

# Research on Resilience: How does it inform practice with vulnerable children?



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# Polly T. McCabe Center, New Haven, CT (Apfel, & Seitz, 1997)



- Prevent school dropout, provide supportive health and social services
- 164 mothers in the study
- Followed longitudinally (18 mos, 6, 12 & 18 yrs) over 90% retention rate
- Interviews (caregivers, mothers, children, teachers) – work, education, moves, child rearing beliefs and practices, family support, activities
- medical records, school records, Intelligence and Achievement Tests

# Evaluation Findings

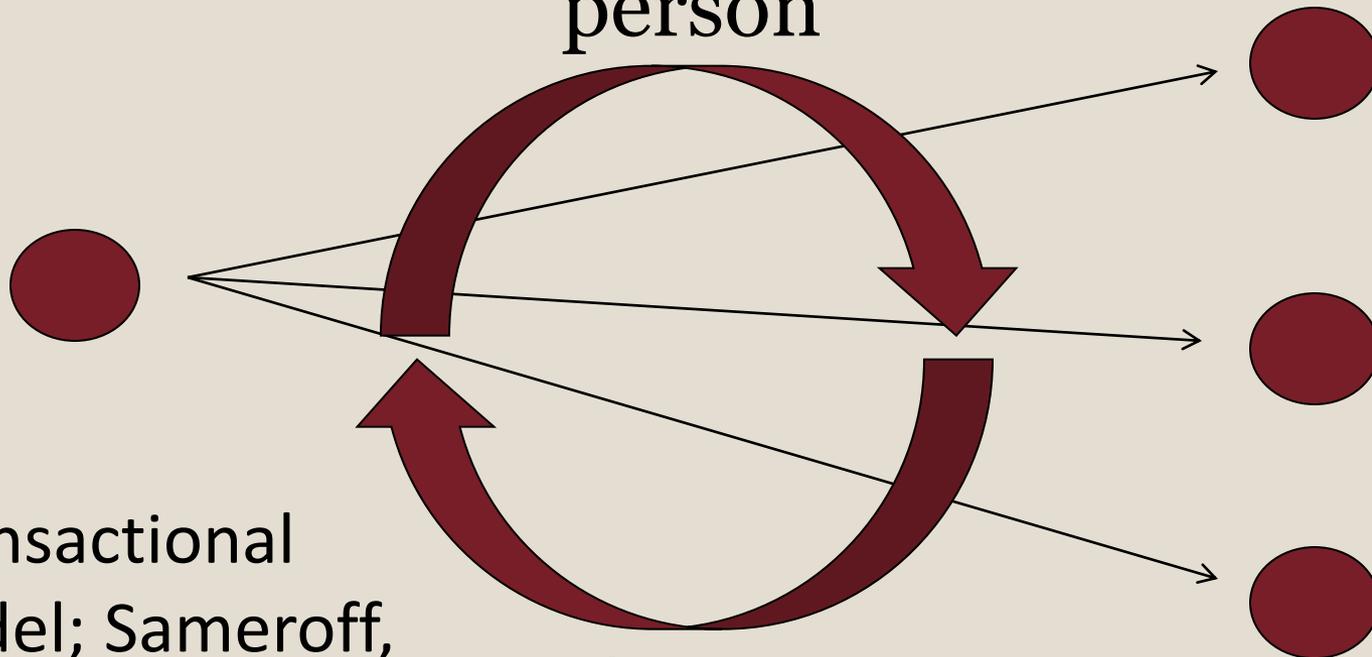


- Risk factor – preterm low-birthweight (Those attending earlier and longer - 1% delivered preterm low-birthweight babies - compared to 12%)
- Risk factor – rapid childbearing (Those who received more than 7 weeks postnatal intervention were less likely to have another baby within 2 years (12% vs 32%))
- Also found a fairly large number of kids who were doing well (average or higher than average) math and reading – child outcome of interest
- Differential response of boys and girls (5 vs 2 years delay)

