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UMass Center for Clinical and Translational  
Science Research Retreat

2014 UMass Center for Clinical and  
Translational Science Research Retreat

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May 20th, 9:30 AM

## Keynote Speaker Presentations: 5th Annual UMass Center for Clinical and Translational Research Retreat (video)

Robert H. Brown Jr.

*University of Massachusetts Medical School*

*Et al.*

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Brown RH, Grisso T. (2014). Keynote Speaker Presentations: 5th Annual UMass Center for Clinical and Translational Research Retreat (video). UMass Center for Clinical and Translational Science Research Retreat. Retrieved from [https://escholarship.umassmed.edu/cts\\_retreat/2014/keynotes/1](https://escholarship.umassmed.edu/cts_retreat/2014/keynotes/1)

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# TRANSLATIONAL RESEARCH IN LAW AND PSYCHIATRY

Thomas Grisso  
Department of Psychiatry

Systems and Psychosocial  
Advances Research Center

**SPARC**

*Improving Mental and Behavioral Health Services for  
Better Lives and Stronger Communities*

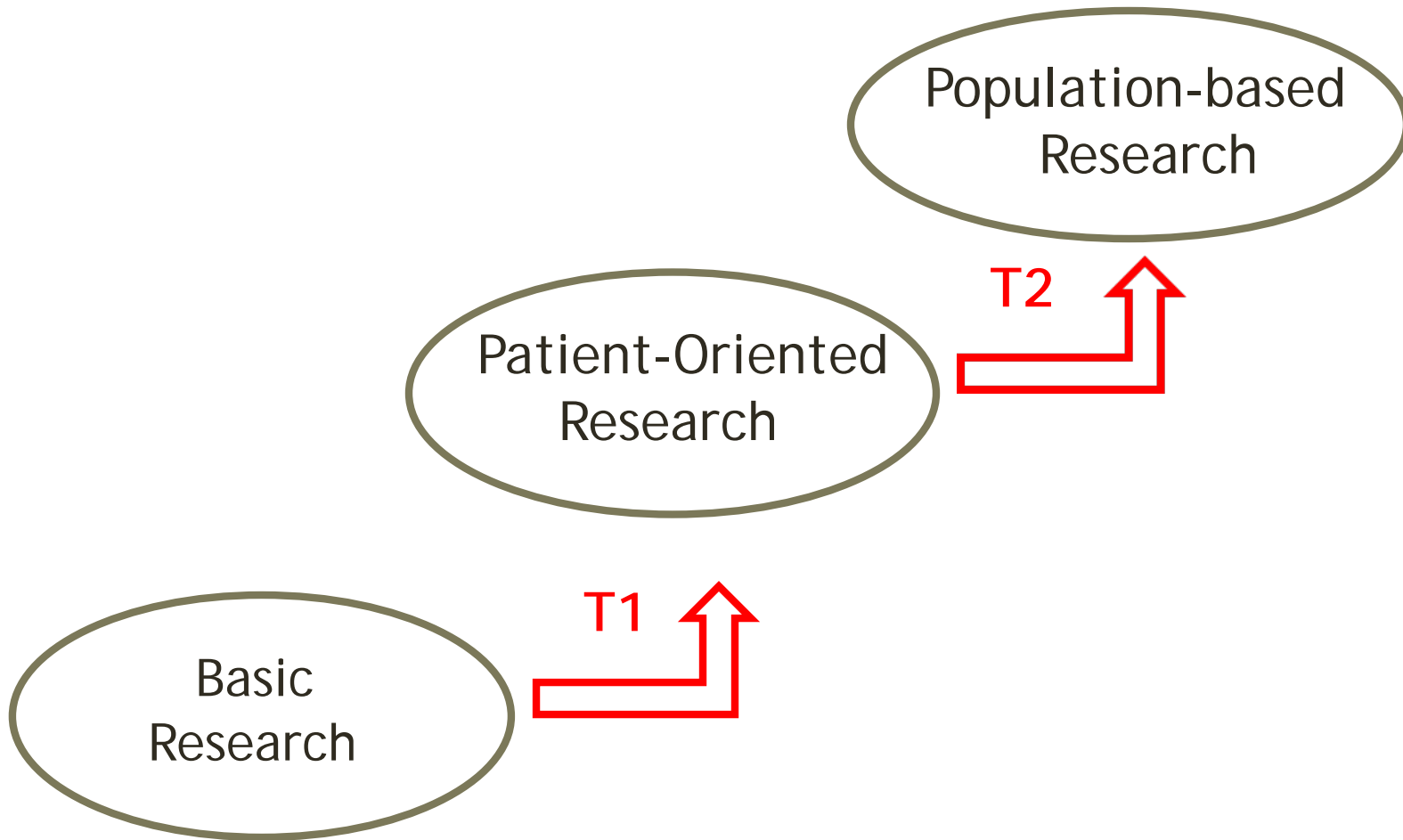
# DISCLOSURE

The speaker has no actual or potential conflict of interest in relation to this program/presentation.

