

Models and Causation of Child Language Disorders

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- **Systems Models:**

- Not all the communication problems are “in” the child but rather are in the relationship between speakers.
 - => Change the environment
 - Raises issues about a language “disorder” versus language “difference”

- **Categorical Model:**

- Organizes language disorders on the basis of the syndrome of behavior they accompany, viz., a medical model
 - Assumes that the categories are causative of the language delay. This is often not the case. For example, individuals with the same IQ can present differently with respect to language abilities. Or, same levels of hearing loss can lead to different language profiles. Or, most individuals do not neatly fit into any category, e.g., autism.

Models cont.

- **Specific Disabilities Model:**
 - Attempts to show how individuals with language disorders differ in some abilities relative to others or how they show within-child variation.
 - Attempt to profile abilities
- **Neuropsychological Orientation:**
- **The Auditory Perceptual Deficit Approach**
 - Bottom up model but does not account for prior knowledge and integration
- **Descriptive-Developmental Model:**
 - Describes current level of language abilities in all areas

Causes of Language Disorders in Children

- “A Lot of Things” and “We don’t know”
- Also, causality is a slippery business for both philosophical and empirical reasons.
- **Syndromes:**
 - “the presence of multiple anomalies in the same individual with all of those anomalies having a single cause.”
 - Four types of congenital syndromes with known biological roots:
 - Chromosomal**
 - Deletion of whole chromosomes
 - Addition of extra chromosomes
 - Deletion of parts of chromosomes
 - Addition of parts of chromosomes
 - Restructured or rearranged chromosomes

- Genetic syndromes
- Metabolic syndromes (inability of body to deal with certain chemicals)
- Teratogenic (result of some agent the child was exposed to before birth)

Returning to SLI

- **What is specific language impairment?**
- Specific language impairment (SLI) is a language disorder that delays the mastery of language skills in children who have no hearing loss or other developmental delays. SLI is also called developmental language disorder, language delay, or developmental dysphasia. It is one of the most common childhood learning disabilities, affecting approximately 7 to 8 percent of children in kindergarten. The impact of SLI persists into adulthood.

- **What causes specific language impairment?**
- The cause of SLI is unknown, but recent discoveries suggest it has a strong genetic link. Children with SLI are more likely than those without SLI to have parents and siblings who also have had difficulties and delays in speaking. In fact, 50 to 70 percent of children with SLI have at least one other family member with the disorder.

- **What are the symptoms of specific language impairment?**
- Children with SLI are often late to talk and may not produce any words until they are 2 years old.
- At age 3, they may talk, but may not be understood. As they grow older, children with SLI will struggle to learn new words and make conversation.
- Having difficulty using verbs is a hallmark of SLI.
 - Typical errors that a 5-year-old child with SLI would make include dropping the “s” from the end of present-tense verbs, dropping past tense, and asking questions without the usual “be” or “do” verbs.
 - For example, instead of saying “She rides the horse,” a child with SLI will say, “She ride the horse.” Instead of saying “He ate the cookie,” a child with SLI will say, “He eat the cookie.” Instead of saying “Why does he like me?”, a child with SLI will ask, “Why he like me?”

Swedish speaking children

- As in studies on English-speaking children with SLI, the Swedish children with SLI had a large number of omissions of grammatical morphemes. Verb-related errors were more common than noun-related errors.
- Contrary to reports on children with SLI acquiring other languages, however, word order errors were also very common in the Swedish children with SLI.
- A restricted usage of word order patterns in combination with errors of word order indicates that not only morphological deficits but also syntactic difficulties can be found in children with SLI relative to MLU controls, depending on the target language.

“Linguistic Perspectives on Specific Language Impairment”

- General linguistic hypothesis:
 - SLI due to some selective deficits in the language acquisition device or faculty.
 - The normal development of grammatical representations is delayed and disrupted.
- Several proposals
 - *The surface deficit model*: SLI children are believed to have difficulties acquiring grammatical morphemes with low phonetic substance.
 - *The missing feature deficit*: Syntactic features (tense, number, person, etc.) are said to be absent from the grammars of SLI children.
 - *The rule-deficit model*: SLI children do not have access to regular rules of inflection.

The grammatical agreement deficit: SLI children have difficulty establishing agreement relations between two elements in phrase structure in which one element asymmetrically controls the other.

- Surface deficit account:
 - Perceptual limitations
 - Language particular familiarity/nonfamiliarity with inflectional morphology
 - Problems in paradigm building
- The missing feature account:
 - The grammars of SLI children and adults lack syntactic features. Although grammatical notions such as tense, aspect, gender, etc., are accessible to them, SLI children and adults are unable to produce and comprehend the overt markings of these notions at the level of morphosyntax. Use of adverbials to express tense and time.
- The rule-deficit model:
 - Inflectional systems involve qualitative differences between regular and irregular morphology.

- Language impaired children and adults are said to possess two distinct psychological mechanisms for inflection: a symbol manipulating rule that allows for productive on-line concatenation of affixes to stems and an associative system that involves memory-based retrieval processes of stored items.
 - SLI individuals' ability to learn inflectional rules is impaired relative to their ability to memorize and store individual rules.
 - SLI knowledge of inflection is believed to be restricted to an associative memory network for irregulars, whereas symbolic rules of regular inflection are claimed to be absent.

- The grammatical agreement deficit:
 - SLI children have problems establishing a relation of “agreement.”
 - Model predicts difficulties with the following:
 - Subject-verb agreement
 - Auxiliaries

- Overt structural case markers
- Gender marking on determiners and adjectives, for example, as in German.

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