

# Psychological Resilience: More than a Metaphor?

Anthony Ong

[anthony.ong@cornell.edu](mailto:anthony.ong@cornell.edu)

 [@adoCornell](https://twitter.com/adoCornell)



Cornell University



Weill Cornell Medicine



Bronfenbrenner Center  
for Translational Research



Center for Integrative  
Developmental Science



## Disclosure(s)

I have no commercial relationships to disclose.

- ▶ Definition and terminology
- ▶ Central features and criteria
- ▶ Conceptualization and measurement
- ▶ Multidimensional nature of resilience
- ▶ Gaps and future direction

- ▶ Definition and terminology
- ▶ Central features and criteria
- ▶ Conceptualization and measurement
- ▶ Multidimensional nature of resilience
- ▶ Gaps and future direction

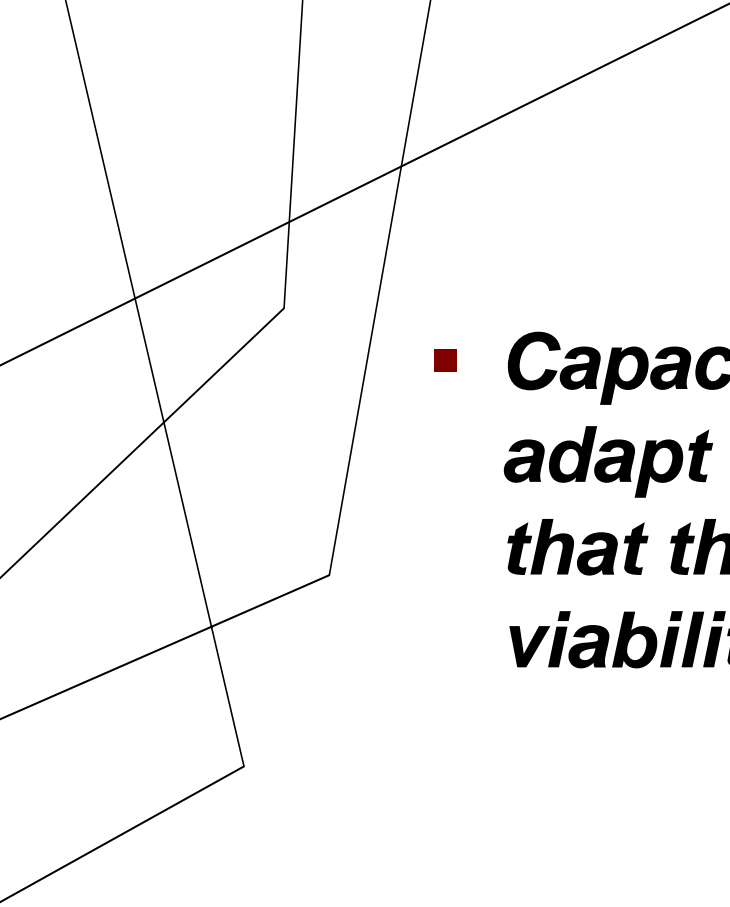
- ▶ Definition and terminology
- ▶ Central features and criteria
- ▶ Conceptualization and measurement
- ▶ Multidimensional nature of resilience
- ▶ Gaps and future direction

- ▶ Definition and terminology
- ▶ Central features and criteria
- ▶ Conceptualization and measurement
- ▶ Multidimensional nature of resilience
- ▶ Gaps and future direction

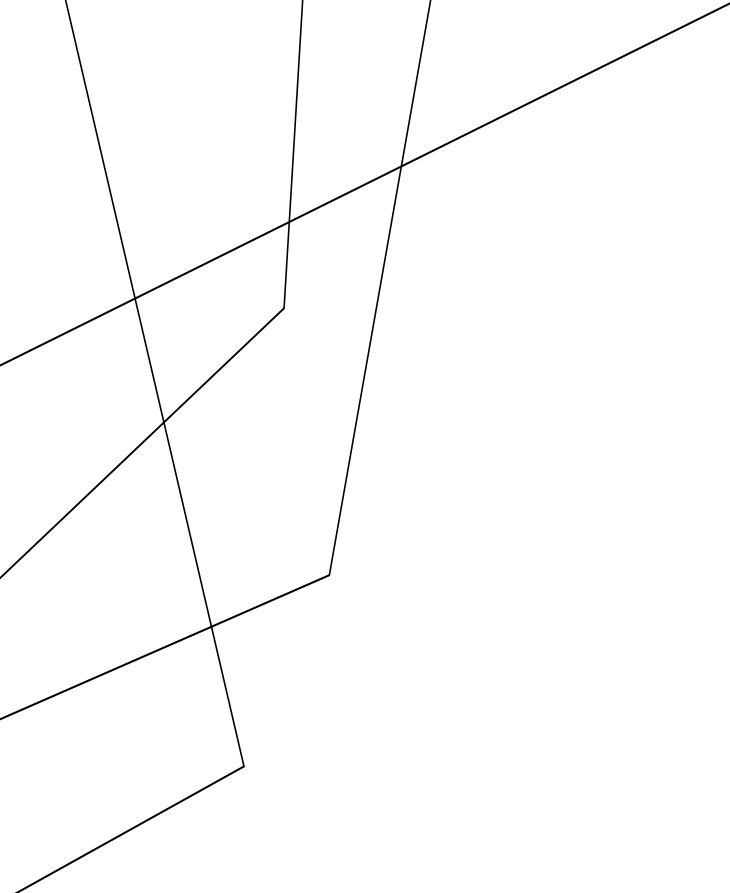
- ▶ Definition and terminology
- ▶ Central features and criteria
- ▶ Conceptualization and measurement
- ▶ Multidimensional nature of resilience
- ▶ Gaps and future direction

