

The Cultural Neurobiology of Moral Development

Darcia Narvaez

University of Notre Dame

Emotions are Foundational to Human Functioning

- Emotional systems
 - Are placed centrally
 - Interact with more evolved cognitive structures
- and
 - With lower-level physiological and motor outputs (Panksepp, 1998)

Emotion Systems Guide

Cognitive Development

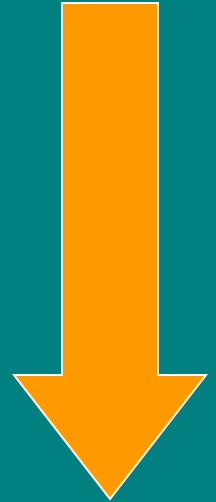
- “psychobehavioral potentials
- genetically ingrained in brain development”
- as “evolutionary operants” (Panksepp, 1998, p. 55)
 - inherited emotional command systems that help animals behave adaptively

Secure Attachment in Infancy

- Caregivers
 - comfort distressed immature reflexive systems
 - condition systems to be calm
 - predictably consistent in cognitive and emotional signaling
- Child learns communicative value of interpersonal signals, both cognitive and affective.

Evolved Developmental Niche for Young Kids (30 million year old practices)

- **TOUCH:** *Held or kept near others constantly*
- **RESPONSE:** *Prompt responses to fusses and cries*
- **BREASTFEEDING:** *Nursed frequently (2-3 times/hr initially) for 2-5 years*
- **EXTENSIVE MATERNAL SUPPORT and ALLOPARENTS:** *Shared care by adults other than mothers*
- **PLAY:** *Enjoy free play in natural world with multiage playmates*
- **NATURAL CHILDBIRTH**



Hewlett & Lamb, 2005; Konner, 2010; Narvaez, Panksepp, Schore & Gleason, 2013)

General Effects

- **TOUCH:** Growth hormone, DNA synthesis, calming hormones
- **RESPONSIVITY:** Vagus nerve function
- **BREASTFEEDING:** immune system, brain receptors
- **MATERNAL SUPPORT & ALLOPARENTS:** Greater maternal responsiveness
- **PLAY:** Dopamine system functioning
- **NATURAL CHILDBIRTH:** bonding, sociality

Parenting Practice & Child Outcomes

EFFECTS AT AGES 3-5	Empathy	Conscience	Self-regulation	Cooperation	IQ	Depression (not)	Aggression (not)
Natural Childbirth	Blue	Teal	Purple	N/A	N/A	N/A	N/A
Breastfeeding initiation	Teal	Light Green	Teal	Yellow	Teal	Teal	Red
Breastfeeding Length	Teal	Light Green	Purple	N/A	N/A	N/A	N/A
Touch	Blue	Light Green	Purple	Teal	Light Orange	Teal	Teal
Responsivity	Blue	Light Green	Purple	Yellow	Pink	Green	Red
Play	Blue	Light Green	Purple	N/A	N/A	N/A	N/A
Social support/ Multiple caregivers	Teal	Light Green	Purple	Yellow	Light Orange	Teal	Red

Early Child Development

- Born 9-18 months early
 - 25% of brain volume (80% by age 3)
- Right brain development before age 2
- Immune system takes about 6 years
- Developmentally plastic for epigenetics

Early experience sets up structure and function of physiology

- Stress response systems
- Immune system
- Endocrine system
- Neurotransmitters (number, functionality)
- Emotions and emotion systems
- Corpus callosum (size, quality)
- Brain hemispheric integration

Narvaez, in preparation; Narvaez, Panksepp, Schore & Gleason, 2012

As embodied creatures, all affect sociality

Right Brain Underdevelopment

- Self-regulation
- Intersubjectivity and social pleasure
- Emotional intelligence
- Empathy
- Beingness
- Self transcendence
- Higher consciousness
- ***Luckily, the right brain can grow throughout life!***

Poor early experience

- **Avoidant Insecure Attachment**
 - Rejecting caregiver
 - Inhibit emotion
 - Emotionally underdeveloped
- **Ambivalent/Anxious Insecure Attachment**
 - Inconsistent caregiver
 - Use emotion to coerce
 - Underdeveloped cognition

**HOW IS EARLY EXPERIENCE
RELATED TO MORAL
FUNCTIONING?**

Triune Ethics Theory

(Narvaez, 2008, 2009, 2014)

- Inspired by MacLean's triune brain theory (1990):
 - Reptilian (brain stem, midbrain, lower limbic)
 - Paleomammalian (upper limbic)
 - Neocortex, prefrontal cortex
- **Subjective** moral orientations
- Also identifies **objective** moral orientations

Brain Function with Good Early Care

Protoreptilian

- **Survival systems:** anger, fear, panic (fight, flight, freeze, faint)

Mammalian

- **Social:** care, play

Human Executive controls interact with survival and prosocial systems

The Moral Power of Brain Systems

Protoreptilian

- Survival: anger, fear, panic (fight, flight, freeze, faint)
- *Morality is self-protective*

