



Early Milestones in the Development of Spoken English

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Introduction

Although there are differences in rate of learning, children learn the major forms and functions of English in a predictable sequence. This makes it possible to specify milestones of development that may be useful to clinicians, teachers, or parents interested in tracking the progress of an individual child. This article describes a set of milestones that are readily observable and that illustrate the emergence of language from the child's growing capacities for speech production, social communication, and symbol use. We present the milestones in a general developmental order, but in real life, the "next" achievement often emerges before the first one is completely mastered, and as complexity increases, the timing of these achievements becomes more variable from child to child.

Recent Research Results

Canonical Babbling (7-10 months)

Over the first year of life, infant vocalizations become more and more like the speech patterns they hear. Initially they just produce vowel-like sounds (Oller, Eilers, Neal, & Schwartz, 1999), but then, around two months of age, they begin to make imprecise syllables that sound somewhat like "goo" or "gaaaa" (Oller et al., 1999). Speech continues to broaden until by six months or so, infants squeal, growl, and blow through their lips as well as "goo". An important milestone in infant speech occurs at seven to 10 months when true, or *canonical*, babbling emerges. Before this time, infant sounds often seem incidental and biologically driven, but this new sort of babbling consists of well-formed and rhythmically reduplicated syllables (e.g., ata; bababa) (Oller et al., 1999). As they reach their first birthday, some children begin to use these syllables to name objects or people. Although these syllables may not be real words, children's consistent pairing of such syllables with particular referents makes them words in the functional sense (McCune & Vihman, 2001).

Intentional Communication (8 months)

Parents often say that their baby communicates with them virtually from birth. When researchers have observed, however, they have found rich and increasingly complex social exchanges, which give parents information about their baby's feelings and interests, but no real evidence that the baby intends to give these messages. Early social exchanges include attention to faces while feeding, bouts of sucking that alternate with the caretaker's speech (Lock, 1993), smiling (Coplan, Gleason, Ryan,

Burke, & Williams, 1982), and by three months of age, turn-taking vocalizations followed by turn taking in gesture games like patty-cake (Coplan et al., 1982). Finally, at about eight months of age, infants begin to use familiar patterns of eye gaze, gesture, and babble for communicative purposes (Fenson, Marchman, Thal, Dale, Reznick, & Bates, 2007). Prior to this point, if an infant wanted something, he/she might look at and stretch for the object, vocalizing frustration if it remained out of reach. Now, the infant extends a relaxed arm towards the object, switches gaze between the object and the adult, and fusses only if ignored. Infants at this stage also “comment” on an object by holding it out while looking an adult in the eye, and soon use pointing gestures to direct the adult’s attention to more distant objects (Liszkowski, Carpenter, Henning, Striano, & Tomasello, 2004). There is no longer any question about the intentional and communicative nature of such behaviour.

First words (by 14 months)

Ninety percent of eight-month-olds understand at least five words and 90% of 14-month-olds have spoken their first word (Fenson et al., 2007). Children’s early words symbolize people, activities (*go, eat*), states (*hot, yucky*), social routines (*byebye, peekaboo*), and, most frequently, objects (*car, book*). At first, vocabulary growth is quite slow, with only a few words added each month. However, each new word contributes to the toddler’s overall understanding of the sounds and meanings of language (Schwarz, Burnham & Bowey, 2006), and this new knowledge supports further word learning. Although researchers disagree about the timing, sharpness, and nature of the change (e.g. Ganger & Brent, 2004; Goldfield & Reznick, 1990; McMurray, 2007), rate of vocabulary growth increases during the toddler’s second year, with parent reports indicating an average spoken vocabulary of 297 words by 24 months (Fenson et al., 2007). Wide individual differences lie behind these group averages; these differences are long lasting and are related in large part to the amount and diversity of the language that the child hears (Hart & Risley, 1995; Pan, Rowe, Singer & Snow, 2005).

Word combinations (16-30 months)

Between 16 and 30 months of age, children begin to combine words into short phrases (Fenson et al., 2007). Advancements in vocabulary size and composition, as well as the cognitive ability to combine symbols, lay the foundation for this attainment (Bates & Goodman, 1997). Two-word combinations soon grow to three words that capture the basic clause structure of English: Subject-Verb-Object (e.g., “monkey eat banana”).

Noun and verb inflections (16-30 months)

During this same period of time, utterances become less telegraphic as children begin to include grammatical inflections to modulate basic propositional meanings and mark syntactic relationships. They indicate plurality (e.g., *cat-s*), possession (e.g., *mommy-’s hair*), progressive aspect (e.g., *me play-ing*), and past tense (e.g., *dropp-ed it*). These grammatical inflections are usually acquired in that order, reflecting the influence of factors such as regularity, frequency, and complexity (Brown, 1973). Seventy-four percent of 30-month-olds use regular past tense “-ed” (Fenson et al., 2007), but consistently correct usage is not typical until 48 months (Rice, Wexler, & Hershberger, 1998).