# Definition and terminology



- 
- ***Capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development.***

*Source: Masten (2014), Child Development*



- **Embedded**
- **Interacting**
- **Interdependent**

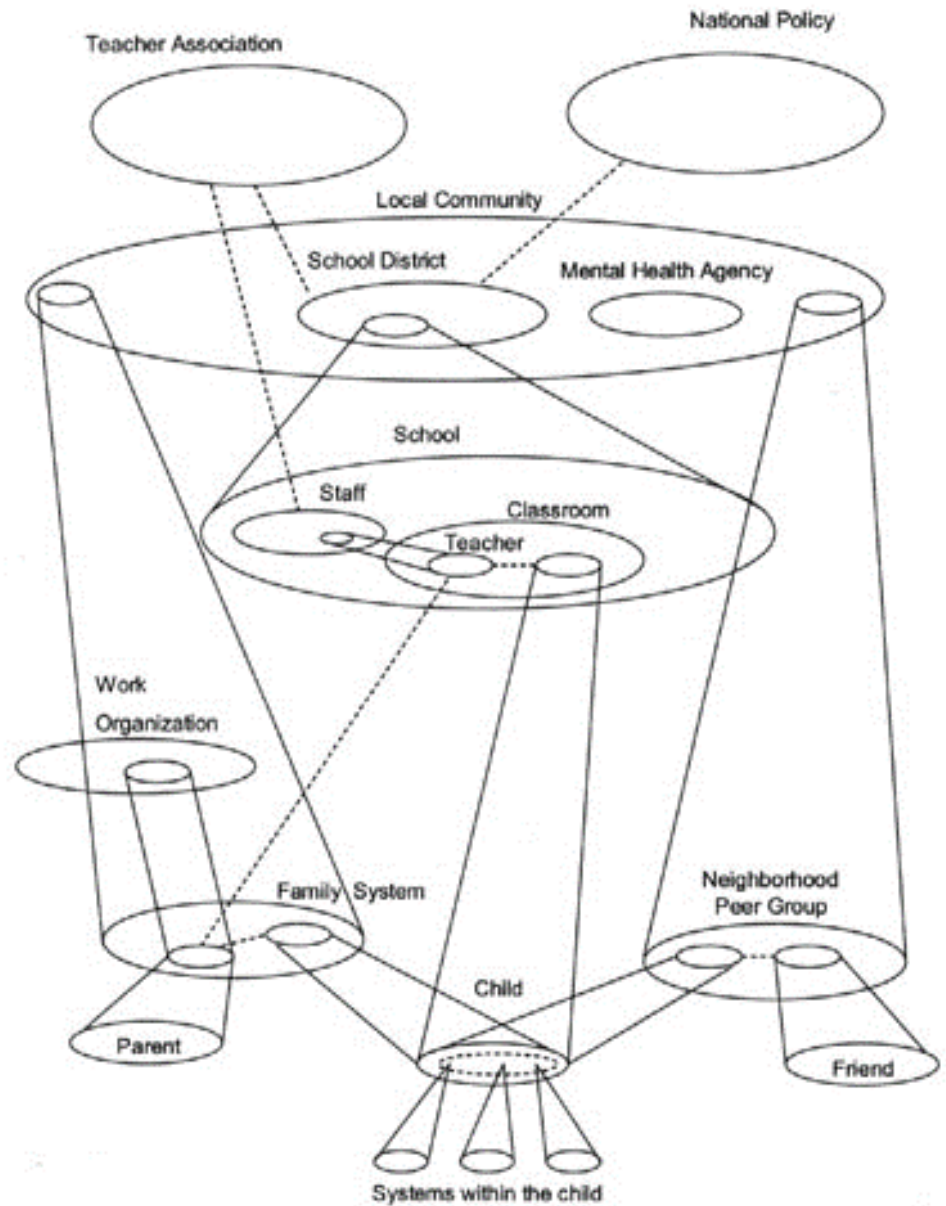


Figure 1. Illustration of embedded systems at multiple levels. Dashed lines represent interactions between systems or individuals within different systems.



# Resilience in dynamic systems

- Resilience is dynamic
- Capacity for adaptation to adversity is distributed across systems
- Individual resilience depends on resilience of other systems

# Central features and criteria



# Two Criteria Defining Resilience

- **Challenge/adversity**
  - What challenges are threatening the system?
- **Positive adaptation**
  - How well is the system doing?



