Parenting with Style: Altruism and Paternalism in Intergenerational Preference Transmission

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Parenting Style in Developmental Psychology

- Three parenting styles (Baumrind 1967):
  - Permissive parenting
  - Authoritative parenting
  - Authoritarian parenting
- Focus on effects of parenting style on children

What We Do

- An economic theory of parenting style
  - Parents have altruistic and paternalistic motives
  - Can affect children through shaping their preferences (persuasion) and through restricting their choices (coercion)
- Equilibrium parenting style depends on economic environment
- Application to patience and occupational choice
- Assess implications for variation in parenting style over time and across countries

Empirical Literature (in Economics)

- Some preference characteristics/non-cognitive skills are key for economic success: Preferences are a form of human capital
- Patience and perseverance affect education, labor market and marriage outcomes (Heckman et al. 2006, Segal 2004)
  - Also: female pregnancy, smoking, crime, etc.
- Risk tolerance is a key attribute of entrepreneurship (e.g., Beauchamp et al. 2012)
- Family environment crucial for preference transmission and non-cognitive skills (Dohmen et al. 2007, Heckman et al. 2006, . . .)

Theoretical Literature

- Models of preference transmission:
  - Imperfect empathy (Bisin and Verdier 2001 and 2005, Hauk and Saez Marti 2002)
  - Beckerian altruism (Becker and Mulligan 1997, Doepke and Zilibotti 2008)
- Optimality of restricting choice:
  - Gul and Pesendorfer (2001)
- Models of parenting strategies:
  - Lizzeri and Siniscalchi (2008)
  - Cosconati (2009)

Traditional Authoritarian Parenting

The Rise of Authoritative and Permissive Parenting

- Education reformers in the nineteenth century
- Maria Montessori (1870-1952):
  - Freedom within limits; guide children to independence.
  - *"To give a child liberty is not to abandon him to himself"*
- Decline in authoritarian parenting (e.g., use of corporal punishment) over time
- Permissive parenting ("anti-authoritarian") becomes popular in the 1960s and 1970s
- More intensive parenting ("helicopter parenting") from the 1970s to the present, but not in all countries

General Model

- Dynastic model: Every person has one child
- People live for two periods: young and old
- Children have different preferences from adults
- Parents paternalistic towards young children
- Parents form child's preferences

General Model

- Value function for an old adult:

$$v^o(a,h,s) = \max_{a',X} \left\{ U^o\left(c|a\right) - e\left(X,a'|h,s\right) + \delta w\left(X,a'|a\right) \right\},$$

subject to $c = C^o(h,s)$, $\quad X \in \mathcal{X}(h,s)$, where:

$$w\left(X,a'|a\right) = E_{s'}\left[(1-\lambda) \underbrace{U^y\left(c|a'\right)}_{\text{ALTRUISM}} + \lambda \underbrace{U^o\left(c|a\right)}_{\text{PATERNALISM}} + \beta v^o\left(a',h',s'\right) \right]$$

Value Function of the Young

- The value function of a child is given by:

$$v^y(X, a') = \max_{c,x} \left\{ E_{s'} \left[U^y(c|a') + \beta v^o(a', h', s') \right] \right\}$$

  subject to:

$$x \in X, \ c = C^y(x, s'), \text{ and } h' = H(x, s').$$

- The child's decision rule is given by $(c, x|X, a')$

Natural Inclinations

- There exists an $\bar{a}$ s.t. $\forall\ a \in \mathcal{A}$:

$$U^o\left(c|\bar{a}\right) \geq U^o\left(c|a\right)$$
$$U^y\left(c|\bar{a}\right) \geq U^y\left(c|a\right)$$
$$e(X, \bar{a}|h, s) \leq e(X, a'|h, s)$$

- $\bar{a}$ is the natural inclination of children
- Focuses attention on molding preferences to affect children's behavior

Parenting Styles

- A parent is **authoritarian** if she spends effort to restrict the choice of the child (choose small X)
- A parent is **authoritative** if she spends effort to mold the preferences of the child ($a' \neq \bar{a}$)
- A parent is **neglecting** if she minimizes parenting effort
- Otherwise, a parent is **permissive** (e.g. expand choice set to include trip to Legoland)

Some General Results

- Fully altruistic parents ($\lambda = 0$) are either permissive or neglecting
- A parent is authoritarian only if restricting the choice set changes the child's behavior
- A parent is authoritative only if molding preferences changes the child's behavior
  - Implies that if the child does not have a choice (X is a singleton), parent is not authoritative
  - Implies that if $U^y\left(c|a'\right) = U^o\left(c|a\right)$, parent is not authoritarian

Application to Patience, Occupational Choice, and Educational Effort

- Preference parameter is weight attached to young-age consumption, $a \geq 0$
- Adult felicity:

$$U^o(x, a) = \frac{c^{1-\sigma}}{1-\sigma},$$

  where $0 < \sigma < 1$ (positive utility)
- Children's felicity:

$$U^y(x^y, a) = a\frac{(c^y)^{1-\sigma}}{1-\sigma},$$

  where $a \in [0, \bar{a}]$ with $\bar{a} > 1$
- When $a' = 1$, parents and children agree
  When $a' = \bar{a}$, disagreement, but happy children

Occupational Choice and Effort

- There are many occupations $i \in I$
- For a given child, the economic return to an occupation is y_L or $y_H > y_L$ with equal probability (talent)
- Talent unknown ex ante
- Incumbency advantage: The return is higher by a factor of $\mu > 1$ if the child adopts the parent's occupation
- In any occupation, child can exert effort x when young and get return Rx when old
- Consumption profile:

$$c^y = y - x,$$
$$c^o = y + Rx.$$

Choosing the Child's Choice Set

- Parent can either force child to stay at home or grant independence.
- Staying at home:
  - Child adopts parent's occupation with expected return

$$\mu \frac{y_L + y_H}{2}$$

  - Parent can control child's effort x
- Independence:
  - Child chooses occupation based on talent, resulting in return

$$y_H$$

  - Child chooses effort x

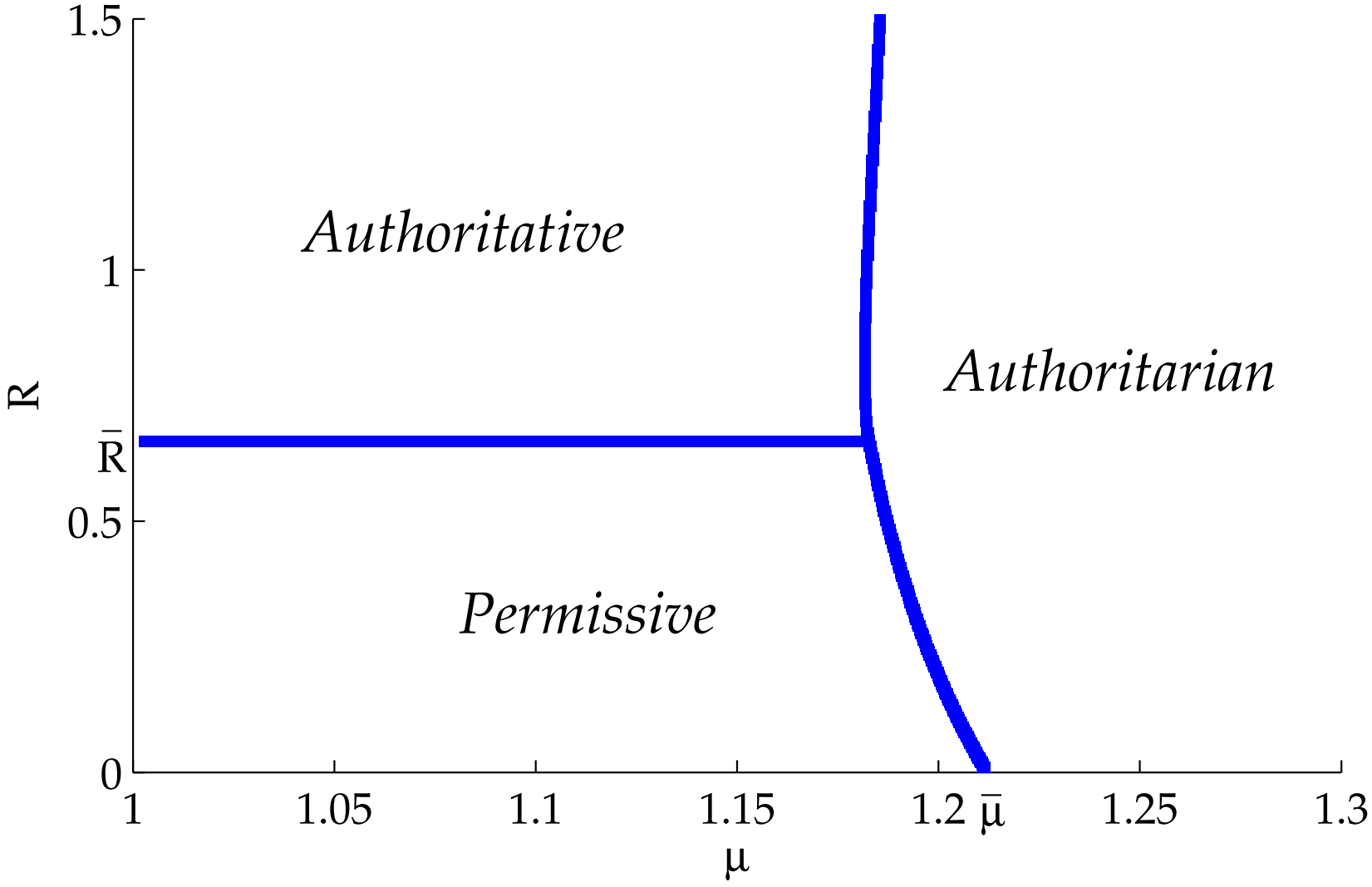
Authoritative versus Permissive Parenting