# LAW AND BEHAVIOR RESEARCH

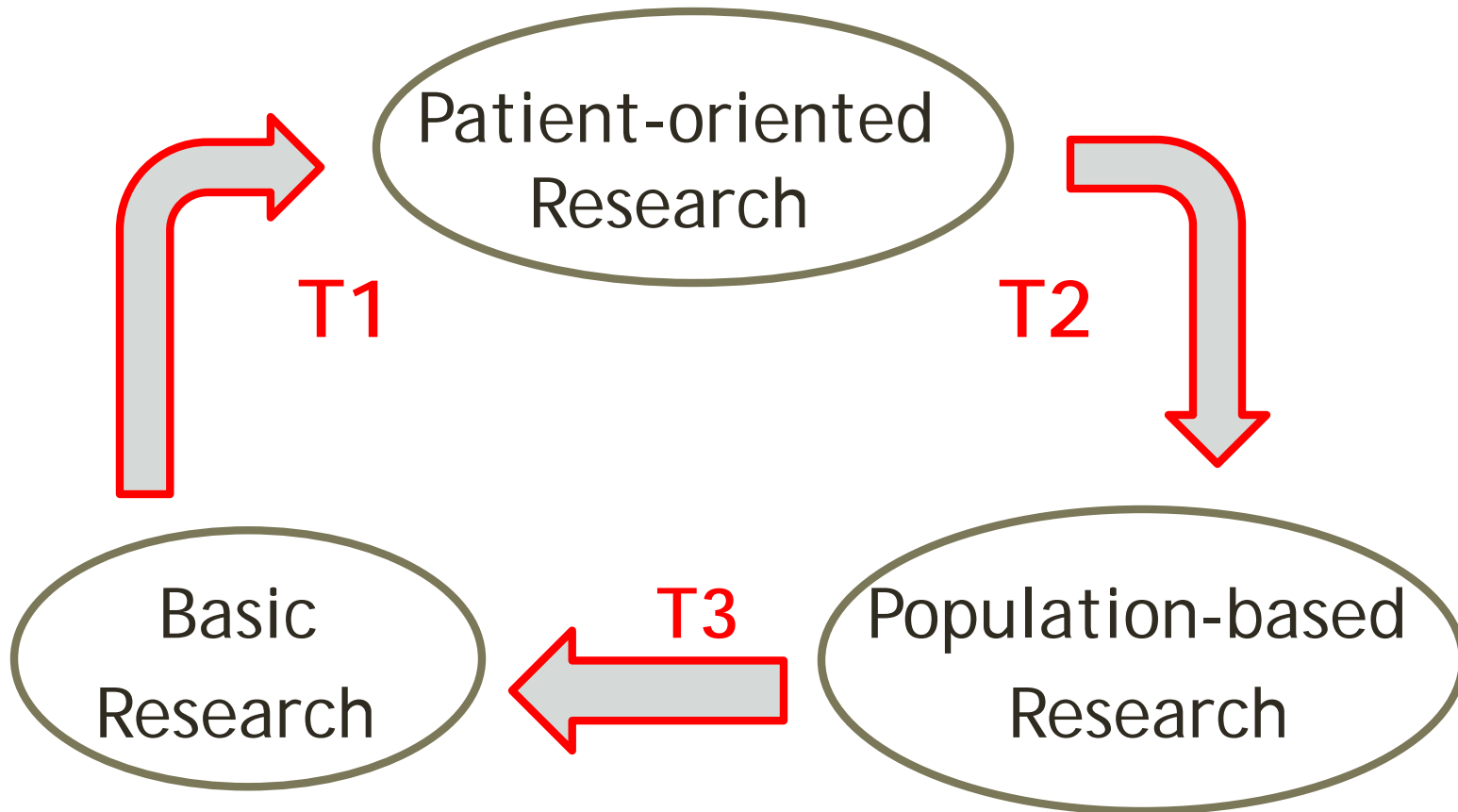
- ◉ All laws are based on presumptions about human behavior
- ◉ Behavioral and medical sciences can test and improve presumptions on which law is based
- ◉ Thus using science to improve the quality of justice