# Resilient to What?

- **Challenge/adversity**
  - Acute stressor (e.g., laboratory challenge)
  - Major event (e.g., early life adversity)
  - Chronic stressor (e.g., Ongoing health problems)

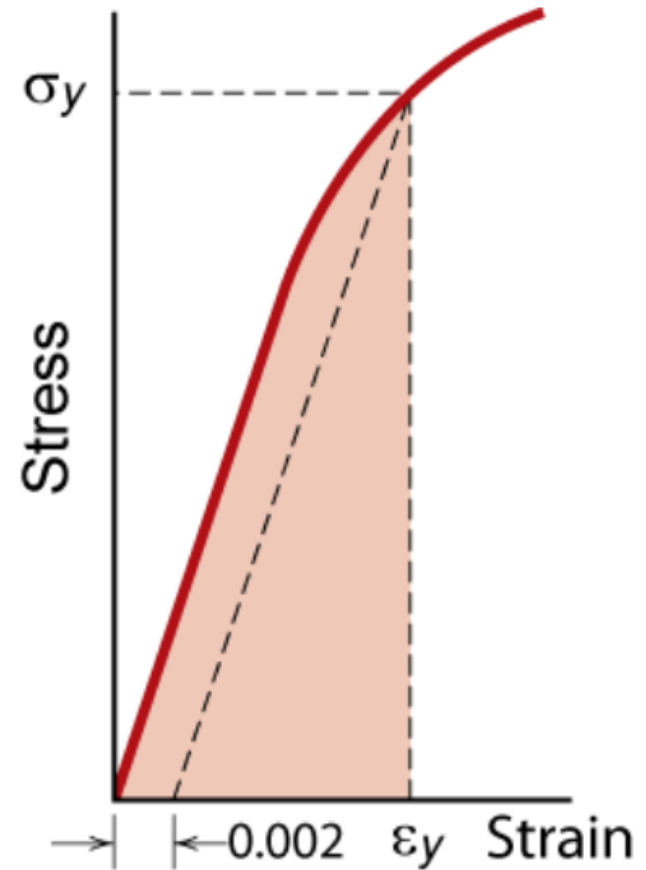


# Resilient by Which Outcome?

- **Outcomes**
  - Recovery
  - Sustainability
  - Growth

# Resilience as Recovery

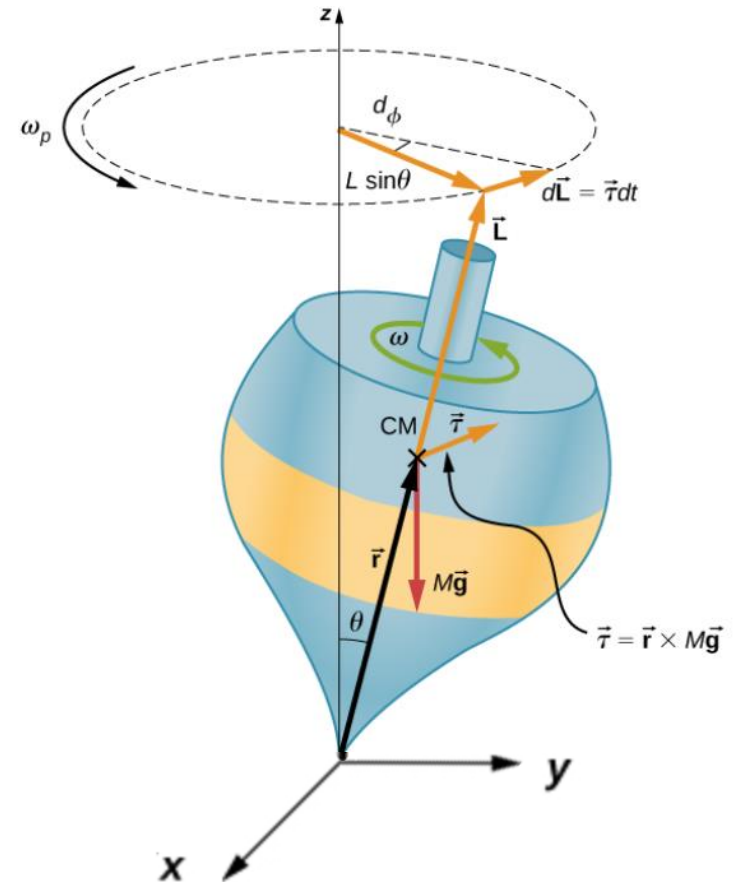
- “Bouncing back”





