Attitudes to Equality and Mobility

Winter School, Canazei

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Why is the issue of attitudes interesting?

- Focus on importance of social objectives:
  - Growth
  - Equality
  - Equality of opportunity
- Welfare approaches
  - meaning of key concepts
  - motives for redistribution
- Techniques of elicitation
  - different from those involving personal choice
  - Empirical Social Choice (Gaertner and Schokkaert 2012)

Foundation of our thinking on social values

- The right way to think about social values?
  - interest groups
  - *a priori* reasoning
  - rhetorical introspection

- Interest groups
  - political economy modelling
- A priori reasoning
  - axiomatization
- Rhetorical introspection
  - veil of ignorance approach
  - alternative philosophical standpoints

- Connections between distributional problems
  - *social* choices among income distributions…
  - …*personal* choices between uncertain prospects

Aversion to risk? Inequality?
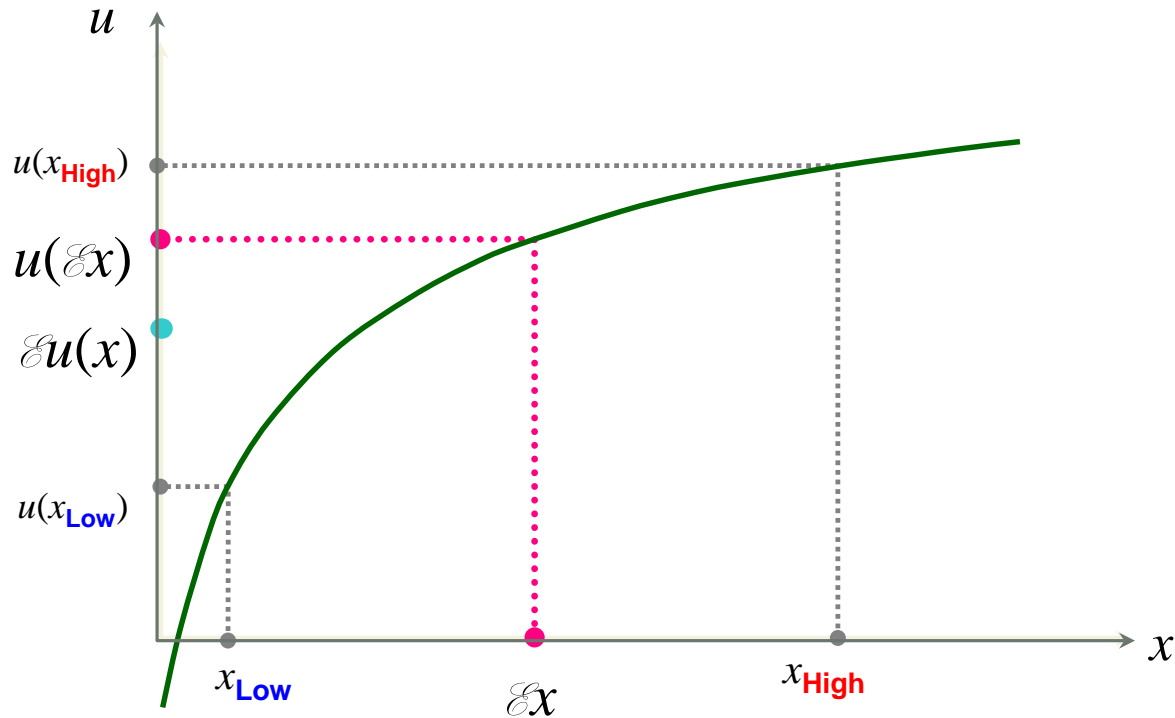
- A good model for social attitudes to inequality?
- A good model for other social values?

Methods of investigation

- Lab experiments ([Krawczyk 2010](#))
  - personal choice carries over to social choice?
  - inferences from choice under uncertainty
- Inference from political choices
  - willingness to sacrifice resource to reduce inequality, poverty
  - tricky to model appropriately
- You can just ask
  - questionnaire studies used in all of the above contexts
  - works where other methods are inappropriate

- Examples for three areas
  - meaning of welfare and inequality comparisons
  - the value of mobility
  - growth / equality / mobility tradeoffs