# Multifinality



person

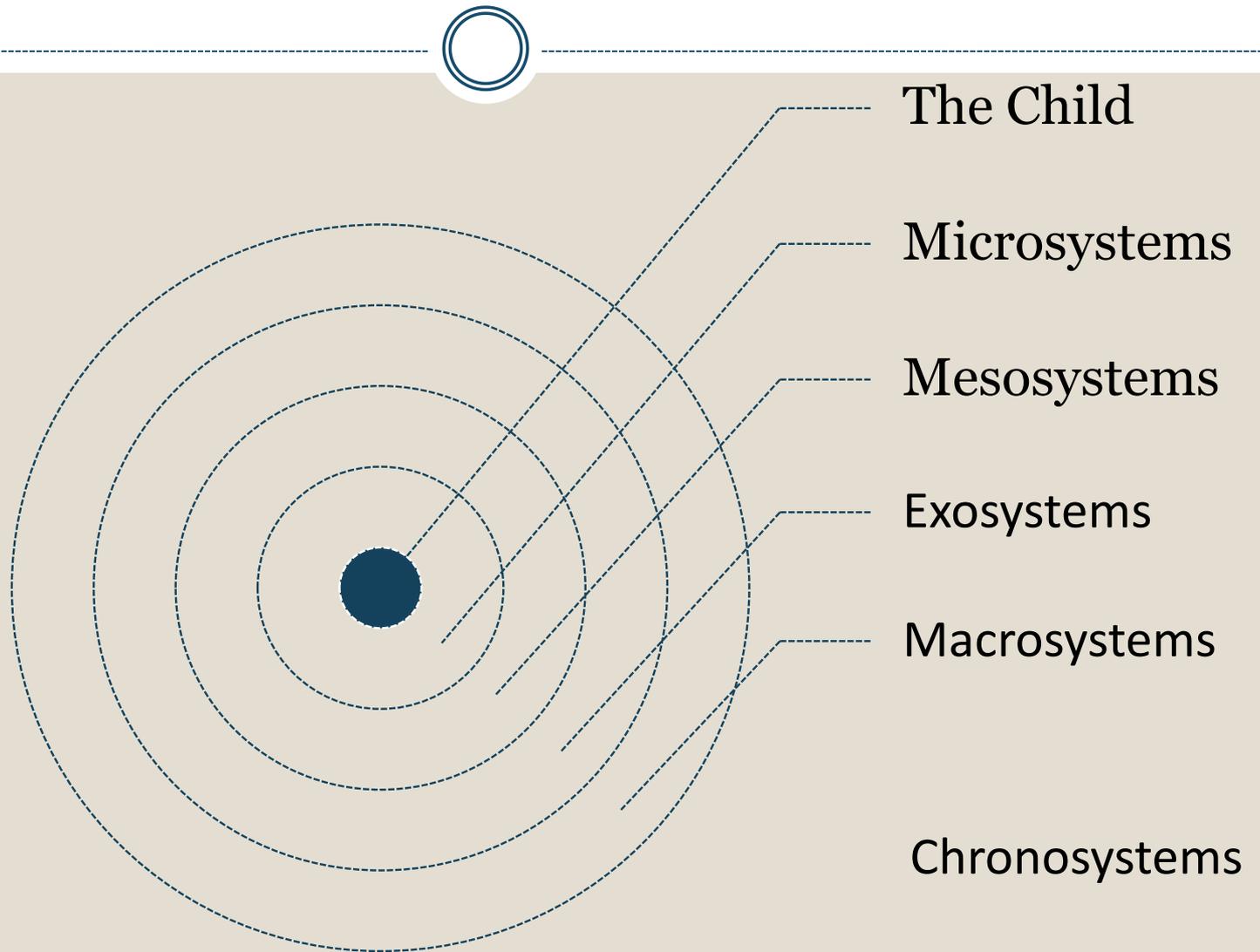


(Transactional Model; Sameroff, 2009)