- Consider independent child. Should the parent choose $a' = \bar{a}$ (permissive) or $a' < \bar{a}$ (authoritative)?
- Cost of being authoritative is utility loss of the child
- Gain of being authoritative is higher investment x by the child
- More likely to adopt authoritative parenting if R is large

Authoritarian Parenting

- If the child stays at home, parent chooses x directly (authoritarian parenting)
- No benefit from also imposing guilt on child: Set $a' = \bar{a}$
- Authoritarian style attractive if μ (incumbency premium) is large
- However, loss from imperfect match between child's talent and occupation

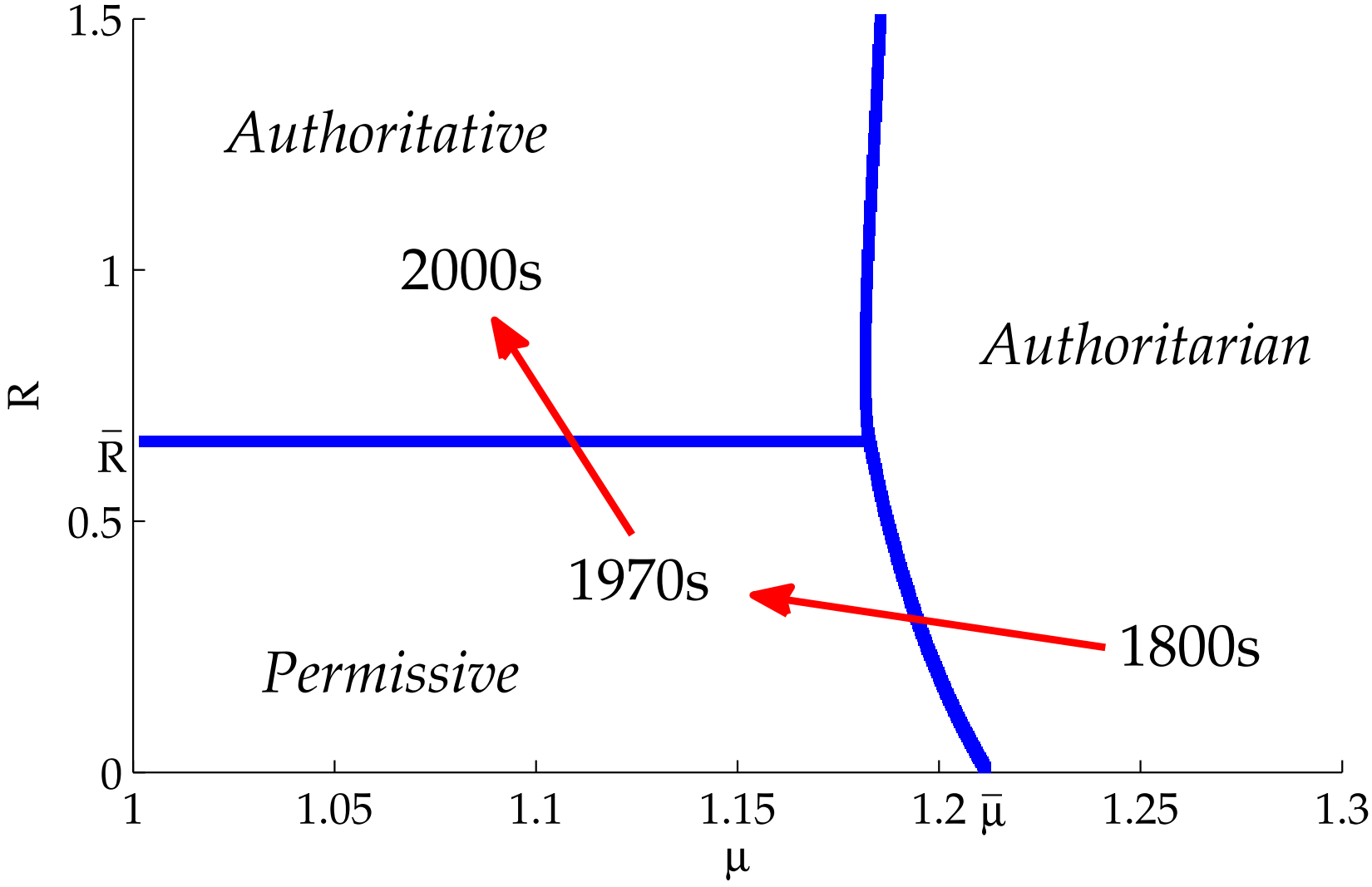
Equilibrium Parenting Style



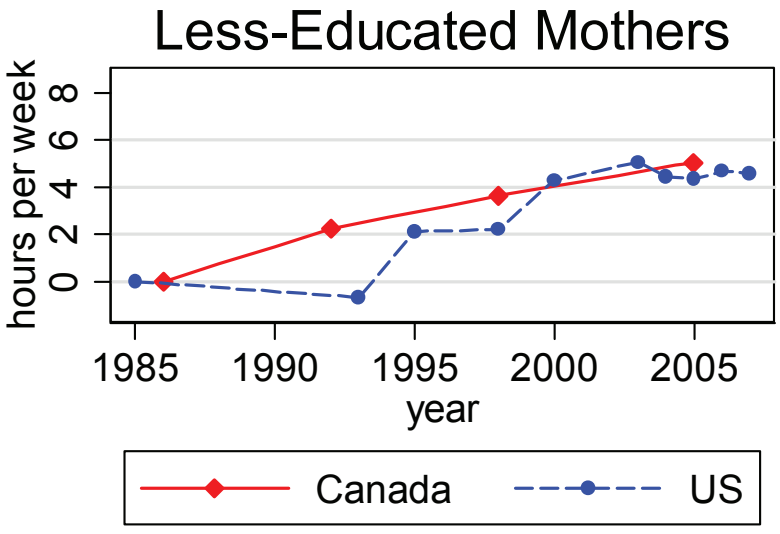
History of Parenting in the West

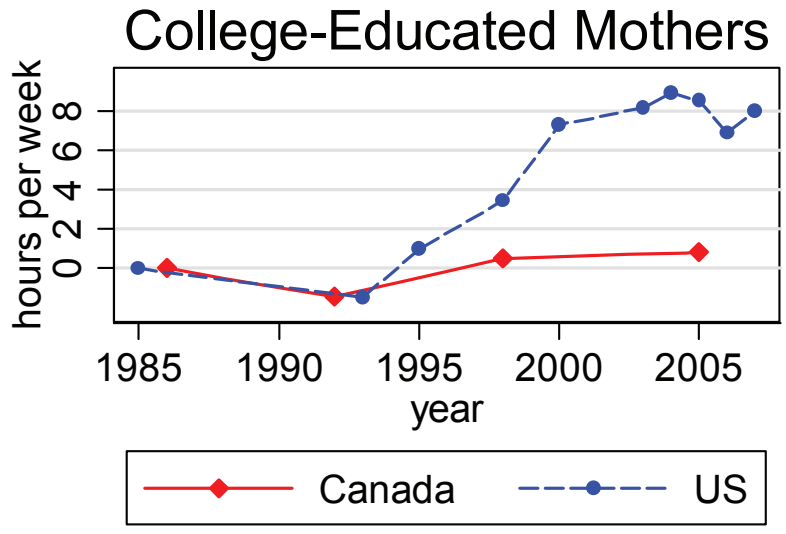
- Until nineteenth century: Authoritarian parenting (e.g., corporal punishment widely recommended)
- Twentieth century until 1970: Increasingly permissive parenting ("anti-authoritarian")
- Since 1980: Increasingly involved parenting especially in upper middle class ("rug rat race," "helicopter parenting," "Tiger Mom")

