A Science-Based Framework for Early Childhood Policy

Katherine Magnuson, PH.D., Associate Professor of Social Work

UNIVERSITY OF WISCONSIN-MADISON, Waisman Center, Institute for Research on Poverty, and LaFollette School of Public Affairs

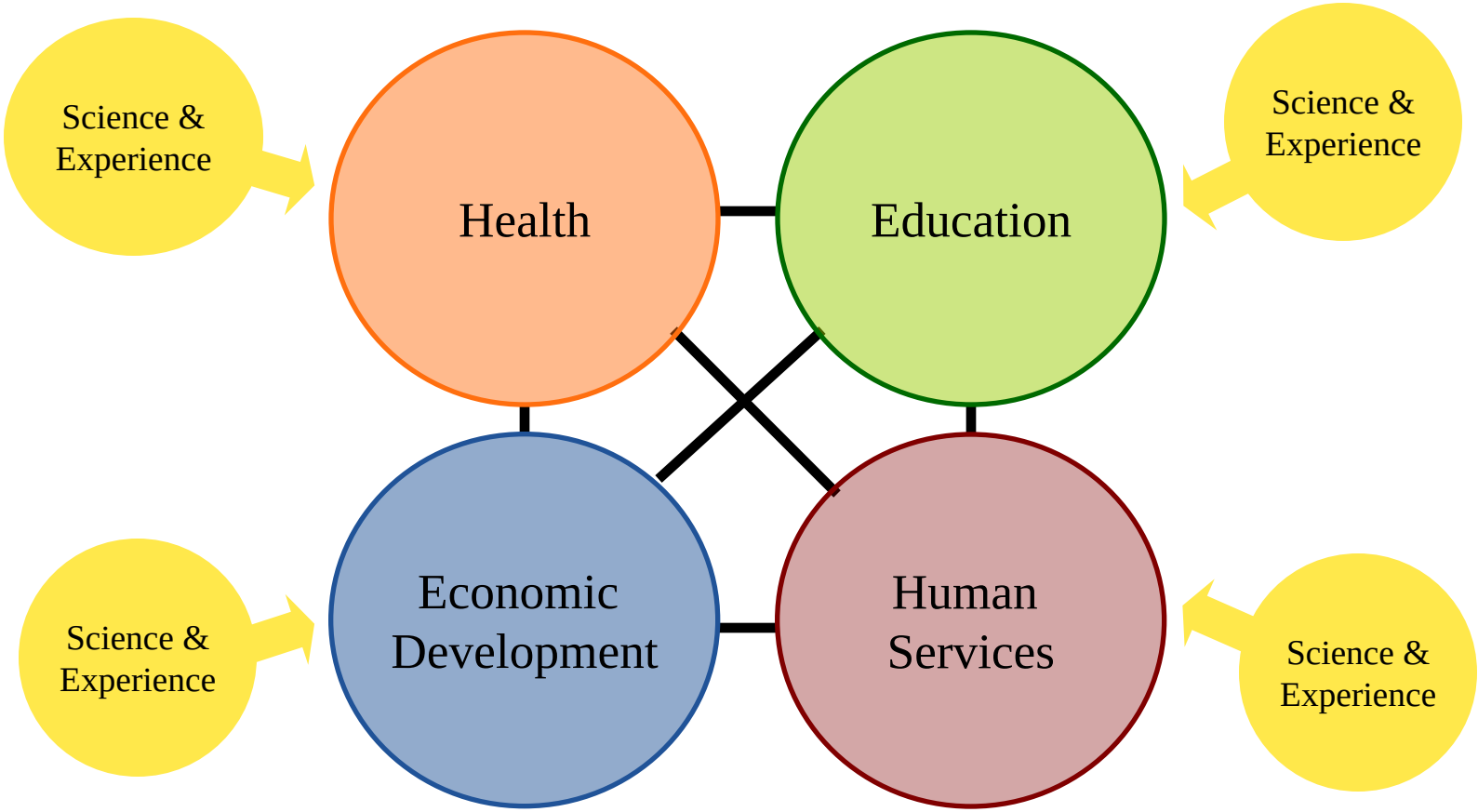
Member, National Forum on Early Childhood Policy and Programs

Decades of Science from Many Disciplines All Point to the Same Conclusion

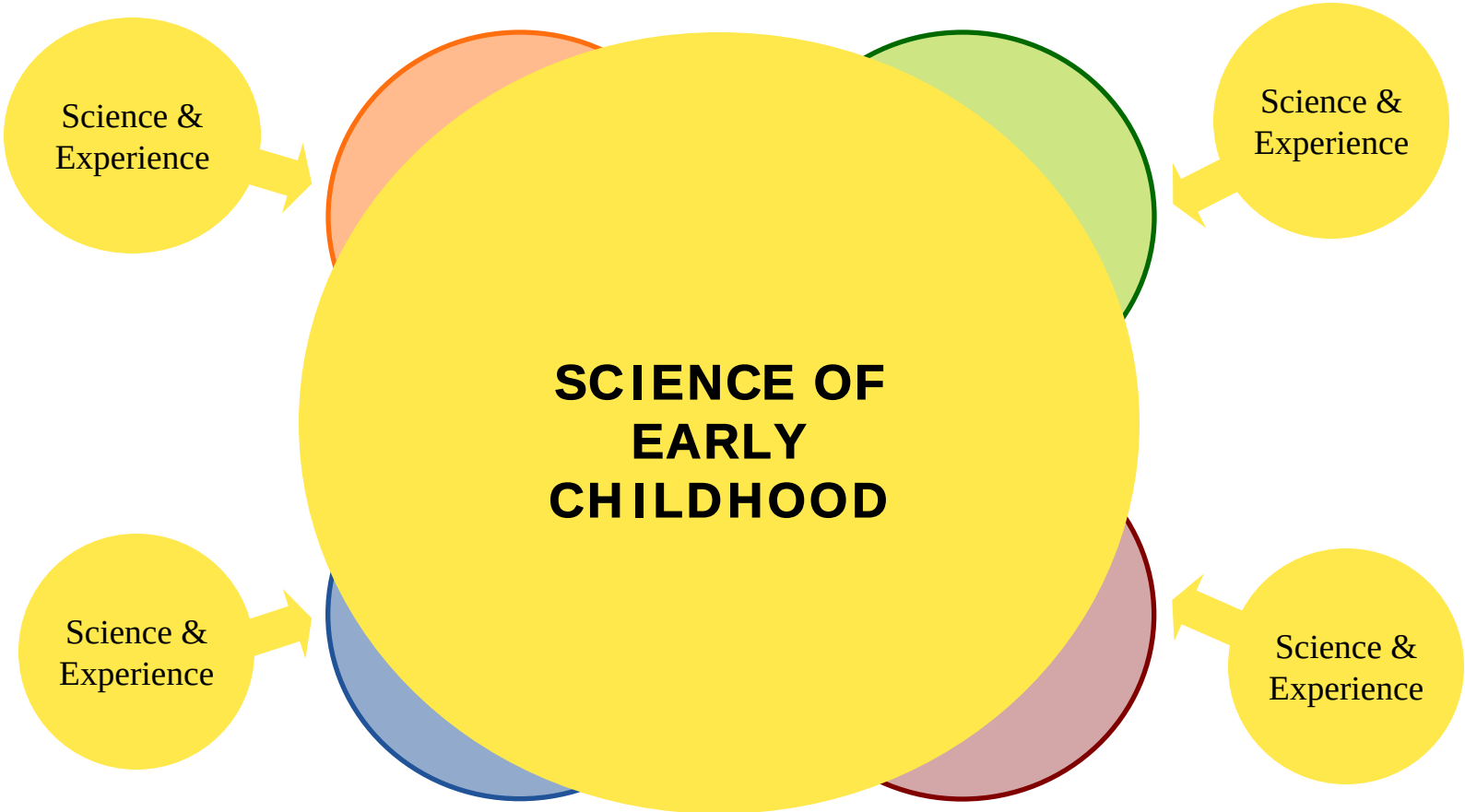
The healthy development of children provides a strong foundation for educational achievement, economic productivity, life-long health, responsible citizenship, strong communities, and good parenting of the next generation.

