

Within-Family Differences

Lecture 34

The Power of the Nonshared Environment

Plomin & Daniels (1987)

Why are Children From the Same Family
So Different From Each Other?

- Each Has a Different Genetic Heritage
- Environment Beyond the Family

Variability Within Families is Almost As
Great as Variability Between Families

Sources of Within-Family Environmental Differences

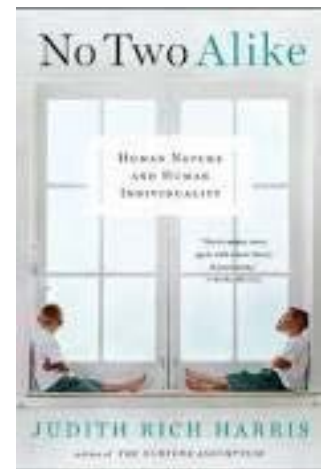
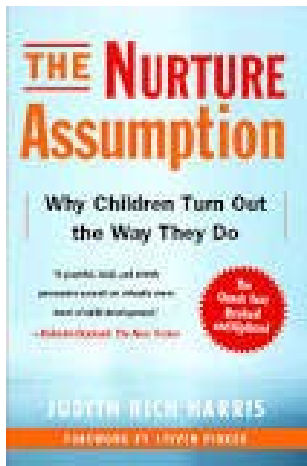
Harris (1995, 1998, 2006), after McCartney et al. (1991)

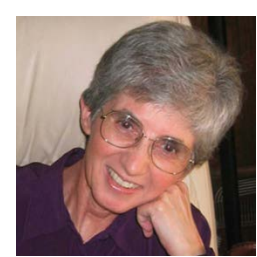
Child-Driven Effects

Relationship-Driven Effects

Parent-Driven Effects

Family Context Effects





Child-Driven (Reactive) Effects

Person-by-Situation Interaction Evocation

- Gender-Role Socialization
 - “Baby X” Studies
- Other Aspects of Physical Appearance
 - Pretty/Cute vs. Homely vs. “Disfigured”
 - Healthy vs. Ill



Child-Driven (Reactive) Effects

Person-by-Situation Interaction

Behavioral Manipulation

- Temperament
 - Speed, Strength of Arousal
 - Quiet vs. Fussy
- Positive Feedback
 - Vicious (and Virtuous) Cycles
- Negative Feedback
 - Lower-Limit Control Behaviors
 - Upper-Limit Control Behavior

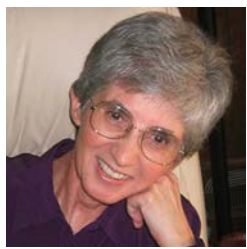


Relationship-Driven Effects

Person-By-Situation Interaction

“Selection”

- Temperamental “Fit” Between Child, Parent
 - Expectations, Preferences
- Extraverted Child
 - Extraverted vs. Introverted Adult
- Introverted Child
 - Introverted vs. Extraverted Adult

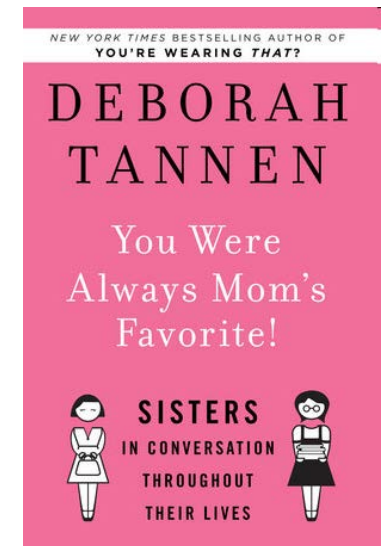


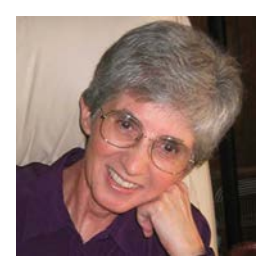
Parent-Driven Effects

Person-by-Situation Interaction

Cognitive Transformation

- Independent of Child's Characteristics
- “Unplanned” Child
- Identical Twins
 - Differential Treatment
- Contrast Effects
 - First Child “Easy” vs. “Difficult”