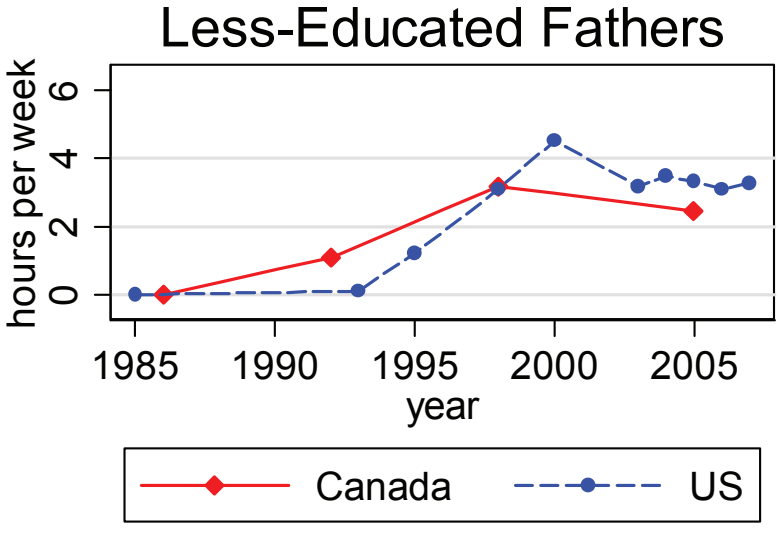
History of Parenting in the Model

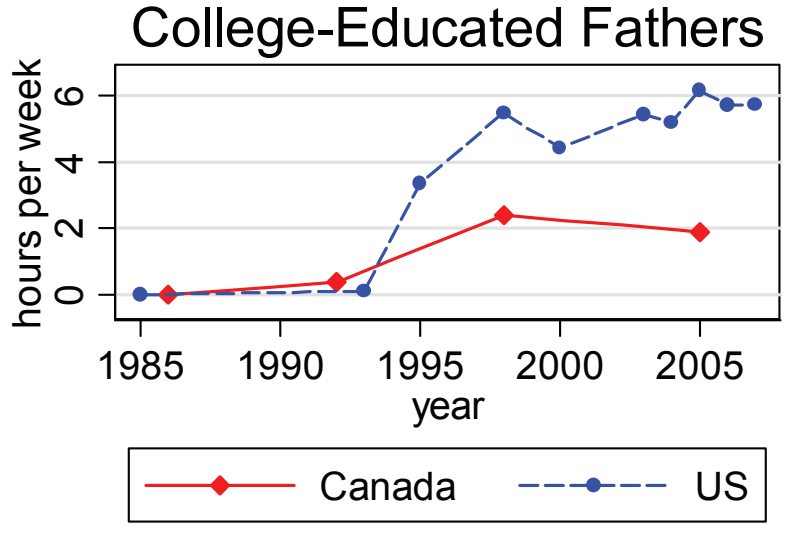


Recent Trend in Parenting, Canada versus United States (Ramey and Ramey 2010)

