	41.66	39.77	39.70
	(16.40)	(18.07)	(17.71)
Married (1=yes)	0.85	0.72	0.66
	(0.36)	(0.45)	(0.47)
Number of observations	2,511	818	367,425

Notes: Standard deviations given in parentheses. Urban percentage is defined as the percentage of individuals in the county desidgnated as living in an urban area in the IPUMS 1% sample. All samples are restricted to males. The IPUMS 1% sample is restricted to men between the ages of 20 and 59. Individuals are defined as moving across states if the state of residence in 1910 is different than the birth state given in the census.

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Empirical Approach with Cross-Sectional Data

- The IPUMS data provide an opportunity to compare adopted children to the general population of children
- Since IPUMS samples households rather than individuals we can also compare adopted children to non-adopted children in the same household
- Potential dependent variables: literacy, school attendance, labor force participation
- Controls: age and race of individual; age, race, nativity, literacy, and occupation of parents; sibling composition; home ownership, urban and farm indicators; state-year fixed effects
- Also use HH fixed effects to look at within-HH variation in blended HHs

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Cross-Sectional Results

Literacy and school attendance: white males age 10-17, 1900-1930								
Dependent variable:	Literate	Literate (1=yes) Attendi						
HH fixed effects:	no	yes	no	yes				
Adopted (1=yes)	-0.015***	-0.010	-0.056***	-0.092*				
	(0.006)	(0.020)	(0.012)	(0.053)				
Age	0.028***	0.025***	0.334***	0.358***				
	(0.002)	(0.002)	(0.004)	(0.005)				
Age squared	-0.001***	-0.001***	-0.015***	-0.015***				
	(0.0001)	(0.0001)	(0.0001)	(0.0002)				
Birth order	-0.0001	-0.0039***	0.015***	0.034***				
	(0.0005)	(0.001)	(0.0009)	(0.0026)				
Mean probability	0.9256	0.926	0.834	0.834				
No. of observations	286,511	286,848	286,511	286,848				
Adjusted R-squared	0.153	0.008	0.215	0.271				

Literary and school attendeness white males are 10.17, 1000, 1020

OLS results controlling for age, race, nativity, literacy and occupation of parents; sibling composition; house ownership; urban and farm indicators; state-year fixed effects. Standard errors given in parentheses.

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Cross-Sectional Results

	In school and	In school and	Not in school	Not in school
Dependent variable:	not in LF	in LF	and in LF	and not in LF
HH fixed effects:	no	no	no	no
Adopted (1=yes)	-0.055***	-0.002	0.013**	0.043***
	(0.012)	(0.004)	(0.006)	(0.011)
Age	0.331***	0.003*	-0.169***	-0.164***
	(0.004)	(0.002)	(0.002)	(0.003)
Birth order	0.017***	-0.002***	-0.005***	-0.010***
	(0.001)	(0.001)	(0.001)	(0.001)
Mean probability	0.808	0.026	0.058	0.108
No. of observations	286,511	286,511	286,511	286,511
Adjusted R-squared	0.227	0.075	0.157	0.096

School attendance and labor force participation: white males age 10-17, 1900-1930

OLS results controlling for age, race, nativity, literacy and occupation of parents; sibling composition; house ownership; urban and farm indicators; state-year fixed effects. Standard errors given in parentheses. Adoption and Adult Outcomes in the Early 20th Century

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School attenuance an	School attenuance and labor force participation. white males age 10-17, 1900-1950									
	In school and	In school and	Not in school	Not in school						
Dependent variable:	not in LF	in LF	and in LF	and not in LF						
HH fixed effects:	yes	yes	yes	yes						
Adopted (1=yes)	-0108**	0.016	-0.048	0.140***						
	(0.055)	(0.023)	(0.040)	(0.046)						
Age	0.356***	0.002	-0.193***	-0.166***						
	(0.006)	(0.002)	(0.004)	(0.005)						
Birth order	0.036***	-0.002	-0.018***	-0.016***						
	(0.003)	(0.001)	(0.002)	(0.002)						
Mean probability	0.808	0.0261	0.058	0.108						
No. of observations	286,848	286,848	286,848	286,848						
Adjusted R-squared	0.286	0.011	0.147	0.106						