# TWO-STAGE TRANSLATIONAL RESEARCH PROCESS



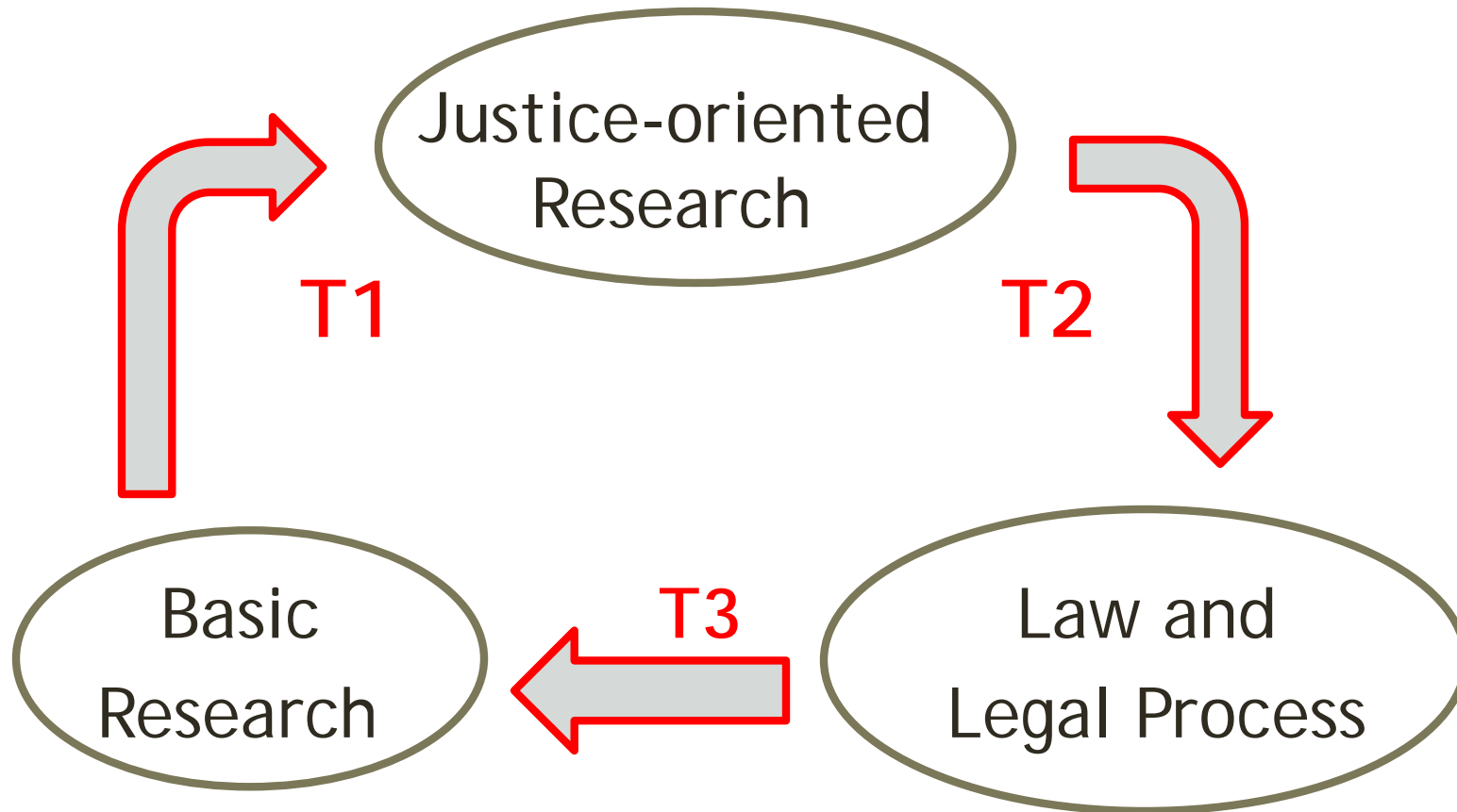
# THREE-STAGE TRANSLATIONAL RESEARCH PROCESS

(NIMH ASSOCIATION FOR CLINICAL RESEARCH TRAINING)



# THREE-STAGE TRANSLATIONAL RESEARCH PROCESS

(NIMH ASSOCIATION FOR CLINICAL RESEARCH TRAINING)



# JUVENILE JUSTICE

- A 100-year old system:  
Intended to meet youths' needs by rehabilitating rather than punishing



- By 1990s, juvenile justice was little different than criminal justice, increasingly treating juveniles like adults