Advances in neuroscience, molecular biology, psychology and program evaluation research provide a foundation to build successful early childhood policies and programs.

Multiple Sources of Knowledge Currently Inform Practice in Poorly Connected Sectors



An Integrated Science of Early Childhood Development Could Drive More Productive Investments Across Sectors



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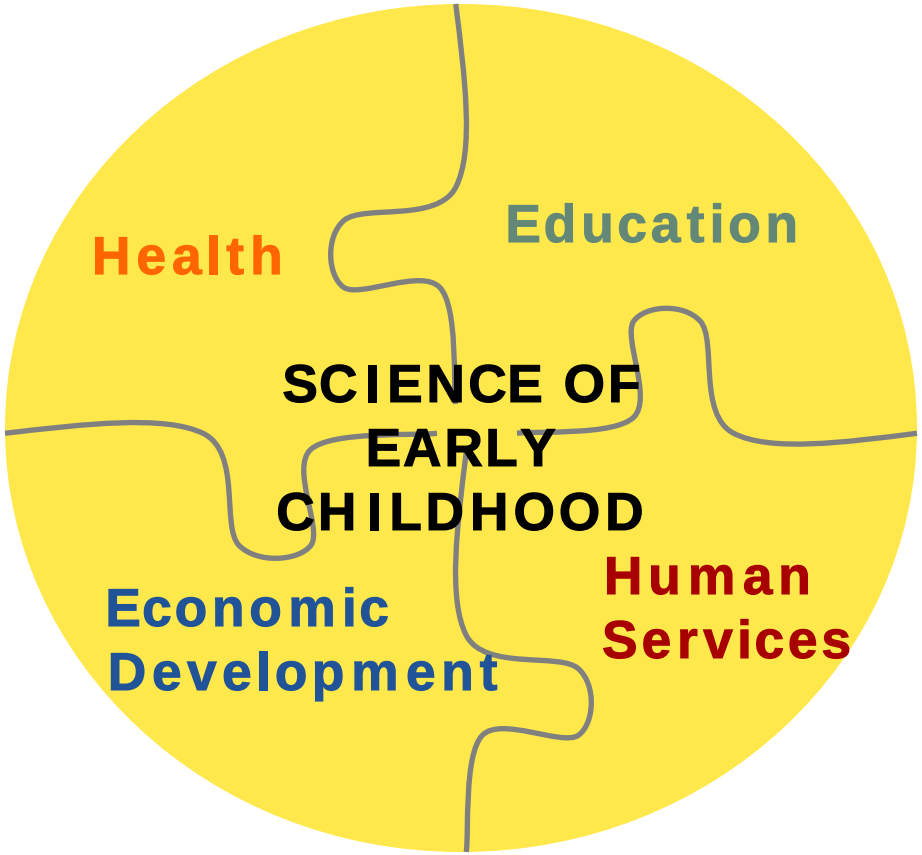
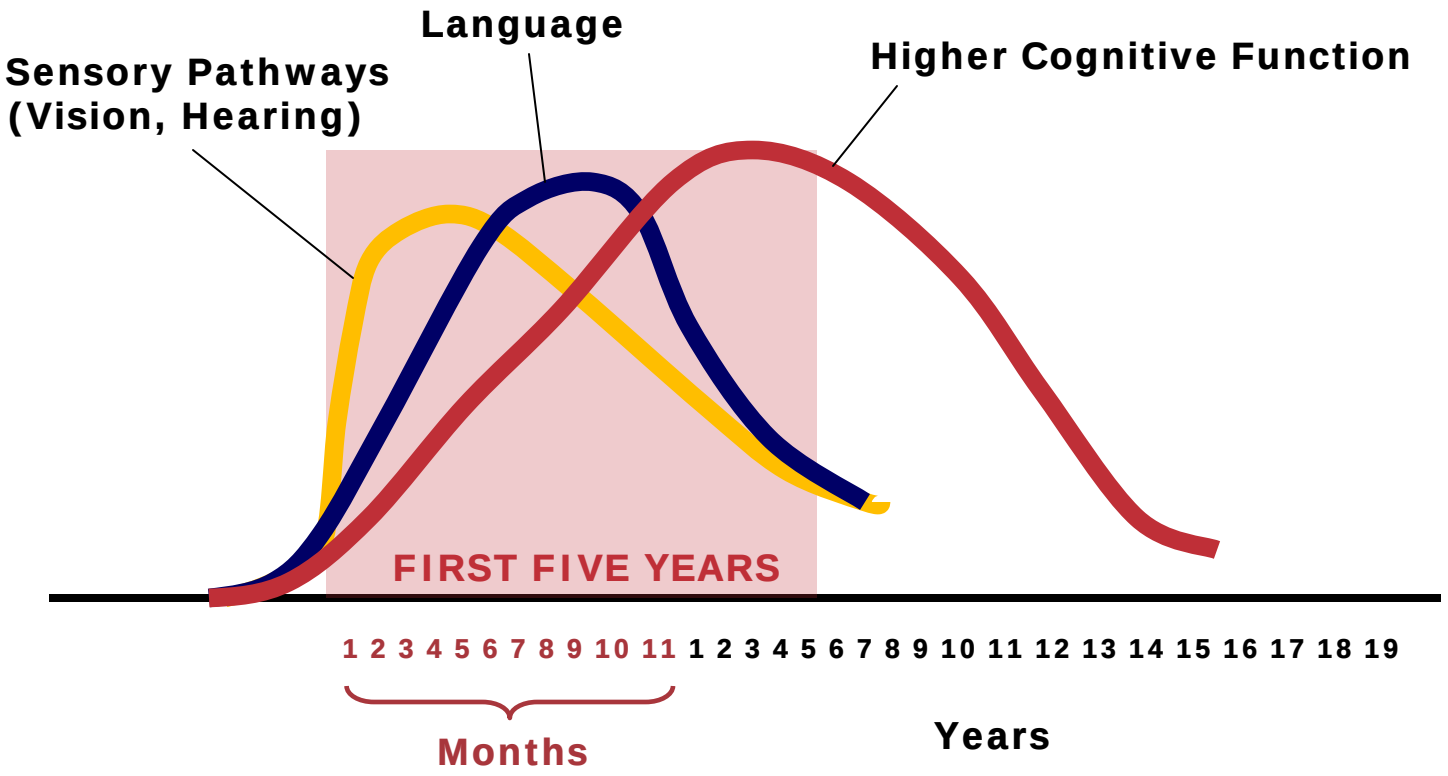