Complex sentences (28-45 months)

The simple sentence expresses only one main idea. Children's communication needs quickly outgrow such simplicity. They need to talk about relationships between events and to explore logical possibilities. Complex sentences do this work, and in the later preschool years children acquire the three sets of syntactic patterns that allow them to relate several ideas within a single sentence (Clark & Clark, 1977). Clauses combined with the conjunctions *and*, *because*, *so*, *when*, and *if*, are among the earliest learned complex sentences and appear in that order over a period of months (Diessel, 2004; Miller, 1981). Another set of sentence patterns allows the speaker to replace a noun in one sentence with an entire clause. Early examples of such complementation include utterances in which the child talks about the content of perceptual and cognitive experience, e.g., "Mommy see he scratched me", or "I think he hurt me" (Miller, 1981; Tomasello, 2000). The third set of patterns consists of relative clauses that provide background information about the objects and events in the main clause. The earliest relative clauses modify nouns in the object position, first with the verb "to be" and then with other verbs, e.g., "that's the dog barks" or "give me the crayon you using" (Diessel, 2004; Retherford, 1993).

Once the various complex sentence patterns are acquired, progress is seen as children use them more often and more effectively. True complex sentences comprise less than ten percent of a three-year-old's utterances, but twenty percent of a four-year-old's utterances and the proportion continues to increase in the school years (Miller, 1981). Success in understanding and producing complex sentences partly depends on how much information the child can process at any one time (e.g., Sullivan, Zaitchik, & Tager-Flusberg, 1994). For example, memory capacity and comprehension of complex sentences (or simple but long sentences) are correlated (Montgomery, 2000); the more information a child can hold in short-term memory, the better the child's sentence comprehension.

Adapting to the Listener in Conversation (36-72 months)

Conversational ability is rooted in turn-taking exchanges between caretakers and infants and later scaffolded via parental "memory talk" about specific past events and routines (Lucariello, 1990). Twenty-four-month-olds can participate in verbal conversations, responding to another's utterance with simple but pertinent information. However, they are most likely to respond to *what* and *where* questions (Hoff-Ginsberg, 1990) and they can typically only sustain conversations over a few turns (Brown, 1980). The success of these early conversations depends heavily on support from the more mature conversational partner. Without an adult present, even seven-year-olds show only limited ability to stay on topic (Dorval, Eckerman & Ervin-Tripp, 1984). Conversational skills develop in tandem with the ability to take another's perspective (Ricard, Girouard, & Décarie, 1999). The 24-month-old, less able in this regard, will use non-specific pronouns to start the conversation, leaving the listener uncertain of the topic. Between 36- and 72- months of age, as they become more able to switch perspective, children increase amounts of description for naïve listeners (Sodian, 1988), simplify their language for younger listeners (Shatz & Gelman, 1973), and repair miscommunications for confused listeners (Tomasello, Farrar, & Dines, 1984). Conversational skills continue to develop well into the school years. Children are slow to realize, for example, that the

speaker needs feedback to indicate when messages are adequate as well as when they are not. Head nodding by a listening child to indicate that he/she understands the speaker is rare before age nine (Hess & Johnston, 1988).

Simple Action Oriented Story (6-7 yrs)

Narrative abilities are proving to be one of the best predictors of later language growth, reading comprehension, and other aspects of school success (Johnston, 2008). Narratives make even more demands on short-term memory than conversation, and require organizing schemes at many levels. In Western cultures, the earliest narratives are born from memory-talk between caregivers and children with the caregivers typically setting the topic, by asking, for example, "Tell Daddy what we did at the park today" (Eisenberg, 1985). Narrative development at that stage is in part influenced by the style of scaffolding provided by the caregiver. For example, questions that move the story forward at 24 months of age will result in better narratives at 36 months than questions that ask the child only to reiterate information (McCabe & Peterson, 1991). The creation of fantasy stories is more challenging than personal event narratives, but by 48 months the basic elements begin to appear. Children will structure stories around a problem, an attempt to solve the problem, and a consequence, but the events and characters may be difficult for a naïve listener to follow. By the early primary grades, however, children succeed in telling short and coherent stories with a problem-action-consequence structure (Stein & Glenn, 1977). At the next stage, children include characters' inner reactions and motivations, improve clarity of reference, show better use of syntactic devices to build cohesive text, and create stories with more episodes (Menig-Peterson & McCabe, 1978; Peterson & McCabe, 1988; Umiker-Sebeok, 1979; Roth & Spekman, 1986).