Mammalian

- Social: care, play
- *Morality is compassionate*

Human

- Executive controls interact with survival and prosocial systems
- *Moral imagination can build on either*

Safety
Ethic

Engagement
Ethic

Imagination
Ethic

Power of Survival Systems from Early Undercare

Protoreptilian

- Survival systems: anger, fear, panic (fight, flight, freeze, faint)

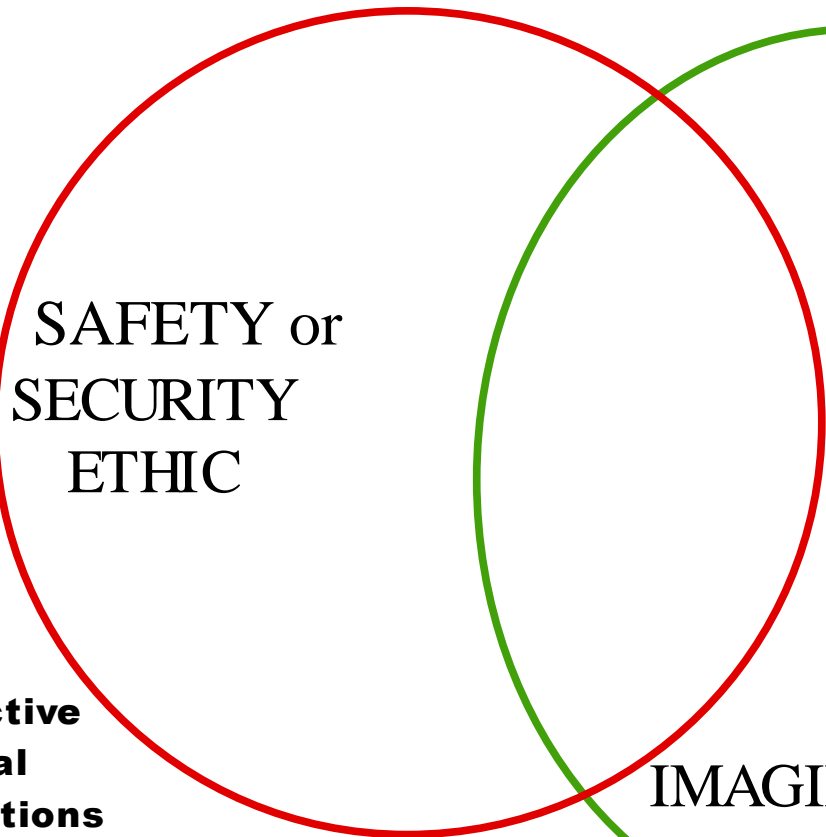
Mammalian

- **Social:** care, play

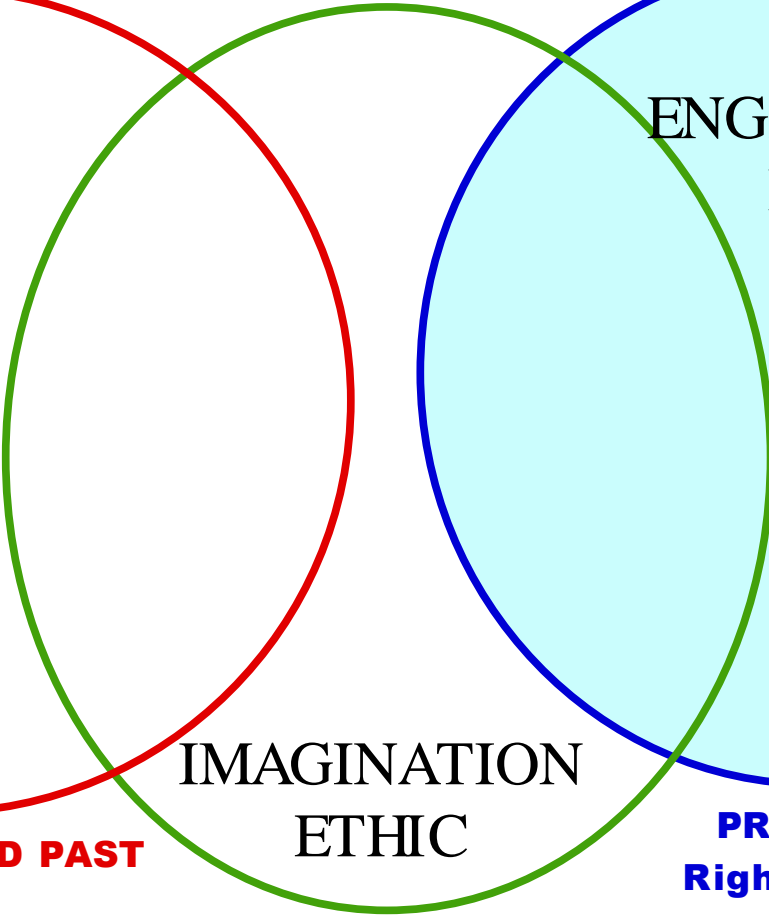
Human Executive controls interact with survival and prosocial systems