School attendance and labor force participation: white males age 10-17, 1900-1930

OLS results controlling for age, race, nativity, literacy and occupation of parents; sibling composition; house ownership; urban and farm indicators; state-year fixed effects. Standard errors given in parentheses. Adoption and Adult Outcomes in the Early 20th Century

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Empirical Approach with Longitudinal Data

- The linked sample includes only adoptees and their siblings
- This is sufficient to do household fixed effects regressions comparable to the cross-sectional data
- To compare both adoptees and siblings to the general population, we merge the linked data with the IPUMS 1% 1940 sample (restricted to males 20-59)
- Regressions will be similar to the cross-sectional data, but with different outcomes and no childhood household controls
- Dependent variables: years of education, annual income, marital status, household size

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Schooling and income for adult white males, 1940							
Dependent variable:	Years of s	schooling	Log of ann	ual income			
HH fixed effects:	no	yes	no	yes			
Adopted (1=yes)	-0.48***	-0.56	-0.14***	0.01			
	(0.09)	(0.35)	(0.02)	(0.13)			
Adoptee sibling (1=yes)	0.08		-0.08				
	(0.14)		(0.05)				
Urban county in 1940 (1=yes)	0.94***	0.91**	0.48***	0.48			
	(0.07)	(0.40)	(0.03)	(0.29)			
Age in 1940	-0.07***	-0.18	0.15***	0.14			
	(0.01)	(0.23)	(0.003)	(0.11)			
Age in 1940 squared	0.0001	0.001	-0.002***	-0.002			
	(0.0001)	(0.003)	(0.0000)	(0.001)			
Moved across states (1=yes)	0.62***	0.35	0.15***	0.05			
	(0.10)	(0.38)	(0.02)	(0.23)			
Number of observations	289,769	2,150	207,888	1,479			
Adjusted R-squared	0.11	0.35	0.18	0.25			

OLS results with standard errors clustered by residence state given in parentheses. All regressions include residence state fixed effects. Samples for the weeks worked and hours worked regressions are restricted to individuals reporting positive values. * significant at 10%,

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** significant at 5%, *** significant at 1%

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Next Steps

F	amily forma	tion of adu	ilt white male	es, 1940		
	Number of	household			Moved act	ross states
Dependent variable:	mem	bers	Married	(1=yes)	<u>(1=</u> y	(es)
HH fixed effects:	no	yes	no	yes	no	yes
Adopted (1=yes)	0.76***	0.11	0.05***	0.10***	0.05***	-0.03
	(0.08)	(0.36)	(0.01)	(0.04)	(0.02)	(0.03)
Adoptee sibling (1=yes)	0.63***		-0.06***		0.09***	
	(0.12)		(0.02)		(0.02)	
Urban county in 1940 (1=yes)	-0.38***	0.71	-0.01*	0.001	0.09***	0.24***
	(0.03)	(0.57)	(0.005)	(0.09)	(0.01)	(0.08)
Age in 1940	-0.05***	0.26	0.10***	0.07	0.01***	-0.03
	(0.01)	(0.23)	(0.002)	(0.05)	(0.002)	(0.04)
Age in 1940 squared	0.0005***	-0.003	-0.001***	-0.001	-0.0001***	0.0004
	(0.0001)	(0.002)	(0.00002)	(0.001)	(0.00002)	(0.0004)
Moved across states (1=yes)	-0.36***	0.09	0.01***	-0.02		
	(0.04)	(0.47)	(0.004)	(0.06)		
Number of observations	289,821	2,202	289,821	2,202	289,821	2,202
Adjusted R-squared	0.04	-0.01	0.19	-0.14	0.16	0.40

OLS results with standard errors clustered by residence state given in parentheses. All regressions include residence state fixed effects. * significant at 10%, ** significant at 5%, *** significant at 1%