Experiences Shape Brain Architecture

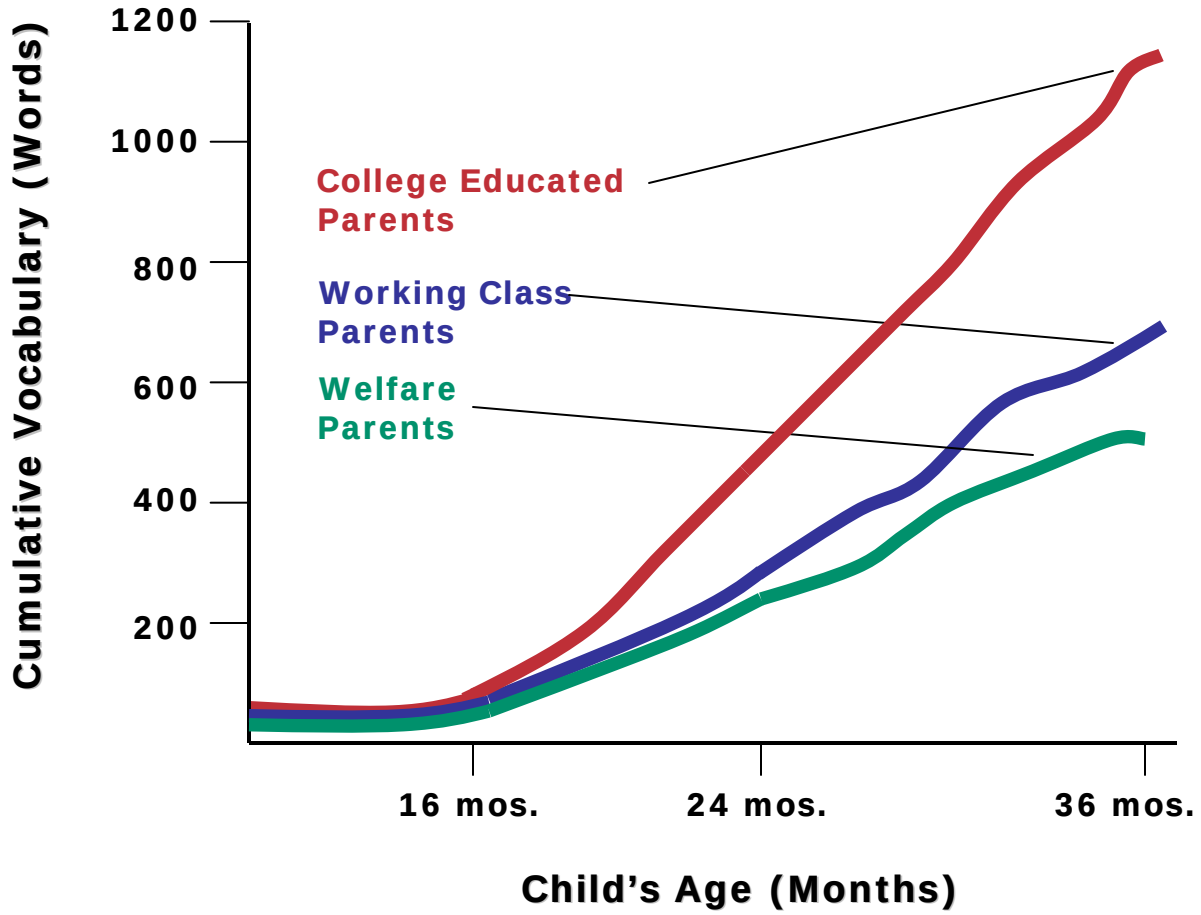
Neural Circuits are Wired in a Bottom-Up Sequence

(700 synapses formed per second in the early years)



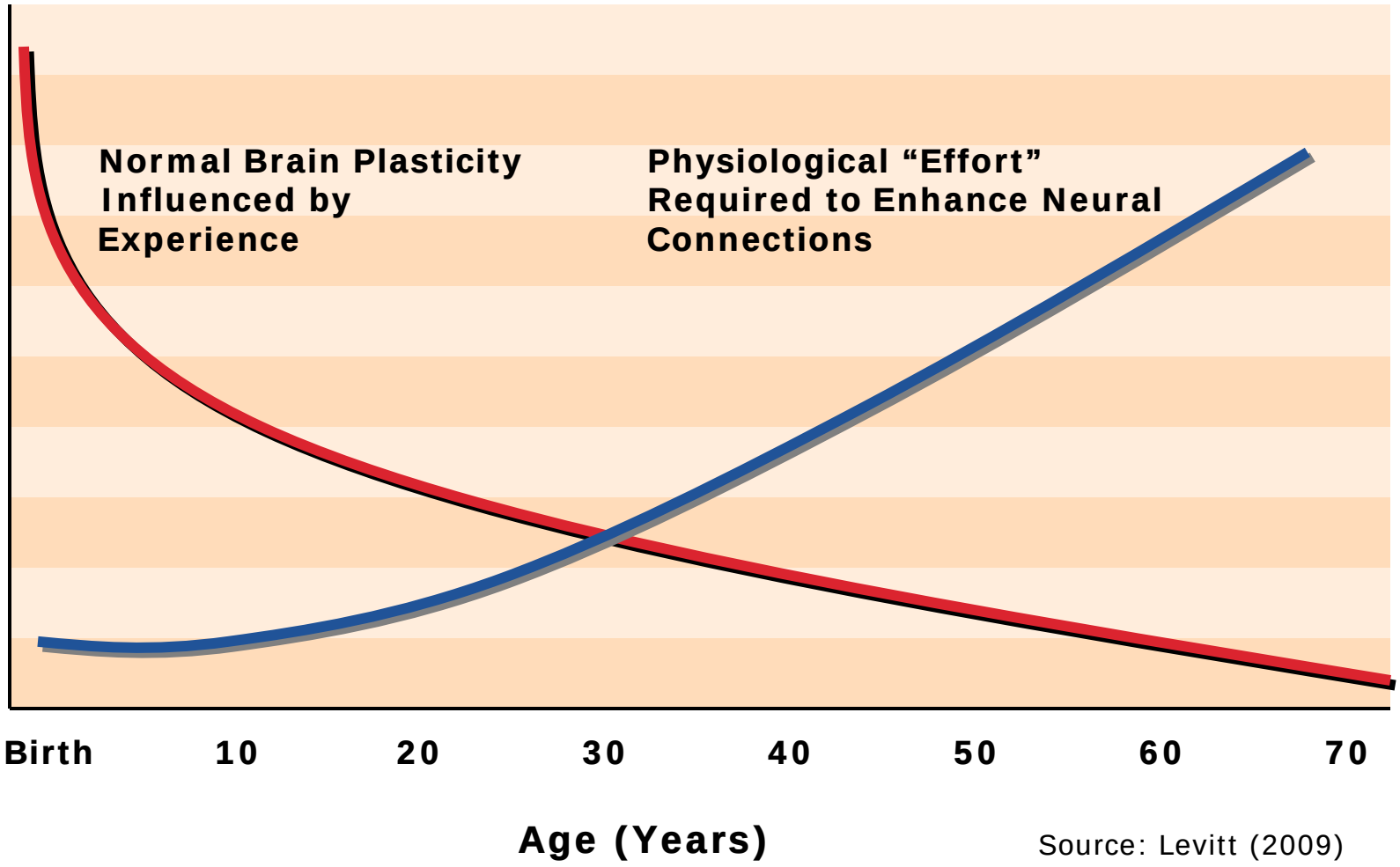
Source: C.A. Nelson (2000)