Toxic Stress leads to self-protection disposition

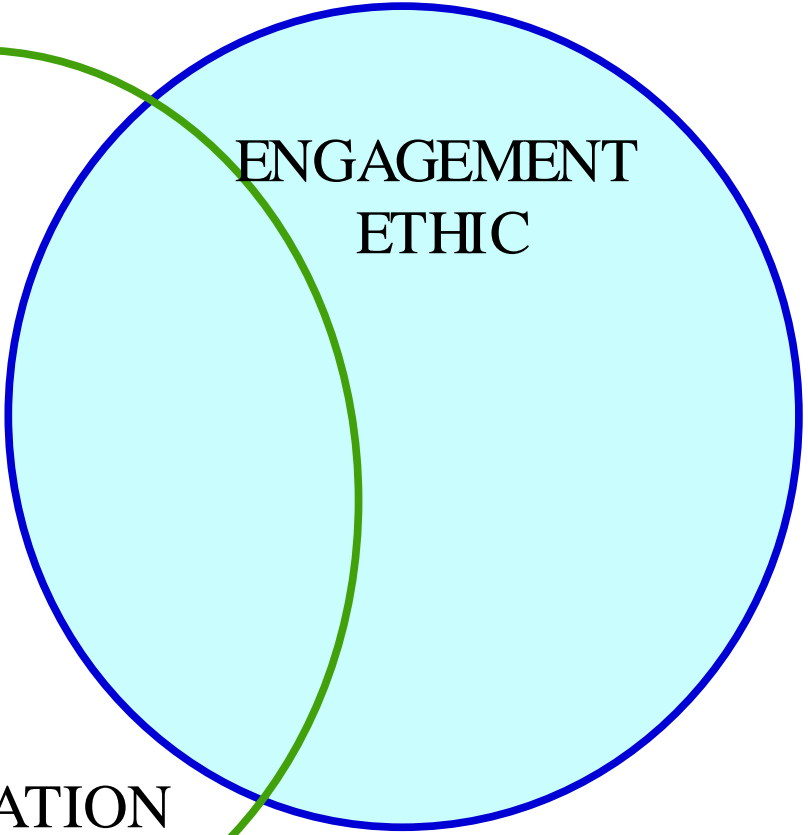
Emotion Development is key to Optimal Functioning



SAFETY or
SECURITY
ETHIC



IMAGINATION
ETHIC



ENGAGEMENT
ETHIC

**Subjective
moral
orientations**

CONDITIONED PAST

FOCUS ON POSSIBILITY
Left brain dominant

PRESENCE
Right brain dominant

MULTI- ETHICS THEORY:
the social landscape

Ethic of Safety: Relational Self-protection

- Based primarily in instincts for **survival** (brainstem, lower limbic system)
 - Systems shared with all animals
(Panksepp 1998)
 - Available at birth
 - Useful in moments of physical threat
- Instincts primed by perception of fearful climate or situation
- Takes over attention
 - Depletes resources for higher order processes
 - Shifts attention to the self, lowering empathy

Safety Subtype 1:

Bunker Safety

- **“Fight” (or Flight)**
 - Based in the activating sympathetic system
- **Defensive or reactive aggression**
 - Feels “good” and “right”
- **Self-preservational externalizing**
 - Early trauma->personality disposition
 - Ambivalent/Anxious attachment

Emotion systems: SEEKING, RAGE

Behaviors: abuse, bullying, blaming

Security Subtype 2: *Wallflower Security*

- **“Freezing” or disassociative “Faint”**
 - Based in the systems that protect body from death or psychological trauma
- **Submission, passivity, detachment**
 - Compliance with an authority
- **Self-preservational internalizing**
 - Early trauma->personality disposition
 - Anaclytic or introjective depression

Emotion systems: FEAR, SEPARATION DISTRESS

**Behaviors: compulsiveness (caregiving, compliance), obsessiveness
hoarding, withdrawal, paralysis**

Ethic of Engagement: Relational Presence

- Mammalian emotional systems drive us towards intimacy
 - Social and sexual instincts, empathy and parental care, play (*Darwin, 1891; Loye, 2002*)
 - Emotion systems underlying Darwin's "moral sense"
- Primed by supportive, caring relationships and environments
 - Secure attachment
- Focused on present moment

Emotion systems: upper limbic: CARE, PLAY
Behaviors: compassionate response,
egalitarian social play, acceptance, social
non-self

Ethic of Imagination: Reflective Abstraction

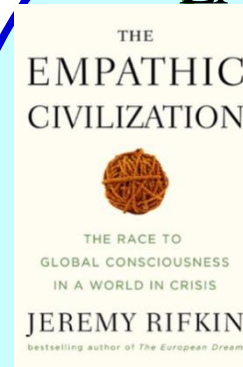
- Engagement May Not Be Enough for Macro Morality
- Neo and Prefrontal Cortices
- Behaviors: abstraction, deliberation, imagination
- **Coordinates** functioning
 - Gut feelings and intuitions,
 - Principles,
 - Self goals/needs with the goals/needs of others,
 - Reactions and outcomes (of self and others)