Family Context Effects

Family “Microenvironment”

Systematic Differences Between Nontwin Siblings

- No Systematic Genetic Differences
 - Share Random 50% of Genes
- Systematic Differences in Birth Order
 - Position within Family Constellation
 - Older (Firstborn) vs. Younger (Laterborn)

Birth Order Effects

- Traditional View: No Systematic Effects
 - Schooler (1966)
 - Ernst & Young (1983)
- Potential Confounds
 - Age
 - Family Size
 - Socio-Economic Status

Birth-Order and the “Big Five”

Sulloway (1996)

- Sibling relations:
 - Competition for Niche in Family
- Firstborns Have First Choice
 - *Primogeniture*
 - Please Parents by Traditional Behavior
 - Become Conscientious, Conservative
- Laterborns Threaten Authority of Firstborns
 - *“Born to rebel”*
 - Seek Alternative Paths to Distinction
 - Become Empathic, Egalitarian, Anti-Authoritarian, Strive for Uniqueness



Birth-Order and the “Big Five”

Meta-Analysis of 196 Comparisons by Sulloway (1996)

- **Neuroticism: *First > Later***
 - More Jealous
 - Anxious
 - Neurotic
 - Fearful
 - Likely to Affiliate Under sStress

Birth-Order and the “Big Five”

Meta-Analysis of 196 Comparisons by Sulloway (1996)

- Neuroticism: *First > Later*
- **Extraversion: *First > Later***
 - More Extraverted
 - Assertive
 - Likely to Exhibit Leadership

Birth-Order and the “Big Five”

Meta-Analysis of 196 Comparisons by Sulloway (1996)

- Neuroticism: *First > Later*
- Extraversion: *First > Later*
- **Agreeableness: *Later > First***
 - More Easygoing
 - Cooperative
 - Popular

Birth-Order and the “Big Five”

Meta-Analysis of 196 Comparisons by Sulloway (1996)

- Neuroticism: *First > Later*
- Extraversion: *First > Later*
- Agreeableness: *Later > First*
- **Conscientiousness: *First > Later***
 - More Responsible
 - Achievement Oriented
 - Organized
 - Planful

Birth-Order and the “Big Five”

Meta-Analysis of 196 Comparisons by Sulloway (1996)

- Neuroticism: *First > Later*
- Extraversion: *First > Later*
- Agreeableness: *Later > First*
- Conscientiousness: *First > Later*
- **Openness: *First < Later***
 - More Conforming
 - Traditional
 - Closely Identified with Parents

Birth Order and the Big Five

Meta-Analysis of 196 Comparisons by Sulloway (1996)

<u>Trait</u>	<u>Pos</u>	<u>Null</u>	<u>Neg</u>
Neuroticism	14	29	5
Extraversion	5	18	6
Agreeableness	12	18	1
Conscientiousness	20	25	0
Openness	21	20	2
Total	37%	56%	7%

Achievers and Rebels in California

Paulhus et al. (1999), Study 1

<u>Sibship</u> <u>Size</u>	<u>FB Achievers</u>		<u>LB Rebels</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
2	.65	.50	.61	.50
3	.37	.33	.71	.67
4	.35	.25	.83	.75
More	.26	.15	.94	.85

Achievers and Rebels in Canada

Paulhus et al. (1999), Study 2

<u>Sibship</u> <u>Size</u>	<u>FB Achievers</u>		<u>LB Rebels</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
2	.63	.50	.64	.50
3	.40	.33	.71	.67
4	.39	.25	.88	.75
More	.27	.15	.97	.85

