

The Neurobiology of Cognitive Bias

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Changes in Philosophical Concepts in Psychiatry

- Theory of psychiatry has roots in philosophy
- Vienna Circle (Logical Empiricism)
- Before 1980's: Dominant dichotomy-- Nature v. Nurture resulted in a myriad of schools of psychology
- After 1990's (decade of the brain): Emergence of Neuroscience

The Continuum: Biased Cognition - Cognitive Bias

- Biased Cognition = presence is felt in many areas of thinking, as a reaction to threats, involves emotional participation
- Consolidated Biased Cognition = hard wired, inflexible, e.g., depressive cog.
- Cognitive Bias Proper = narrow, specific, operates via implicit/procedural memory

Cognitive Bias

(first studied in youth aggression)

- Fiske & Taylor, 1991: Display of aggression depends to a great extent on cognitive processes.
- The relationship between social antecedents and a child's aggressive behavior is partially mediated through cognitive processing mechanisms, including expectations, attributions, and beliefs.
- Cognitions become a bridge between environmental events and behaviors. (Coie & Dodge, 1997; Crick & Dodge, 1994; Huesmann, 1998)

Cognitive Bias (cont'd)

- Empirical studies (Crick & Dodge, 1994; Hudley, 1994, 2003; Orobio et. al, 2002): School violence and bullying = consistent encoding of benign and ambiguous social cues as being hostile and aggressive in nature.
- Hostile attributions are consistently higher in aggressive youth and are insensitive to priming techniques in comparison to non-aggressive youth (Graham & Hudley, 1994)

Cognitive Bias

(developmental, psychological, and neurobiological perspectives)

1. Brain development (“sculpting”)
2. Neurobiology of learning (protein synthesis, synaptic growth, dendritic rebr.)
3. Emotion/cognition partnership
4. HTP axis and traumatic stress
5. Complex learning

For additional information regarding
this subject, please contact Dr. Novac
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