Detached



Vicious



Communal



Wallflower

SAFETY or
SECURITY
ETHIC



Bunker

IMAGINATION
ETHIC

ENGAGEMENT
ETHIC

PRESENCE
Right brain dominant

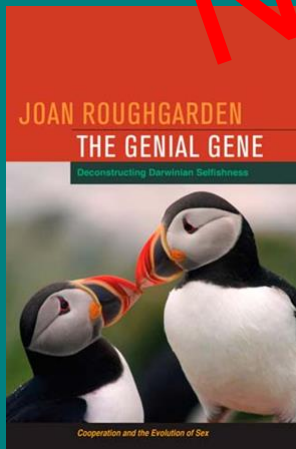
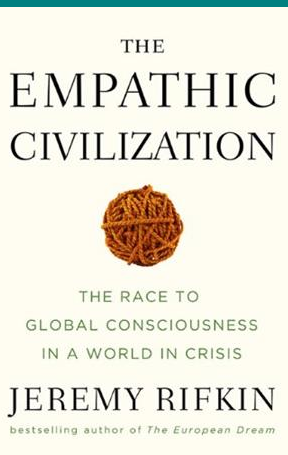
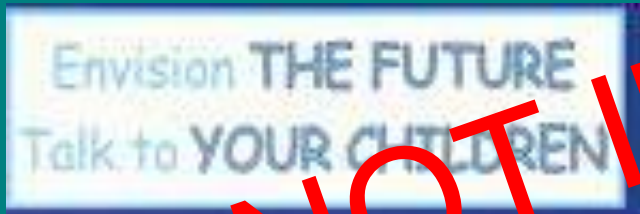
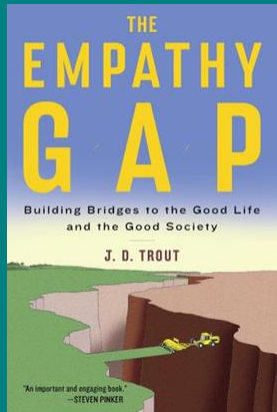
CONDITIONED PAST

FOCUS ON POSSIBILITY
Left brain dominant

Subjective
moral
orientations



Communal Imagination



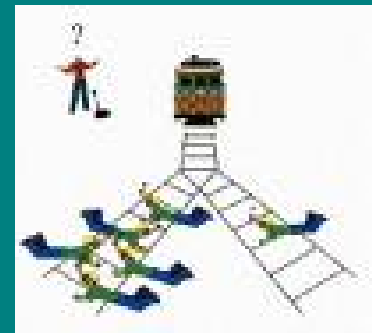
- Prosocial emotions are active
- Perception of possible prosocial moral futures

- Capabilities fostered by good early care, secure attachment, supportive culture