Which distribution seems more unequal ?
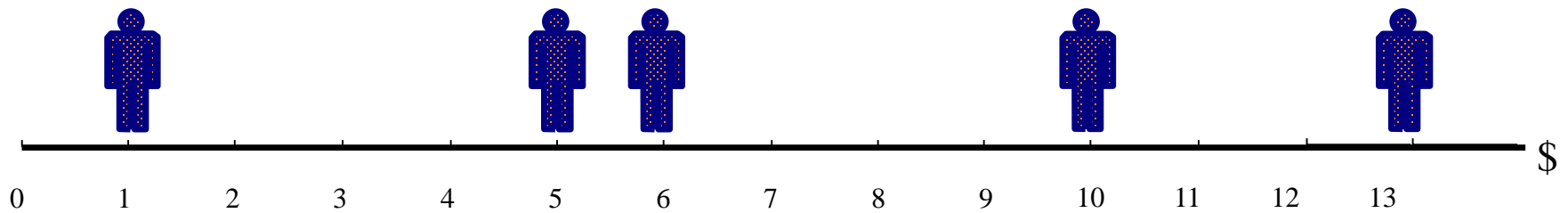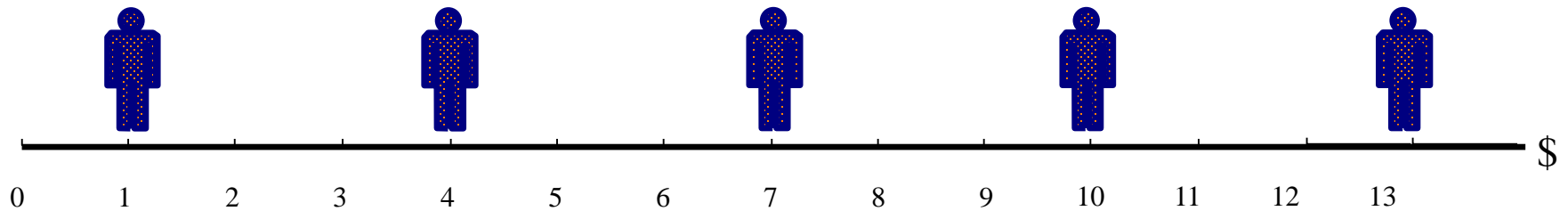
Heterodox Answer
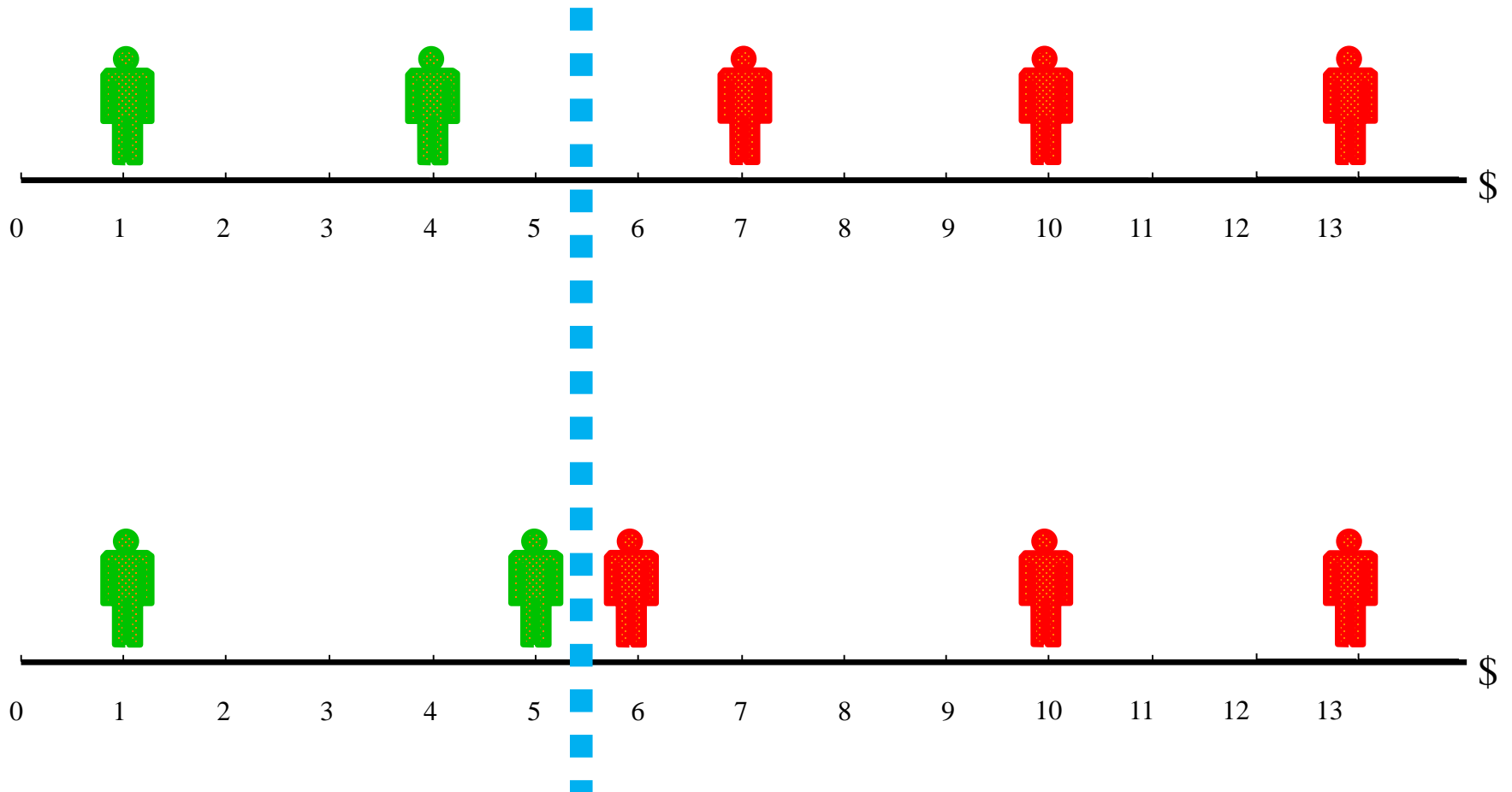
Orthodox Answer
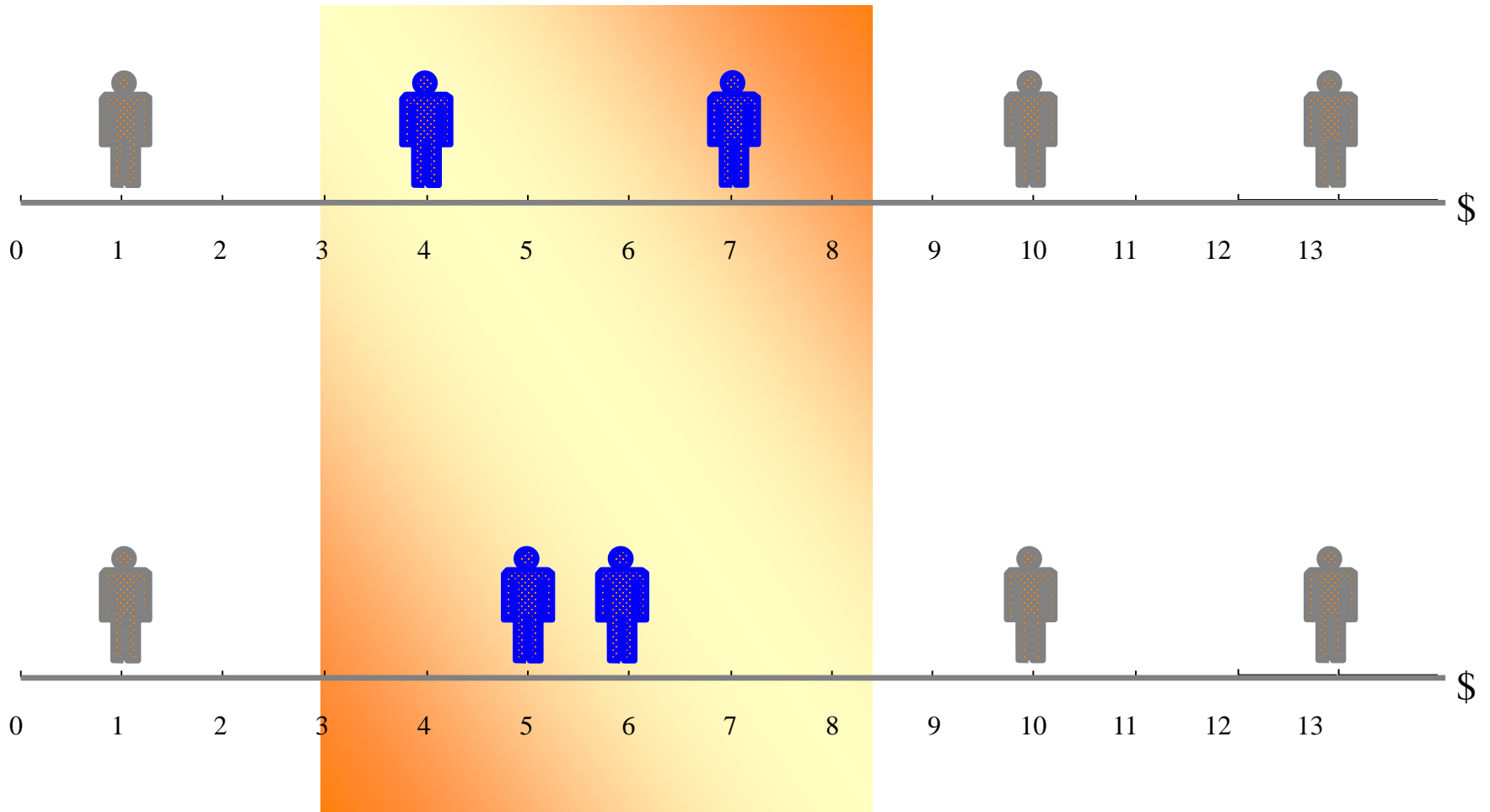
Empirical Social Choice: Inequality

- [Amiel, Cowell, Gaertner (2009)](#)
  - part of research programme on perception of distributions
- Lesson 1: some core principles consistently rejected
  - monotonicity
  - transfer principle
- Lesson 2: context may be important
  - inequality
  - welfare…
- Pin down the context effect using variety of settings
  - same experiment in different flavour
  - should the flavour matter?
  - systematic differences across settings?

If we use a different distributional criterion…?

- Inequality rankings should derive from social welfare rankings
  - ([Atkinson 1970](#))
  - Likewise risk rankings should derive from preference rankings
- What if we changed the context of the question?
  - should just be a matter of changing the flavour
  - not the substance
- Harsanyi's insight fundamental for risk-inequality relation
  - a theoretical basis for concern with inequality
  - a link with the analysis of risk
  - but gives us not just one flavour but two

Harsanyi 1: Aggregation theorem

- Consider preferences over set of lotteries L
  - individuals' preferences V_i satisfy EU axioms $i = 1,\ldots,n$
  - social preference V satisfies EU axioms
  - Pareto indifference is satisfied
- Then there exist a_i, b such that:

  - for all $\mathbf{p} \in L$: $V(\mathbf{p}) = \sum_i a_i V_i(\mathbf{p}) + b$

- Powerful result
  - does not assume interpersonal utility comparisons.
  - if such comparisons ruled out, the a_i are based on the evaluator's value judgments (Harsanyi 1978 , p. 227)
  - need not be a member of the society

Harsanyi 2: Impartial observer theorem

- An *involved* observer makes value judgments
  - sympathetic to interests of each member of society ([Vickrey, 1945]())
  - assumes interpersonal comparisons of utility
- Thought experiment: observer imagines being person i
  - i's objective circumstances i's preferences
  - equal consideration to each person's interests.
  - so imagines he has an equal chance of being any person in society
- So observer calculates average EU of each lottery in L:

  - $V_j(\mathbf{p}) = (1/n) \sum_i V_i(\mathbf{p})$
  - person j's expected utility

A questionnaire approach

- A questionnaire-experiment about Alfaland:
  - imaginary country with five regions
  - equality within each region but each region has a different income level
  - two policies A,B with different consequences for the regions

- Two different questionnaires distributed in the same session
  - H1: Imagine that you are invited to be an outside observer of Alfaland
  - H2: Imagine that you have been assigned to one of the regions in Alfaland with an equal chance of being in any one of the five regions.

