The process underlying the development of a template can be understood in at least two ways. On the one hand, we can see the child as working from an internal schema abstracted away from his or her experience of actually producing any given word. On the other hand, we can conceptualize the process as the simple extension of a motoric routine or procedure in which the child’s intent to repeat a familiar adult word triggers the motoric readiness or motor memory that has successfully achieved word production in previous experience. Under either interpretation, the template permits further word learning and use without exceeding the child’s existing phonetic or motoric resources, and indeed the existence of such a readily available production routine can support attention to and memory for increasing numbers of words. Furthermore, the experience of attempting a wider range of adult word forms may stimulate the development of new, more complex phonological patterns, even while the child’s existing patterns continue to constrain his or her output. The child’s discovery of the power of the template—the increased flexibility in word production afforded by the freedom to adapt adult word forms to existing production resources—has often been taken to result in more rapid lexical learning, but this has not been demonstrated in quantitative terms.

The use of templates cannot readily be established for all children, nor can the timing of template use be predicted by age or lexical or syntactic advance. On the other hand, the templates used are similar, both within and across languages: Children everywhere are constrained by the same limitations on articulation, speech planning, and memory for segmental strings in a time of rapid lexical advance. The challenges include within-word changes in consonantal place or manner, vocalic or consonantal sequences, and words of more than two syllables. However, frequency of occurrence and rhythmic or accentual patterning in the adult language also shape templates: Whereas English templates are typically monosyllabic and may include diphthongs or codas, in most European languages, disyllabic templates with open syllables are characteristic.

The templates arrived at by children learning languages with iambic accent or medial geminates often neglect the onset consonant, which is omitted (<VCV>) or assimilated to the medial consonant (harmony). Finally, either consonantal or vocalic melodies (labial first, coronal second, and low first vowel followed by higher second vowel) may characterize templates. As template use has so far been investigated in only about 100 children learning a dozen of the world’s 6,000 or more languages, much remains to be learned about these early stepping-stones to phonology.

Marilyn Vihman
University of York

See Also: Language and Motor Interactions in Development; Morphological Development; Phonological Development; Phonological Processes in Lexical Development; Prelinguistic Vocalization (Overview); Speech Sounds, Articulation of.

Further Readings

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Play and Its Role in Language Development

Play forms the foundation for language learning. From early childhood to old age, people use language to understand, communicate, negotiate, and actively participate in the world around them. Early language skills are also central to later academic achievement. How do people learn language, and how do they so quickly transition from babies with no language to preschoolers with thousands of words and a grammar? The rich literature from cognitive and social development suggests that one platform that supports this growth might come through child’s play. Although each approached constructivism differently,
intellectual giants like Jean Piaget and Jerome Bruner shared a fundamental reliance on play as a context for learning. Indeed, Piaget went as far as stating, “Play is the answer to how anything new comes about.” Thus, the importance of play on child development is not a new insight. More recent work on the interplay between play and language builds on these ideas. Researchers are investigating how language play promotes not only vocabulary and grammar but also other cognitive skills. This entry offers a comprehensive overview of language play—from babbles and coos, to symbolic play, to more complex forms of language play. Different types of play contexts will be reviewed and related to language development, leading to contemplations and future directions.

In a recent chapter from the *Oxford Handbook for the Development of Play*, Gordon Burghardt outlined five qualities of play that are generally accepted across programs of research. The first addresses the nature of playful behaviors as not fully functional. While play can serve a purpose, it is not expressly intended to meet an immediate survival need. Second, play is joyful and voluntary. Third, play is often exaggerated. As Angeline Lillard highlights, eating and pretending to eat look very different in character. For example, a mother’s motions are faster during pretense than in the corresponding real-life actions, with actions in the pretend context only approximating those of real life. Fourth, play often consists of repeated elements across time, allowing researchers to distinguish play from exploration. Fifth, play may only emerge when children’s immediate physical needs are met. Despite this overarching and generally agreed-upon definition, finding critical features of play has been (and remains) a source of dispute. Play remains what philosopher Ludwig Wittgenstein referred to as a fuzzy concept that is not only somewhat elusive but that unfolds across a number of types (e.g., object play and symbolic play) and formats (e.g., guided play and pretend play).

**How Children Play With Language:**
**Vocal, Object, Symbolic, and Pretend Play**

The importance of play on language development is witnessed even before children produce their first words. Even before they begin to babble with consonant–vowel syllables, infants engage in a kind of vocal play, defined as melodies and rhythms encompassing gurgles, coos, hiccups, and screeches. These playful vocalizations allow the infant to move beyond reflexes and random actions to babbling and later language production, and may facilitate early types of social play between infants and their parents and caregivers.

Parents’ timely and reciprocal responsiveness to vocal play has been linked with later language development and the onset of the vocabulary spurt. John Locke offers a comprehensive overview of the ways in which vocal play shapes child language and parental responses. This early play is not done in solitude. For example, the phonology of infant babbling can be shaped by caregiver responses that are contingent upon the child’s vocalization. When caregivers respond to infants’ communicative bids, expectations of reciprocity begin to take root. For example, research has shown that, by 5½ months, infants expect that parents will respond to their vocalizations. When the parent failed to do so during an interaction in which parents were instructed to maintain a still face and not respond, infants demonstrate an extinction burst, or temporary increase followed by a rapid decrease in vocalizations when the parent stops responding. This burst is thought to reflect the infant’s expectation that vocalizations should regain their parent’s attention. Importantly, the magnitude of an infant’s vocalizations in response to their nonresponsive caregiver has been shown to be predictive of their language comprehension eight months later. These early reciprocal exchanges lay the foundation for the later give-and-take structure of dialogue. Additionally, children’s language skills benefit when caregivers mirror children’s rhythmic vocalizations and follow, rather than lead, in their interactions. Infants who are not yet walking or even crawling play with those around them using their early vocalizations.

