





an infant's language. Several recent studies by Helen Neville and colleagues have used tone and speech probes to show that children with language impairment have reduced attentional resources for processing stories.

Future studies should focus on understanding how infants segment connected speech and process speech at the syllabic and segmental levels, and further explore processing of speech in more complex discourse.

In summary, we have described the principal electrophysiology methods used for studying child language and have presented a brief review of major findings. The number of studies using ERPs to examine child language development is slowly but steadily increasing. Methods for analyzing ERP multichannel data are also being developed that will allow for more precise characterizations of ERP correlates and more confidence in findings. Another important development will be to combine ERPs with other methods that show better localization. For example, Near Infrared Spectroscopy (NIRS) provides better localization than ERPs and is relatively inexpensive and easy to use with young children. However, the ERP method will remain an important tool for the study of child language because it is tolerant to the difficulties encountered in studying children.

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**See Also:** Lexical Development; Parsing/Sentence Processing; Phonological Development; Processing Deficits in Children With Language Impairments; Speech Perception and Categorization; Speech Processing.

#### Further Readings

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## Emergentist Coalition Model of Word Learning

One of the most difficult challenges that infants face is word learning. By the end of their second year of life, they move from knowing no words to being expert word learners. Several theories (e.g., the Constraints-Principles theory, the Social-Pragmatics theory, and the Associationistic view) have been proposed, each emphasizing a single factor. Even though these theories successfully explain different parts of word learning, they do not independently account for the entire word learning process. G. J. Hollich and colleagues posited the Emergentist Coalition Model (ECM), which offers a system-based, developmental model that borrows the strengths from each of the theories, weaving them together into an empirically testable model of word learning.

The ECM takes into account both the developmental nature of language acquisition and the diverse and complex factors that impact word learning. It portrays infants' word learning as the emergent product of these different factors. The ECM is founded on three principles for guiding children's hypotheses about what a word might mean (1) children are sensitive to multiple cues in the input, (2) children differentially weigh certain cues over others in the course of word learning, and (3) the principles of word learning are emergent as each principle changes from an immature to a mature state. After describing these principles with empirical evidence, some of the implications of ECM will be discussed.

### Principle 1: Children Are Sensitive to Multiple Cues for Word Learning

The various cues for word learning are available in infants' environments even if they may not take