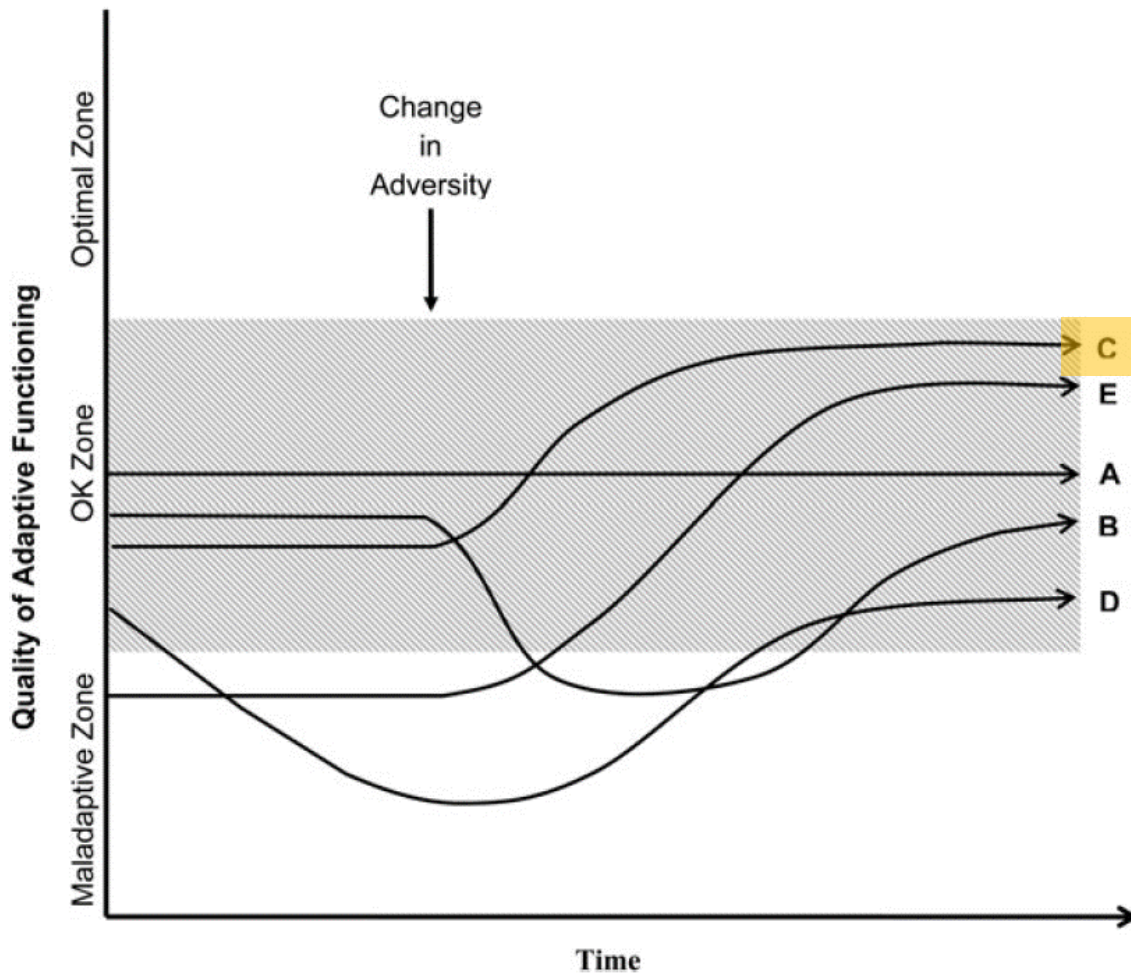
# Resilience as Sustainability

- “Maintenance of functioning”



# Resilience as Growth

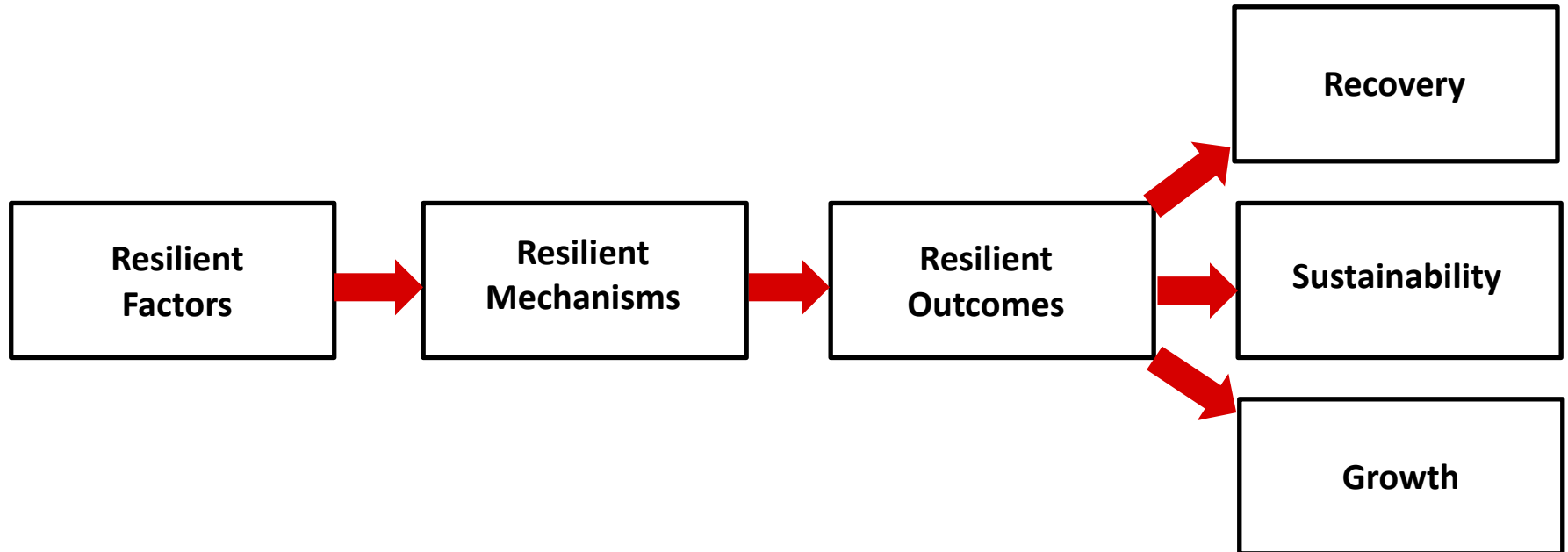
- “Toughening and inoculation”



“Steeling Effects” (2012)