Barriers to Educational Achievement Emerge at a Very Young Age



Source: Hart & Risley (1995)

The Ability to Change Brains Decreases Over Time



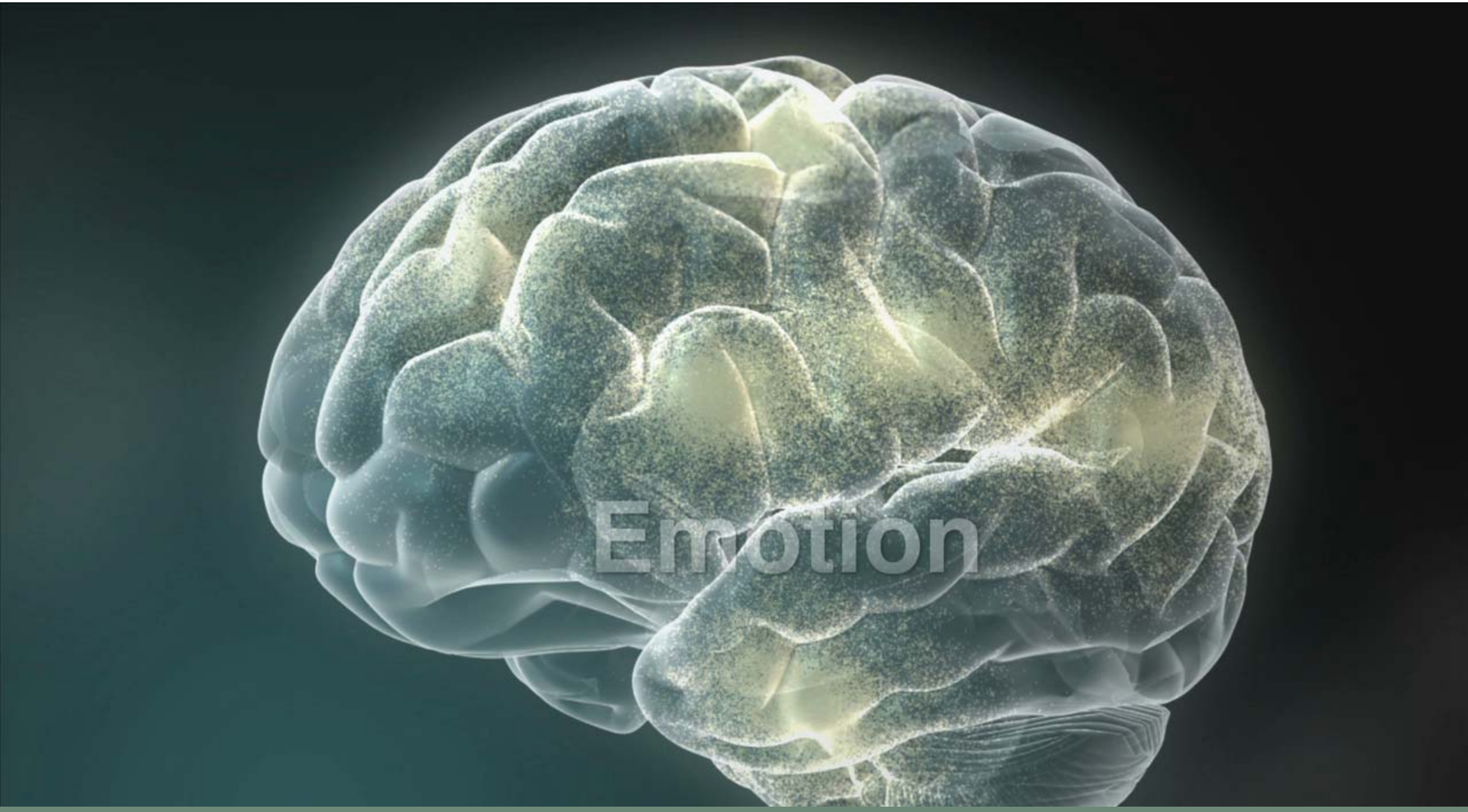
Source: Levitt (2009)

Early Life Experiences Are Built Into Our Bodies (For Better or For Worse)

Stable and supportive relationships, language-rich environments, and mutually responsive, “serve and return” interactions with adults promote healthy brain architecture and adaptive regulatory systems.

Excessive or prolonged activation of stress response systems and reduced availability of the buffering protection of supportive relationships can weaken brain architecture and disrupt the development of other organ systems.

Toxic Stress Derails Healthy Development



NATIONAL FORUM ON EARLY CHILDHOOD PROGRAM EVALUATION

The Biology of Adversity: Three Levels of Stress

Positive

Brief increases in heart rate, mild elevations in stress hormone levels.

Tolerable

Serious, temporary stress responses, buffered by supportive relationships.