- Students ranked six pairs of income vectors (A and B)

Numerical Questions

1) A = (2, 5, 9, 20, 30)   B = (2, 6, 8, 20, 30)

2) A = (2, 5, 9, 20, 30)   B = (3, 5, 9, 20, 29)

3) A = (2, 5, 9, 20, 30)   B = (2, 6, 9, 20, 29)

4) A = (2, 5, 9, 20, 30)   B = (2, 10, 9, 15, 30)

5) A = (10, 10, 10, 10, 30)   B = (10, 10, 10, 20, 20)

6) A = (2, 5, 9, 20, 30)   B = (2, 6, 9, 19, 30)

- For each question B obtained from A by an equalising income transfer from a rich to a poor region

- Transfer Principle (mps principle) implies that A is riskier/more unequal than B in all six questions

Response patterns

	Q1	Q2	Q3	Q4	Q5	Q6	All
H1	58.9	80.9	72.3	61.0	80.9	56.0	26.2
H2	55.0	78.5	65.8	57.0	76.5	53.7	24.8
H1 M	63.2	81.6	72.4	61.8	85.5	61.8	27.6
H1 F	54.8	79.0	72.6	59.7	74.2	51.6	25.8
H1 (Israel)	48.0	82.0	64.0	48.0	74.0	44.0	
H2 (Israel)	56.6	92.5	79.4	66.0	81.1	62.3	

Results: summary

- Responses violate transfer principle
  - question pattern similar to previous studies
  - extremes produce orthodox responses
- Involvement:
  - more orthodox for outside observer
  - another example where "flavour" matters ([Amiel, Cowell, Gaertner 2012](#))
- Personal characteristics:
  - males respond in more orthodox fashion
  - if question is framed as non-involved observer
- Importance of subsample characteristics:
  - Israel effect
  - supported by follow-up studies

Mobility as a social good

- Mobility as a private good?
  - <u>language problem 1</u>: income growth as an example of mobility? (relabelling of the simple desire for more income)
  - <u>language problem 2</u>: a good or a bad? ("mobility" versus "volatility")
- 1. Mobility as an intrinsic social good?
  - methodological problem
  - contrast inequality or poverty
- 2. Mobility as an indirect social good?
  - a proxy for other objectives
  - similar to (but different from) EOp (<u>Van de gaer et al. 2001</u>)
- 3. Mobility as an instrument?
  - a tool for achieving other objectives

Mobility and welfare

- Construct explicit welfare approach
  - like Atkinson inequality? (Gottschalk and Spolaore 2002)

- But must go beyond simple welfare models
  - cannot base it on individual utility
  - individuals are risk averse?

- Maybe "extend" the utilitarian model to two generations 0,1?
  - $W = (1/n) \sum_i \sum_j U(x_{i0}, x_{i1}) \, n_{ij}$

- Welfare principles?
  - full mixing: equality of opportunity? (ABCD 2015)
  - increased mixing, increase welfare? (Atkinson 1981, Atkinson and Bourguignon 1982) : $\partial^2 U / \partial x_{i0} \partial x_{i1} < 0$.

Inequality and Mobility 1

Society X

Children

	$600	$1000	
$200	10	0	*10*
$600	0	10	*10*
	10	*10*	

Parents

Society Y

Children

	$400	$1200	
$200	10	0	*10*
$600	0	10	*10*
	10	*10*	

Parents

- Perfect immobility
  - Parents have same inequality in X and Y
- Child distribution in X Lorenz dominates Y:
  - Children's welfare higher in X?

Inequality and Mobility 2

Society W

Children

Parents	$600	$1000	
$200	5	5	10
$600	5	5	10
	10	10	

Society Z

Children

Parents	$400	$1200	
$200	5	5	10
$600	5	5	10
	10	10	

- Perfect mobility
  - Parents have same inequality in W and Z
- Child distribution in W Lorenz dominates Z

Redistribution, risk and mobility

- Mobility affect attitude to inequality? (Friedman 1962, Krueger 2012)
- Redistribution and personal interest
  - Tunnel effect   (Hirschman 1973)
  - "Land of opportunity" reduces demand for redistribution? (Alesina and La Ferrara 2005, Ravallion and Lokshin 2000)
  - Prospect Of Upward Mobility (Bénabou and Ok 2001)
- Something more?
  - POUM dominated by demand for social insurance
  - Depends on culture? (Corneo and Grüner 2002, Isaksson and Lindskog 2009)
  - Concern with distributive justice (Fong 2001, Ohtake and Tomioka 2004)
- Difference of views on
  - role of effort and predetermined factors
  - trade-off between equality and mobility

Inequality and redistribution: three views

- ***Substitution view***. Main objective is origin independence
  - concern for inequality only if rigidities can't be removed.
  - X socially preferred to Y? (greater child inequality in Y is inherited)
  - Z preferred to W? (greater inequality in Z means a "land of opportunities")
- ***Priority for the worst off.*** Equality of outcome explicit
  - inequality at minimum compatible with the maximum for the least well-off
  - X is better than Y _and_ W is better than Z
- ***Intermediate position.*** Promotion of talent: equality of opportunity
  - role of incentives for economic efficiency
  - also fairness: rewards related to individual desert
  - inequality accepted only to the extent it serves this purpose

Asking about mobility

- A questionnaire study
  - use same type of methods as for inequality?
  - focus on whether people value mobility
  - contrast with preferences for equality

- A classic empirical social choice problem
  - mobility problem obviously more complex
  - mobility is a "from-to" concept not a snapshot
  - graphics representation is tricky

- Method (ABCD 2015) :
  - "bus queue" pictures based on Amiel-Cowell (1999) design
  - combine equality and intergenerational mobility
  - get personal characteristics

Questionnaire introduction

- […]"Social preferences" mean the preferences of an impartial individual about the way society distributes incomes among its citizens; and "impartial" means that the individual is not a member of the society in question.

- Several factors may be involved in considering income distributions even from an impartial position. In the questionnaire we ask you to focus on the distributions of incomes in hypothetical societies of two generations, parents and children. The two-generation story can be illustrated graphically: […]the distribution of income for parents is shown in the upper part, while the income distribution of children is shown in the lower part. Each parent gives birth to one child, so the population remains the same. The children are the same colour as their parents: a blue parent will have a blue child and a red parent will have a red child. […]

- […]. In each comparison you are asked to state which society is more socially preferable according to your view.