Birth-Order and IQ

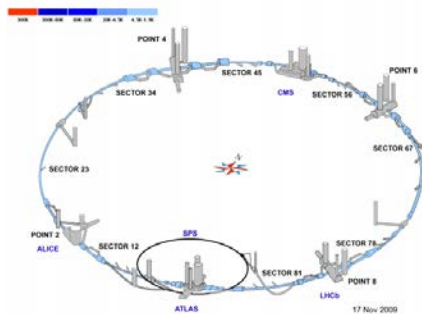
Zajonc & Markus (1975), after Belmont & Marolla (1973)

- Sequelae of Dutch Famine of 1944
- Every Dutch Male Aged 19
 - 1963-1966 ($N = 386,114$)
- Nonverbal Intelligence
 - Raven's Progressive Matrices
- Family Size
- Birth Order

Birth Order and IQ

Zajonc & Markus (1975)

- Family Size
- Birth Order
- Last-Born Child
- Rate of Decline
- Only Child



The Large Hadron Collider, Geneva

Only Child

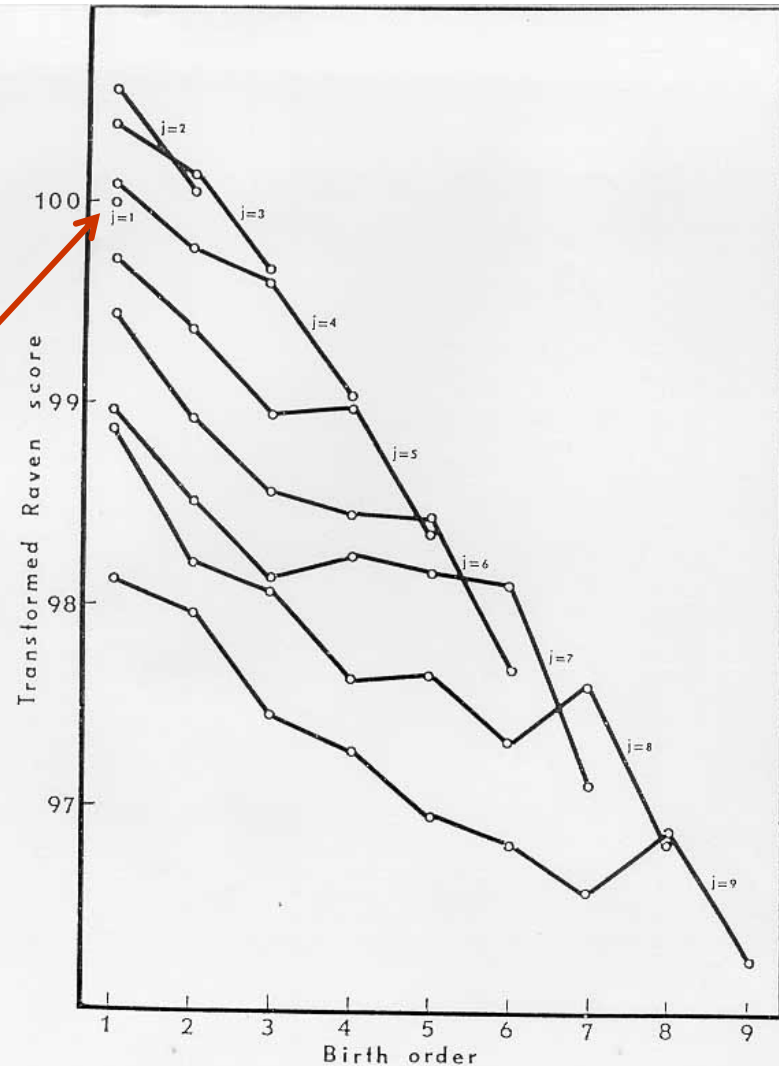


FIGURE 1. Average transformed Raven scores as a function of birth order (i) and family size (j), recalculated from Belmont and Marolla (1973). (The Raven scores were reported by Belmont and Marolla in terms of six categories from 1, high, to 6, low. For the purposes of the present analysis a linear transformation, $X_{it} = 113.45 - 5.0047X$, was performed on these scores, inverting the scale so that increasing values now indicate increasing intelligence and setting the score of the only child at 100.)

