

## How neuroscientists explore what goes on in minds of babies

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How do you get into the mind of a human being who cannot speak, does not follow instructions and rudely interrupts your experiments? That is the challenge embraced by scientists at the Babylab at Birkbeck, University of London. The brain undergoes more change during the first two years of life than at any other time: consciousness, traits of personality, temperament and ability all become apparent, as do the first signs that development could be drifting off course. But this period is also the most difficult to explore, because many of the standard tools of human neuroscience are useless: babies will not lie awake and still in an imaging machine, and they cannot answer questions or do as they are told. Researchers have measured infants' interest and attention mostly by tracking their gaze — but even this method has been criticized as crude.

The field is now becoming more sophisticated, thanks in part to the Birkbeck lab. Scientists there have pioneered techniques such as infant near-infrared spectrometry (NIRS), which measures brain activity by recording the colour, and therefore the oxygenation, of blood. They are also trying to strengthen conclusions by combining multiple techniques. Among the handful of baby labs around the world, this makes the London one stand out. "They are doing research on babies using every single technique you could imagine," says Richard Aslin, an infant-behaviour researcher and director of the Rochester Center for Brain Imaging in New York.

**Read full, original post:** [The big baby experiment](#)