1 Full Mixing v Rigidity
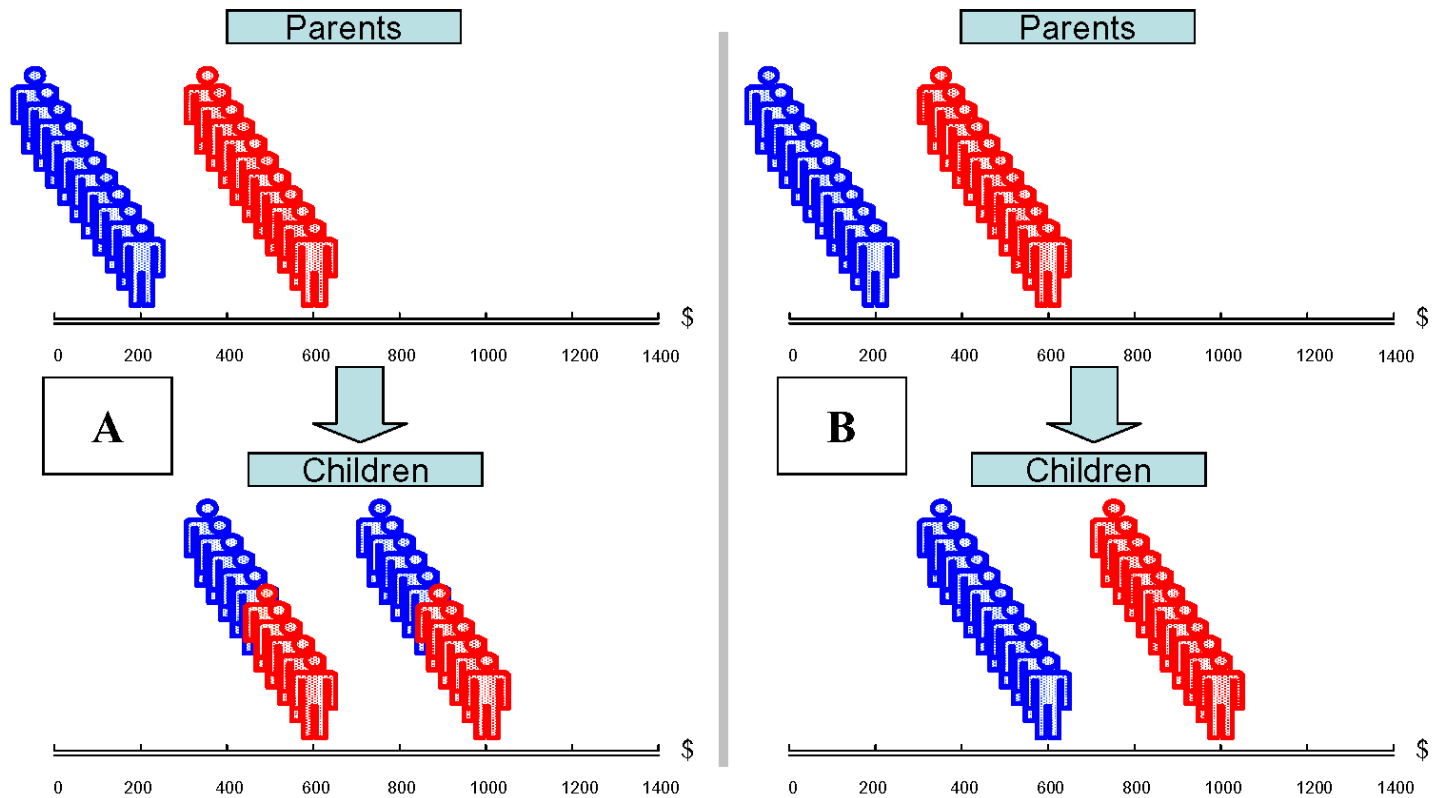
Please check (✔) one :   A is preferable
B is preferable
A and B are equally preferable

2 Full Mixing and Widening

Please check (✔) one:

A is preferable
B is preferable
A and B are equally preferable

3 Rigidity v Full Mixing+Widening

Please check (✓) one: A is preferable
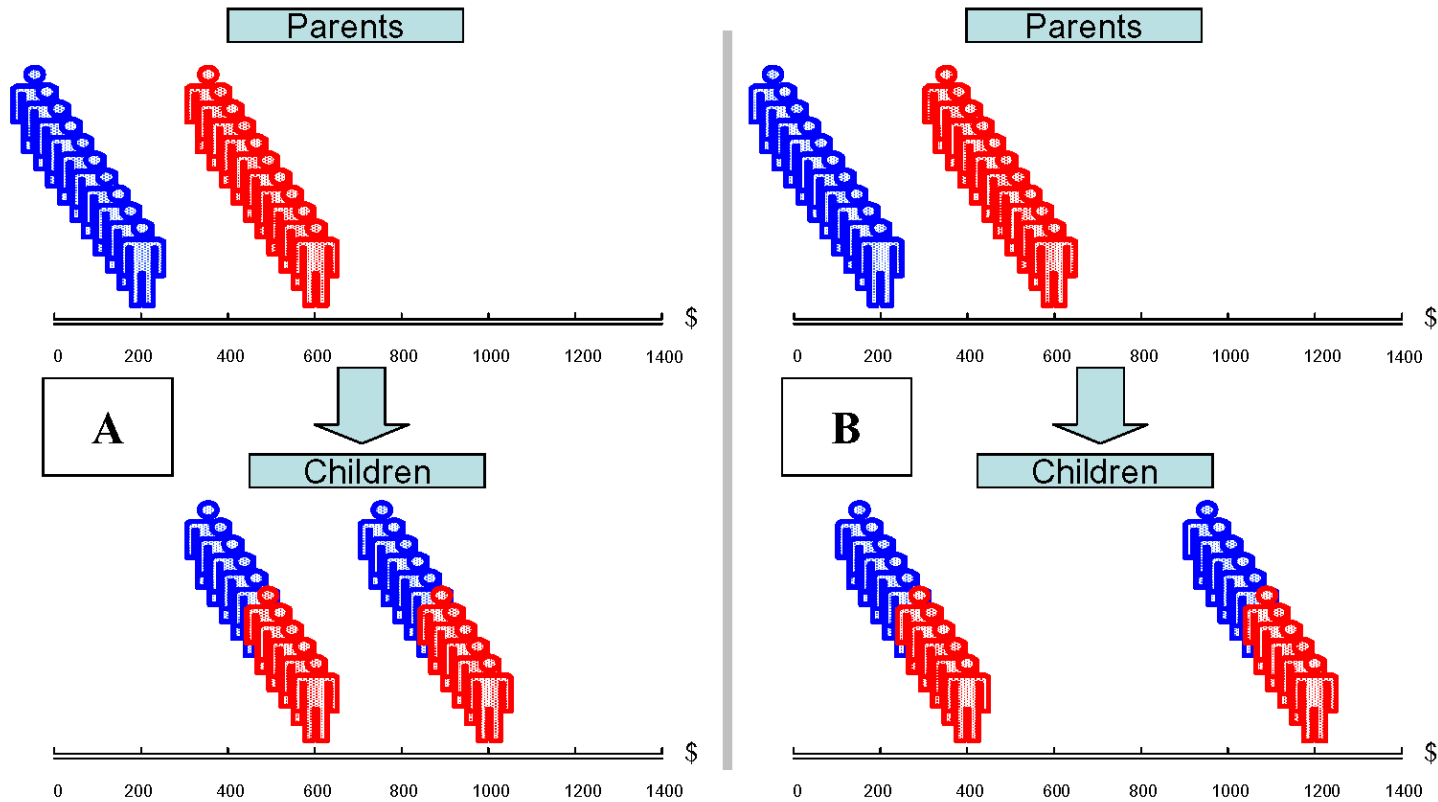B is preferable
A and B are equally preferable

4 Partial mixing v Rigidity

Please check (✓) one:

A is preferable
B is preferable
A and B are equally preferable

5 Partial Mixing and Widening

6 Rigidity v Partial Mixing+Widening
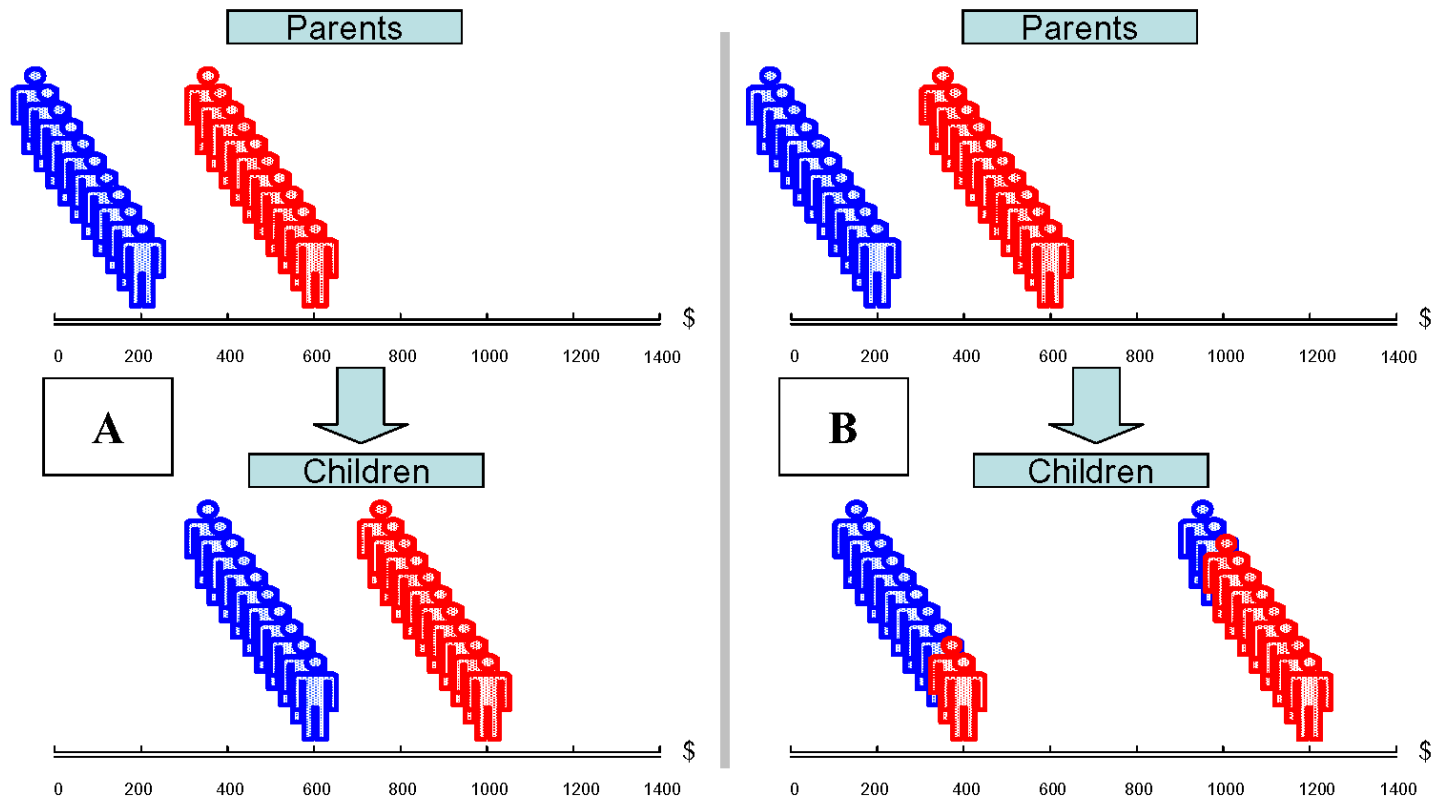
Please check (✓) one: A is preferable