environment

See Cicchetti & Rogosh (1996) for review

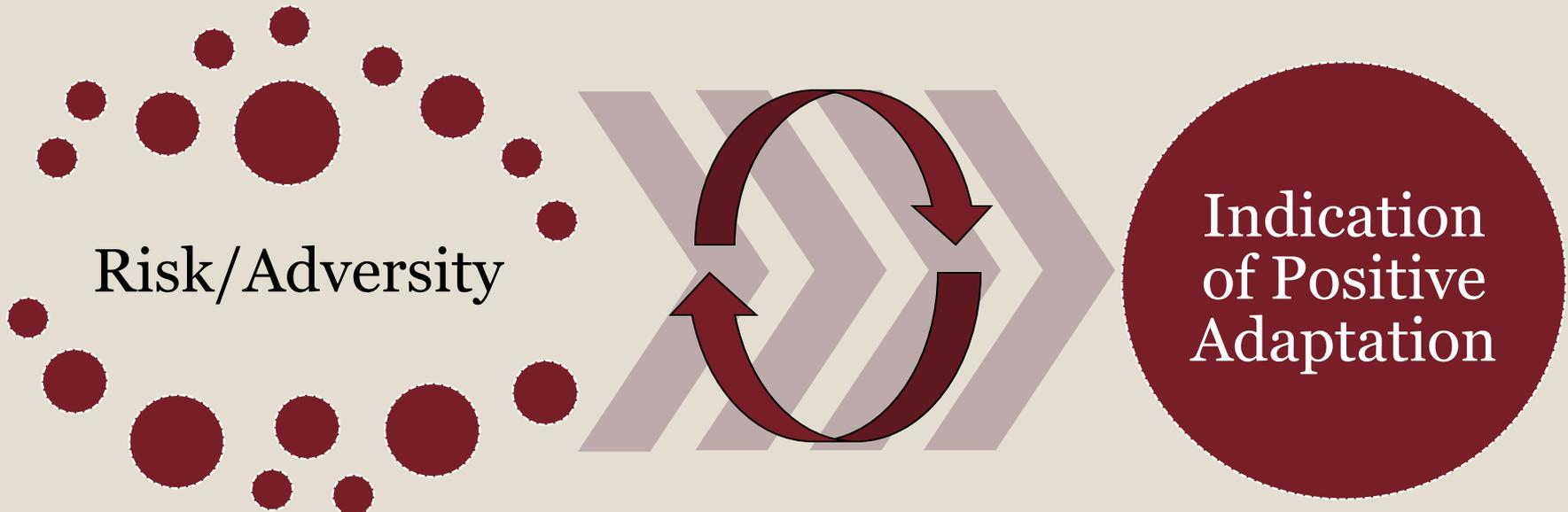
# Bronfenbrenner's Ecological Model



# Resilience



- Process of adaptation (not an outcome)
- Not directly measured – inferred
- Positive adaptation in the face of adversity (relative)



Processes at Individ., Family, Comm level

# Case Study



- **Bertille and Cassius**

- Bertille: 16yrs, EMR (educable mentally retarded), poor school attendance
- full term, healthy, 18mos - “active” infant, liked to be read to. Bayley Scales of Infant Development – average cognitive scale and above average physical scale
- 3 most postnatal intervention
- Postponed 2<sup>nd</sup> child for 6 years and lived with grandmother and aunt
- Multiple moves after 6 years, described as unstable & chaotic by professionals
- Poor school attendance all the way through
- At age 9 mother had cocaine overdose and multiple suicide attempts
- Cascade of negative consequences following re: support for Bertille
- Cassius continued, consistent contact with aunt and grandmother
- Excelled on academic testing and average on grades - Bs (absenteeism – 32 days in 7<sup>th</sup> grade)
- Favorite activities: track, reading and church
- By 12 years there were 4 more children
- Bertille helped with homework
- Had a “big brother” and other community models and supports
- Fights in school and physical altercation with a teacher – struggle with ER

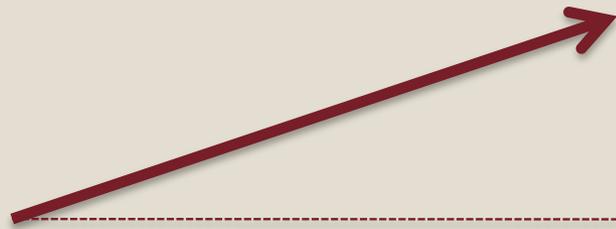
# Resilience



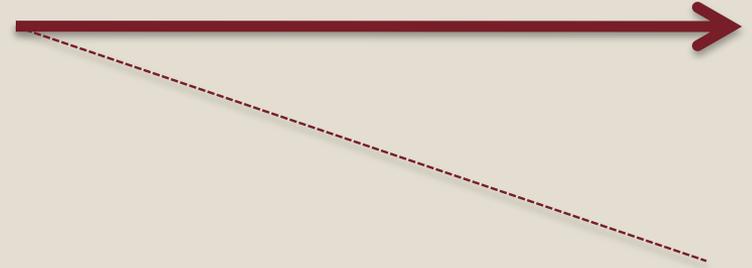
- **Positive adaptation in the face of significant risk**
  - Can't talk about resilience without talking about risk
  - Not simply a child doing well – interactive process that takes into consideration a child's functioning in relation to risk
  - E.g. Cassius being born to teen mom with low IQ and doing well academically
- **Domain specificity of resilience**
  - Just because show resilience in one domain not necessarily show the same positive adaptation in another domain – also not necessarily over time
  - E.g. Cassius is showing positive adjustment in the area of academic achievement but struggles in other areas like emotion regulation – fighting.
- **Not “invulnerable”**
  - E.g. divorce - emotional sensitivity might contribute to resilience in one area and might create vulnerabilities in other areas
- **NOT a personal trait (blame victim)**
  - Cartoon: “We're encouraging people to become involved in their own rescue”