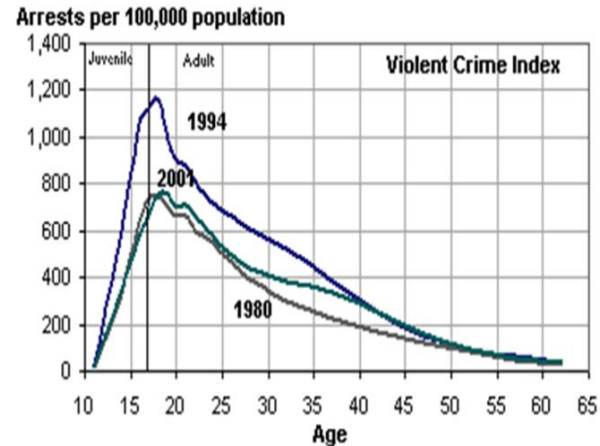




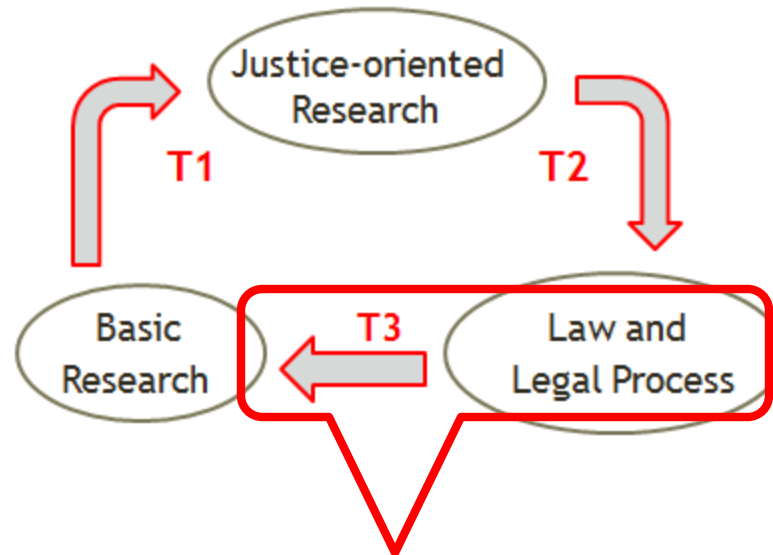
# REVISITING THE NATURE OF ADOLESCENCE

## ○ Questions:

- *Why is adolescence a high risk period for crime?*
- *Among teenagers who offend, even seriously, why do most of them not continue to re-offend in adulthood?*
- *Could understanding of adolescent offending from a developmental perspective provide for a better response than simply “locking them up?”*



# MACARTHUR FOUNDATION ADOLESCENT DEVELOPMENT AND JUVENILE JUSTICE RESEARCH NETWORK

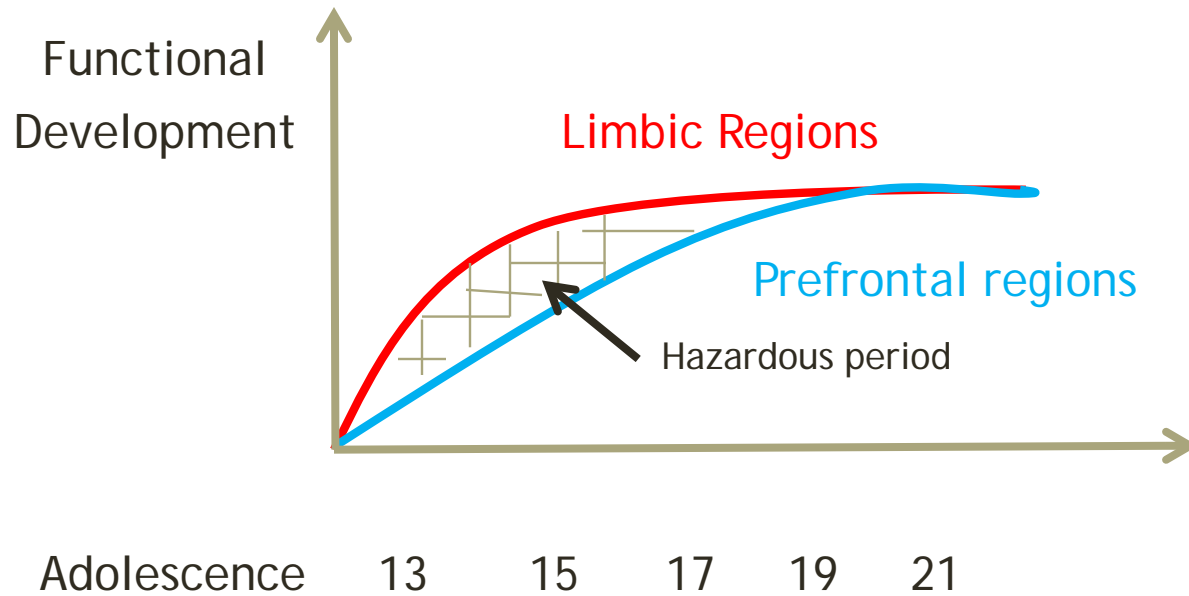


Analysis of law's assumptions  
about adolescent offending

# MACARTHUR FOUNDATION ADOLESCENT DEVELOPMENT AND JUVENILE JUSTICE RESEARCH NETWORK

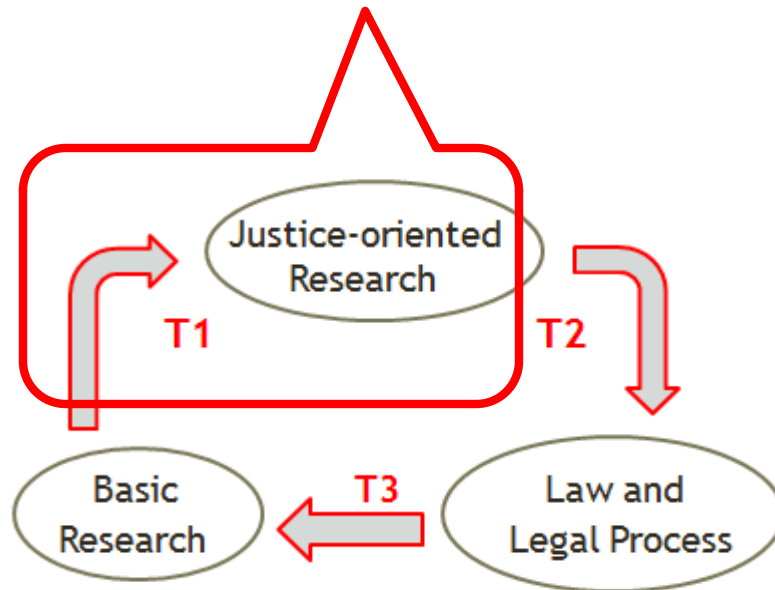
- ◉ Objective: Study decision-making processes and capacities of adolescents from a developmental perspective
- ◉ Appearance of first fMRI studies of child/adolescent brain development
- ◉ Gradual maturation of prefrontal cortex until late teens
- ◉ Surge of activity in limbic area associated with hormonal puberty around 12 to 16