B is preferable
A and B are equally preferable

7 Full v Partial Mixing
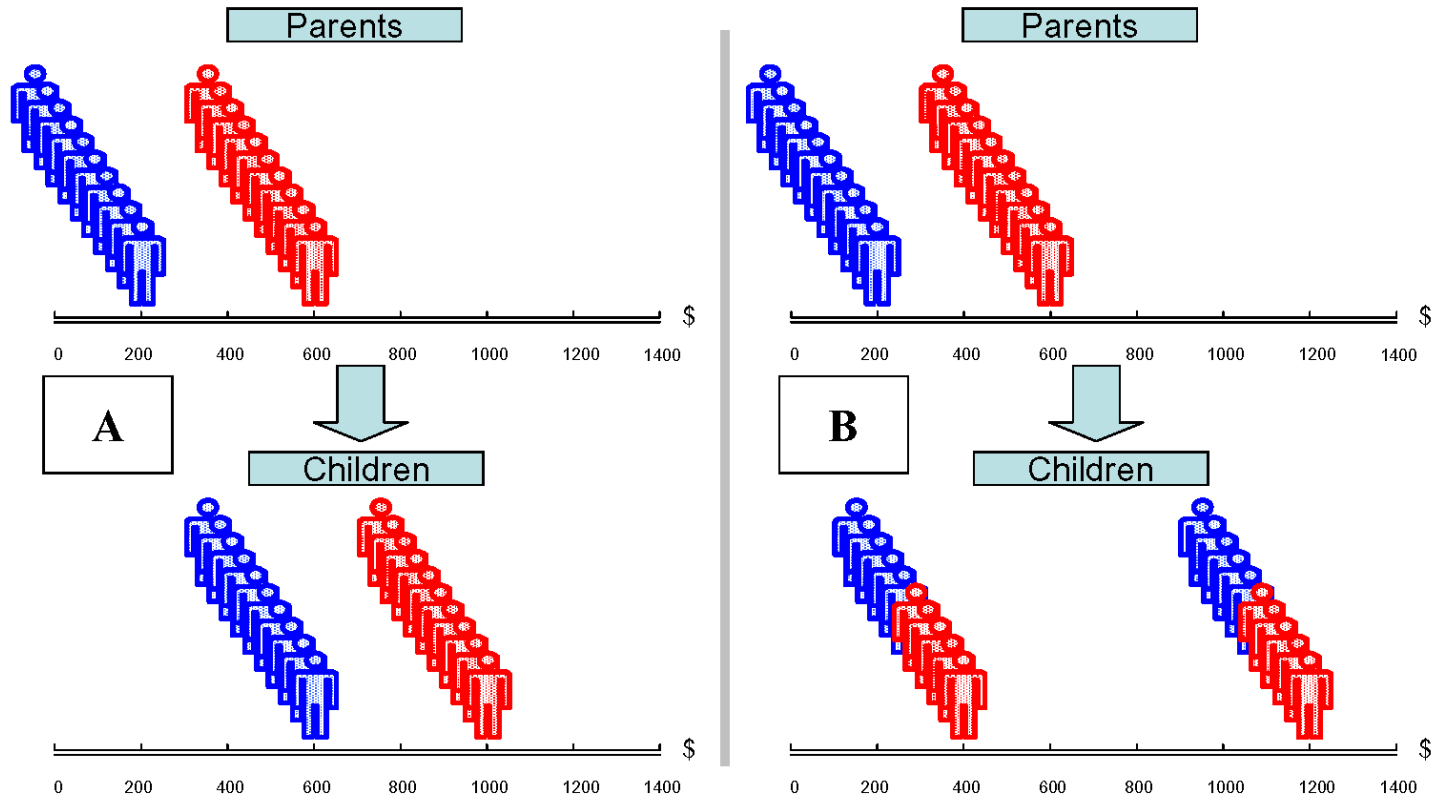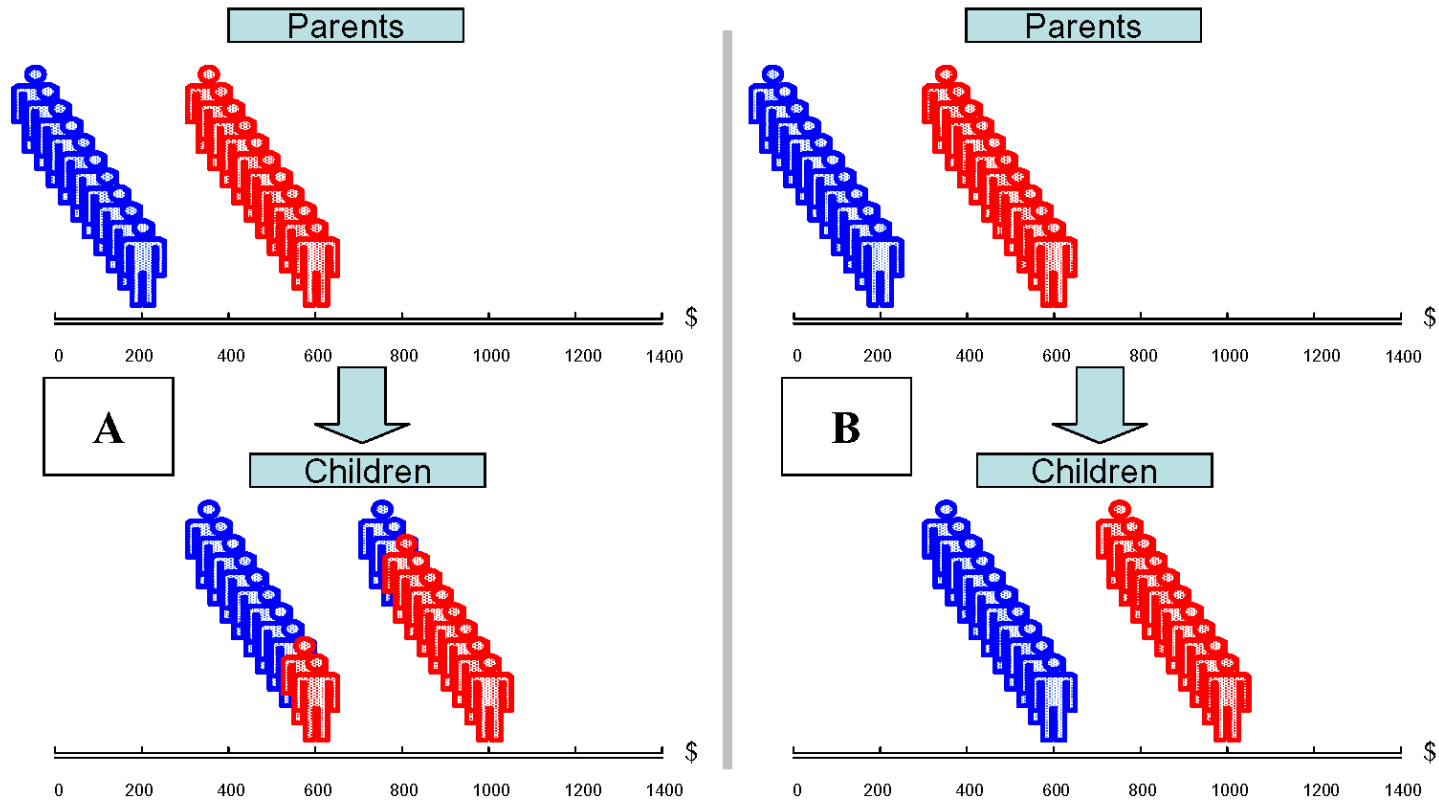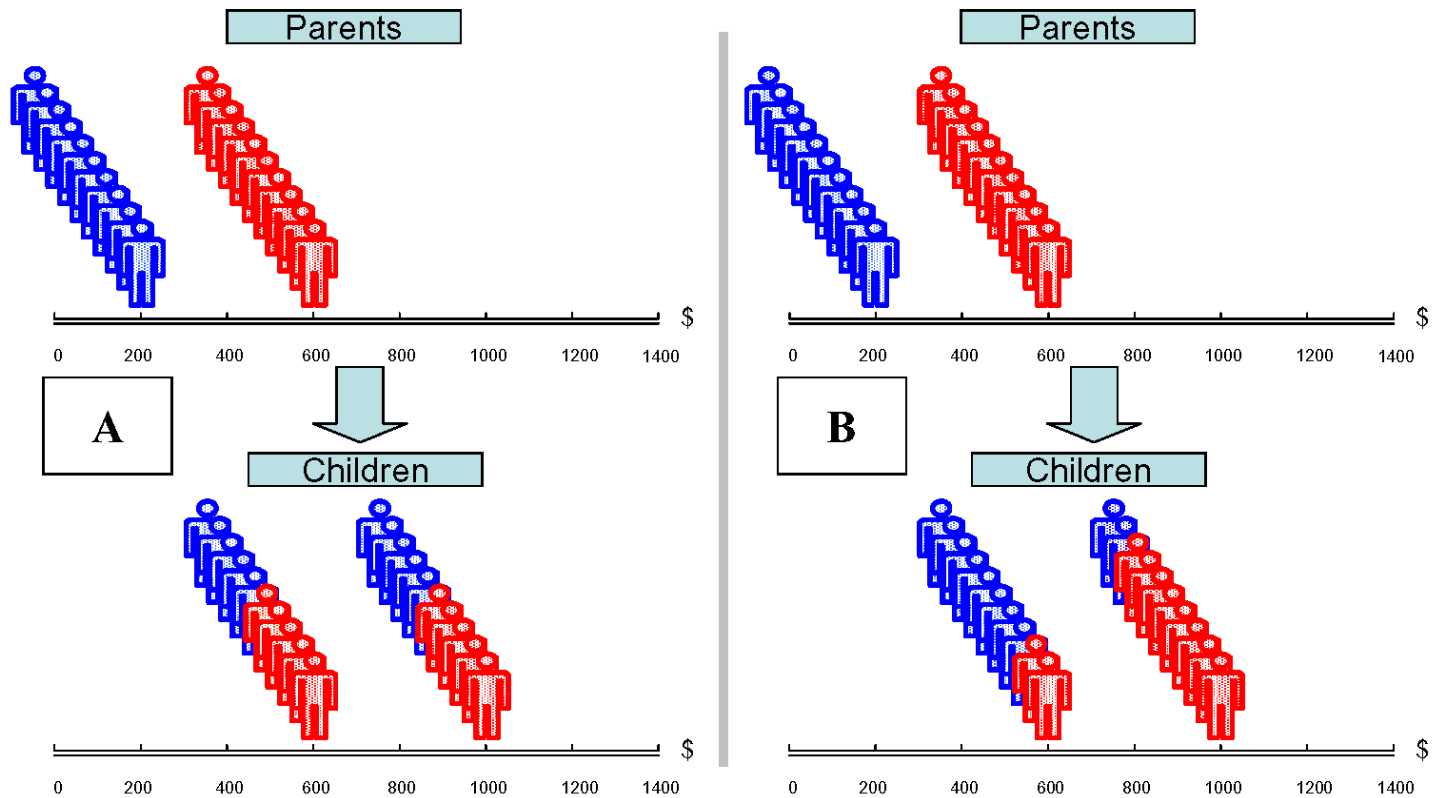