Pragmatic vs. Sentimental Adoption

- Adoptees look different than the general population and, along certain dimensions, their non-adopted siblings
- These differences can be driven by four very different mechanisms:
 - Selection in terms of who gets adopted
 - Selection in terms of who adopts
 - The effects of being adopted
 - Differential treatment after adoption
- Ideally, we would like to assess which of these mechanisms are driving our results

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- Controlling for observable characteristics helps address some of the selection into adoption issues
- Household characteristics and household fixed effects help control for who adopts
- We're particularly interested in getting at the differential treatment component
- One approach: identify situations where adoption is more likely to be sentimental and see if within-family effects decrease

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- There are a few observable characteristics of households that may be correlated with the likelihood of sentimental adoption
 - Rural or farm status
 - Presence of biological children
 - Whether the mother has lost children
 - Gender mix of children
 - Shared last name
- Including an interaction term between a measure of adoption motivations and the adopted dummy gives us a way to directly test whether pragmatic motivations translate into differential treatment of children

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Pragmatic vs. Sentimental Adoption in the Cross-Sectional Data

Schooling and labor force participation for white males age 10-17, 1900-1930								
				Not in school				
				and in labor	In school and			
Dependent variable:	Literate	In school	In labor force	force	in labor force			
HH fixed effects:	yes	yes	yes	yes	yes			
Adopted (1=yes)	-0.0018	-0.0591	-0.1536**	-0.1341**	-0.0194			
	(0.0294)	(0.0782)	(0.0637)	(0.0590)	(0.0335)			
Adopted x same surname	0.0806*	0.0484	0.1597*	0.0366	0.1231**			
	(0.0443)	(0.1178)	(0.0960)	(0.0889)	(0.0505)			
Adopted x farm	-0.0968**	-0.1411	0.2156**	0.2227**	-0.0071			
	(0.0431)	(0.1146)	(0.0934)	(0.0865)	(0.0491)			
Birth Order	-0.0039***	0.0341***	-0.0194***	-0.0176***	-0.0018			
	(0.0010)	(0.0026)	(0.0022)	(0.0020)	(0.0011)			
Age	0.0251***	0.3584***	-0.1907***	-0.1927***	0.0020			
	(0.0020)	(0.0054)	(0.0044)	(0.0041)	(0.0023)			
Age Squared	-0.0009***	-0.0152***	0.0082***	0.0081***	0.0001			
	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0001)			
No. of Observations	286,848	286,848	286,848	286,848	286,848			
R-squared	0.0078	0.2713	0.0587	0.0746	0.0107			

OLS results with standard errors clustered by residence state given in parentheses. * significant at 10%, ** significant at 5%, *** significant at 1%

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Effects of adoption status on schooling, dependent variable is years of educational							
		attainment,	white male	s only			
						Same	
	Lived on	Lived in a	Adoptee	Adoptee	Mother	surname as	
	farm in	rural area	had older	had older	had lost a	adoptive	
Household type	1910	in 1910	brothers	siblings	child	parents	
Mean value for							
household type	0.379	0.428	0.273	0.559	0.491	0.121	
Standard deviation							
for household type	(0.485)	(0.495)	(0.446)	(0.497)	(0.500)	(0.326)	
Adopted (1=yes)	-0.227	-0.142	0.112	-0.061	-0.446	-0.632	
	(0.413)	(0.418)	(0.471)	(0.628)	(0.526)	(0.518)	
Adopted x							
household type	-0.487	-0.336	-1.264	-0.517	0.198	0.659	
	(0.757)	(0.623)	(0.852)	(0.731)	(0.762)	(0.655)	
Number of							
observations	1361	2222	1361	1361	1273	2233	

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OLS results with standard errors clustered by residence state given in parentheses. Regressions include family fixed effects and control for living in an urban area in 1940, moving across states by 1940, and a quadratic in age. * significant at 10%, ** significant at 5%, *** significant at 1%