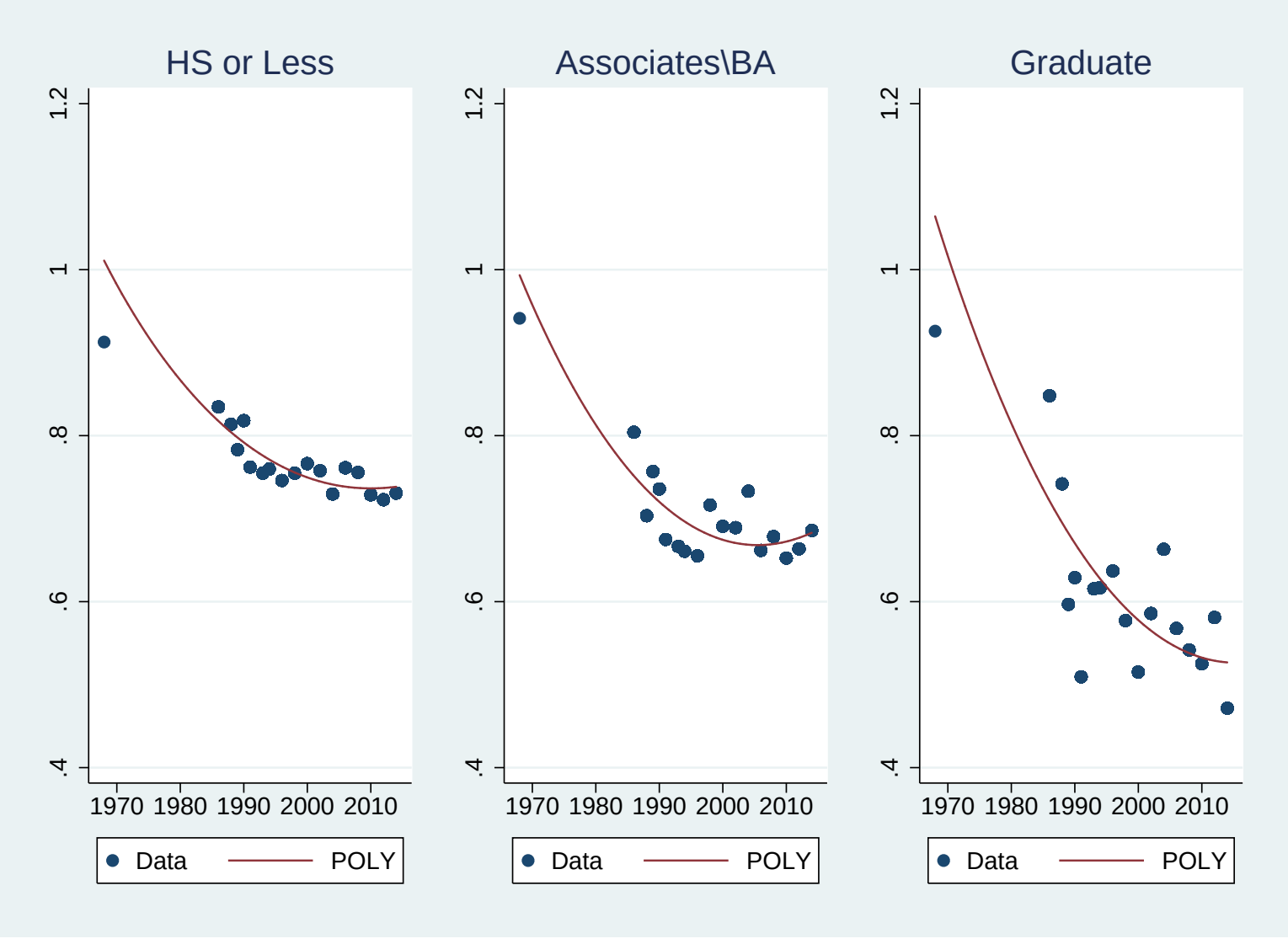








Recent Trend in Spanking in United States by Education



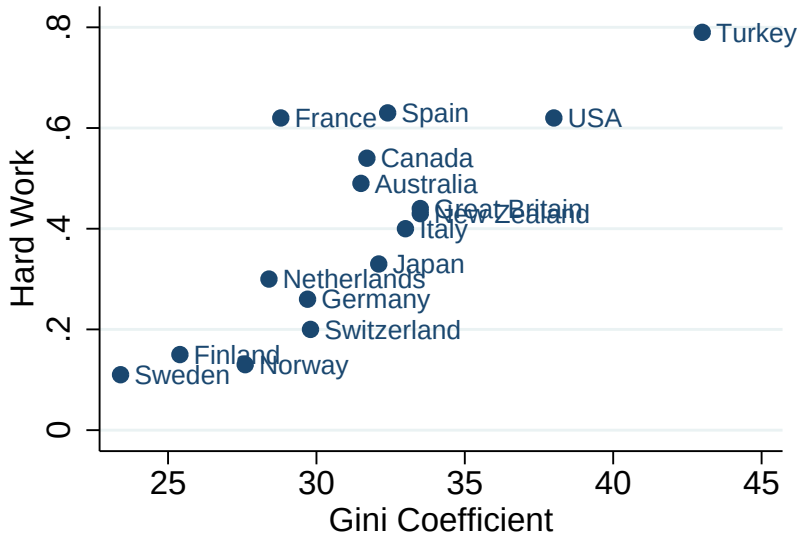
Parenting Across Countries

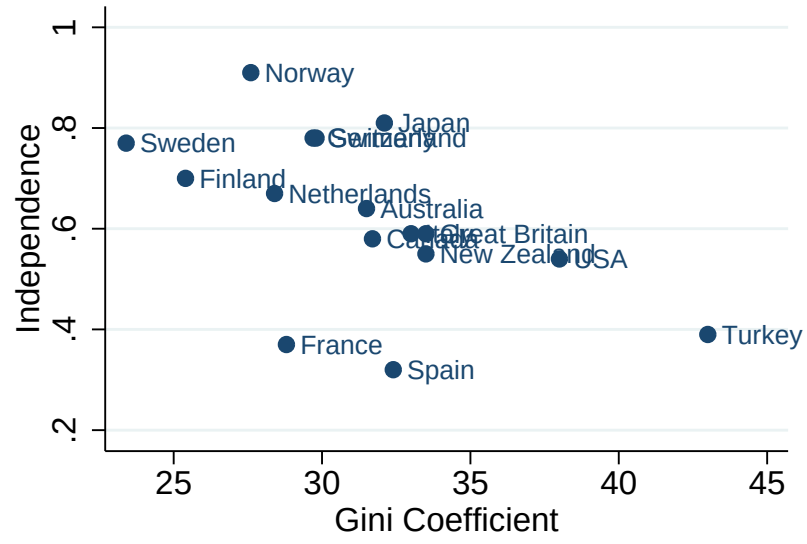
- "Intensive" parenting styles (authoritarian and authoritative) are associated with high stakes
- World Value Survey question:
  "Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?"
- Examine correlation of answers with inequality

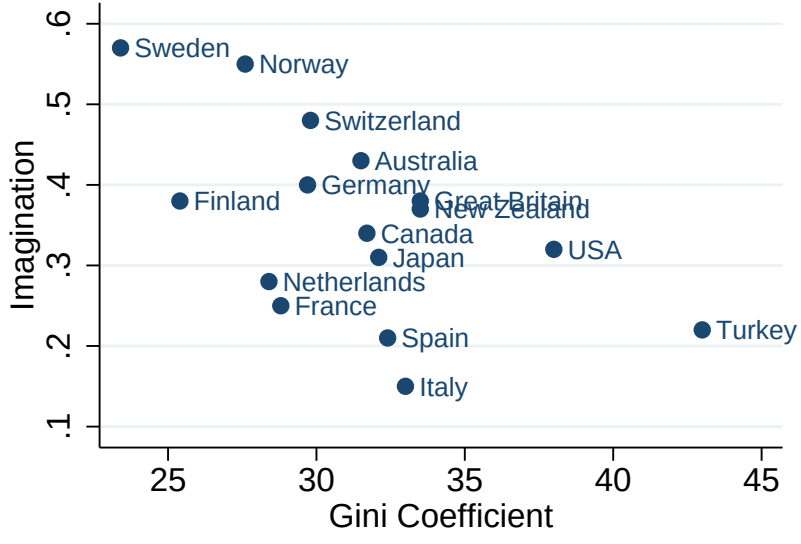
Principal Components of Parenting Values

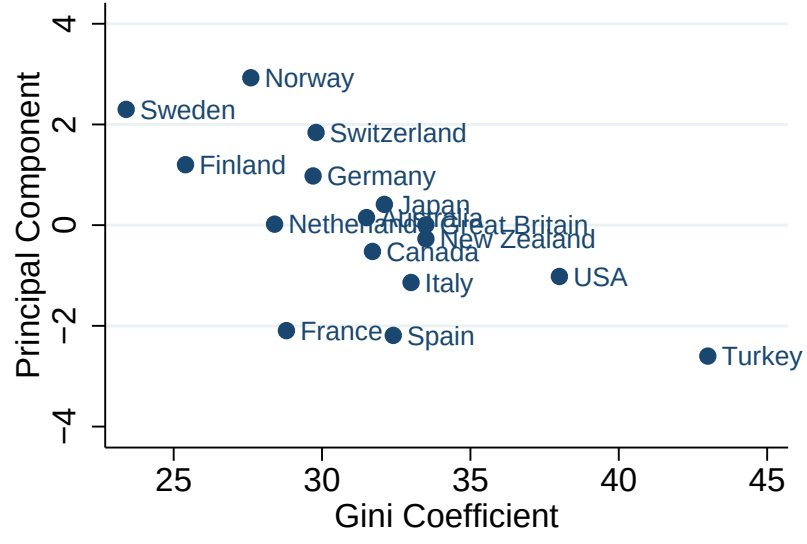
Principal Component	1	2	3	4
Loading on Independence	0.55	-0.19	0.79	-0.17
Loading on Imagination	0.58	0.24	-0.18	0.75
Loading on Hard Work	-0.58	-0.15	0.51	0.62
Loading on Thrift	-0.13	0.94	0.28	-0.13
Percent of Variance Explained	0.64	0.26	0.07	0.03
Correlation with Gini Coefficent	-0.69	-0.07	0.17	0.52

Inequality and Parenting Values









Summary

- Model of endogenous preference transmission with altruistic and paternalistic motives
- Yields theory of endogenous parenting styles as a function of the economic environment
- Explains broad trends of parenting in the data

Risk Aversion

- Individual endowed with CRRA preference with endogenous risk aversion, $a \in [\bar{a}, \bar{a}]$
- Parents chooses the child's risk aversion
- U^Y induces less risk aversion than U^O

$$U^y(x,a) = E\left[\left.\frac{c^{1-\sigma+\psi-a}-1}{1-\sigma+\psi-a}\right| x\right]$$

$$U^o(x,a) = E\left[\left.\frac{c^{1-\sigma-a}-1}{1-\sigma-a}\right| x\right]$$

- $\psi > 0$, so for given a the young are less risk averse than the old

Juvenile Lotteries

- Young people can choose between a (relatively) safe (S) and a risky (R) action, represented by lotteries:

$$c\left(S^{y}\right) = \begin{cases} c_{S,L} & \text{prob.} \quad p_L \\ c_{S,H} & \text{prob.} \quad 1-p_L \end{cases}$$

$$c\left(R^{y}\right) = \begin{cases} BJR \equiv \begin{cases} c_{R,L} & \text{prob.} \quad p_L \\ c_{R,H} & \text{prob.} \quad 1-p_L \end{cases} & \text{prob. } p_R \\ \begin{cases} c_{S,L} & \text{prob.} \quad p_L \\ c_{S,H} & \text{prob.} \quad 1-p_L \end{cases} & \text{prob. } 1-p_R \end{cases}$$

- Assume even the most risk-tolerant parent dislikes juvenile risk
- When $p_R = 1$ the two lotteries are identical. So, p_R measures the *exposure* to endogenous juvenile risk
- The risk $(c_{S,H} - c_{S,L})$ is unavoidable, so we label it as exogenous juvenile risk