Please check (✔) one: A is preferable
                        B is preferable
                        A and B are equally preferable

8 Rigidity v Simple Widening
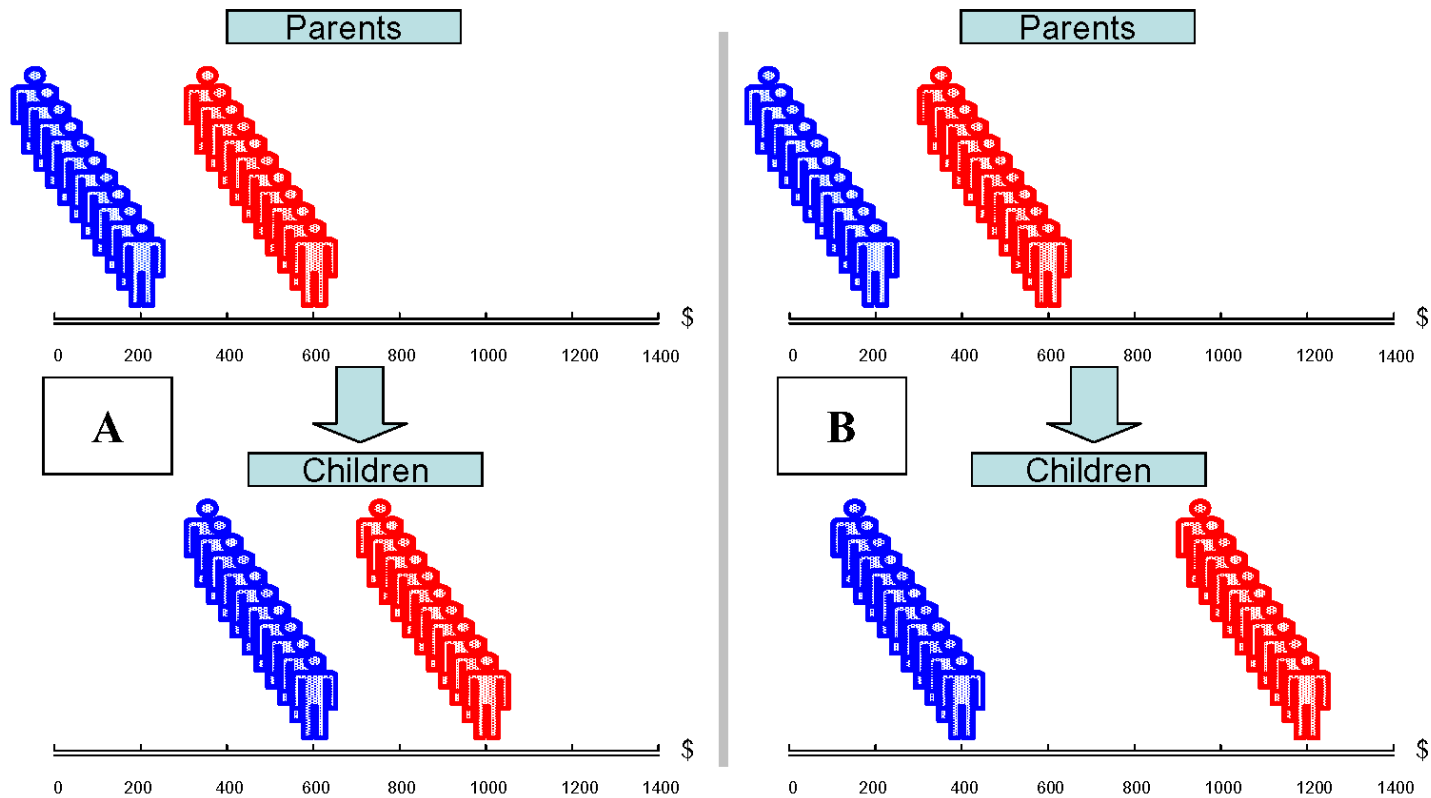
Please check (✔) one:

A is preferable
B is preferable
A and B are equally preferable
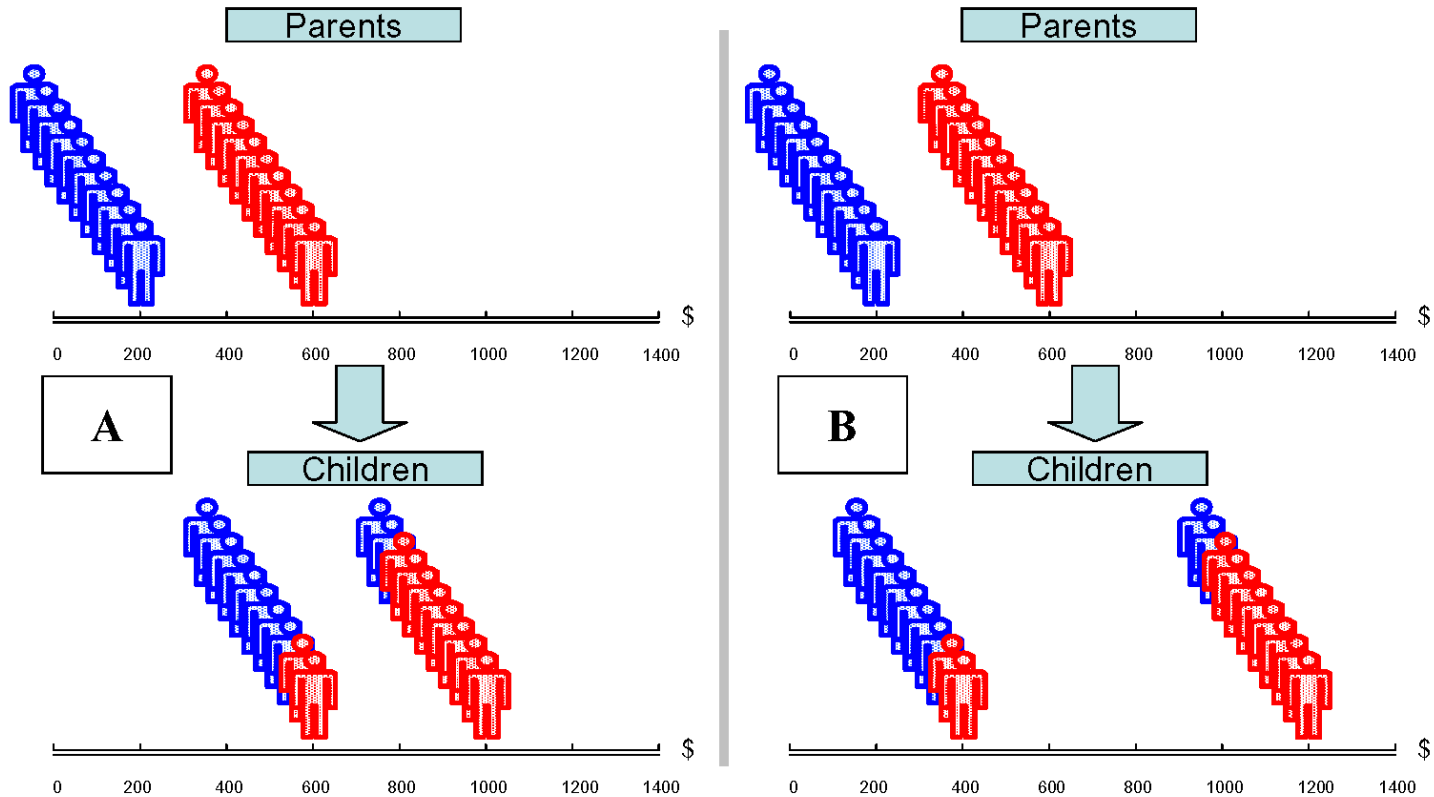
Summary: ABCD

	Scenario A	Scenario B
Q1	full mixing	no mixing; income gap unchanged
Q2	full mixing	full mixing; income gap widens
Q3	no mixing	full mixing; income gap widens
Q4	partial mixing	no mixing; income gap unchanged
Q5	partial mixing	partial mixing; income gap widens
Q6	no mixing	partial mixing; income gap widens
Q7	full mixing	partial mixing; income gap unchanged
Q8	no mixing	no mixing; income gap widens

In all cases average income increases from $400 to $800

Do people value mobility? Equality?

- Mobility is *yes* if A chosen more often than B in
  - Q1 (Full mixing v rigidity)
  - Q4 (Partial mixing v rigidity)
  - Q7 (Full v partial mixing)

	Q1	Q4	Q7
A	68.8	67.7	69.1
B	17.7	21.1	18.0
indiff	13.5	11.0	12.6

- Equality is *yes* if A chosen more often than B in
  - Q2 (Full mixing and widening)
  - Q5 (Partial mixing and widening)
  - Q8 (Rigidity v Simple widening)

	Q2	Q5	Q8
A	71.4	72.5	76.7
B	16.0	14.6	11.2
indiff	12.6	12.9	11.8

- Clearly *yes* to both
- Applies to all subsamples

Mobility induce lower support for equality?

- Check if %B in Q2 (Full mixing+widening) > %B in Q5 (Partial mixing+widening) > %B in Q8 (Rigidity v widening)

Q5	Q2 A	B	Indiff	Q8	Q5 A	B	Indiff
A	62.1	5.9	4.5	A	65.6	5.9	5.4
B	5.3	7.1	2.3	B	2.3	6.8	2.3
Indiff	3.9	3.1	5.9	Indiff	4.5	2.0	5.3

- Although support for B increases, vastly outweighed by A
- Mobility not a substitute for equality
- Applies to all subsamples

Willing to sacrifice equality for mobility?

- *Yes* if %B in Q3 (Rigidity v Mixing+Widening) > %B in Q6 (Rigidity v Partial Mixing+Widening) > %B in Q8 (Rigidity v Simple widening)

Q6	Q3 A	B	Indiff	Q8	Q6 A	B	Indiff
A	37.2	15.6	3.1	A	48.6	22.2	6.5
B	7.7	25.6	2.6	B	3.7	6.8	0.6
Indiff	2.6	3.4	2.3	Indiff	3.7	6.8	1.1

- From simple percentages, clearly yes
- Applies to all subsamples

Does more mobility elicit stronger preference?

- *Yes* if %A in Q1 (Full Mixing v Rigidity) > %A in Q4 (Partial mixing v rigidity)
- *Yes* if %A in Q1 (Full Mixing v Rigidity) > %A in Q7 (Full v Partial Mixing)

	Q1	Q4	Q7
Italy	60.8	56.7	68.3
UK	77.5	84.3	68.5
Israel	70.1	66.7	70.1

Mobility preferences: categorical variable

- For mobility check (for each person) the answers to Q1,Q4,Q7
- For equality check (for each person) the answers to Q2,Q5,Q8
- Categorise 0A, 1A, 2A, 3A
- Calculate percentages in each category

Mobility	0A	1A	2A	3A
Italy	10.8	24.2	33.3	31.7
UK	9.0	11.2	20.2	59.6
Israel	10.9	16.3	27.9	44.9
TOTAL	10.4	17.7	27.8	44.1

Equality	0A	1A	2A	3A
Italy	16.7	10.0	23.3	50.0
UK	13.5	6.7	11.2	68.5
Israel	9.5	14.3	19.7	56.5
TOTAL	12.9	11.0	18.8	57.3

- The higher the category, the greater the percentage (almost)
- Applies to all subsamples

Personal characteristics 1

1) How old are you? _____.(years)

2) Are you   □ male?   □ female?

