

# Sociocultural Factors in Conceptual Change: Tracking Mental Models in A Community-Based Parent Education Program

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The National Academy of Sciences and the Institute of Medicine (NAS/IOM, 2000) argue for disseminating neuroscientific and psychological research to caregivers, citing misconceptions, debates raging without evidence, and a tendency to treat “nature” and “nurture” as mutually exclusive. Altering caregiver reasoning and behavior requires creating new mental models of the brain and mind. NAS/IOM (2000) reported that existing interventions fail in accommodating sociocultural factors, and in empowering family decision making. Furthermore, the clearest benefits of caregiver knowledge and skills have been to children disadvantaged by such events as brain injury (Kinsella, Ong, Murtagh, Prior & Sawyer, 1999), and neglect or abuse (Bakermans-Kranenburg, Ijzendoorn, & Juffer, 2003); Given that such trauma is often emotionally challenging, the most important caregiver models may be constructed in the context of strong social and affective pressures.

We examined the mental models of caregivers participating in a program on infant brain development, representing not only the domain content of their models, but also sociocultural and affective factors. Affect and cognition interact in the experience of regret (Roese, 1997; Gilovich & Medvec, 1995), and dissonance (Elliot & Devine, 1994). Sociocultural factors can affect inquiry (Brodie, Kjellson, Hoff & Parker, 1999), attribution and emotional regulation (Chavira, Lopez, Blacher & Shapiro, 2000), and reasoning (Nisbett, Peng, Choi & Norenzayan, 2001). Our goal is to enhance theoretical models of conceptual change, while tracking family outcomes.

## Method

The *First Teacher Program* disseminates research on infant brain development. Professional caregivers receive training, and then facilitate parent workshops in their communities. Our research involves two communities, each with 20 facilitators. Town A is 1/3 Latino and 2/3 Anglo. Primarily middle class, it contains a Federal Enterprise Zone; 68% of zone residents do not speak English, 50% of adults lack a high school diploma, and 50% of families earn less than \$5,000 annually. Town B is semi-rural. Twenty-five percent students in the district are native Spanish speakers identified as “limited English proficiency.” Forty percent of families live at or below the poverty level.

Participant models of the brain and mind are elicited using written protocols, one-on-one interviews, focus groups, and observation of trainings and presentations.

## Results & Discussion

Participants are strongly influenced by prior experience, not only as parents and caregivers, but also as children themselves. They are emotionally invested in cases of neglect and injury, and the futures of children experiencing neurological insult. These personal investments enhance motivation, and are represented in their mental models. However, participants do not critically evaluate research. Terms and concepts that initially fail to connect to other knowledge result in later elaborations and connections that conflict with or are unsupported by research.

## Acknowledgments

This work is supported by an NSF grant to the second author (REC-0133441).

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