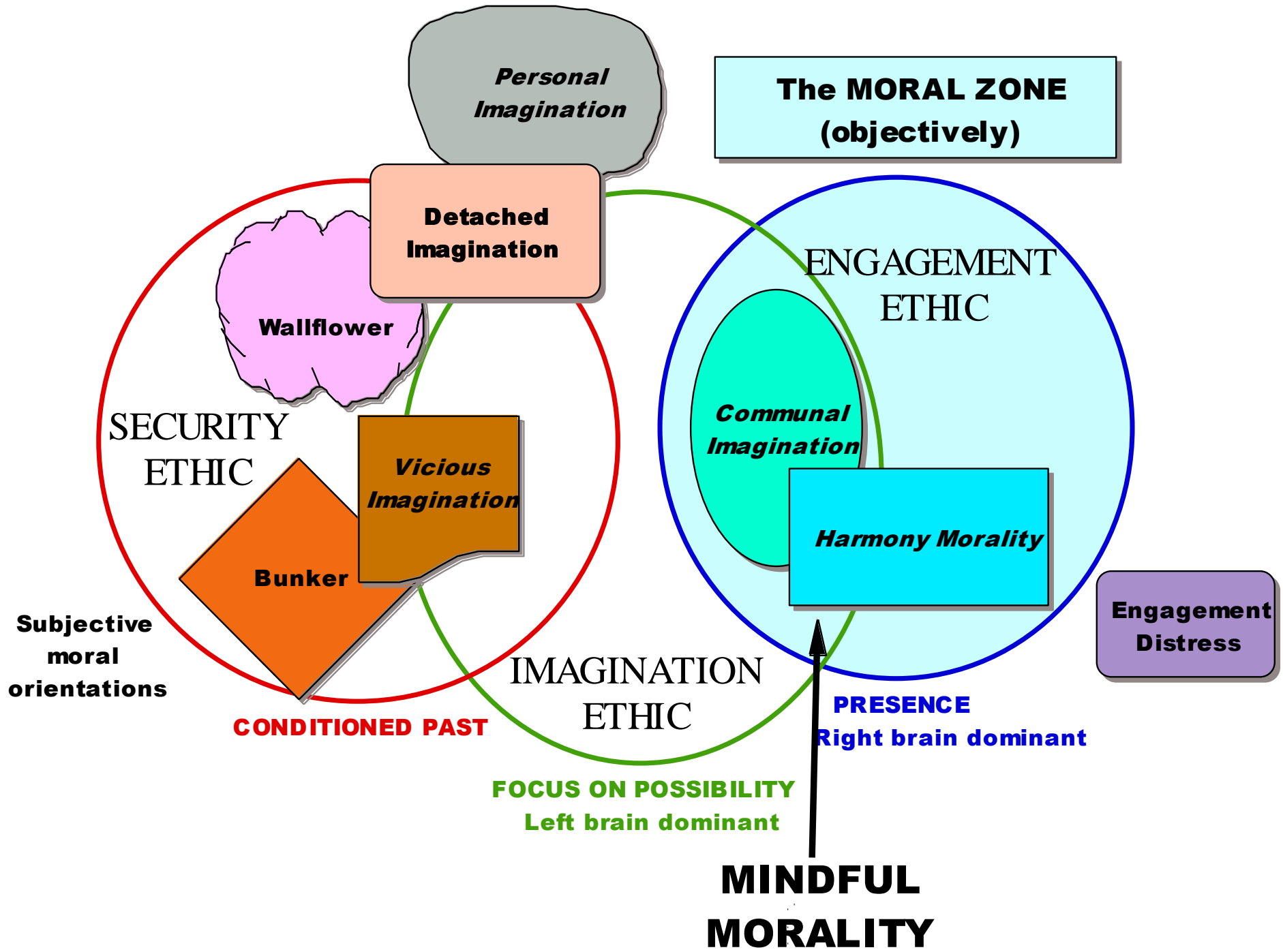
NOT INNATE

Detached Imagination

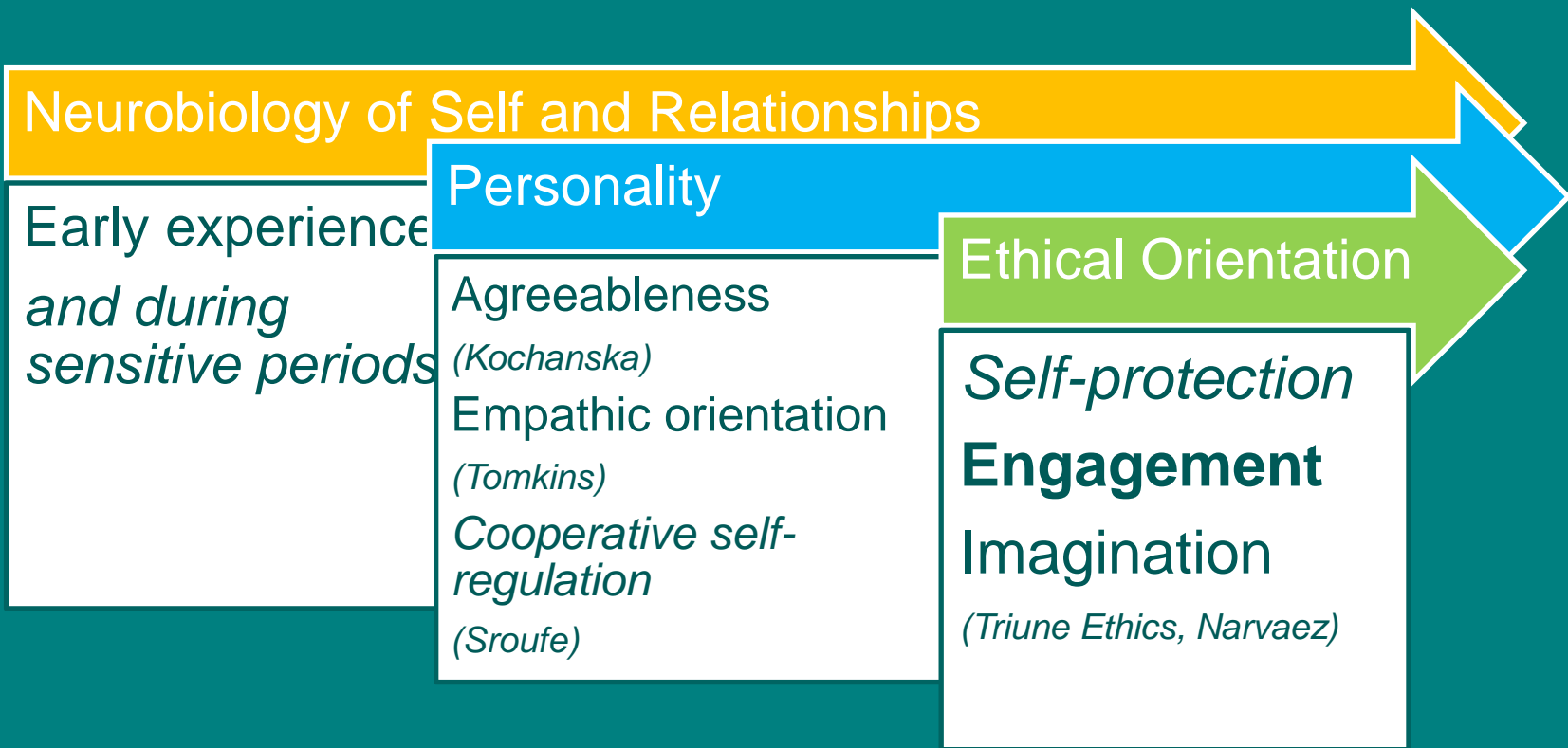
- Emotionally cool or cold
- Categorizes and stereotypes
- Objectifies, dissects and orders
- Decontextualizes
- Seeks control, power over objects
- Lack of attuned relationship
- Innovation without a sense of consequence