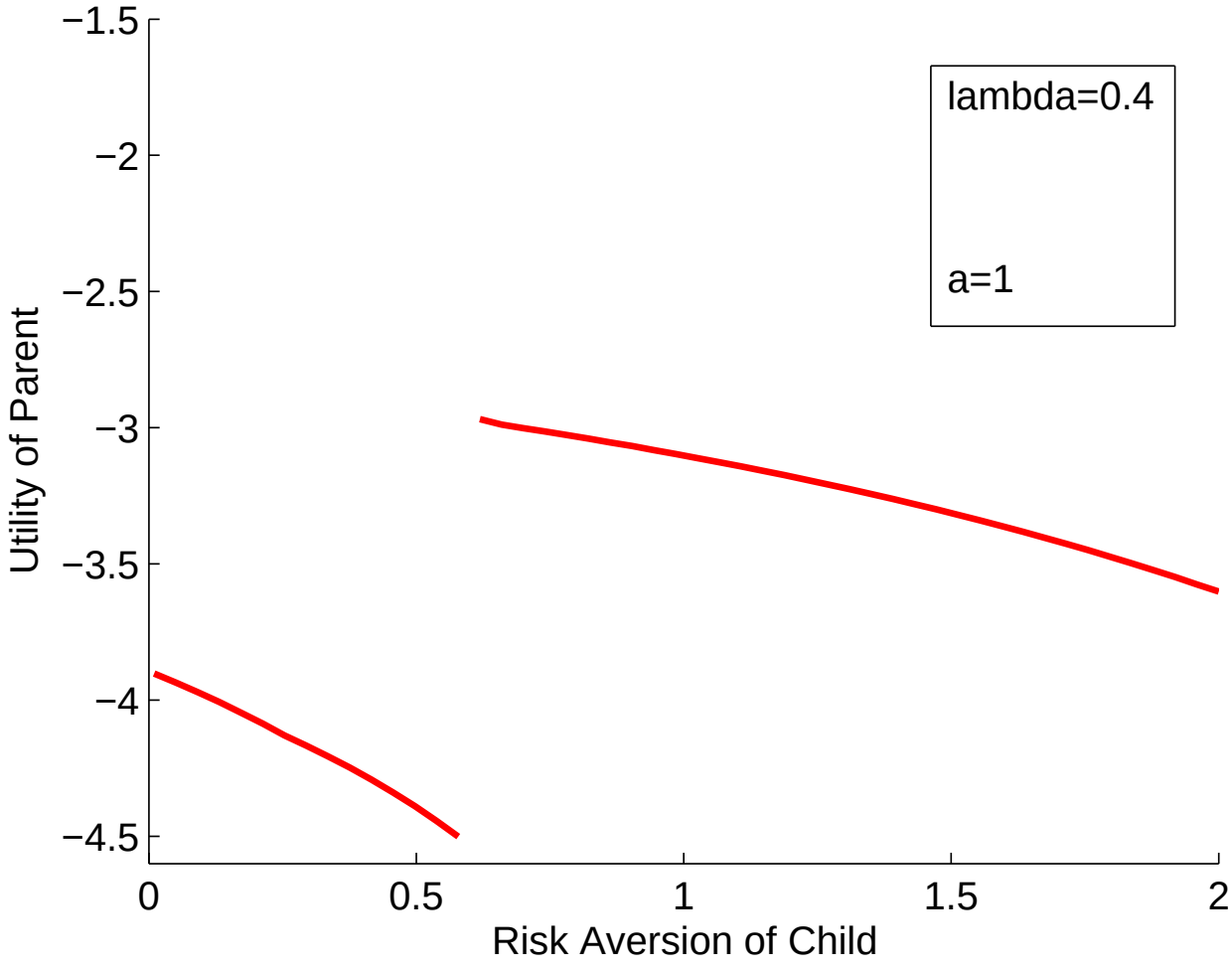
Entrepreneurial Lotteries

- Old people choose between being employees and entrepreneurs
- Employees bear less risk than entrepreneurs

Equilibrium Choice of Risk Aversion

- In equilibrium, two choices may be optimal
  1. set $a' = 0$. The child will take the bad juvenile risk, but also the entrepreneurial opportunities
  2. set $a' = a^y$. The child will decline BJR, but (possibly) also entrepreneurial opportunities
- The optimal choice of a' depends on both λ and the parent's risk aversion (a)

Parent's Utility and Child's Risk Aversion



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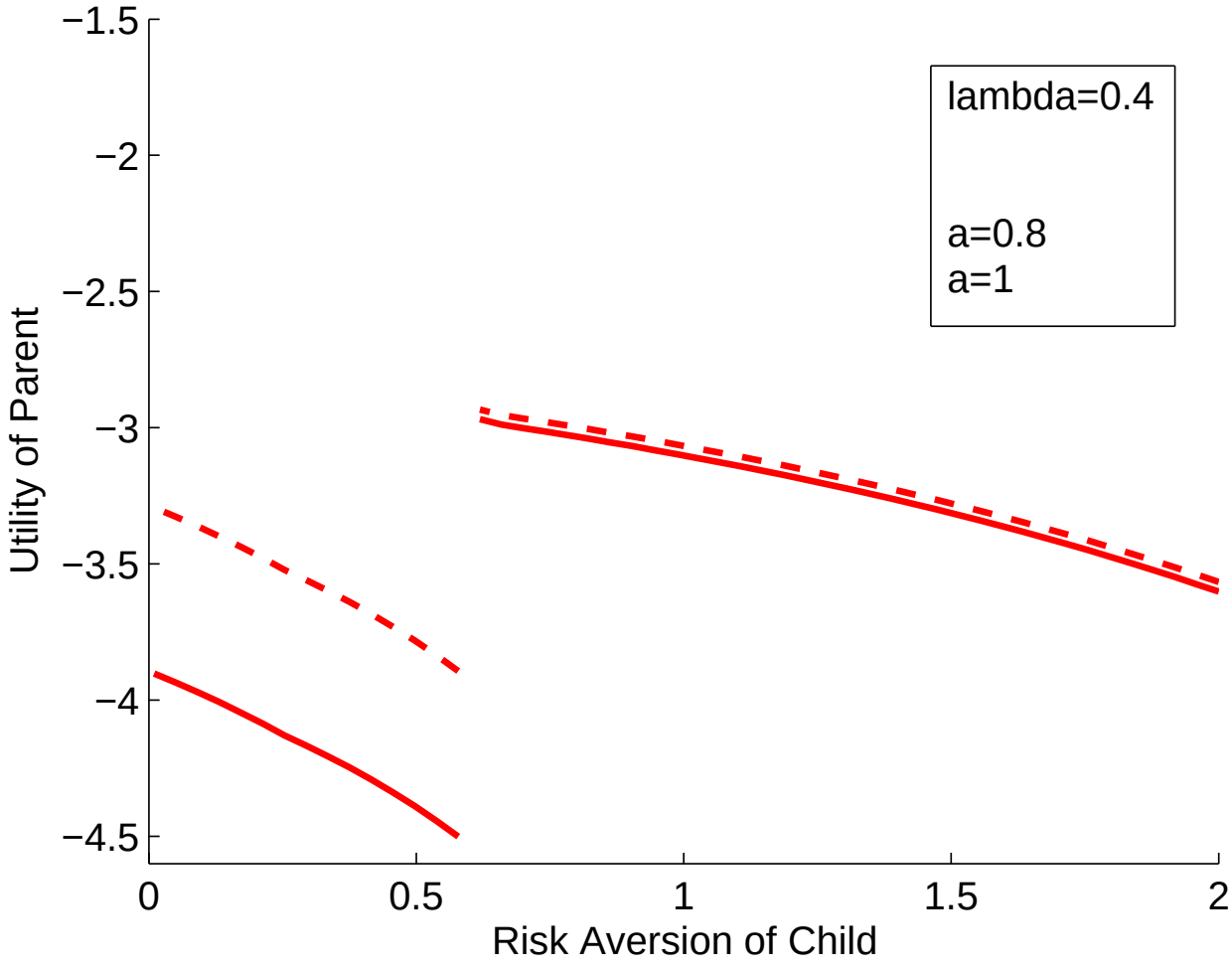