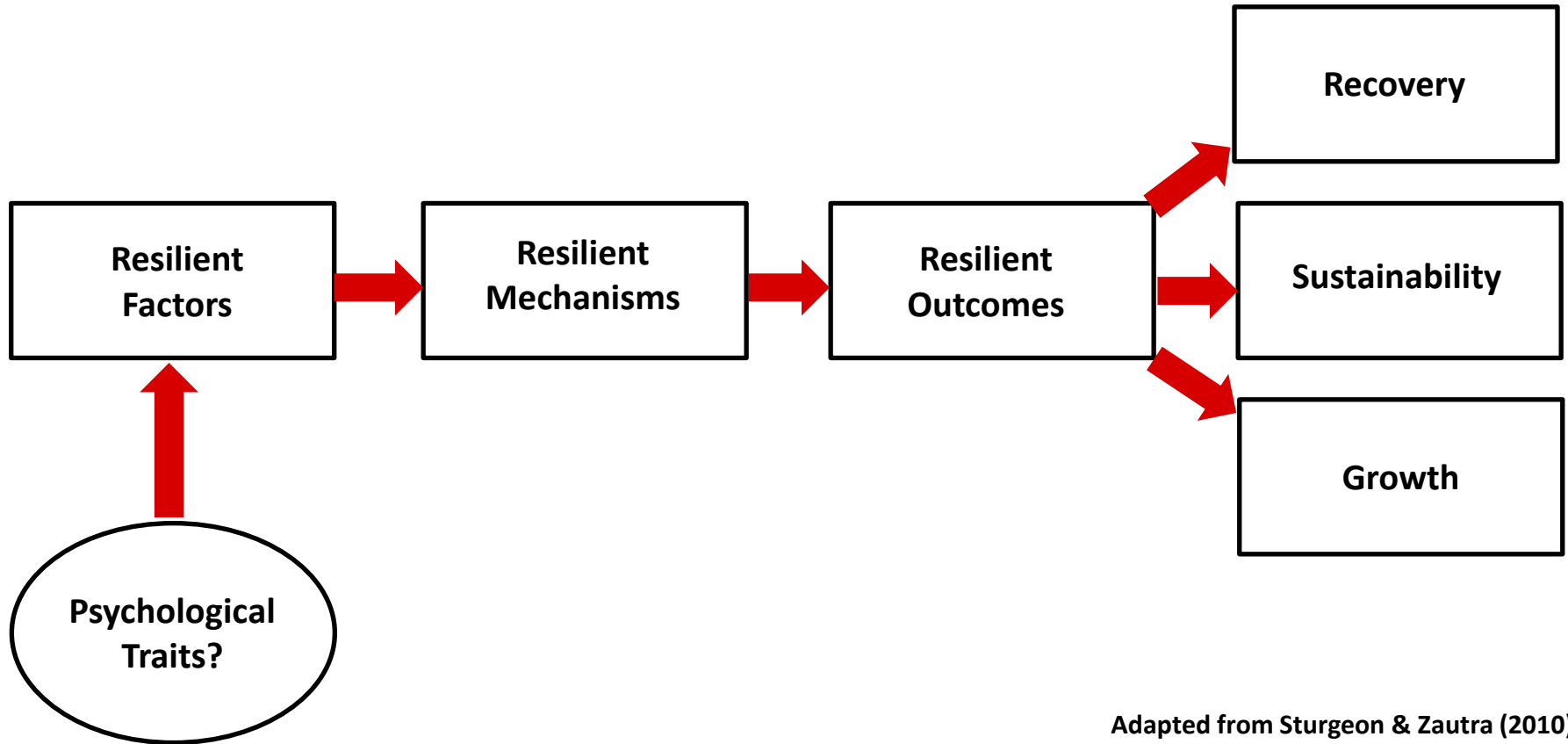
# Conceptualization and measurement

# Conceptual Framework



Adapted from Sturgeon & Zautra (2010)

# Resilience: Trait vs Process?



Adapted from Sturgeon & Zautra (2010)

# Multidimensional Nature of Resilience

# **Is Resilience Only Skin Deep? Rural African Americans' Socioeconomic Status–Related Risk and Competence in Preadolescence and Psychological Adjustment and Allostatic Load at Age 19**

**Gene H. Brody<sup>1</sup>, Tianyi Yu<sup>1</sup>, Edith Chen<sup>2</sup>, Gregory E. Miller<sup>2</sup>,  
Steven M. Kogan<sup>3</sup>, and Steven R. H. Beach<sup>4</sup>**

<sup>1</sup>Center for Family Research, University of Georgia; <sup>2</sup>Department of Psychology, Northwestern University;

<sup>3</sup>Department of Human Development and Family Science, University of Georgia; and <sup>4</sup>Institute for Behavioral Research, University of Georgia