# CONSEQUENCES: A DEVELOPMENTAL PERIOD OF HAZARDOUS DECISION-MAKING



# T1 STUDIES OF DECISIONAL ABILITIES

- Seeking behavioral evidence for immature decisional abilities suggested by neuroscience data on brain development



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- ◉ Seeking behavioral evidence for immature decisional abilities suggested by neuroscience data on brain development

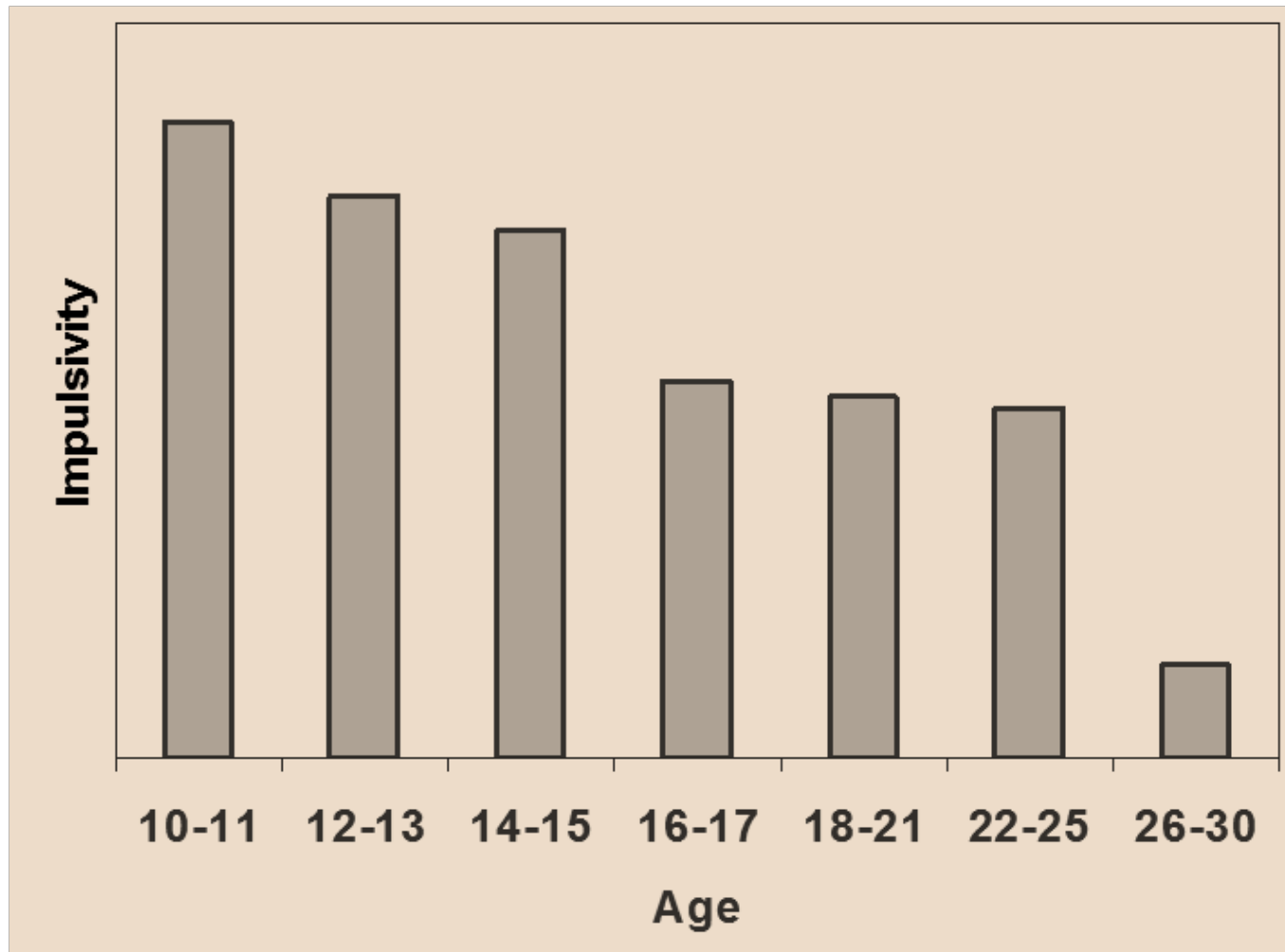
Performance on laboratory behavioral tasks...