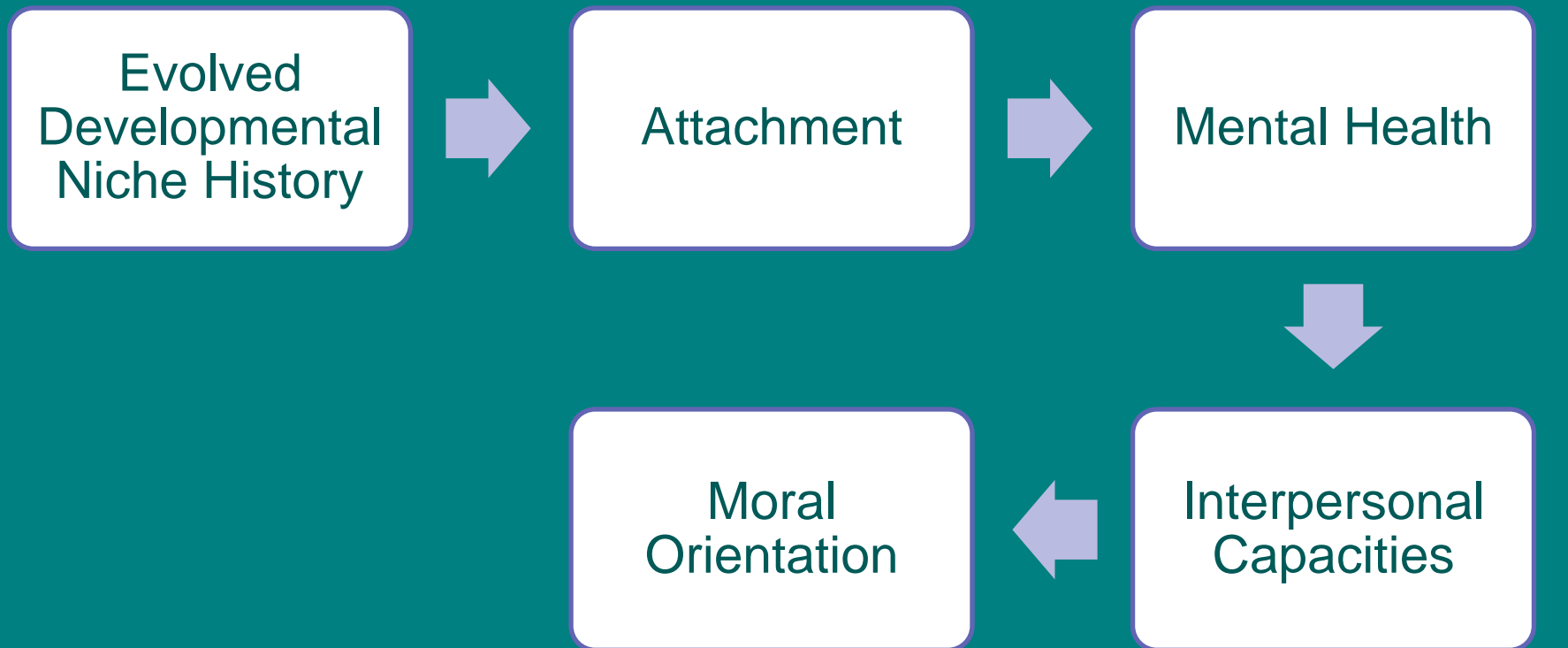
(McGilchrist, 2009)



