Transfers, Bequests, and Human Capital Investment in Children Over the Life Cycle

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What we do

Using UK data we

- Estimate transfers from parents to children over the life cycle
  - Time with children
  - Schooling investments to children
  - Inter-vivos transfers and bequests to children

- Incorporate these transfers into an estimated lifecycle model (similar to Lee and Seshadri 2017)
  - Separate luck from investments in driving income inequality
  - **Estimate extent of intergenerational altruism**

- Use the model to understand the behavioral and welfare consequences of tax and Social Security reform

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Motivation: Intergenerational Altruism

- Intergenerational altruism important for understanding potential benefits of Social Security reform
  - Current generations only willing to accept benefit cuts if they are altruistic towards future generations (Fuster, Imrohoroglu, Imrohoroglu, (ReStud 2007))

- Model allows us to estimate intergenerational altruism using data on multiple parental transfers (time + money transfers)
  - Estimates less senstitive to model misspecification, confounding factors than those based on single outcome (e.g. bequests (De Nardi, French, Jones (JPE 2010; AER 2016)))

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UK Data

National Child Development Study (NCDS)

- All individuals born in a particular week of March 1958 - followed up at 7, 11, 16, 23, 33, 42, 50 and 55
- Information on parental background, parental time investments, cognitive ability, school quality, educational outcomes, earnings and inter-vivos transfers
  - Ability measure: test with approx. 30 math, 30 verbal questions.
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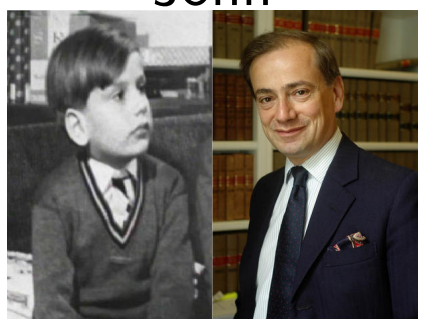
UK: High Intergenerational Persistence of Inequality