# Many ways to talk about Resilience

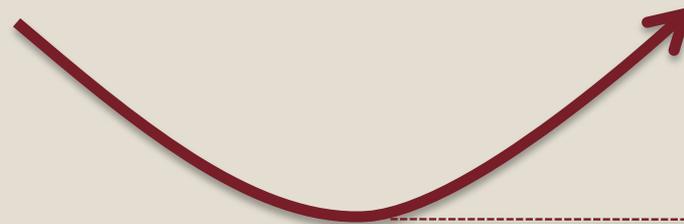
(Masten, Best, & Garmezy, 1990, Werner, 1990)



Overcoming the Odds



Sustained Competence  
Under Stress



Recovery from Trauma

# Protective, Vulnerability, Promotive, & Risk Factors



- Risk factors – usually lead to negative or maladaptive outcomes.
  - E.g economic, parental mental illness, substance abuse, child abuse, teenage motherhood
  - Severity, Duration, Additive or Cumulative
- Protective factors & Vulnerability factors: work differently at different levels of risk. Serve as mediators and moderators.
  - Same factor might work differently in various contexts or domains and also at different time points OR in different people in the situation
  - Eg parental efficacy serves as a mediator of child problems during divorce
  - E.g. show some examples of moderators in next couple of slides
  - Might not see functions unless we are faced with risk – e.g. airbag

(Sameroff, 2000; Masten, A., 2001, 2012)

# Case Study



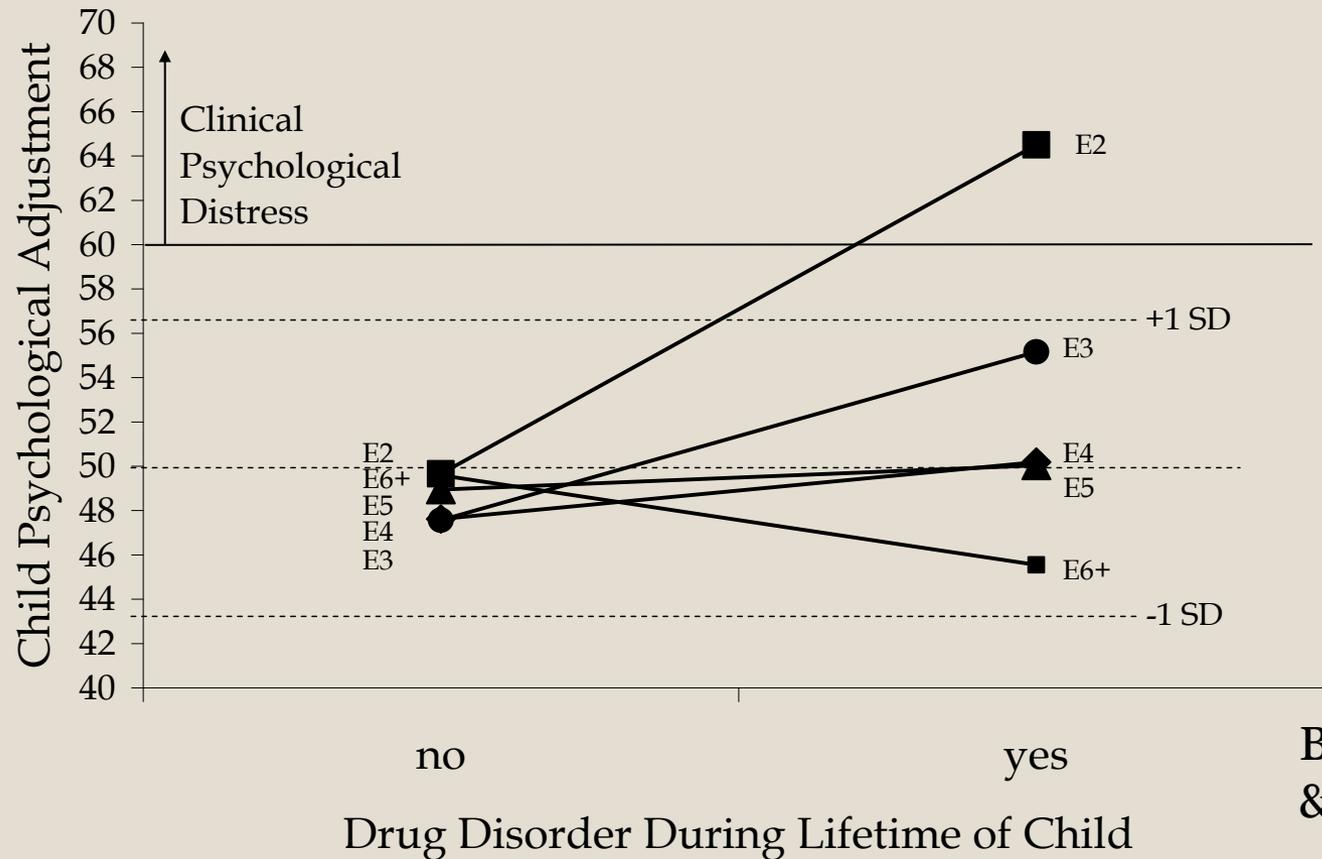
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# Moderator of child adjustment