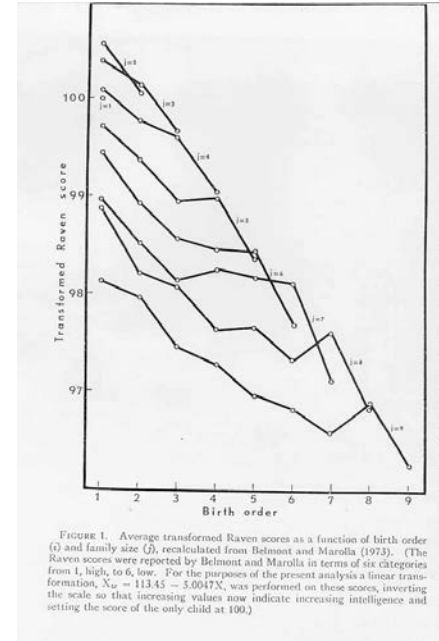


Confluence Model of Intellectual Development

Zajonc & Markus (1975)



- Mutual Influence Among Children
- Dilution Effect
 - Newborn Diminishes Intellectual Resources
- Growth Effect
 - Developing Child Contributes More Intellectual Resources
- Each Laterborn Increases Dilution
- Each Earlyborn Counteracts Dilution
- Spacing Matters – and So Does Family Size



Confluence Model of Intellectual Development

Zajonc & Markus (1974)

- Teaching Effect
 - Earlyborns Profit from Laterborns
- Last-Child Handicap
- Only-Child Handicap
- Multiple Births
- Single-Parent Households
- Extended Families

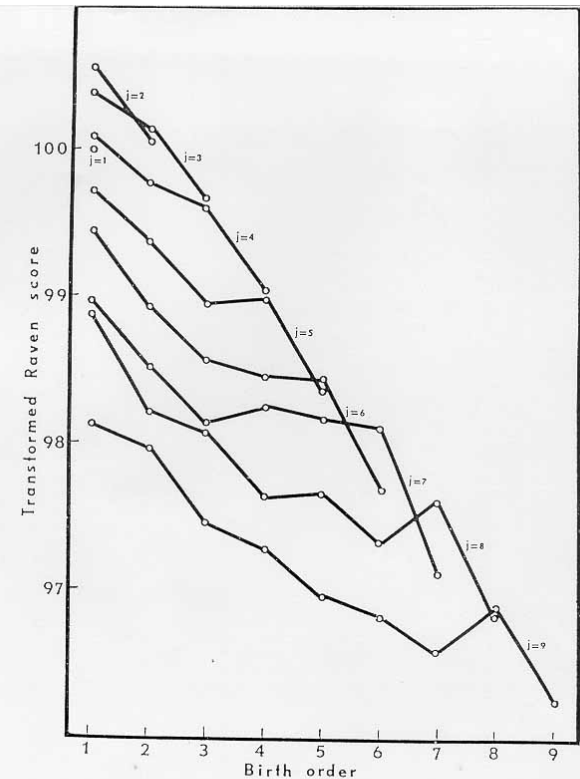


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The Confluence Model

Zajonc & Markus (1974)

- Individual is Part of His or Her Own Environment
- Environment is Dynamically Changing
- Individual Constantly Influenced by Environment
- Individual Reciprocally Influences Environment
- Individual as Active Agent of Own Development

The Origins of Uniqueness

- Individual Creates Unique Environment
 - Evocation
 - Selection
 - Behavioral Manipulation
 - Cognitive Transformation
- Unique Environment Reciprocally Creates Unique Individual

Widely Shared General Processes Produce Uniqueness in Human Personality

Interactions in Development

Interactions

Nature and Nurture

Person and Environment

The Person is Part of His/Her Environment

The Child is an Agent of His/Her Own
Socialization

In Psychological Terms...

Every Child Is...
Born to Different Parents
Raised in a Different Family
Lives in a Different Neighborhood
Attends a Different School
and
Worships in a Different Church.



Norman Rockwell, "Freedom from Want"
Saturday Evening Post, 1943