The "Up" documentary series

John

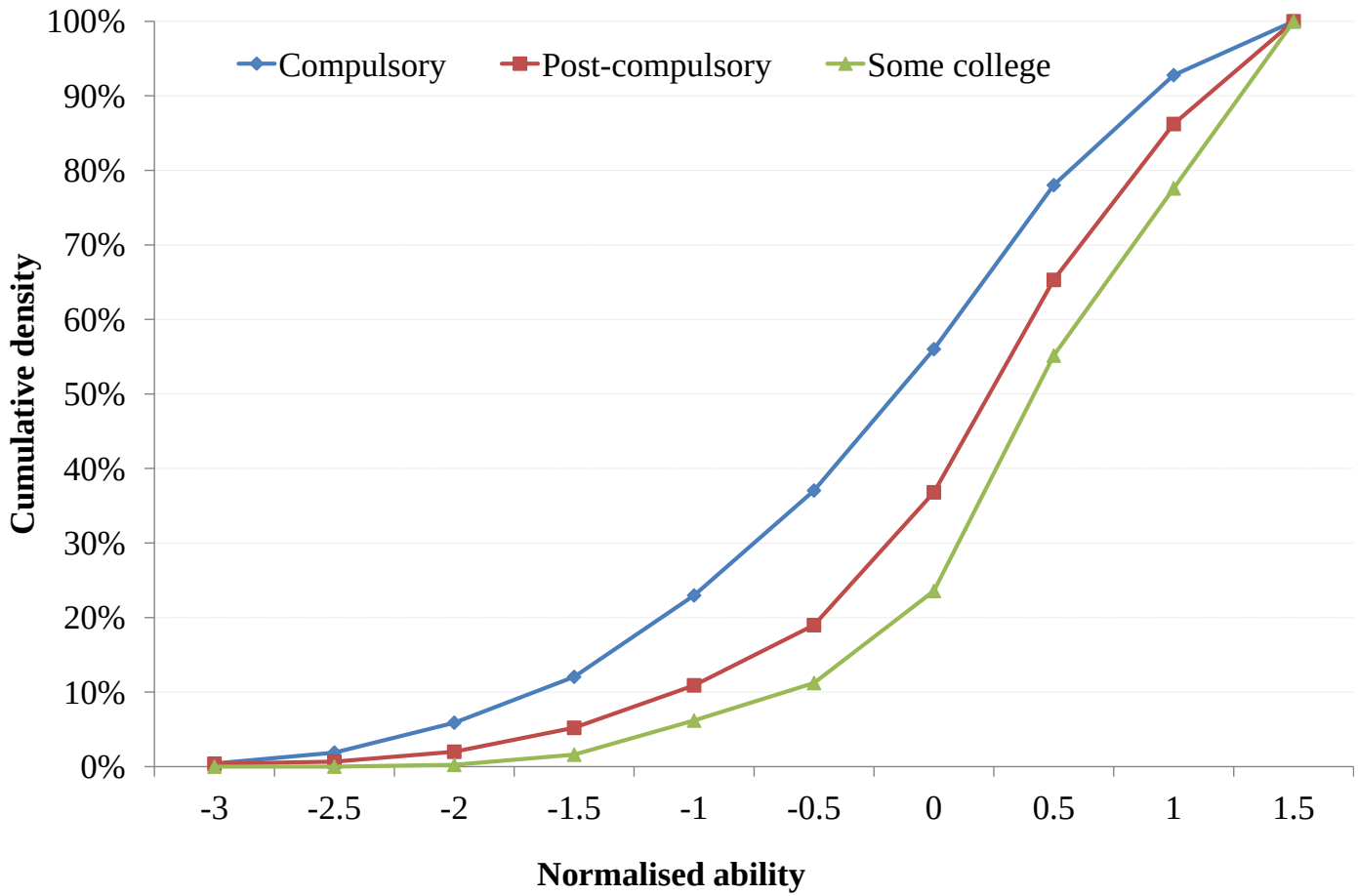


Tony

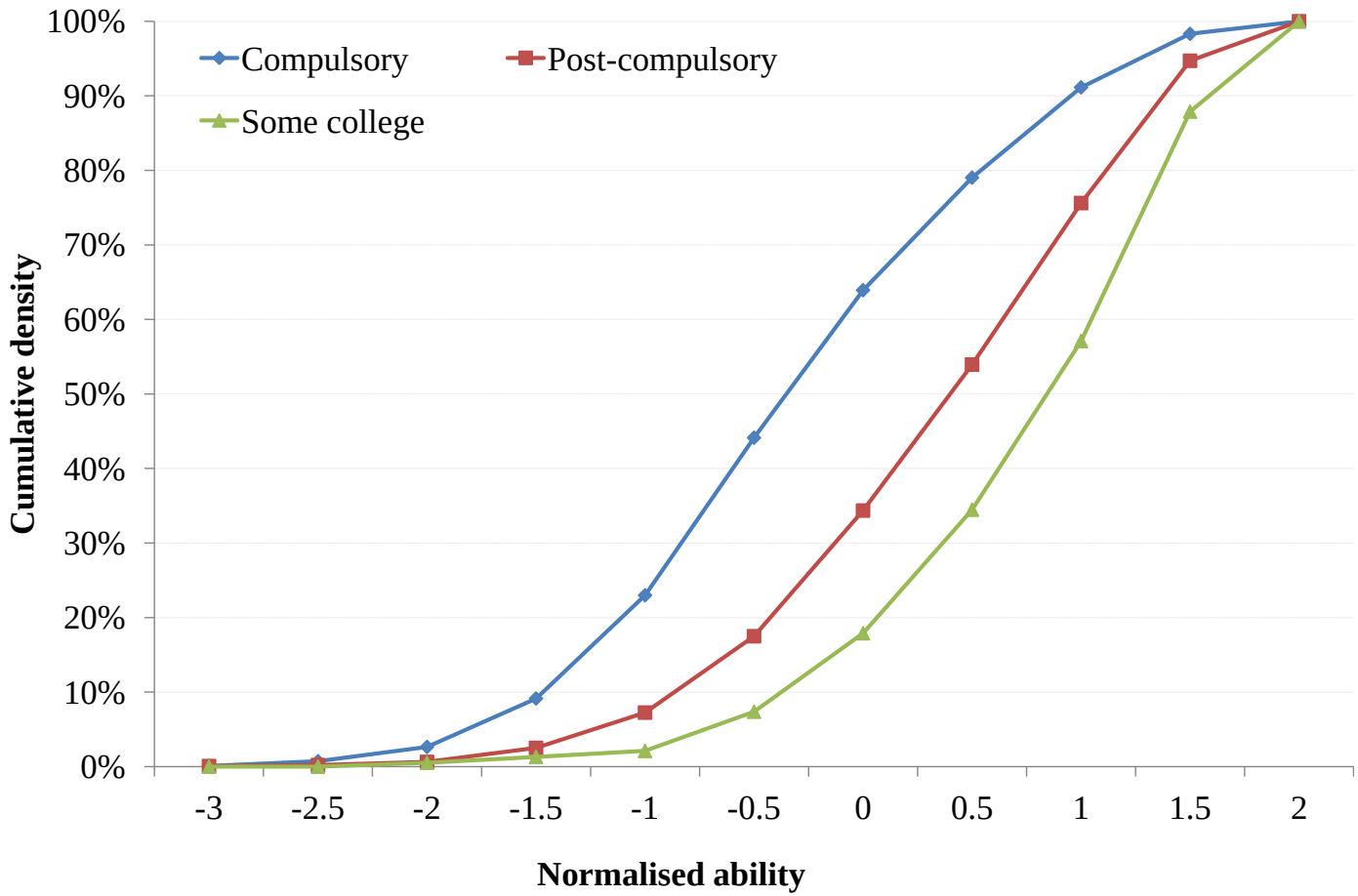
Machin et al. (1997): using our data, intergenerational correlation:

- income = 0.45

Ability at 7 by father's education



Ability at 16 by father's education



Intergenerational correlation in education

Child's education by father's education

	Child's education		
	High-school dropout	High-school graduate	Some college
Compulsory	30%	50%	20%
Post-compulsory	10%	47%	43%
Some college	2%	32%	66%

Differences in lifetime income by parental education

compared to those whose fathers had compulsory schooling

	Father's education	
	Some post-compulsory	Some college
Total difference	£159,000	£291,000
Explained by...		
Age-16 ability	£118,000	£195,000
Explained by...		
Age-7 ability	£65,000	£115,000
Evolution of ability 7-11	£52,000	£75,000
Evolution of ability 11-16	£1,000	£5,000
Education given age-16 ability	£17,000	£59,000
Transfers and bequests	£24,000	£37,000

Notes: Men only.

Lifetime income for those with low-educated fathers: £736,000.

Parental time investments at 7 by father's education

Reading with child

	Father reads...		
	Never	Sometimes	Every week
Compulsory	30%	36%	34%
Post-compulsory	20%	35%	45%
Some college	18%	29%	53%
	Mother reads...		
	Never	Sometimes	Every week
Compulsory	16%	37%	47%
Post-compulsory	12%	31%	57%
Some college	10%	23%	67%

Parental time investments at 7 by father's education

Teacher's assessment of interest in child's education

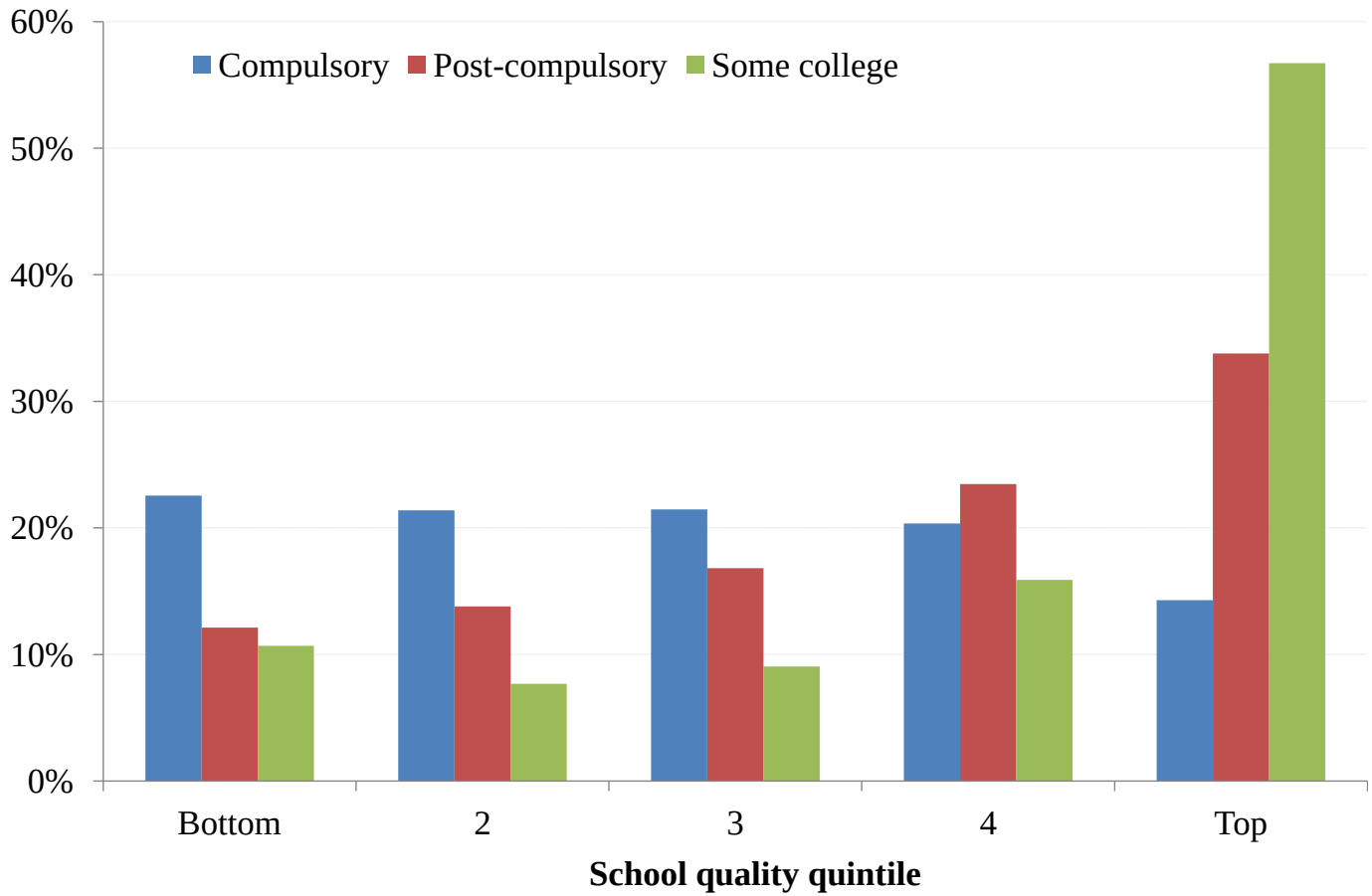
	Father		
	Little interest	Some interest	Very interested
Compulsory	55%	24%	22%
Post-compulsory	34%	22%	44%
Some college	20%	15%	65%
	Mother		
	Little interest	Some interest	Very interested
Compulsory	23%	43%	35%
Post-compulsory	10%	30%	60%
Some college	6%	18%	76%