Psychological Science

24(7) 1285–1293

© The Author(s) 2013

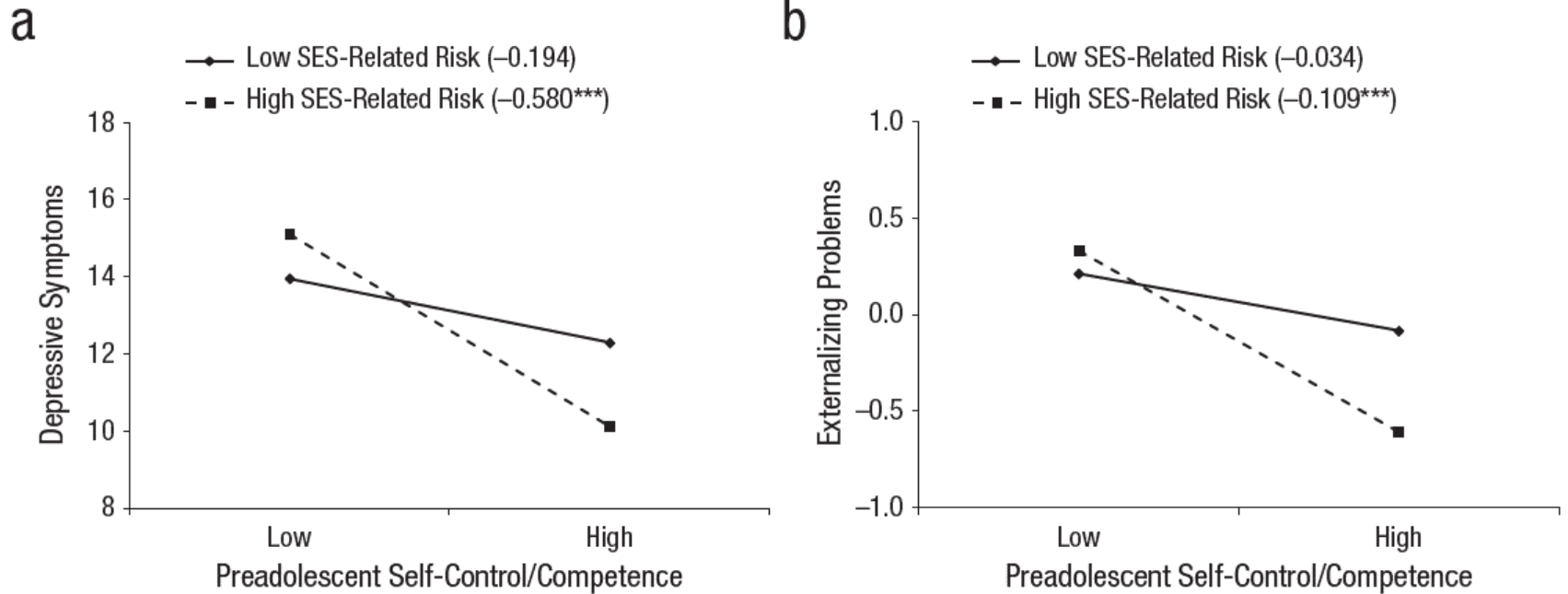
Reprints and permissions:

[sagepub.com/journalsPermissions.nav](http://sagepub.com/journalsPermissions.nav)

DOI: 10.1177/0956797612471954

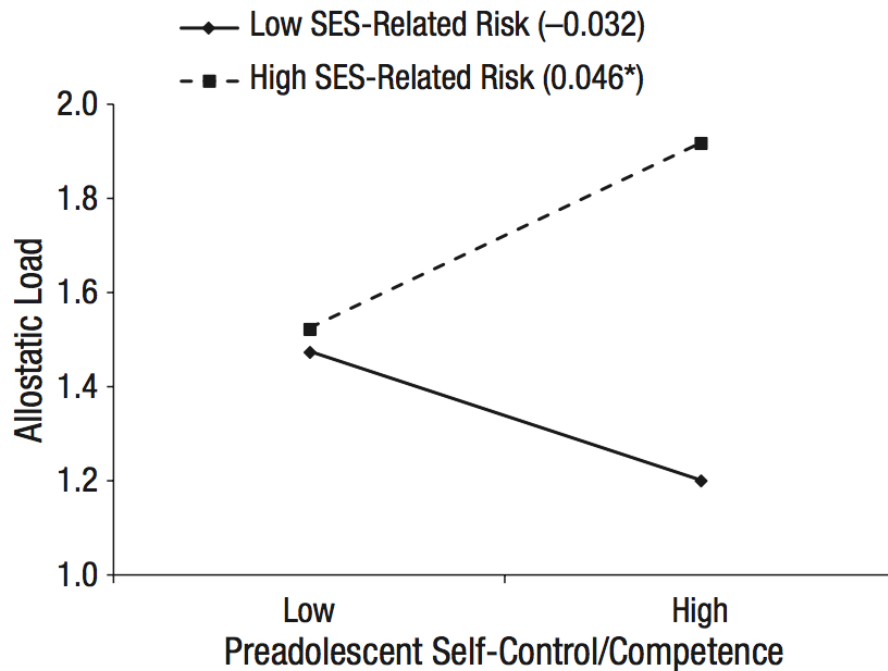
[pss.sagepub.com](http://pss.sagepub.com)





**Fig. 1.** Young adults' (a) depressive symptoms and (b) externalizing problems as a function of their socioeconomic status (SES)–related risk and self-control/competence in preadolescence (low = 1 *SD* below the mean; high = 1 *SD* above the mean). The lines represent the results of regression analyses at low and high levels of SES-related risk, and the numbers in parentheses refer to the simple slopes (\*\**p* < .001).