Toxic

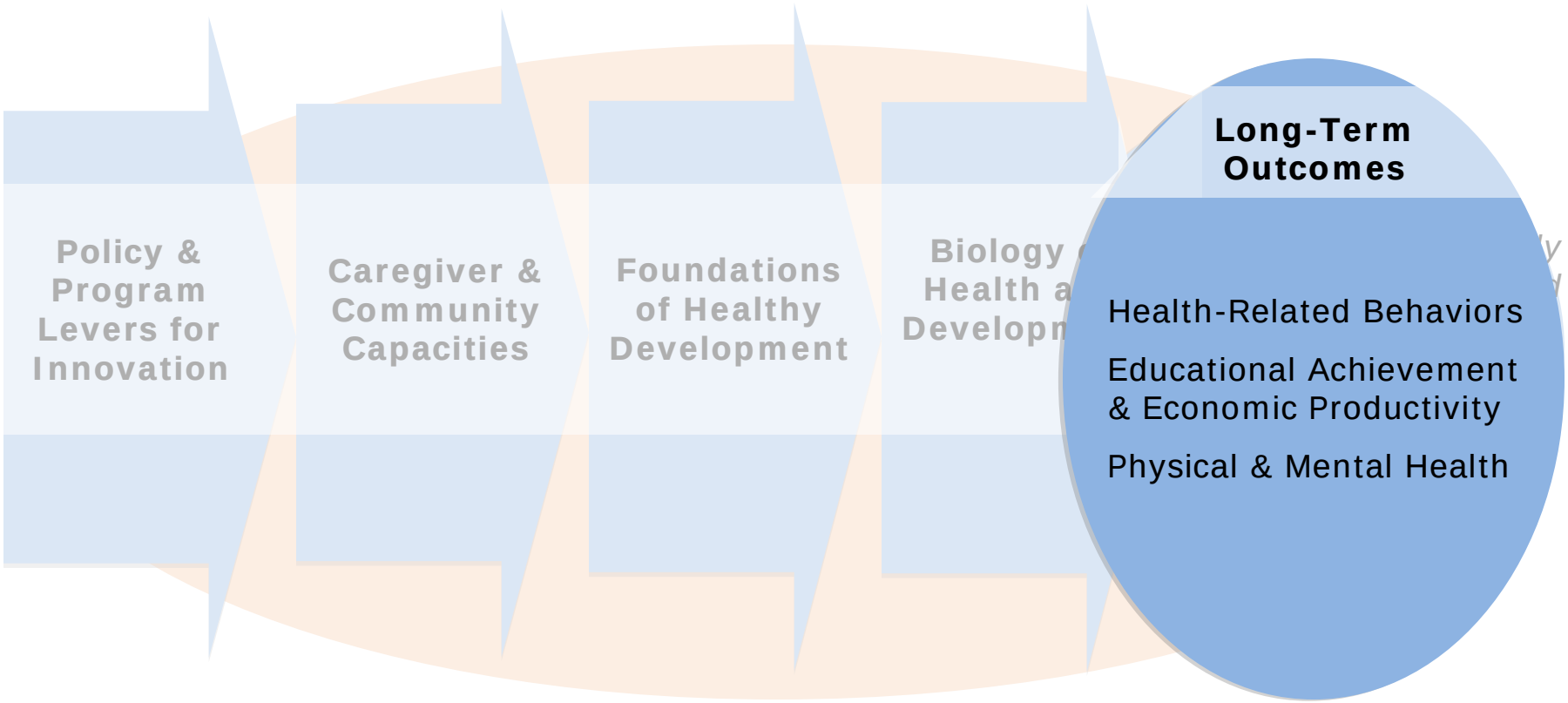
Prolonged activation of stress response systems in the absence of protective relationships.

The Biology of Adversity Suggests a Compelling New Theory of Change to Enhance Both Learning and Health

Because excessive activation of the body's stress response systems can lead to long-term disruptions in brain architecture, immune status, metabolic regulation, and cardiovascular function ...

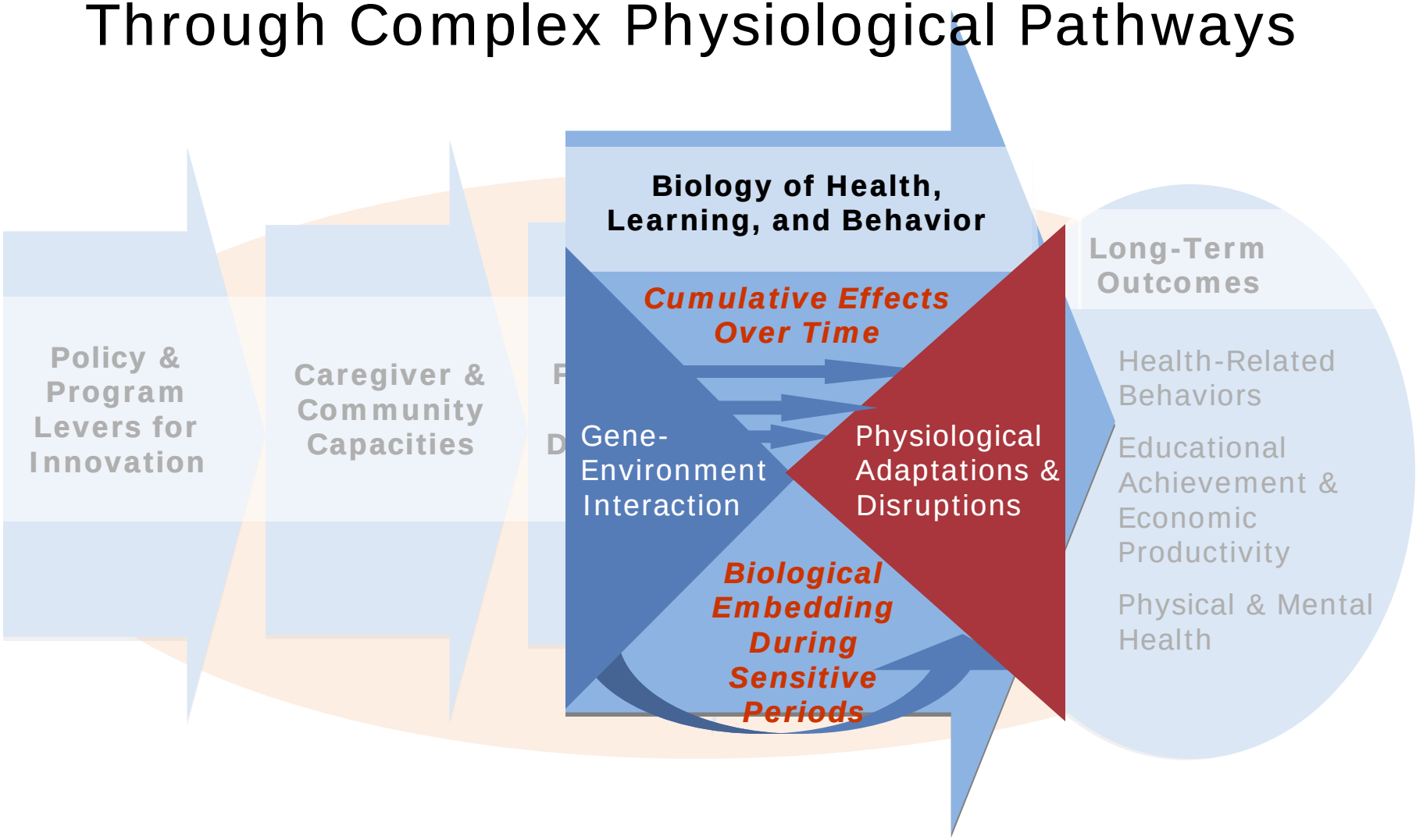
...better outcomes could be achieved by reducing the number and severity of adverse experiences and by strengthening relationships that protect young children from the harmful effects of toxic stress, above and beyond providing parenting education, rich learning experiences, and primary health care.