Effect of time investments on the ability

	Norm. age-11 ability	Norm. age-16 ability
Norm. age-7 time investments	0.127	
	(0.008)	
Norm. age-11 time investments		0.0911
		(0.007)
Norm. age-7 ability	0.596	
	(0.008)	
Norm. age-11 ability		0.770
		(0.007)
N	9609	7196

Regression includes controls for parental education and family background.

School quality at 16 by father's education



Effect of ability, school quality on educational attainment

	Complete HS	Attend college
Normalised age-16 ability	0.226	0.224
	(0.005)	(0.007)
School quality quintile=2	0.022	0.003
	(0.013)	(0.019)
School quality quintile=3	0.028	0.005
	(0.013)	(0.019)
School quality quintile=4	0.046	0.040
	(0.013)	(0.018)
School quality quintile=5	0.018	0.070
	(0.014)	(0.019)
Constant	0.731	0.252
	(0.009)	(0.014)
N	7803	6070

Linear probability model. Excluded category is bottom quintile of school quality. HS dropouts not included in college regression.

Model: timing of parental investments

Parental investments

Outcomes

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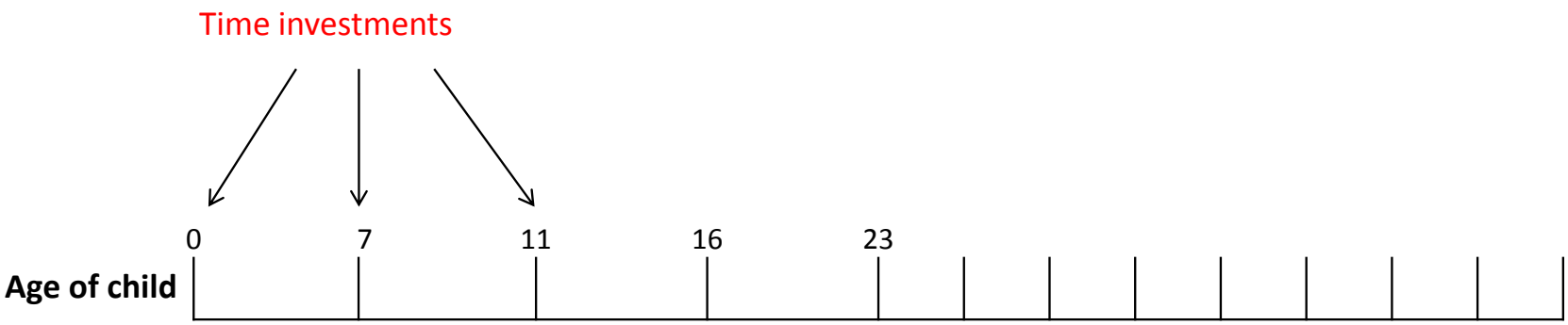
Parental investments



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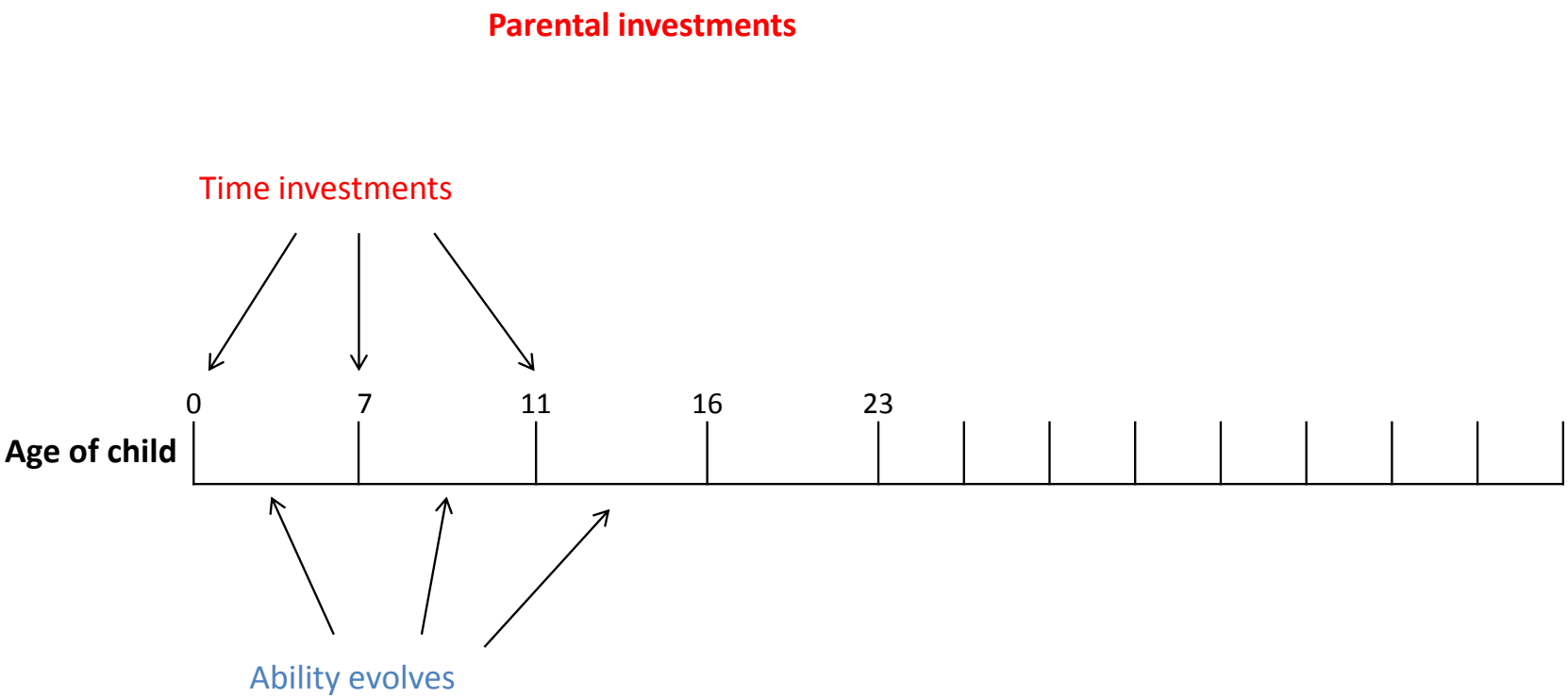