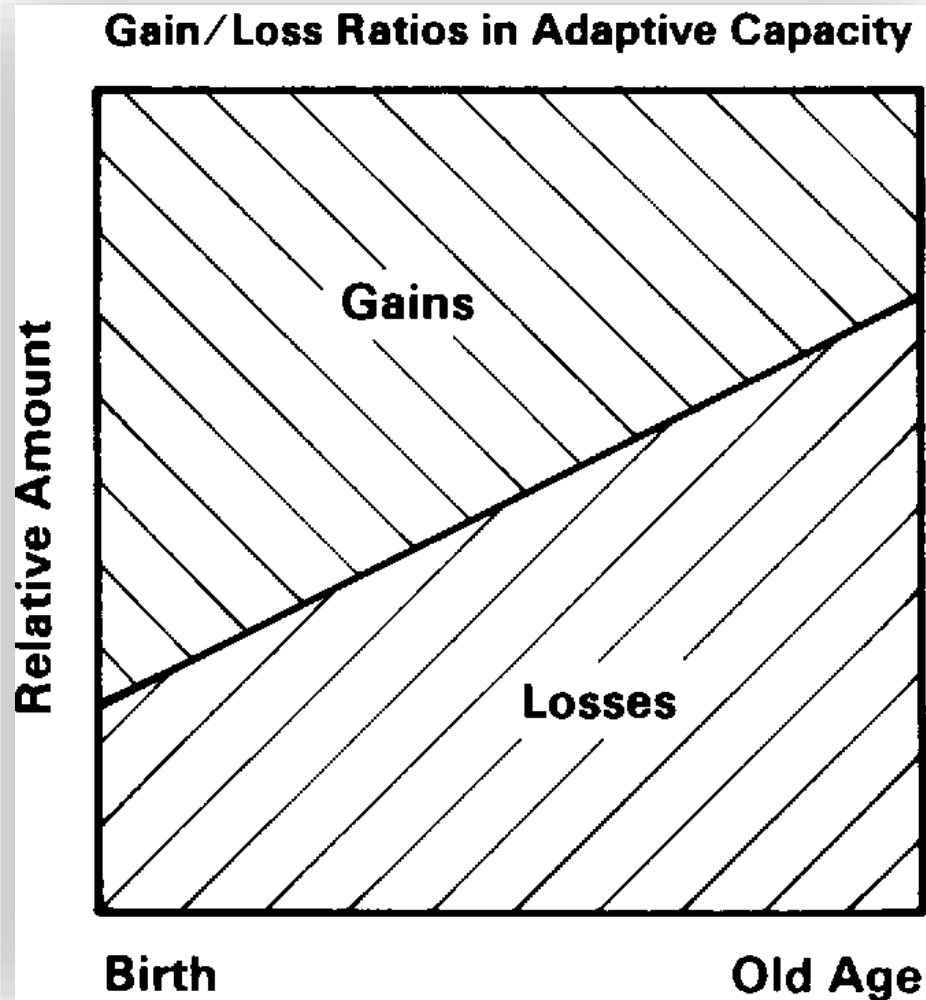
**Fig. 2.** Young adults' allostatic load as a function of socioeconomic status (SES)-related risk and self-control/competence in preadolescence (low = 1 *SD* below the mean; high = 1 *SD* above the mean). The lines represent the results of regression analyses at low and high levels of SES-related risk, and the numbers in parentheses refer to the simple slopes ( $*p < .05$ ).

**“For many rural African Americans, resilience may indeed be only *skin deep*.” (Brody et al., 2013, p. 1285)**

# The Multidimensional Nature of Resilience

- Unevenness in functioning across domains is common (Cicchetti, 1993; Fischer & Biddell, 1998)

# The Multidimensional Nature of Resilience



# The Multidimensional Nature of Resilience

- Unevenness in functioning across domains is common (Cicchetti, 1993; Fischer & Biddell, 1998)
- Multidimensional approach to studying resilience (Infurna & Luthar, 2018)