Science Can Help Construct a Logic Model to Guide Effective Early Childhood Investments



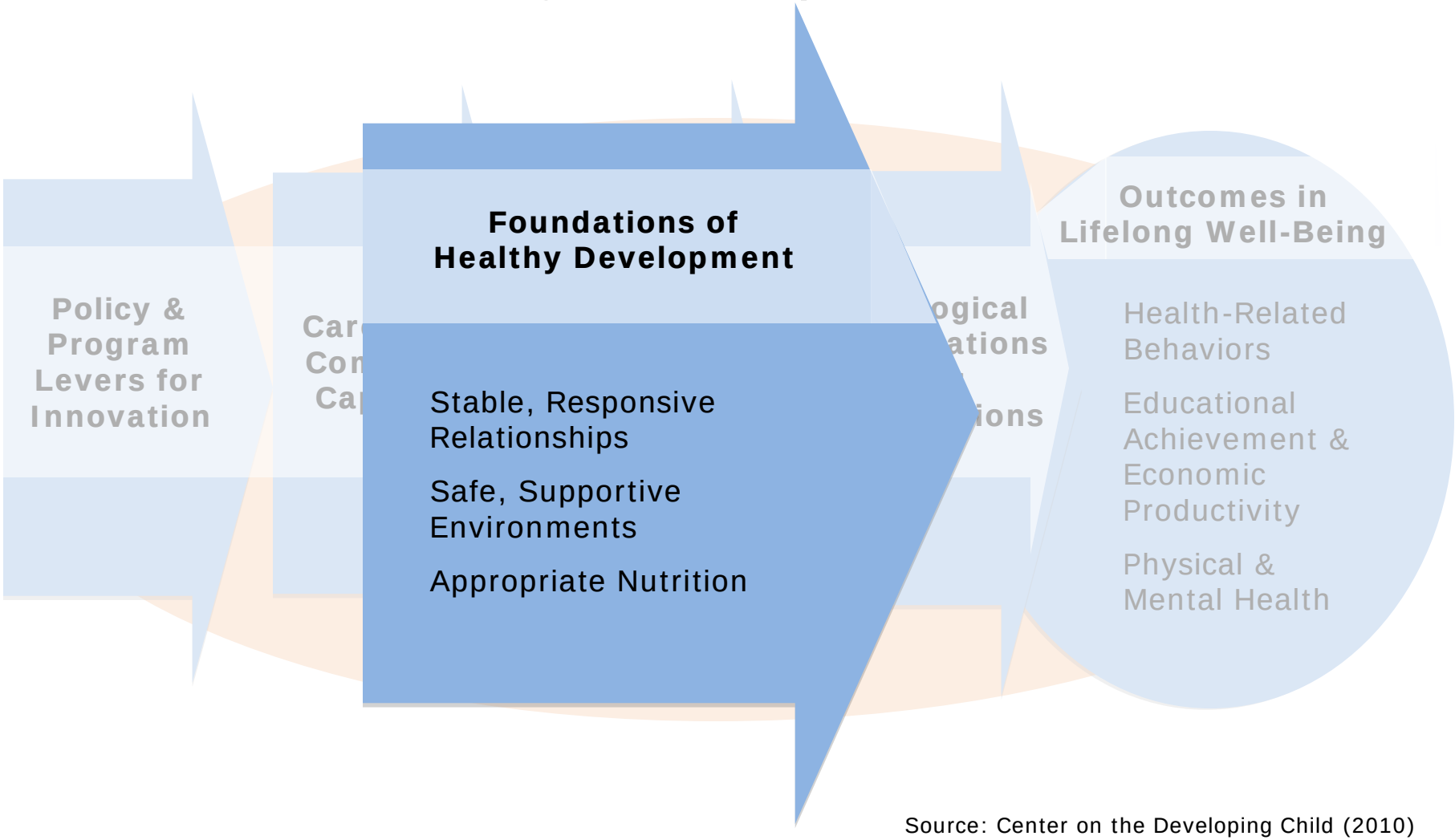
Source: Center on the Developing Child (2010)

Early Experiences Are Built Into the Body Through Complex Physiological Pathways



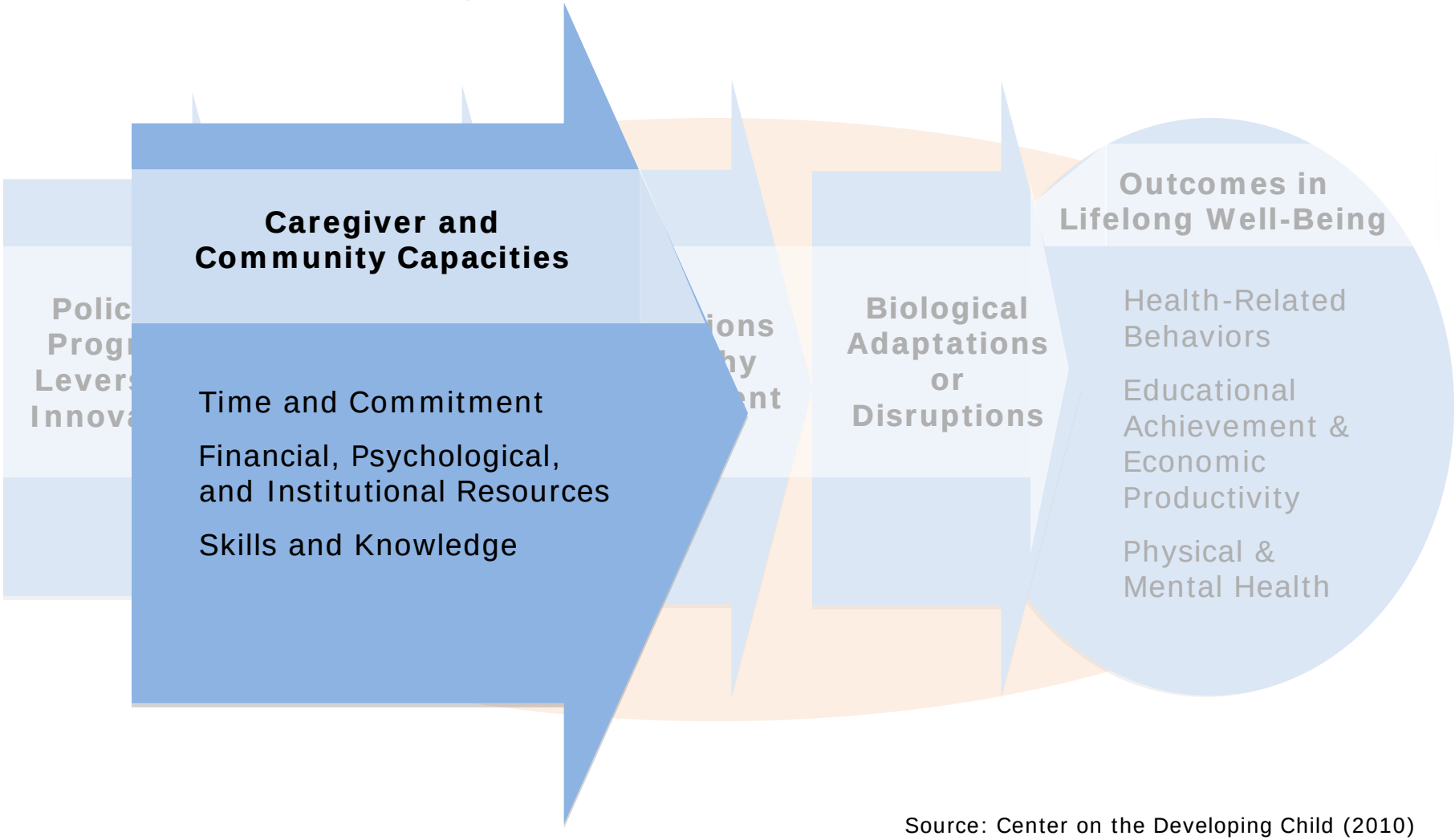
Source: Center on the Developing Child (2010)