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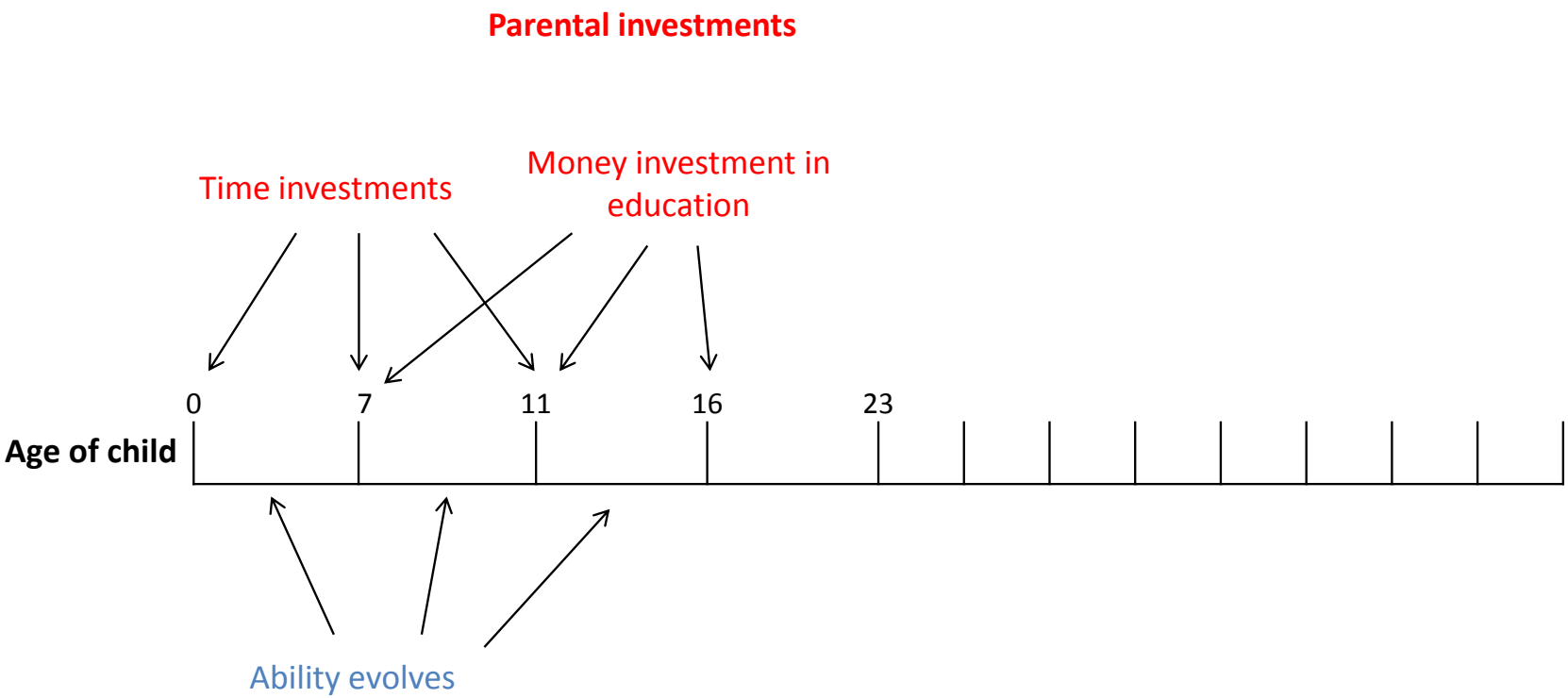