- Are we looking at a protective or vulnerability factor?



Bidwell, Barbot,  
& Luthar)



- Protective mechanisms may not always look or feel good (e.g. inoculations in medicine)
- The challenges that are associated with risk are not always bad (Masten, 2012)
- “Steeling effects” (Rutter, 2006)
  - E.g. Elder, 1974
  - What leads to steeling vs sensitization in the face of stress? may likely involve adaptation, habituation, self-efficacy, effective coping strategies and/or cognitive redefinition of the experience.

# Processes leading to resilience (Rutter, 2010)



- **Reducing Risk Impact**
  - Alter the meaning or danger of the risk
  - Alter the child's exposure to the risk
- **Promoting self-esteem and self-efficacy**
  - Success at tasks
  - Attachment and secure relationships
- **Provide Opportunities**
  - E.g. Early Head Start
- **Reducing Negative Chain Reactions (cascades)**
  - One negative event might cause a chain of negative events to occur

# Cascading Effects



- Can be positive or negative chain reactions over time
- Timing of early intervention might promote positive cascades
  - E.g. quality early education program may start a positive cascade (promoting competence early on)
- May see effects in areas not originally targeted due to cascades
  - E.g. divorcing mothers who received parenting intervention 9 years prior (Patterson, Forgatch, & DeGarmo, 2010)

# Review: Four Waves of Resilience Research (Sapienza & Masten, 2011)



1. Observational. What are we looking at here? How do we define, measure and describe resilience?
2. Greater depth. Better understanding of underlying processes that account for what had been observed to date
3. Experimental research targeted at mechanisms underlying resilience
4. Processes that occur across systems (e.g. genetic, neural, behavioral, social). Unique features of this wave involve improved technology for measuring variables of interest and more sophisticated systems of analysis for multilevel modeling.

# Gene X Environment (Caspi & Moffitt; & Cicchetti)



- Technology has opened up a new world of possibilities
- Gene-environment interactions
  - E.g. researchers have identified 2 genes: Monoamine Oxidase A (MAOA) and serotonin transporter (5-HTT) that moderate the link between maltreatment and psychopathology
  - Maltreated children with Low-levels MAOA expression had higher antisocial behavior later on than the high-level MAOA peers
  - Maltreated children with 5-HTT “short” allele had higher depression than 5-HTT “long” allele peers
  - Possibly related to serotonin regulation during development (Kim-Cohen & Gold, 2009)

# How resilience research informs interventions



- Process driven: We're able to uncover processes involving the complex relationship between the child and his/her environment
- Highlights the importance of strategic timing related to interventions and promotion of natural family processes
  - E.g. Canada's maternity leave policies
- Examine and uncover specific areas of risk, protection and vulnerability and how they work together: Don't want to just throw interventions at children.
  - (Center for personalized prevention research, UMN). No "one size fits all".

# E.g. The National Campaign to Prevent Teen Pregnancy



- Review of 19 studies aimed at postponing additional pregnancies
- Most important factor in postponing additional pregnancies may be strength and length of time of relationship with (professional) worker (more so than type of intervention itself)
- Relationships built during pregnancy
- Polly T. McCabe – naming baby after nurse

# Birth to Five



- Importance of early brain development – as technology continues to improve we'll see even greater evidence emerging for the importance of the first years of life.
- Know sensitive period for development where we can make big impact and will cost less than remediation down the road
- Age is also important factor in creating positive (and preventing negative) cascading effects that result from the interaction between the developing child and their environment
- Across multiple studies we can map common protective factors related to infancy that relate to later resilient adaptation in multiple domains (Werner, 1990)
  - Child: Low distress, Active, alert, high drive, sociable, easy engaging temperament
  - Environment: Small family size, birth order, maternal age and education, close bond with primary caregiver, supportive family members – siblings, grandparents, successful early experiences

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