3) Do you consider yourself:

     □ *British?*   □ *other European?*   □ *Chinese?*   □ *other Asian?*

     □ *North American?*   □ *Latin-American/Caribbean?*   □ *other? (___)*

4) How would your rank the income of your family?

     □ *very low*   □ *low*   □ *adequate*   □ *high*   □ *very high*

5) How would you rank the living standards of your family with respect to the average standard in your country?

     □ *much lower*   □ *lower*   □ *the same*   □ *higher*   □ *much higher*

Personal characteristics 2

6) How would you imagine your income will be in 10 years with respect to your parents' income at the same age?

  □ *much lower*　　　□ *lower*　　　□ *the same*　　□ *higher*　　□ *much higher*

7) How would you imagine your social position will be in 10 years with respect to your parents' social position at the same age?

  □ *much lower*　　　□ *lower*　　　□ *the same*　　□ *higher*　　□ *much higher*

8) Please indicate how much you agree or disagree with the following statements:

    A) "The more independent are children's and parents' economic positions in a society, the more socially preferable is the society"

        □ *Strongly agree*
        □ *Agree*
        □ *Neither agree nor disagree*
        □ *disagree*
        □ *Strongly disagree*

    B) "The more independent are children's and parents' economic positions in a society, the more equality of opportunity there is in the society"

        □ *Strongly agree*
        □ *Agree*
        □ *Neither agree nor disagree*
        □ *disagree*
        □ *Strongly disagree*

Personal characteristics 3

9) "How would you place your view on the following scale?"

1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

"The government should take the responsibility to ensure equal opportunity to everyone, but then everyone should be left on his or her own"

"No matter whether people have equal opportunity or not, it is the responsibility of government to reduce income differences between people as much as possible"

Mobility and Equality - Baseline

	Mobility	Equality
A1. Age	+0.0062	+0.0440
A2. Gender	−0.1638	−0.1005
F1. Family income	+0.0271	+0.2514**
F2. Living standard	−0.0311	−0.0879
P1. Prospect on income	+0.0212	+0.0368
P2. Prospect. on soc. pos	−0.0349	−0.2068*
V1. Indep. desirable	−0.3152***	−0.0130
V2. Indep. as equ. of opport.	−0.1148	+0.0114
V3. Eq. opp v. eq. income	+0.0102	−0.0655**

Mobility and Equality – Country

	Mobility	Equality
A1. Age	+0.0223	+0.0762**
A2. Gender	−0.1460	−0.0709
F1. Family income	−0.0408	+0.2419*
F2. Living standard	−0.0822	−0.0978
P1. Prospect on income	−0.0697	+0.0311
P2. Prospect. on soc. pos	−0.0117	−0.2044*
V1. Indep. desirable	−0.3128***	−0.0068
V2. Indep. as equ. of opport.	−0.0984	+0.0049
V3. Eq. opp v. eq. income	+0.0255	−0.0583**
Italy	−0.1356	+0.1678
UK	+0.5029**	+0.3298

Mobility and Equality - Nationality

	Mobility	Equality
A1. Age	+0.0209	+0.0808**
A2. Gender	−0.1466	−0.0700
A3. Nationality	−0.0547	+0.1793
F1. Family income	−0.0394	+0.2342*
F2. Living standard	−0.0850	−0.0883
P1. Prospect on income	−0.0700	+0.0318
P2. Prospect. on soc. pos	−0.0126	−0.2016*
V1. Indep. desirable	−0.3132***	−0.0063
V2. Indep. as equ. of opport.	−0.0983	+0.0047
V3. Eq. opp v. eq. income	+0.0251	−0.0571**
Italy	−0.1439	+0.1949
UK	+0.4580	+0.4772

Cross-section: summary results

1. The majority of subjects prefer the society where mobility is higher

2. In most cases more mobility induces stronger preferences

3. Majority of subjects prefer the society where inequality is lower

4. Preferences for income equality do not become weaker with more income mobility

5. Trade-off between preferences for mobility and for equality; subjects willing to sacrifice some equality if this is *necessary* to obtain more mobility

Regression: summary results

- Mobility key factors:
  - "The more independent are children's and parents' economic positions in a society..."
  - "I am from around here"
- Equality key factors:
  - family income
  - role of government
  - prospective social position
- Government result?
  - Kuziemko et al. (2015): information on inequality increases concern about inequality, but has little effect on support for redistributive policies. People do not trust the ability of governments to reduce inequality through standard policy instruments.

GEM: A triad of objectives

- Look at two tradeoffs
  - Growth / mobility
  - Growth / equality
- Two groups
  - the ABCD sample base
  - "Greater China"

Summary: ABCD

	Scenario A	**Scenario B**
Q1	full mixing	no mixing; income gap unchanged
Q2	full mixing	full mixing; income gap widens
Q3	no mixing	full mixing; income gap widens
Q4	partial mixing	no mixing; income gap unchanged
Q5	partial mixing	partial mixing; income gap widens
Q6	no mixing	partial mixing; income gap widens
Q7	full mixing	partial mixing; income gap unchanged
Q8	no mixing	no mixing; income gap widens

In all cases average income increases from $400 to $800

Summary: GEM

	Scenario A	Scenario B
Q1	full mixing; no growth	no mixing; all grow $400
Q2	full mixing; no growth	no mixing; all grow $600
Q3	partial mixing; no growth	no mixing; all grow $400
Q4	partial mixing, all grow $200	partial mixing; rich grow $600
Q5	partial mixing; rich grow $200	partial mixing; rich grow $600
Q6	no mixing; all grow $200	no mixing; rich grow $600
Q7	no mixing; rich grow $200	no mixing; rich grow $600
Q8	full mixing; no growth	no mixing; all grow $200

GEM tradeoff results

		Mobility					Equality		
All	_Q1_	_Q2_	_Q3_	_Q8_		_Q4_	_Q5_	_Q6_	_Q7_
_A_	34.8	24.4	17.4	26.6		75.9	38.6	78.8	42.4
_B_	58.9	69.3	76.9	58.2		15.8	52.2	15.5	48.4
Indiff	5.7	5.4	4.7	15.2		8.2	9.2	5.4	8.9
Israel	Q1	Q2	Q3	Q8		Q4	Q5	Q6	Q7
_A_	52.5	40.4	34.3	41.4		77.8	41.4	80.8	54.5
_B_	43.4	56.6	62.6	44.4		14.1	49.5	14.1	40.4
Indiff	4.0	3.0	3.0	14.1		8.1	9.1	5.1	5.1

China tradeoff results

	Mobility					Equality			
All China	_Q1_	_Q2_	_Q3_	_Q8_		_Q4_	_Q5_	_Q6_	_Q7_
_A_	44.1	26.6	28.3	37.0		74.0	58.5	78.6	55.6
_B_	46.5	63.8	61.3	47.5		18.1	31.2	12.8	33.5
Indiff	7.7	7.2	8.7	12.9		4.9	8.6	5.8	8.9
Taiwan	_Q1_	_Q2_	_Q3_	_Q8_		_Q4_	_Q5_	_Q6_	_Q7_
_A_	58.0	35.8	38.3	42.0		74.1	61.7	86.4	50.6
_B_	39.5	60.5	54.3	46.9		21.0	29.6	9.9	39.5
Indiff	1.2	2.5	6.2	9.9		3.7	7.4	1.2	7.4

Conclusions

- Welfare and inequality
  - the model matters for the perception of inequality
  - meaning of comparisons depends on whether we are "in" or "out"
- We can reconcile tastes for equality and tastes for mobility
  - common analytical framework
  - use tools drawn from economics / psychology / statistics
- Who really value mobility?
  - nothing to do with factors on valuing equality
  - importance of attitudes
  - importance of actions
- Tradeoffs
  - do people worry about EOp versus growth?
  - is Taiwan the new Israel…?

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