Epigenetics of Moral Development



Significant Mediation Patterns



Engagement
vs.
Self-protection

Empathy
Perspective taking
vs. *Personal distress*

Evolved Human Developmental Niche

Multiple Inheritances

Pre-conception and Conception

Gestation and Birth

Caregiving and Social Support

Capacities and Optimality

Moral Mindset

Other-inclusive personality

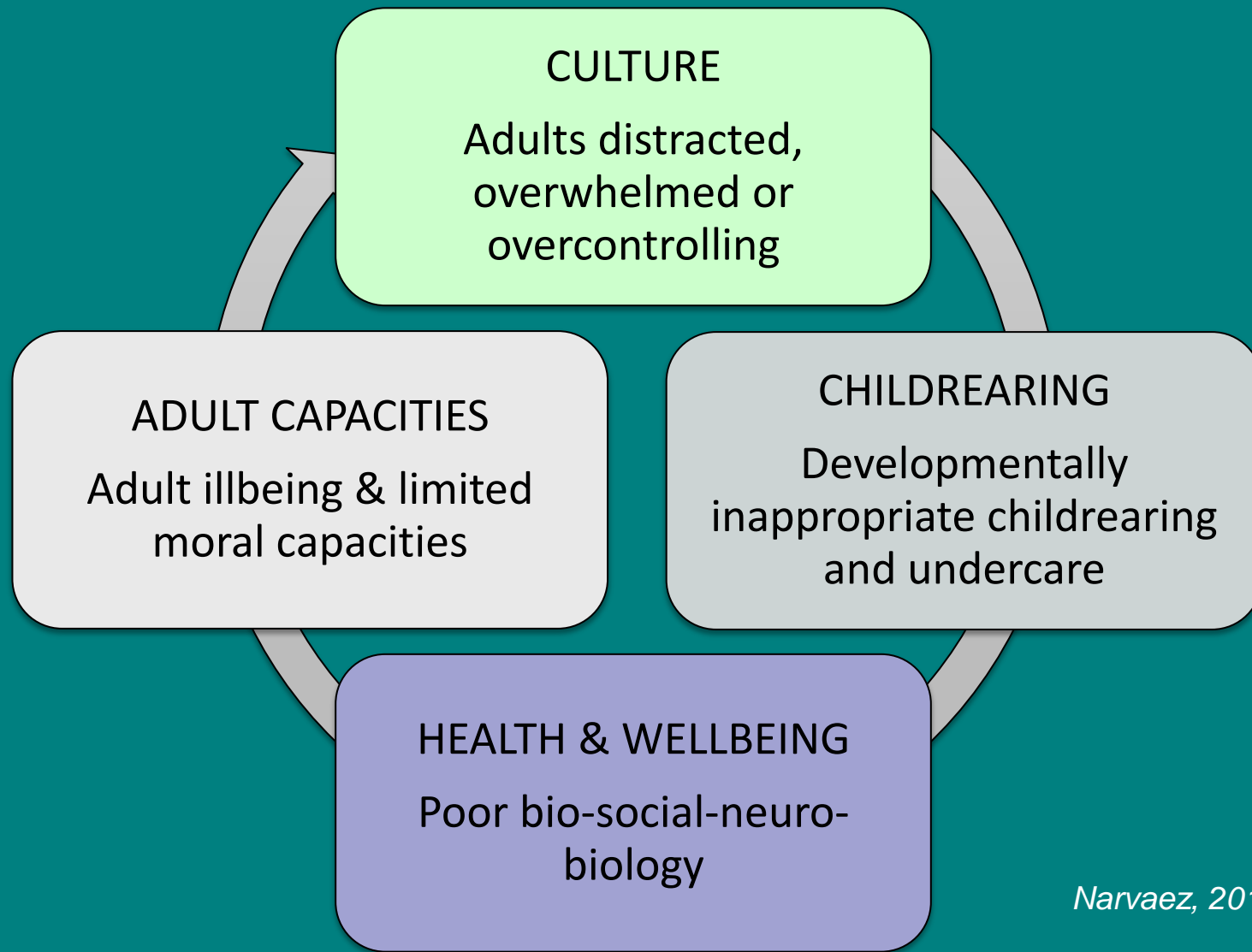
Suboptimal

Epigenetics and Plasticity

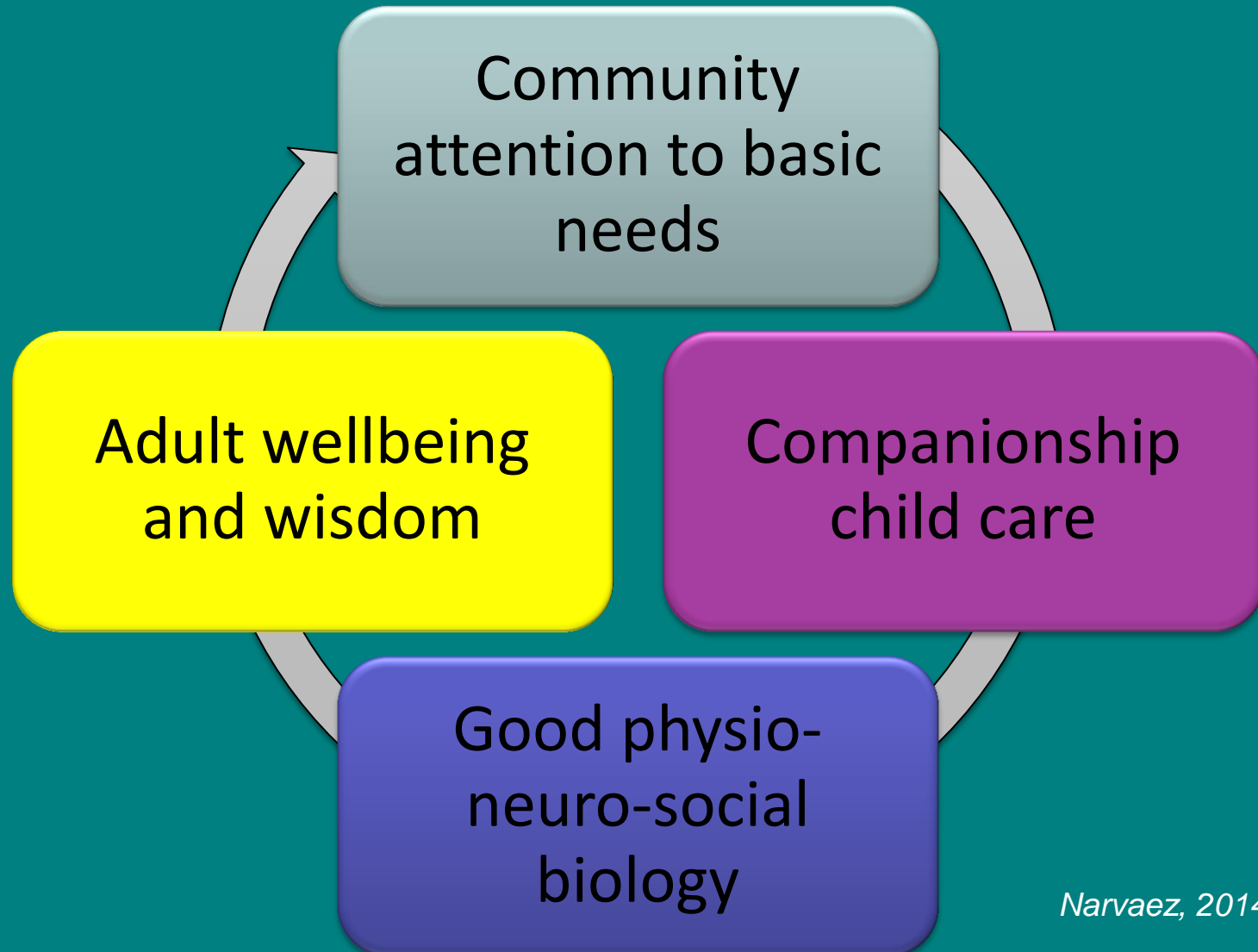
Self-focused

person

Culture of Competitive Detachment



Culture of Cooperative Companionship



