

## **We'll never discover what is external, and what is internal, to language without multi-methodological approaches**

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Historically, first language acquisition research has been dominated by attempts to describe formal mechanisms that can explain why children acquire the same language structures in the same order, despite great variation in the language environment (Chomsky, 1955/1975; Pinker, 1984). Consequently, much effort in language acquisition research has focused on determining the Universal Grammar that described the deep structure (or logical form) of children's linguistic constructions and how this is activated by exposure to a particular language (Chomsky, 1981). This theoretical approach has been largely unconcerned with combining multiple approaches to investigate language acquisition, such as corpus data, experimental methods, or computational approaches. Instead, it focuses on creating descriptions of algebraic mechanisms that can explain particular isolated patterns of data (e.g., Crain & Nakayama, 1987). However, curiously, this research has for many years run in parallel with other productive streams of research that have investigated nonsyntactic aspects of the language process, such as the use of speech segmentation to isolate words from continuous speech, or of morphological segmentation to identify lexical structure (Chomsky, 2005). Rather than focusing on formal descriptions of the developing language, these investigations used multiple methods to determine how children might segment words and discover morphological structure (see, e.g., Monaghan & Christiansen, 2010; Yang, 2002). These approaches have been very productive in uncovering the richness of the environment and defining the computations in the learner that can apply to discover language structure (MacWhinney, 2005; Pullum & Scholz, 2002). In this talk, I present three test cases involving the acquisition of both syntactic categories and functional items, in which corpus, computational, and experimental work have been productively combined to uncover the first language acquisition process. These cases highlight how a multi-methodological approach is crucial if we are to discover what is internal, and what is external, to language.