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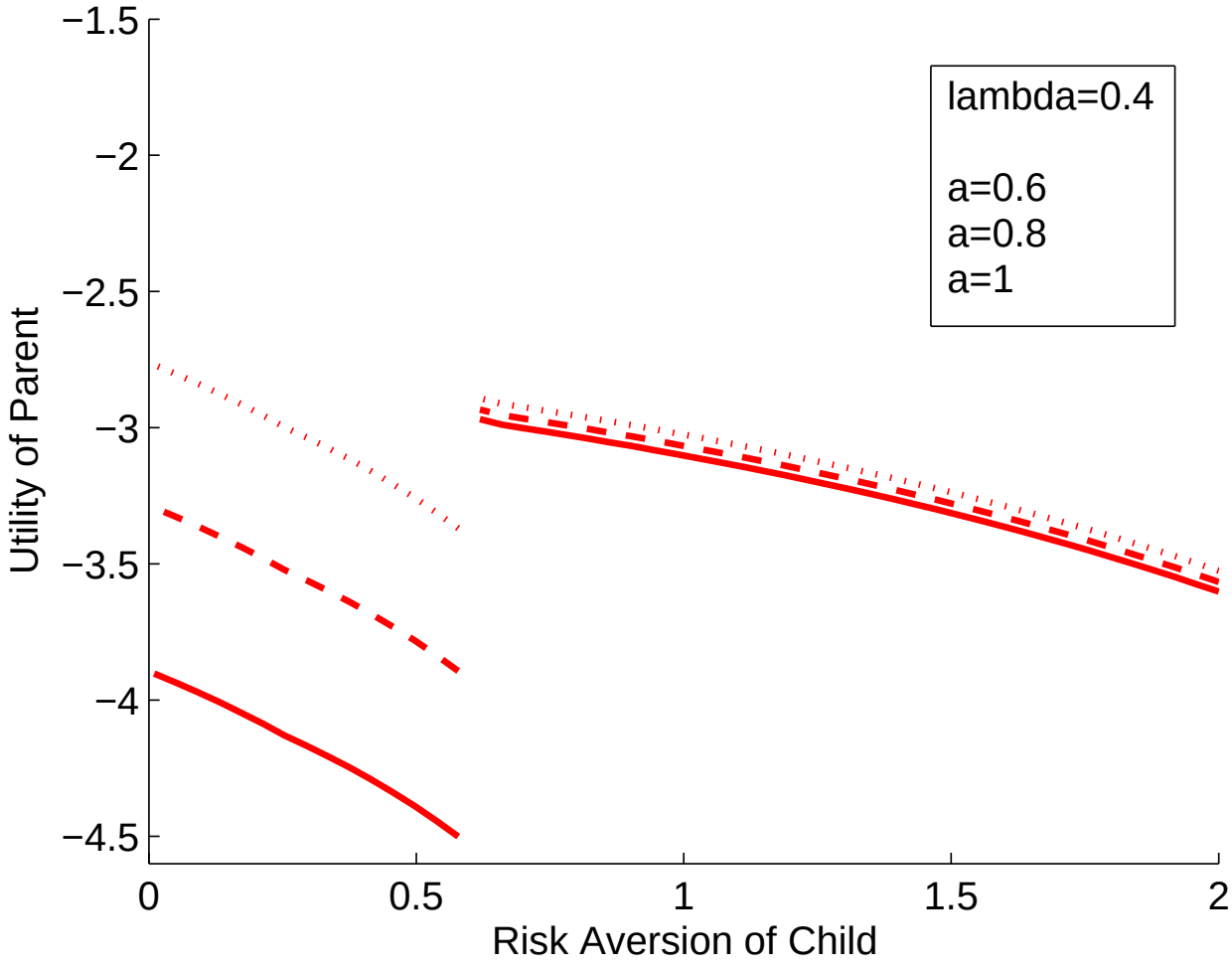
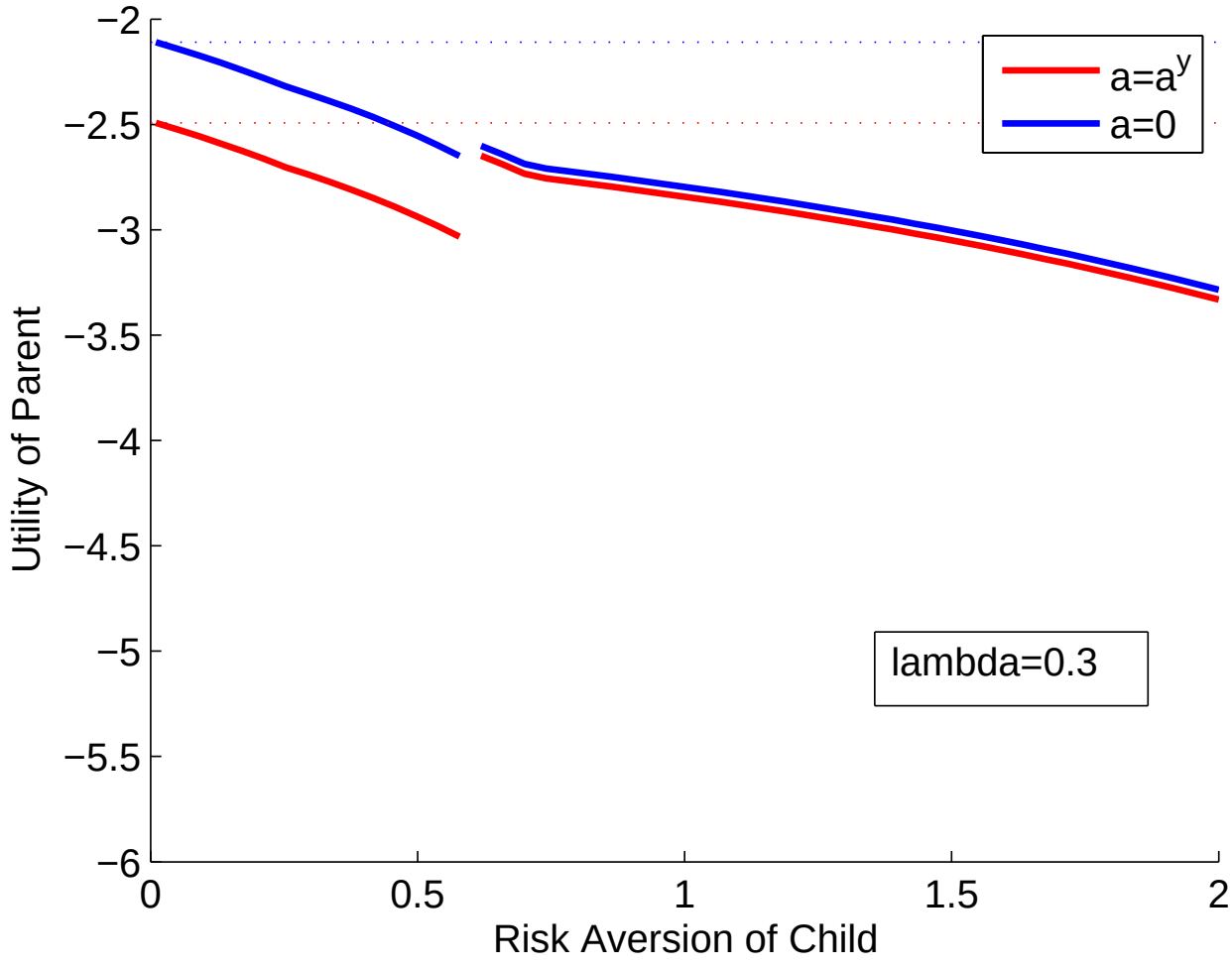