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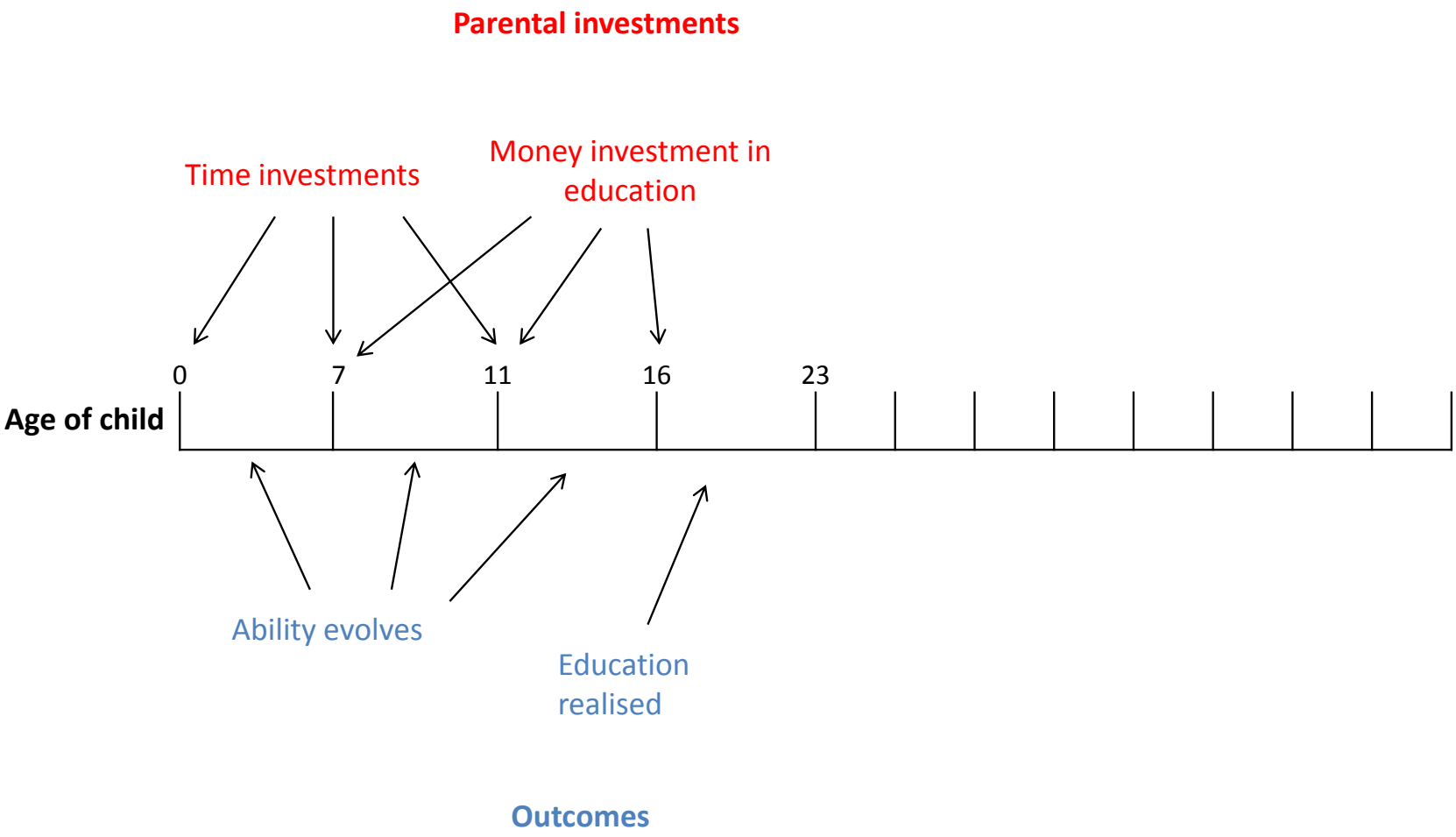

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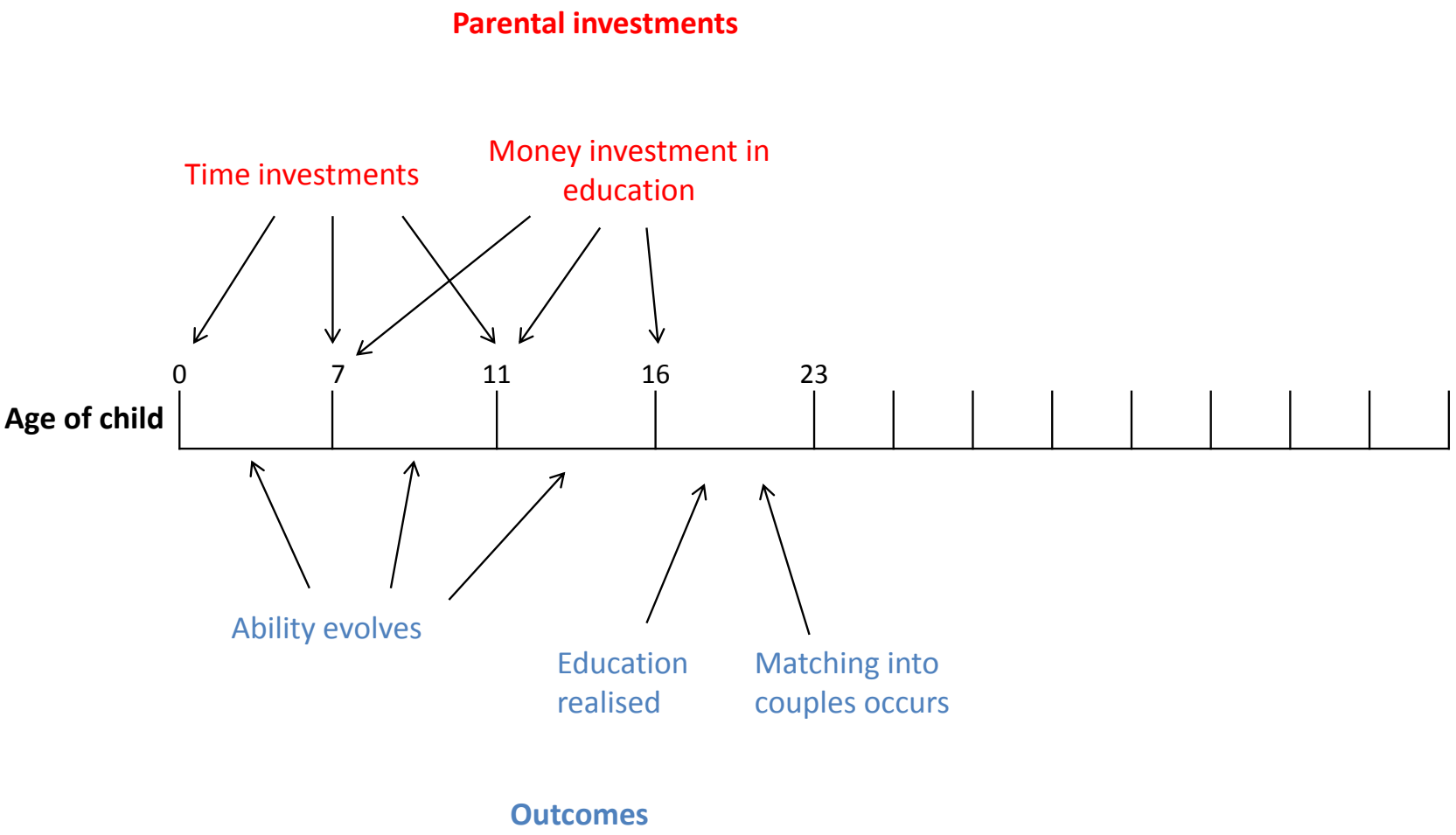