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Effects of adoption	Effects of adoption status on adult earnings, dependent variable is log income, white							
		ma	les only					
Household type	Lived on farm in 1910	Lived in a rural area in 1910	Adoptee had older brothers	Adoptee had older siblings	Mother had lost a child	Same surname as adoptive parents		
Mean value for	1,710		orouters	bioinigo	Unita	purento		
household type	0.379	0.428	0.273	0.559	0.491	0.121		
Standard deviation								
for household type	(0.485)	(0.495)	(0.446)	(0.497)	(0.500)	(0.326)		
Adopted (1=yes)	0.083	-0.014	0.089	0.025	-0.009	0.066		
	(0.194)	(0.178)	(0.189)	(0.263)	(0.220)	(0.257)		
Adopted x								
household type	-0.355	-0.002	-0.233	-0.045	-0.077	-0.135		
	(0.482)	(0.332)	(0.290)	(0.308)	(0.297)	(0.299)		
Number of								
observations	998	1583	998	998	932	1589		

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OLS results with standard errors clustered by residence state given in parentheses. Regressions include family fixed effects and control for living in an urban area in 1940, moving across states by 1940, and a quadratic in age. * significant at 10%, ** significant at 5%, *** significant at 1% Adoption and Adult Outcomes in the Early 20th Century

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Effects of adoption on marital status in 1940, dependent variable is married (1=yes),								
		wh	ite only					
						Same		
	Lived on	Lived in a	Adoptee	Adoptee	Mother	surname as		
	farm in	rural area	had older	had older	had lost a	adoptive		
Household type	1910	in 1910	brothers	siblings	child	parents		
Mean value for								
household type	0.379	0.428	0.273	0.559	0.491	0.121		
Standard deviation								
for household type	(0.485)	(0.495)	(0.446)	(0.497)	(0.500)	(0.326)		
Adopted (1=yes)	0.023	0.008	0.013	0.058	0.030	0.012		
	(0.052)	(0.051)	(0.073)	(0.091)	(0.074)	(0.069)		
Adopted x								
household type	-0.074	-0.048	-0.030	-0.095	-0.068	-0.023		
• •	(0.118)	(0.096)	(0.109)	(0.120)	(0.092)	(0.096)		
Number of								
observations	1388	2274	1388	1388	1300	3184		

Effects of adaption on manifel status in 1040 dependent variable is married (1-ves)

OLS results with standard errors clustered by residence state given in parentheses. Regressions include family fixed effects and control for living in an urban area in 1940, moving across states by 1940, and a quadratic in age. * significant at 10%, ** significant at 5%, *** significant at 1%

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Effects of adoption status on adult household size, dependent variable is number of household members in 1940, white only

						Same
	Lived on	Lived in a	Adoptee	Adoptee	Mother	surname as
	farm in	rural area	had older	had older	had lost a	adoptive
Household type	1910	in 1910	brothers	siblings	child	parents
Mean value for						
household type	0.379	0.428	0.273	0.559	0.491	0.121
Standard deviation						
for household type	(0.485)	(0.495)	(0.446)	(0.497)	(0.500)	(0.326)
Adopted (1=yes)	-0.067	0.149	-0.034	0.166	-0.041	0.286
	(0.640)	(0.442)	(0.630)	(0.813)	(0.571)	(0.837)
Adopted x						
household type	0.669	-0.144	0.429	-0.061	0.567	-0.353
	(1.063)	(0.798)	(0.995)	(1.096)	(0.938)	(0.964)
Number of						
observations	1388	2274	1388	1388	1300	2286

OLS results with standard errors clustered by residence state given in parentheses. Regressions include family fixed effects and control for living in an urban area in 1940, moving across states by 1940, and a quadratic in age. * significant at 10%, ** significant at 5%, *** significant at 1% Adoption and Adult Outcomes in the Early 20th Century

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Moving Forward

- These preliminary results suggest that outcomes for adopted children did differ from those of children raised by biological parents
- Some of these differences persist even within families
- The within-family differences are sensitive to the type of family that raised the adopted child
- The task now is to put together additional data to refine and expand on these results:
 - Better utilize occupation info (occupational mobility, alternative measures of SES)
 - Exploit migration information
 - Refine measures of household type
 - Utilize 1920 and 1930 census records with automated linking

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