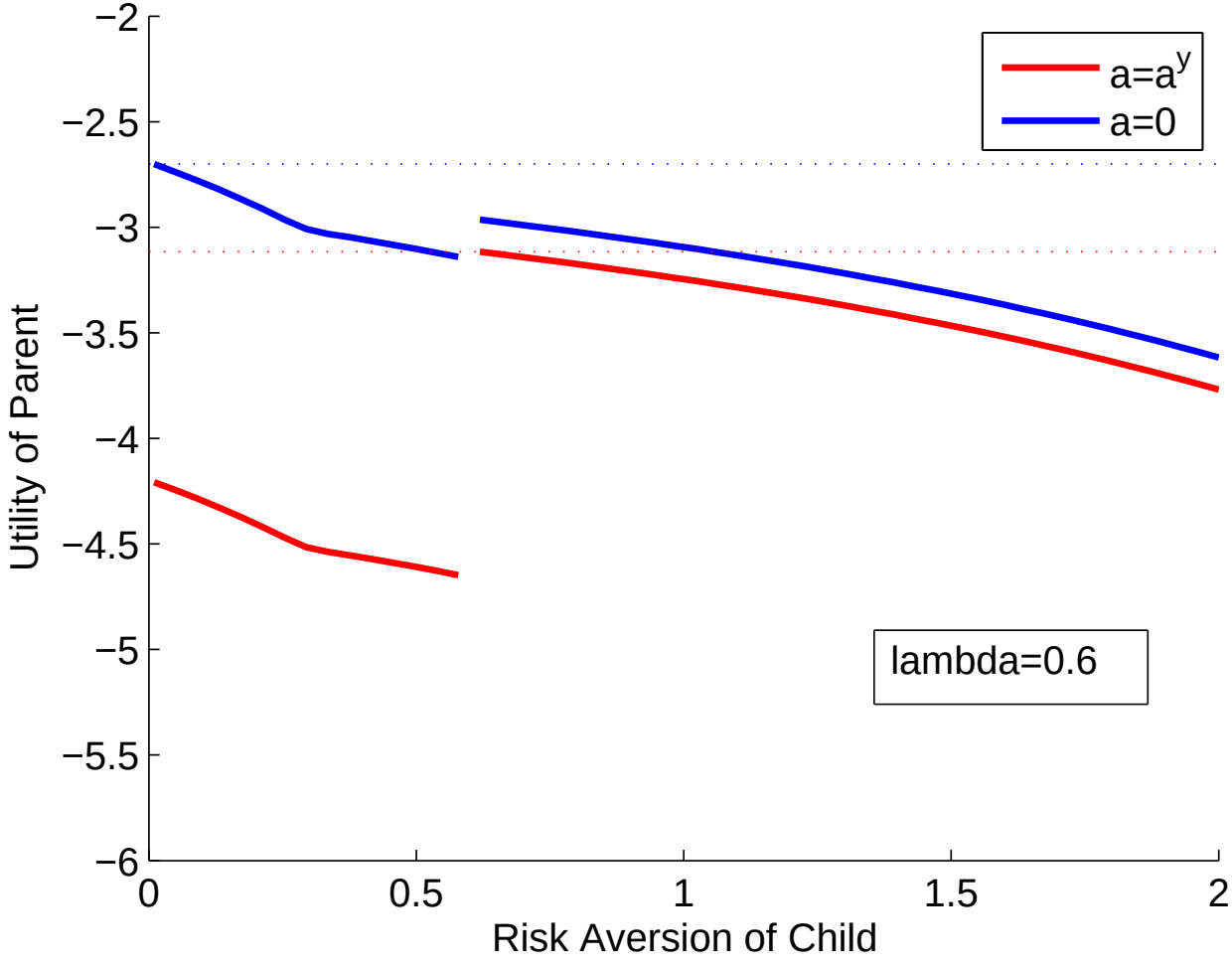
Parenting Style (Permissive vs. Authoritative)

- There exist two thresholds, $0 < \lambda_1 \leq \lambda_2 \leq 1$ such that
  1. all parents with $\lambda \leq \lambda_1$ set $a' = 0$ (**permissive parenting**)
  2. for $\lambda \in (\lambda_1, \lambda_2]$, risk-tolerant parents set $a' = 0$ (**permissive parenting**), whereas highly risk-averse parents set $a' = a^y$ (**authoritative parenting**);
  3. all parents with $\lambda > \lambda_2$ set $a' = a^y$ (**authoritative parenting**)

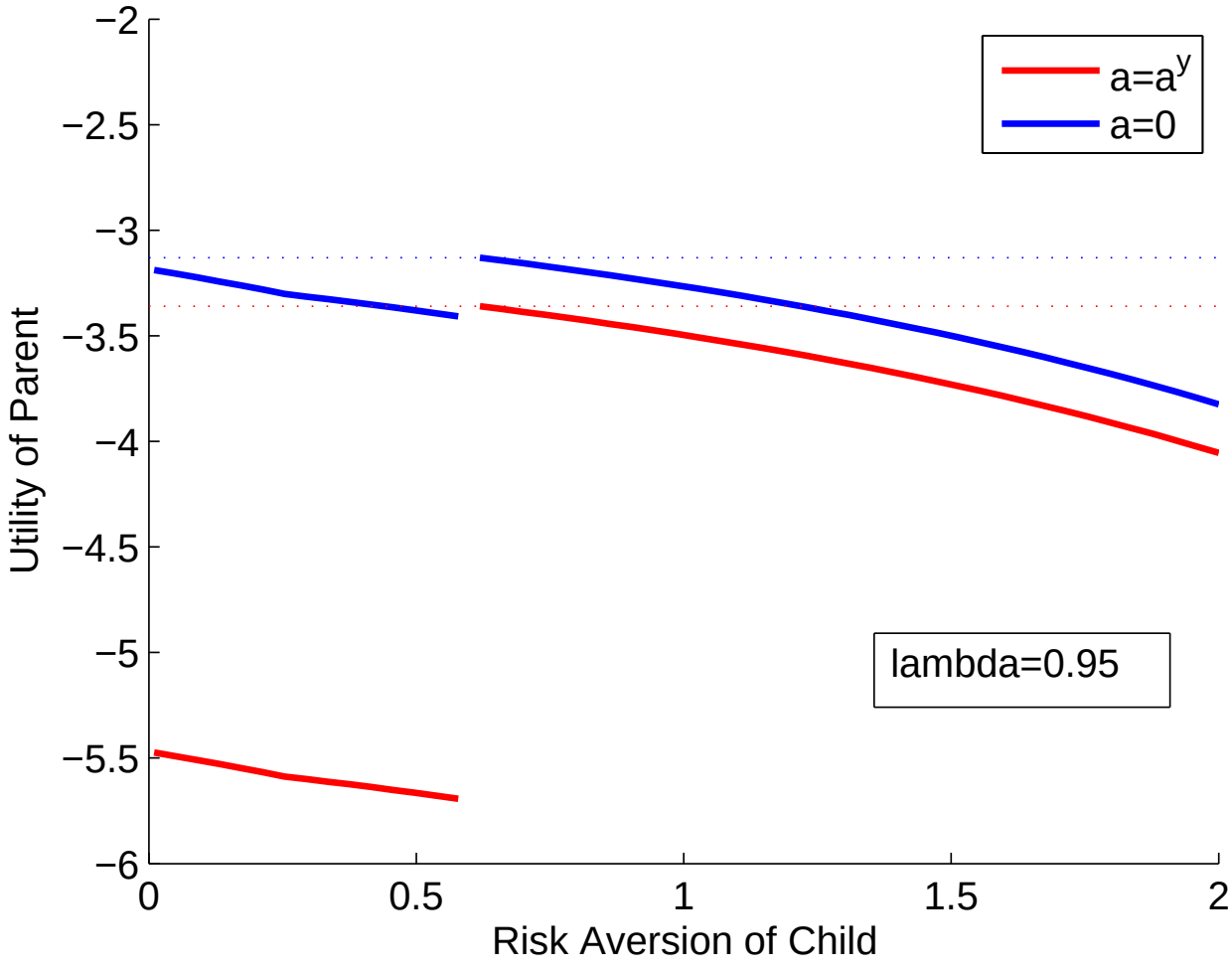
Low lambda (all set a'=0)



Intermediate lambda (parenting style depends on a)