The Foundations of Healthy Development Influence Biological Responses Over Time



Source: Center on the Developing Child (2010)

Caregiver and Community Capacities Affect the Strength of the Foundations



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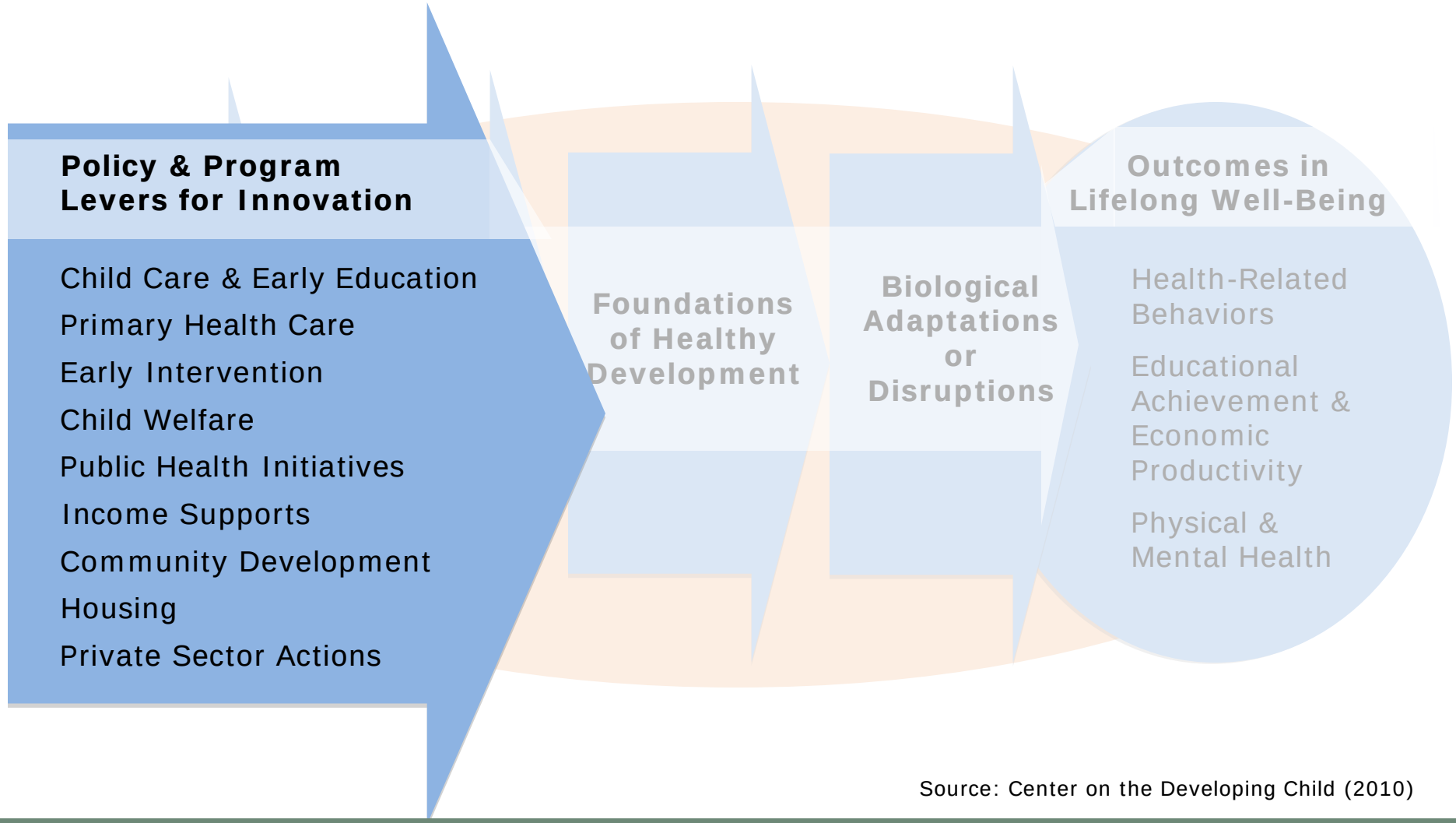
The Developmental Needs of Young Children Can Be Addressed Across Multiple Sectors



