Emotions as the product of body and mind: The hierarchical structure of folk concepts of mental life among US adults and children

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Can a beetle

feel love?

Can a beetle

remember things?

Can a beetle

get hungry?

Fig. 2: The joint dependency of HEART on BODY and MIND across age groups in all studies. Points = individual participants' assessments of a particular target.

kgweisman.github.io

teddy bear

computer

dol

robot

RESULTS: Cluster analysis

Cluster analyses hint at radical conceptual change: Agglomerative hierarchical clustering (agnes) over difference scores in Studies 2-3 consistently yielded 3 clusters: Frequent violations A. Mostly younger children (Fig. 3, left) of asymmetries B. Adults + older children who assessed animate targets (Fig. 3, middle) Almost no violations of asymmetries C. Adults + older children who assessed inanimate targets (Fig. 3, right) Age-related, qualitative differences in response patterns are consistent with radical changes in structural relations (in addition to gradual knowledge enrichment) (Carey, 1991). Study 2 Cluster A: 80% children Cluster B: 32% children Cluster C: 21% children Median child age: 8.86y Median child age: 8.12y Median child age: 8.67y Age group * ▲ children adults * 0.0 -Target character beetle robot Study 3 Cluster A: 79% children Target character Cluster B: 56% children Cluster C: 51% children Median child age: 8.69y Median child age: 5.45y Median child age: 7.89y elephant goat * mouse *** bird beetle

Fig. 3: Difference scores by cluster in Studies 2-3. Small points = individual participants; large points = group means; error bars = bootstrapped 95% Cls.

-0.5

DISCUSSION

US adults' mental capacity attributions appear to be strictly governed by a folk theory: Emotions depend on a combination of physiological sensations and perceptual-cognitive abilities. This folk theory resembles recent scientific theories. (Barrett, 2012, Emotion; Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005, Emotion)

Conceptual development extends well into middle childhood, characterized by radical changes in structural relations well after the differentiation of adult-like conceptual units.