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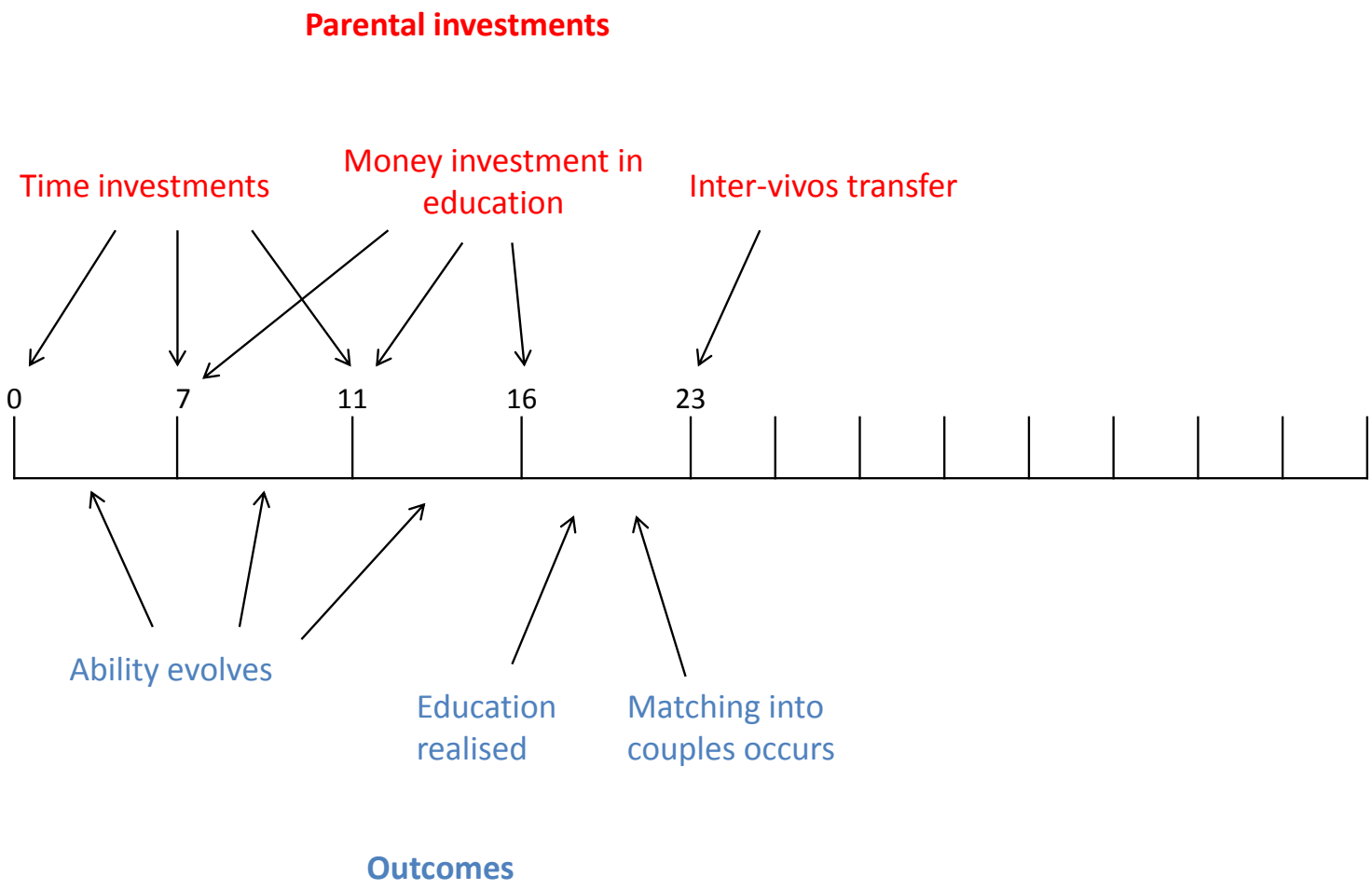

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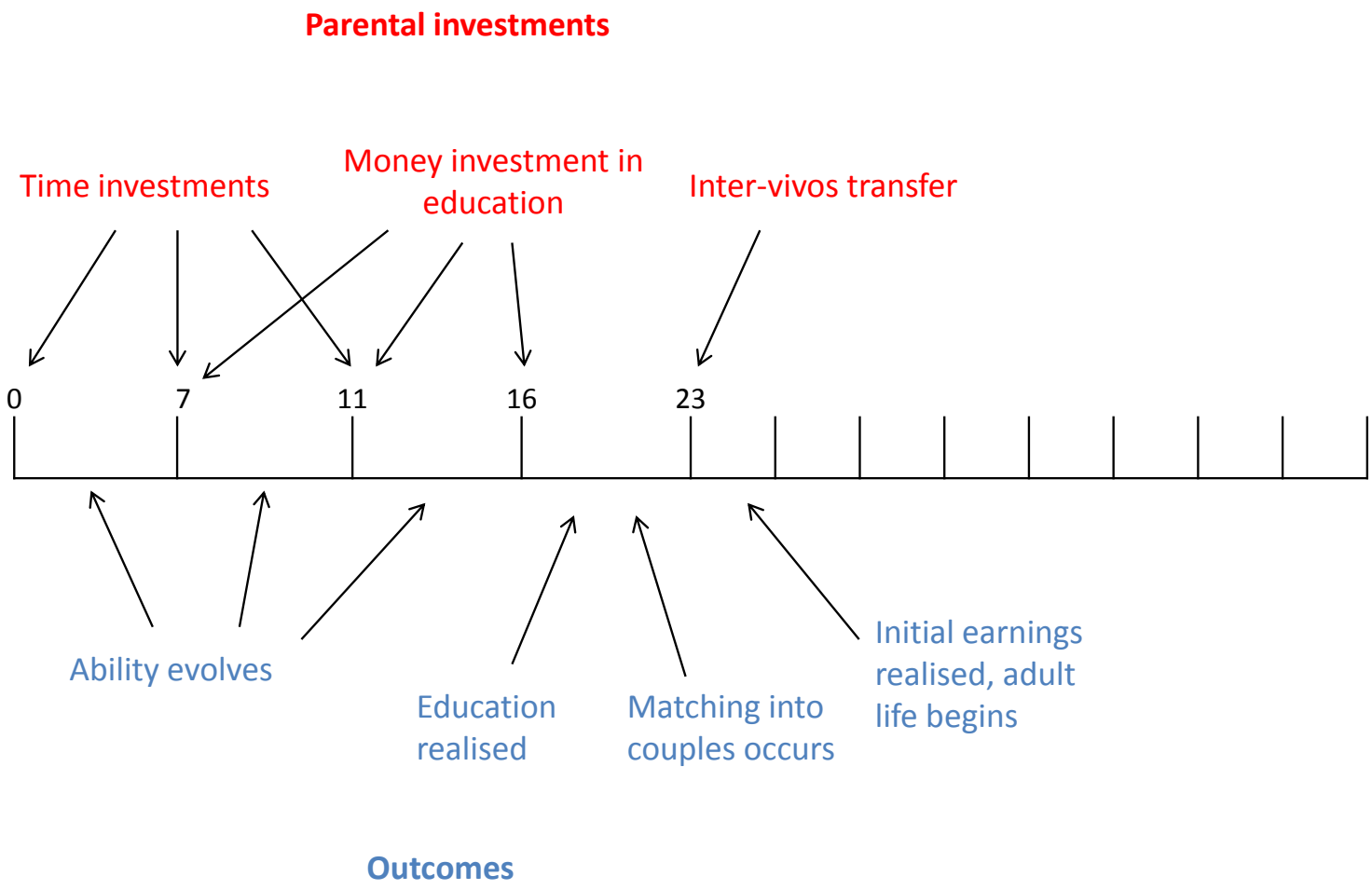