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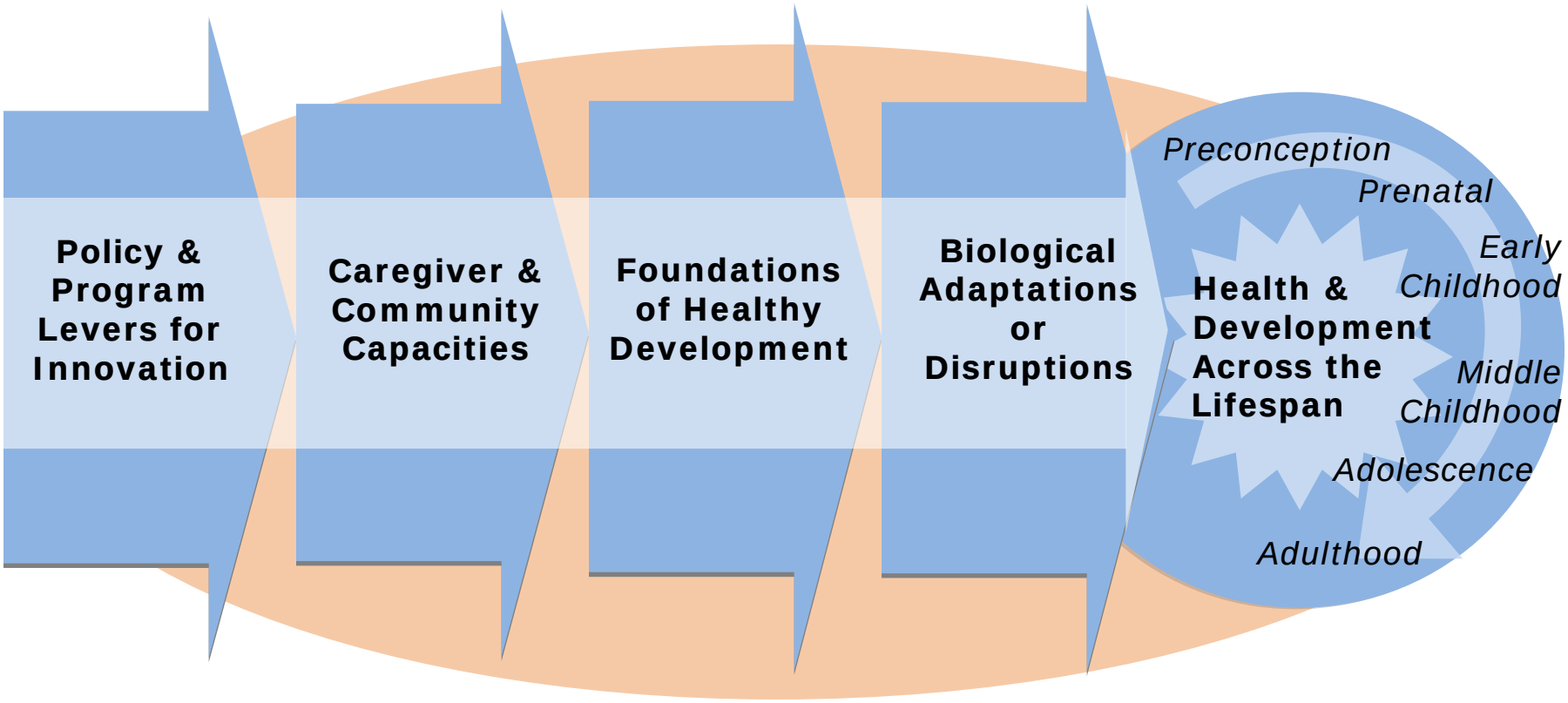
Science Can Inform an Integrated Approach to Early Investment in Healthy Development



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Effective Services Improve Relationships and Environments

Positive relationships and emotional, social, cognitive, and language learning experiences can be promoted both at home and through a range of **evidence-based** parent education, family support, early care and education, and intervention services.

Program Evaluation Research Helps Identify Effectiveness Factors

Not all programs are effective.

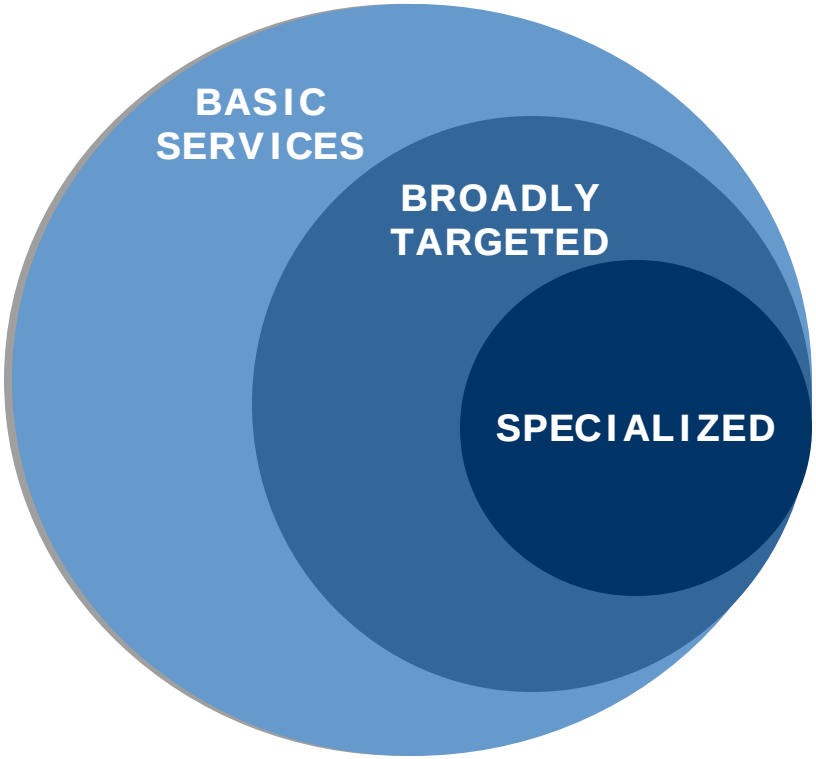
Effectiveness factors are key to distinguishing those programs that work from those that do not.

Science Points Toward 3 Levels of Services to Ensure Healthy Development

Basic health care, child care, and early learning services to help all children build and sustain strong bodies and brains.

Broadly targeted supports for children faced with major risk factors for poor development.

Specialized interventions for children and families with complex needs.



KATHERINE MAGNUSON, PH.D.
ASSOCIATE PROFESSOR OF SOCIAL WORK
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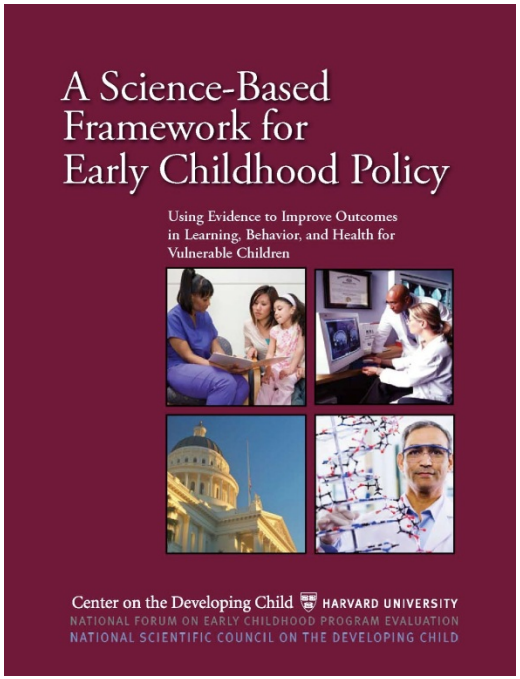

THE UNIVERSITY of WISCONSIN MADISON

kmagnuson@wisc.edu
www.developingchild.harvard.edu