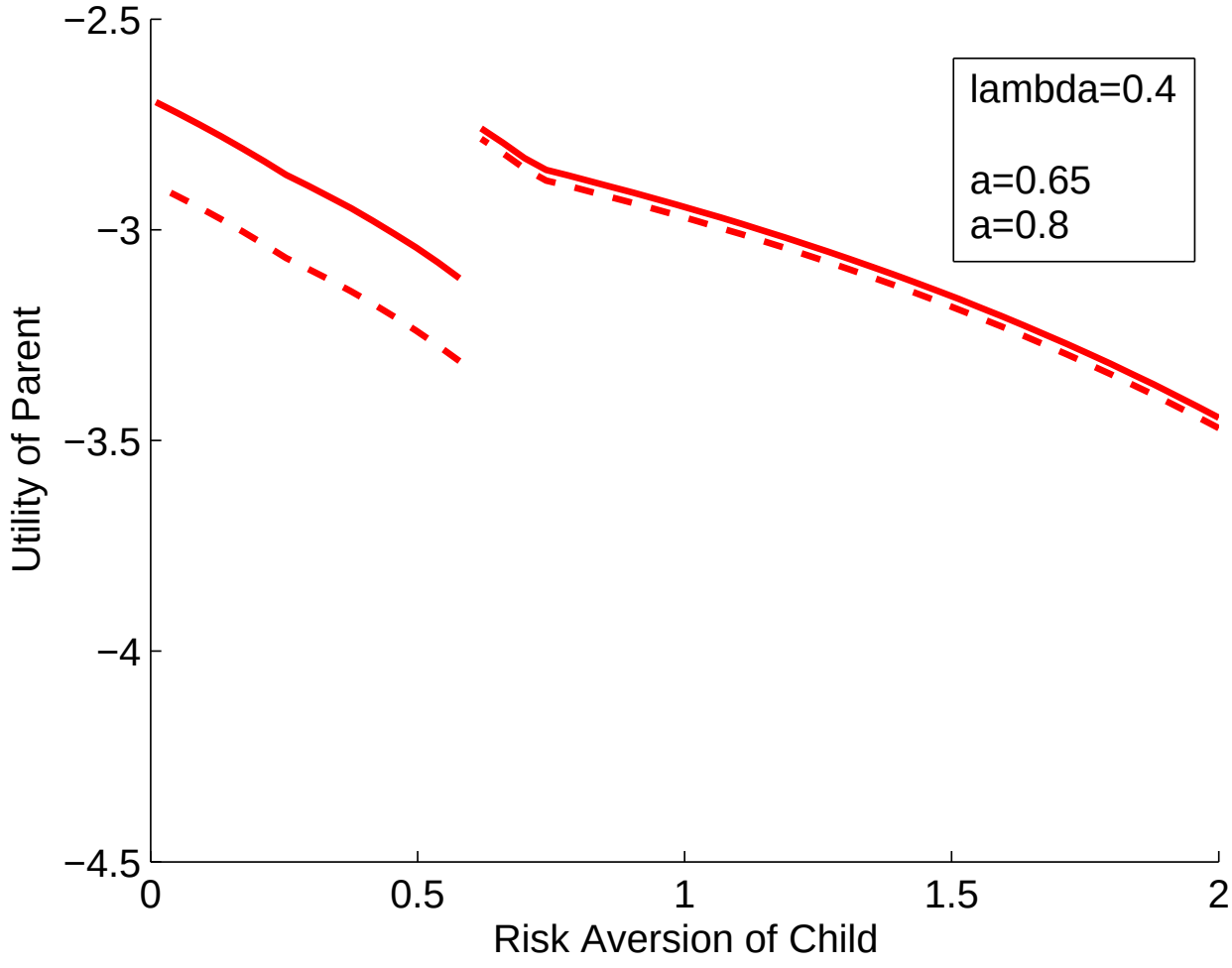
High lambda (all set a'=a_y)



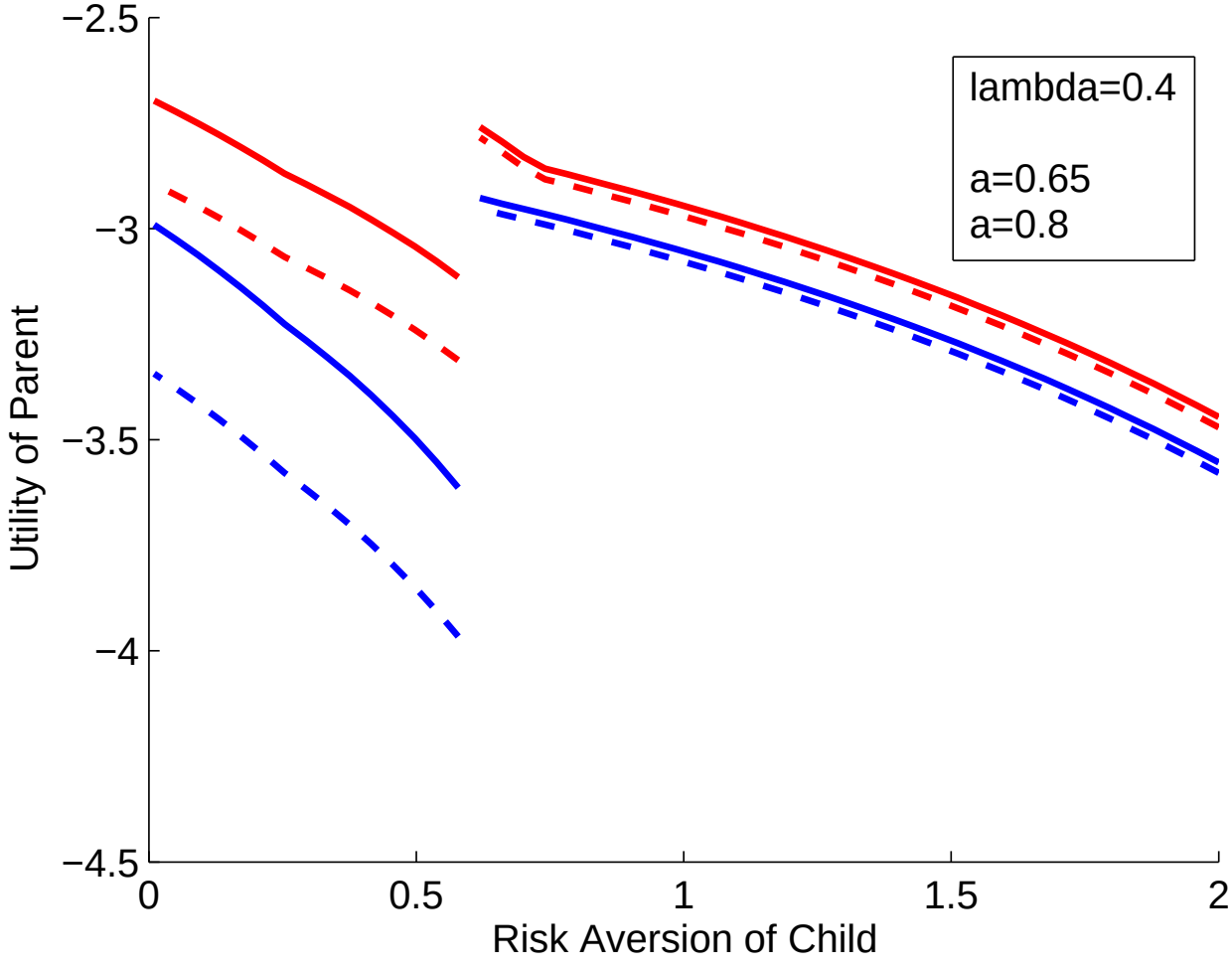
Juvenile Risk and Entrepreneurial Return

1. An increase in **exogenous risk** $(c_{S,H} - c_{S,L})$
   reduces parents' motives for transmitting high risk aversion
   (e.g., Israel)
2. An increase in **endogenous juvenile risk** (p_R),
   increases parents' motives for transmitting high risk aversion
   (e.g., gang-infested neighborhood)
3. An increase in the **expected return to entrepreneurship**
   reduces parents' motives for transmitting high risk aversion

Choice of Risk Aversion (Safe Suburb)



Choice of Risk Aversion (Safe Suburb vs. Bad Neighborhood)



Restricting the Choice Set: Boarding School

- Suppose parents can restrict the choice of lotteries available to children, in order to prevent juvenile risk taking
- A strict boarding school or a safe suburb where there is no street violence and no supply of illicit drugs
- Alternative interpretation: heavy monitoring (*helicopter parent*)
- These options come with a cost for the child (being annoyed by parents, being disciplined by the school, etc.)
  - hence, we assume that this lottery is dominated by the safe choice S^y in the full choice set
  - alternative interpretation: cost borne by parents (school fees or cost of moving into a safe neighborhood)

Parenting Style (Permissive vs. Authoritarian)

- Parents with low λ and/or low a tend to choose a permissive parenting style (low risk aversion)
- Parents with high λ and/or high a tend to choose an authoritative parenting style (high risk aversion)
- Parents with intermediate λ may choose to be authoritarian