Evolution, Early Experience and Human Development

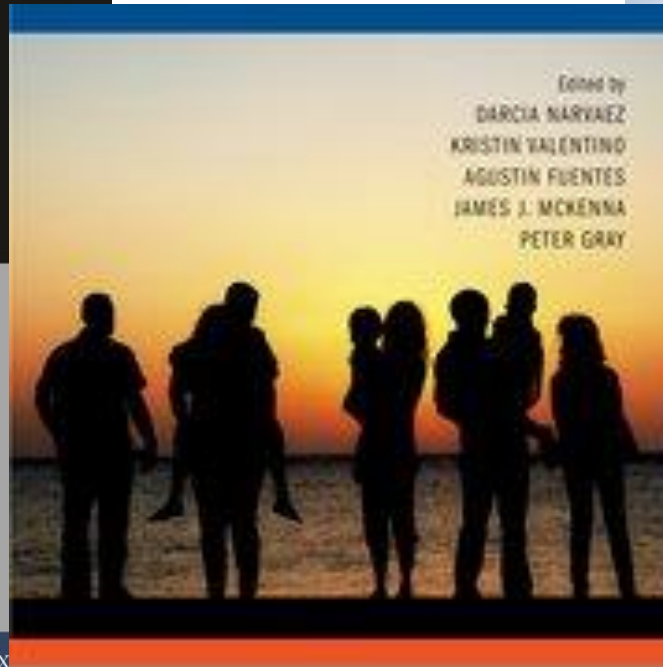
From Research to Practice and Policy



EDITED BY
DARCIA NARVAEZ
JAAK PANKSEPP
ALLAN N. SCHORE
TRACY R. GLEASON

2013

2014



Ancestral Landscapes in Human Evolution

Culture, Childrearing and Social Wellbeing

OXFORD

NEUROBIOLOGY AND THE DEVELOPMENT OF HUMAN MORALITY

EVOLUTION, CULTURE, AND WISDOM



DARCIA NARVAEZ

2014, W.W. Norton
Series on Interpersonal
Neurobiology

For More Information and Papers

Download papers from webpage:
<http://www.nd.edu/~dnarvaez/>

Email: dnarvaez@nd.edu

Psychology Today blog:
“Moral Landscapes”