# Gaps and Opportunities

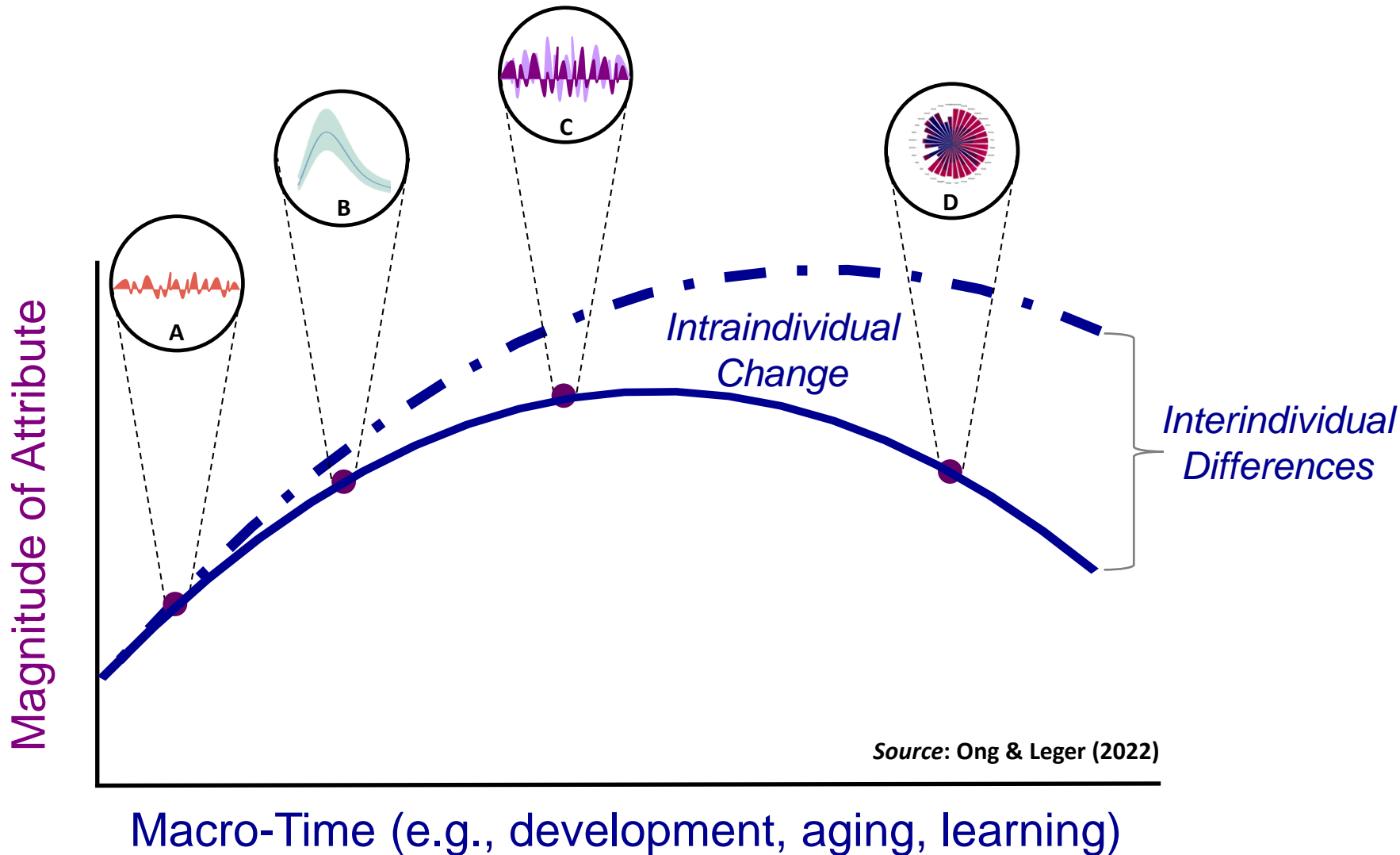


# Gaps and Opportunities

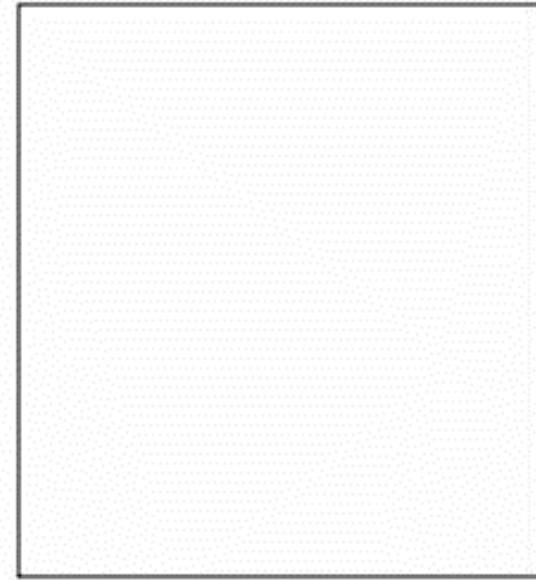
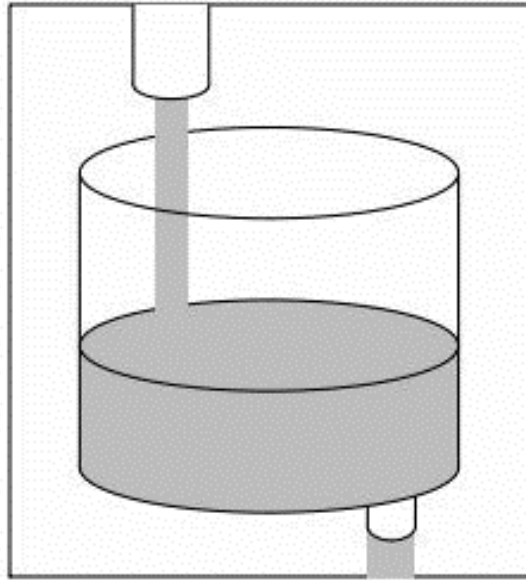
- Need for a multiple-levels-analysis perspective
- Incorporating intensive *measurement-burst designs*

# *Intraindividual Variability and Change*

## *Descriptive Framework*



Source: Ong & Leger (2022)



$$dV_{\text{reservoir}} = -V_{\text{out}} + V_{\text{in}}. \quad (1)$$

$$(dh)A_{\text{reservoir}} = -v_{\text{out}}A_{\text{out}}(dt) + v_{\text{in}}A_{\text{in}}(dt). \quad (2)$$

$$\frac{dh}{dt} = \left( -c \frac{A_{\text{out}}}{A_{\text{reservoir}}} \right) h + \frac{v_{\text{in}}A_{\text{in}}}{A_{\text{reservoir}}}, \text{ or alternatively,} \quad (3)$$

$$\frac{dh}{dt} = \beta h + \varepsilon_{\text{inputs}}.$$