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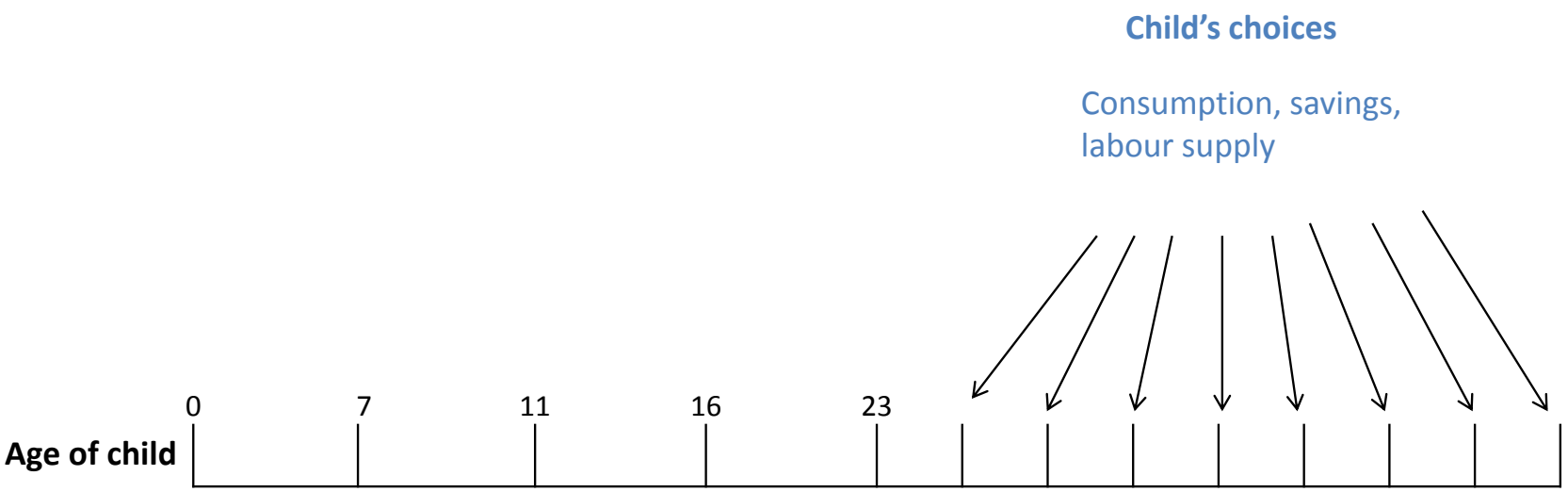

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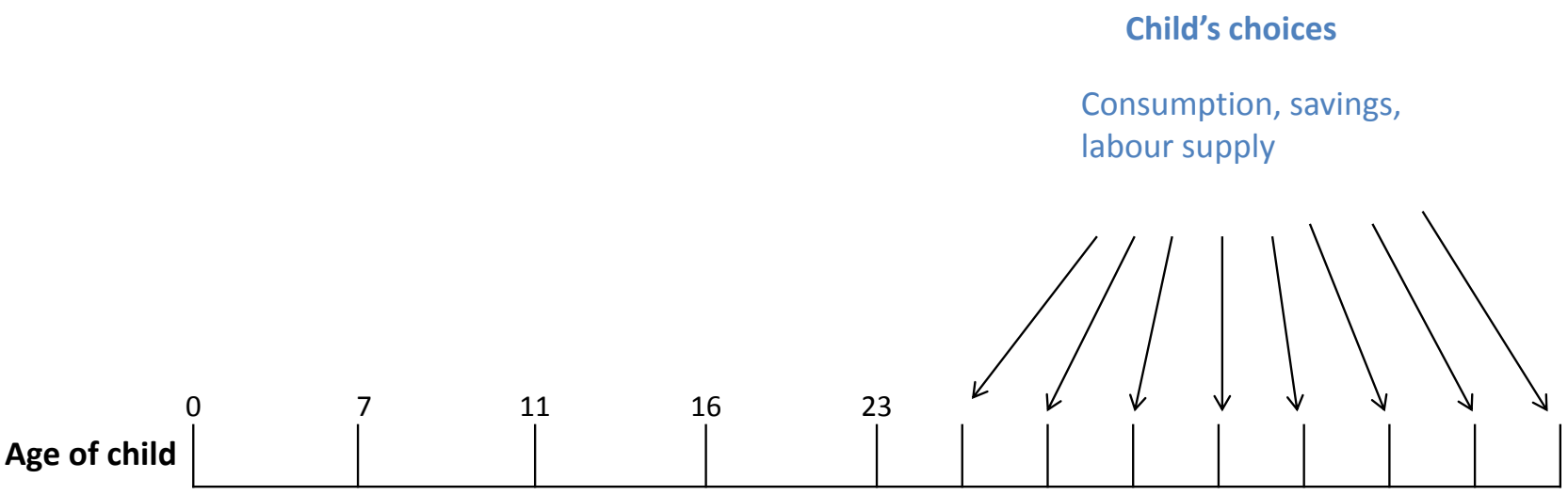

