

Specific Language Impairment; a challenge to Cognitive Linguistic theory?

Specific Language Impairment (SLI) is a developmental disorder characterised by unexplained language difficulties. It poses a unique challenge to Cognitive Linguistic (CL) theories, firstly because patterns of breakdown suggest strong modularity, and secondly because it reinforces the competence-versus-performance dichotomy. This talk addresses these challenges, and outlines a CL account of this disorder

At first glance, children with SLI exhibit fragmentation at multiple levels. Language is worse than non-verbal IQ. Within language, syntax is more adversely affected than the lexicon. Within syntax, verb morphology is more affected than noun morphology. And within verb morphology, regular forms are more affected than irregular forms. Thus wherever one divides the ‘cognitive cake’, localised difficulties appear. This picture is inconsistent with CL arguments for weak modularity.

A second issue is the competence-versus-performance dichotomy. Causal explanations of SLI propose either deficient grammatical knowledge, or weak processing, e.g. limited short-term memory. This conflicts with CL claims that knowledge and processing are ‘two sides of the same coin’ (Kidd, Lieven, & Tomasello, 2006, p. 102).

I will argue that this appearance of fragmentation is misleading, and reflects a number of biases. Firstly, apparent dissociations may reflect a flawed approach to statistical analysis which does not address non-linearity. I will use an original dataset to demonstrate this argument (Riches, 2016). Secondly, language assessments differ in their sensitivity and ecological validity. For example, it is difficult to design vocabulary assessments which tap into underlying lexical difficulties, and this reinforces the impression that vocabulary is ‘spared’.

Secondly, I will address the competence-performance dichotomy. This challenges the CL claim that competence and performance are ‘two sides of the same coin’. In addition, if competence and performance are intrinsically related, there is no parameter free to vary which can explain severe language weaknesses. I will argue that the free parameter is learning, and that language difficulties can be reconceptualised as language-LEARNING difficulties, a view consistent with ‘adaptationist’ accounts of the language system (Chang, Janciauskas, & Fitz, 2012). To support this argument, I will present new data demonstrating substantial variation in language-learning abilities, which is strongly correlated with standardised assessment scores (Riches & Jackson, submitted).

Finally, I will address the future of SLI research. Statistical analyses must be brought rapidly up-to-date. We must be more creative regarding experimental methods and use dynamic tasks which measure learning abilities in addition to static assessments of performance at a single moment in time.

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Riches, N. G. (2016). Complex sentence profiles in children with Specific Language Impairment: Are they really atypical? *Journal of Child Language*, 1–28.
<https://doi.org/10.1017/S0305000915000847>

Riches, N. G., & Jackson, L. L. (submitted). Language learning and linguistic competence; two sides of the same coin?