Conclusion: Milestones and Variability

Milestones are descriptive markers along an expected developmental course, and as such presume predictable trends and common orders of acquisition across children. The set of milestones we have included in this article far from exhausts the possibilities. Predictability is also found in the acquisition of locative prepositions (Johnston & Slobin, 1979), Wh-question words (Hood, Bloom & Brainerd, 1979), word formation (Clark, 1993; Nagy, Diakidoy & Anderson, 1993), pretend play (Striano, Tomasello & Rochat, 2001), freestanding grammatical morphemes (Brown, 1973) and many other aspects of language knowledge and use. The reasons for these regularities in language development are not well understood but it seems likely that a different set of predisposing developments lies behind each one (Spencer, Blumberg, McMurray, Robinson, Samuelson, & Tomblin, 2009). For example, in the case of locative expressions, predictability can be explained by universal patterns of conceptual development along with culture- and language-specific patterns of frequency of use, perceptibility, and syntax (Johnston & Slobin, 1979).

General regularities in language development definitely occur and can provide important educational guidelines, but they do not tell the whole story. Children also differ in their rate of progress along the developmental path, and may move more quickly in one language domain than another. To explain this variability, we appeal once again to the

skills and processes, among them perception, memory, and conceptual understanding, that along with the child's various knowledge bases are used to learn new words and phrases. Relative strength in any of these areas may hasten the learning of related language forms which in turn will enhance the child's learning resources.

These explanations of similarity and diversity lead us to a final caution about milestones. The vision of language development that underlies a list of milestones is one that is linear and progressive. It fails to capture the starts and stops, spurts and plateaus that characterize human development. Moreover, it fails to convey the complex interaction between the child and the world. If conceptual development enables the learning of a new word, the new word in turn enables more sophisticated thought. If maternal language supports the learning of a new sentence type, the child's use of that new sentence will lead in turn to more complex maternal language. We can measure progress by noting milestone achievements, but we also need to look for the dynamic ripples that mark the child's influence on the environment and hence on his/her own further learning.

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References

- Bates, E., & Goodman, J. C. (1997). On the inseparability of grammar and the lexicon: Evidence from acquisition, aphasia and real-time processing. *Language and Cognitive Processes, 12*, 507-584.
- Brown, R. (1973). *A first language: The early stages*. Cambridge, MA: Harvard.
- Brown, R. (1980). The maintenance of conversation. In D. R. Olson (Ed.), *The social foundations of language and thought* (pp. 187-210). New York: Norton.
- Clark, E. V. (1993). *Cambridge studies in linguistics: Volume 65. The lexicon in acquisition*. Cambridge, UK: Cambridge University Press.
- Clark, H., & Clark, E. (1977). *Psychology and language: An introduction to psycholinguistics*. New York: Harcourt Brace Jovanovich.
- Coplan, J., Gleason, J. R., Ryan, R., Burke, M. G., & Williams, M. L. (1982). Validation of an early language milestone scale in a high-risk population [Electronic version]. *Pediatrics, 70*, 677-683.
- Diessel, H. (2004). *The acquisition of complex sentences*. Cambridge, UK: Cambridge University Press.
- Dorval, B., Eckerman, C., & Ervin-Tripp, S. (1984) Developmental trends in the quality of conversation achieved by small groups of acquainted peers. *Monographs of the Society for Research in Child Development, 29*, 1-91.
- Eisenberg, A. R. (1985). Learning to describe past experiences in conversation. *Discourse Processes, 8*, 177-204.
- Fenson, L., Marchman, V. A., Thal, D. J., Dale, P. S., Reznick, J. S., & Bates, E. (2007). *MacArthur-Bates communicative development inventories: User's guide and technical manual* (2nd ed.) Baltimore: Paul H. Brookes Publishing Co.
- Ganger, J., & Brent, M. (2004). Reexamining the vocabulary spurt. *Developmental Psychology, 40*, 621-632.
- Goldfield, B. A., & Reznick, J. S. (1990). Early lexical acquisition: Rate, content, and the vocabulary spurt. *Journal of Child Language, 17*, 171-183.
- Hart, B., & Risley, T. (1995). *Meaningful differences in the everyday experiences of American children*. Baltimore: Paul H Brooks.
- Hess, L., & Johnston, J. (1988). Acquisition of back channel responses to adequate messages. *Discourse Processes, 11*, 319-335.
- Hoff-Ginsberg, E. (1990). Maternal speech and the child's development of syntax: A further look. *Journal of Child Language, 17*, 85-99.
- Hood, L., Bloom, L., & Brainerd, C. J. (1979). What, when, and how about why: A longitudinal study of early expressions of causality. *Monographs of the Society for Research in Child Development, 44*, 1-47.
- Johnston, J. (2008). Narratives 25 years later. *Topics in Language Disorders*.
- Johnston, J., & Slobin, D. (1979). The development of locative expressions in English, Italian, Serbo-Croatian and Turkish. *Journal of Child Language, 6*, 529-545.
- Liszkowski, U., Carpenter, M., Henning, A., Striano, T., & Tomasello, M. (2004). Twelve-month-olds point to share attention and interest. *Developmental Science 7*, 297–307.
- Locke, J. L. (1993). *The child's path to spoken language*. Cambridge, MA: Harvard University Press.