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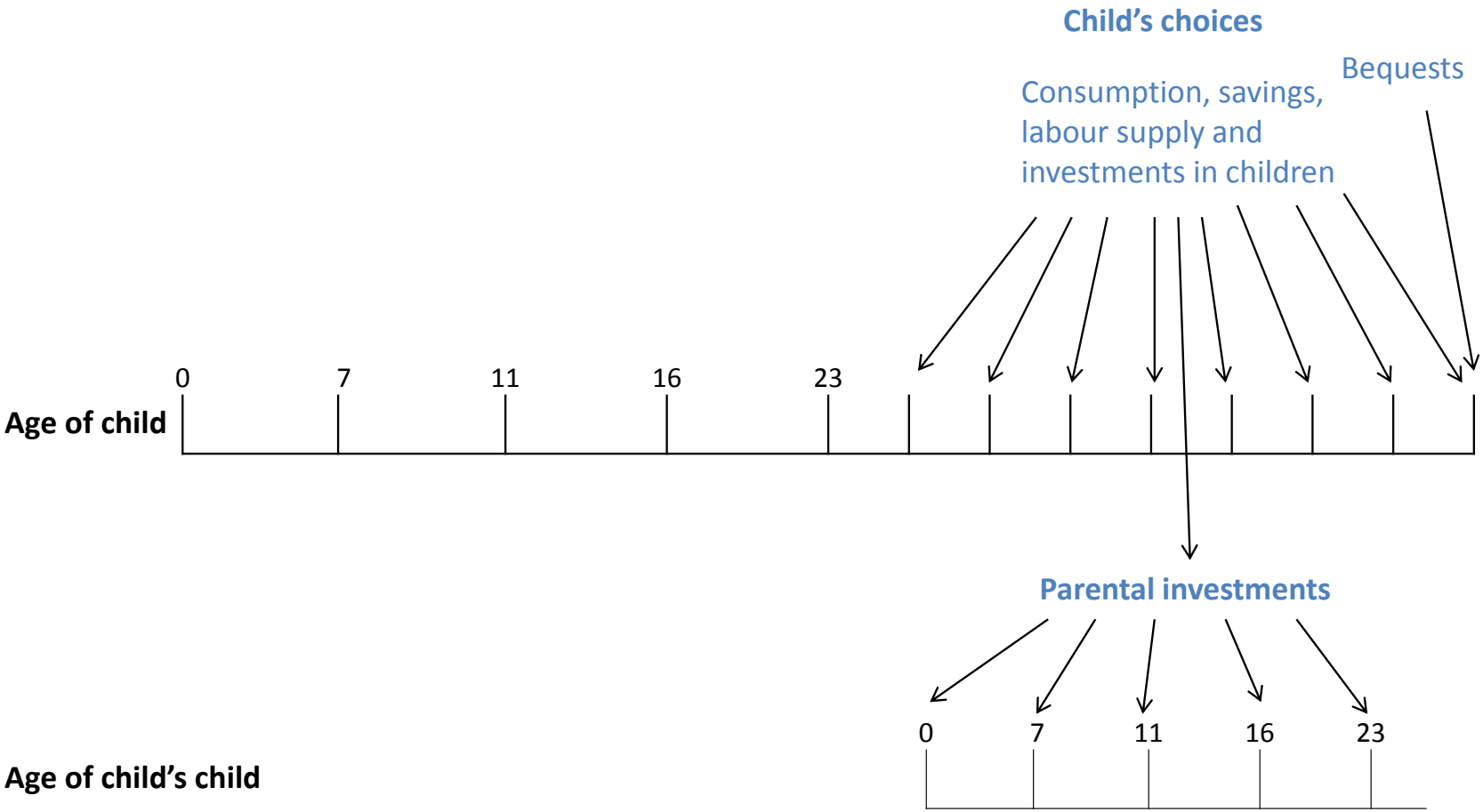

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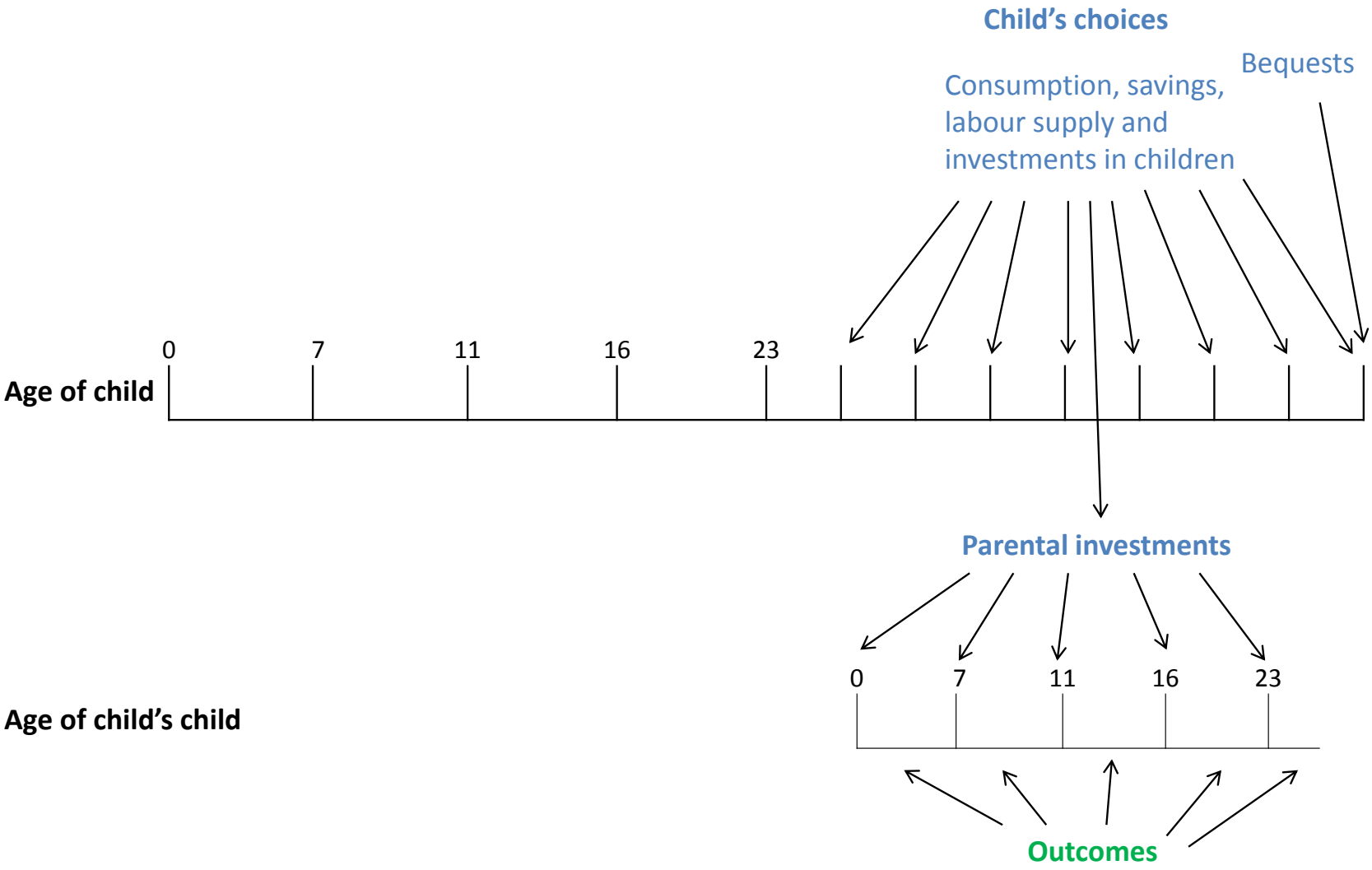

Summary

- We estimate the importance of time investments, educational investments and cash transfers in driving inequalities over the lifecycle
  - Preliminary estimates suggest all channels are quantitatively important
- Goal is to build model to unpick intergenerational links
  - Will allow us to model household responses to counterfactual policies