(using neuropsychology, cognitive psychology, and attitudinal preference measures)

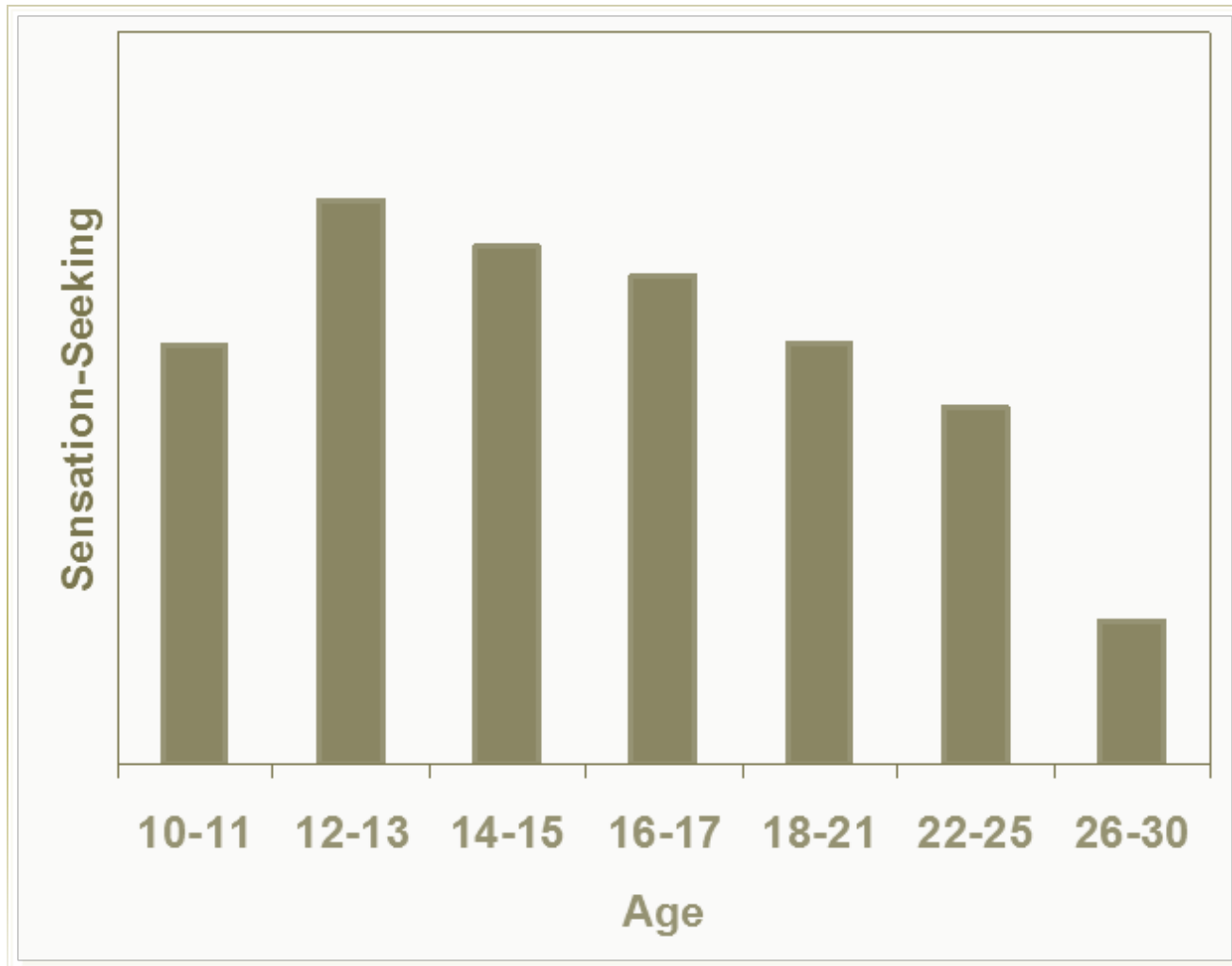
...measuring age differences in abilities related to adaptive decision-making

(such as delay of impulse, consideration of future potential outcomes, recognizing risks, etc.)