- Lucariello, J. (1990). Freeing talk from the here-and-now: The role of event knowledge and maternal scaffolds. *Topics in Language Disorders, 10*, 14-29.
- McCabe, A., & Peterson, C. (1991). Getting the story: A longitudinal study of parental styles in eliciting narratives and developing narrative skill. In A. McCabe & C. Peterson (Eds.), *Developing narrative structure* (pp. 217–253). Hillsdale, NJ: Erlbaum.
- McCune, L., & Vihman, M.M. (2001). Early phonetic and lexical development: a productivity approach. *Journal of Speech, Language, and Hearing Research, 44*, 670-684.
- McMurray, B. (2007). Defusing the childhood vocabulary explosion. *Science, 317*, 631.
- Menig-Peterson, C.L., & McCabe, A. (1978). Children's orientation of a listener to the context of their narratives. *Developmental Psychology, 14*, 582-592.
- Miller, J. (1981). *Assessing language production in children: Experimental procedures*. Baltimore: University Park Press.
- Montgomery, J. W. (2000). Relation of working memory to off-line and real-time sentence processing in children with specific language impairment. *Applied Psycholinguistics, 21*, 117-148.
- Nagy, W. E., Diakidoy, I. M., & Anderson, R. C. (1993). The acquisition of morphology: Learning the contribution of suffixes to the meanings of derivatives. *Journal of Reading Behavior, 25*, 155-170.
- Oller, D. K., Eilers, R. E., Neal, A. R., & Schwartz, H. K. (1999). Precursors to speech in infancy: the prediction of speech and language disorders. *Journal of Communication Disorders, 32*, 223-245.
- Pan, B., Rowe, M., Singer, J., & Snow, C. (2005). Maternal correlates of growth in toddler vocabulary production in low-income families. *Child Development, 76*, 763-782.
- Peterson, C., & McCabe, A. (1988). The connective *and* as discourse glue. *First Language, 8*, 19-28.
- Retherford, K. S. (1993). *Guide to analysis of language transcripts* (2nd ed.). Eau Claire, WI: Thinking Publications.
- Ricard, M., Girouard, P.C., & Decarie, T.G. (1999). Personal pronouns and perspective taking in toddlers. *Journal of Child Language, 26*, 681-697.
- Rice, M. L., Wexler, K., & Hershberger, S. (1998). Tense over time: The longitudinal course of tense acquisition in children with specific language impairment. *Journal of Speech, Language, and Hearing Research, 41*, 1412-1431.
- Roth, F.P., & Spekman, N.J. (1986). Narrative discourse: spontaneously generated stories of learning disabled and normally achieving students. *Journal of Speech, Language, and Hearing Disorders, 51*, 8-23.
- Shatz, M., & Gelman, R. (1973). The development of communication skills: Modifications in the speech of young children as a function of listener. *Monographs of the Society for Research in Child Development, 38*, 1-38.
- Sodian, B. (1988). Children's attributions of knowledge to the listener in a referential communication task. *Child Development, 59*, 378-385.
- Spencer, J. P., Blumberg, M. S., McMurray, B., Robinson, S., Samuelson, L. K., & Tomblin, J. B. (2009). Moving to the inconvenient middle: Grounding development in process, not nativist origins. *Child Development Perspectives*.

- Stein, N., & Glenn, C. (1977). A developmental study of children's construction of stories. Paper presented to the Society for Research in Child Development, New Orleans.
- Striano, T., Tomasello, M., & Rochat, P. (2001). Social and object support for early symbolic play. *Developmental Science*, 4, 442–455.
- Sullivan, K., Zaitchic, D., Tager-Flusberg, H. (1994). Preschoolers can attribute second-order beliefs. *Developmental Psychology*, 30, 395-402.
- Swartz, I., Burnham, D., & Bowey, J. ((2006) Phoneme sensitivity and vocabulary size in 21/2 to 3 year olds. In P. Warren & C. Watson, (Eds.) *Proceedings of the 11th Australian International Conference on Speech Science and Technology, Auckland*.
- Tomasello, M. (2000). The item-based nature of children's early syntactic development. *Trends in Cognitive Sciences*, 4, 156-163.
- Tomasello, M., Farrar, M. J., & Dines, J. (1984). Children's speech revisions for a familiar and an unfamiliar adult. *Journal of Speech and Hearing Research*, 27, 359-363.
- Umiker-Sebeok, D.J.. (1979). Preschool children's intraconversational narratives. *Journal of Child Language*, 6, 91-109.

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