# IMPULSIVENESS (FAILURE TO DELAY ADAPTIVELY)

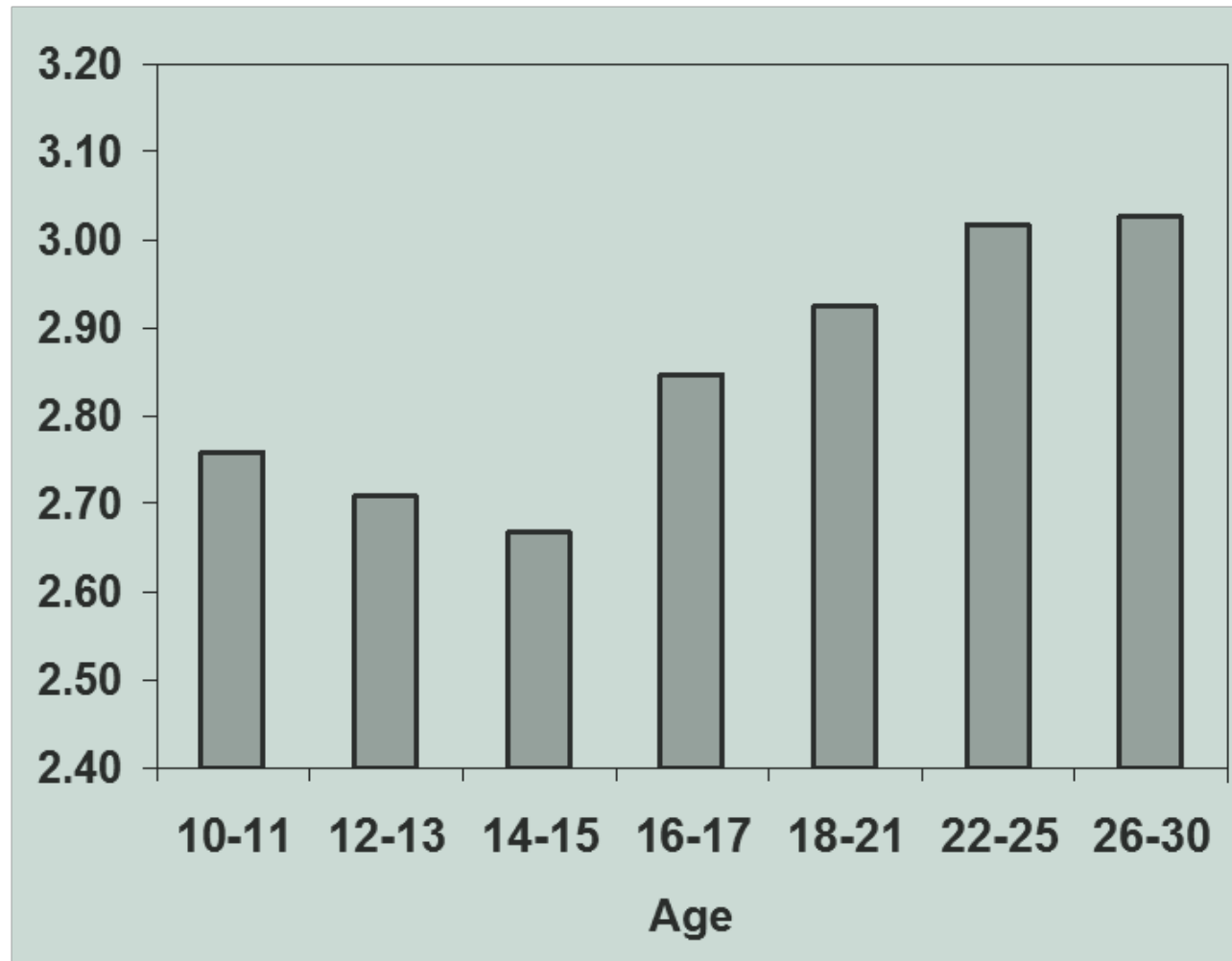


# SENSATION SEEKING

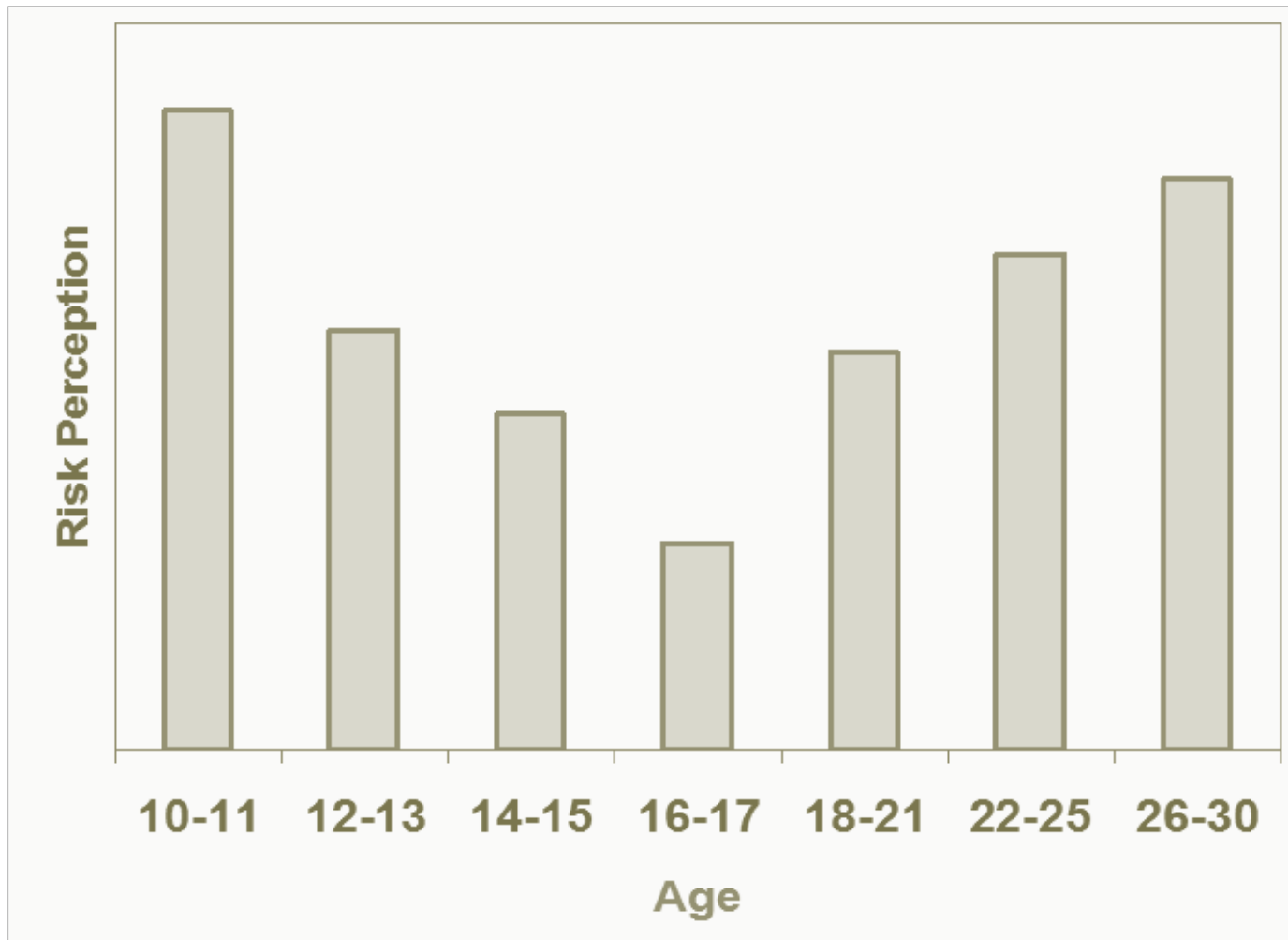




# CONSIDERING LONG-RANGE CONSEQUENCES



# PERCEIVING DANGEROUS OPTIONS AS RISKY

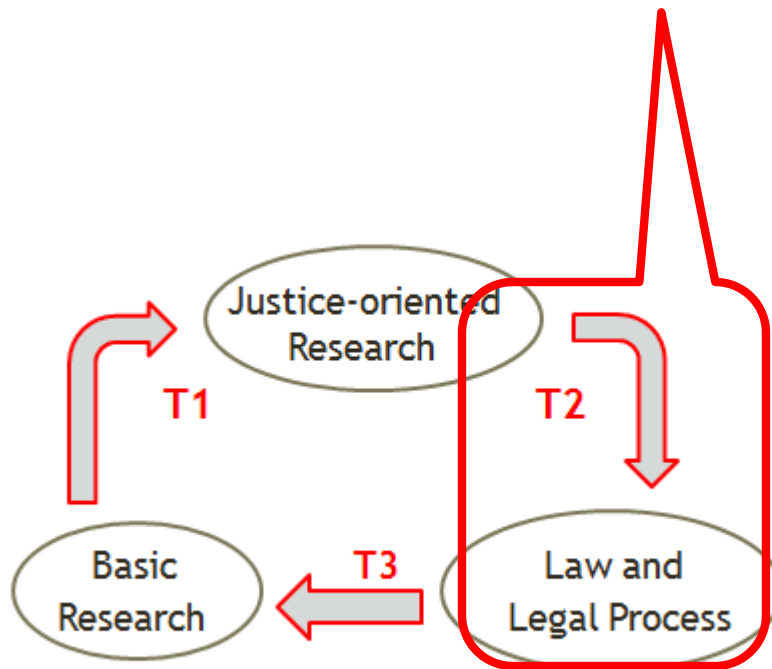


# T1 STUDIES OF DECISION MAKING IN A LEGAL CONTEXT

- ◉ Do the age differences in abilities in laboratory tasks also hold for youths' decisions in legal contexts?
- ◉ Age-related performance paralleled the findings in the first set of studies

# T2 STUDIES: PRACTICE AND LEGISLATION

- Research to educate juvenile court practice and state legislatures to better recognize adolescents' lesser capacities as defendants



# T2 STUDIES: IMPLEMENTING OUR RESULTS THROUGH PRACTICE AND LEGISLATION

- ◎ Research to educate juvenile court practice and state legislatures to better recognize adolescents' lesser capacities as defendants
  - *Development of valid forensic assessment methods*
  - *Translation to inform legislators*
  
- ◎ Outcomes—
  - *Our assessment methods are now used in a majority of juvenile courts nationwide*
  - *One-third of the states have created special legislation for better protection of youth in trial proceedings*

# T2 STUDIES: SHAPING OUR RESULTS FOR THE U.S. SUPREME COURT

- ◎ Legal scholarly analysis to translate the neurodevelopmental/behavioral research for use by appellate courts
  - *Amicus briefs*
  - *Policy documents*
- ◎ Cited and explained by U.S. Supreme Court in three cases reducing culpability for crimes committed as an adolescent
  - *Roper v. Simmons (2005) (no death penalty)*
  - *Graham v. Florida (2010)(no LWOP less than murder)*
  - *Miller v. Alabama (2012) (No mandatory LWOP for murder)*

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