During object play, young children transform the way they treat and talk about objects (e.g., banging a pot). Michael Goldstein and his colleagues demonstrate that certain moments with object play can foster language growth. When infants vocalize while engaging in object play, their grunts and proto-words may signal a state of heightened attention, which is an ideal context for the caregiver to provide a language label. Caregivers who offer labels in response to infants’ object-directed vocalizations have toddlers with higher vocabularies, as measured by the MacArthur-Bates Child Development Inventories (CDI), several months later. How children play with objects also impacts how they think about and define object categories. If children play with objects in a way that incorporates a characteristic of that object, they will
then use that feature to define that category and name that object. How they play thus determines the way they map words onto the world.

A key accomplishment of Piaget's sensorimotor period is symbolic understanding. Language is inherently symbolic, and children must learn that sounds correspond to objects in the world (i.e., /dāl/ corresponds to her stuffed companion). Studies of children's early symbol use suggest that play and language development go hand in hand. In particular, symbolic play with objects (e.g., having a block stand in as a car during play) correlates with toddlers' language growth. In a longitudinal study assessing play and language skills, children's symbolic play at 13 months predicted the number of different semantic categories (e.g., agent or action) that children spontaneously used at 20 months. This was true even when controlling for the size of children's productive vocabularies. Research also shows that, the larger a child's vocabulary, the more likely he or she is to engage in symbolic play.

Language supports play and play supports language.

Throughout early and middle childhood, language itself can serve as a play domain. Early language play supports fundamental aspects of language acquisition. Nursery rhymes are often characterized by alliteration and rhythms, both of which support language development by promoting phonological awareness, the idea that language can be broken into pieces. For example, old Mother Hubbard lives in a cupboard has the feel of iambic pentameter, and the rhyme between Hubbard and cupboard feeds into children's phonological awareness. Children often play with the addition or deletion of syllables or words in joyful interactions with caregivers and peers in early childhood. Young children show an affinity for singing songs, which heightens their attention to rhyme and alliteration, and by middle childhood, they engage in other traditional forms of language play including jokes and sarcasm.

Language play continues to serve as an engine for cognitive growth—building perspective taking and children's verbal memory as well as encouraging them to practice speaking. As their language becomes more sophisticated, short, three-word sentences give way to narratives where kings and queens watch knights travel over moats. Aside from introducing new vocabulary and points of view, researchers like Ageliki Nicolopoulos, Catherine Snow, and Katherine Nelson suggest that these narratives become a scaffold for building more-complex language structures while interpreting the world through a cultural lens. Playful narratives set the stage for a kind of decontextualized language that will enrich not only further language use but also early reading. Indeed, researchers like Kathleen Roskos, James Christie, and Donald Richgels look directly at the relationship between narratives and reading and offer data to suggest that teacher talk, storybook reading, and alphabet games, among other experiences, are essential teaching strategies that reinforce later language competence.

Play Contexts

Pretend or dramatic play, in which children not only use symbolic play to interact with objects but also include others in their imaginary worlds, has been linked to a number of cognitive advances beyond language. When two children pretend to play house, they must negotiate roles ("I'll be the mom, you be the baby"). Gegenметabolismal turns while playing, take the perspective of the other character, and self-regulate according to the demands of the characters they play. Language is a tool for accomplishing these goals. During pretend play episodes with peers, children seamlessly navigate between talk in character as part of the pretense and out-of-character comments used to establish and sustain the pretense context. The latter is referred to as meta-communication and includes instances as when a child reminds him or her peer to stay in character. Recent reviews suggest that dramatic play is one context that bolsters vocabulary development.

Not all types of playful contexts foster language growth in the same way. Research distinguishes between free play situations in which there is little-to-no direction from a parent, guided play in which an adult follows a child's lead but also scaffolds and structures the play to incorporate curricular goals, and structured play in which there are extrinsic goals that limit the play situation (e.g., putting a block castle together in a certain way). Recent work comparing free, guided, and structured play with blocks found that parents used more spatial language during guided play situations than in free play. Parental language incorporated into guided play likely contributes to the development of cognitive skills. Four-year-olds have been shown to learn more about the properties of geometric forms when they are taught with a guided play pedagogy rather than didactic instruction or free play. As Kelly Fisher and her colleagues demonstrated, children taught with guided play more readily transfer their learning to new instances of
the concept. Critically, language was the vehicle for instruction in both the guided and didactic conditions; they differed only in how children's playful engagement was enlisted. This suggests that language can be more powerful when presented in certain types of playful interactions.

**Future Directions**
Jerome Bruner highlights the importance of play on development and suggests, “The most complicated grammatical and pragmatic forms of language appear first in play activity.” Play and language have had a long and rich history together, yet many questions remain. As Angeline Lillard emphasizes, many of the current studies of play and its relation to cognition lack the kind of methodological rigor that allow examination of the mechanisms that might link play and outcomes. More research is needed to fully understand how playful learning supports language development. The current crop of studies on guided and free play offers a window onto that new research. Only recently has the study of the science of learning started to expand upon the foundational work linking play and language to investigate the mechanisms that support this established relationship. The field of language development provides many examples of the positive outcomes that are promoted by increased play across physical, social, and linguistic domains. Continued research examining the impact of play contexts on language growth will help us to understand relationships between play and other abilities such as reading, math, and spatial learning that are mediated by language competencies.

Jennifer M. Zosh  
*Penn State University, Brandywine*  
Jessa Reed  
*Temple University*  
Roberta Michnick Golinkoff  
*University of Delaware*  
Kathy Hirsh-Pasek  
*Temple University*

**See Also:** Bruner, Jerome; Dyadic Interaction and Early Communicative Development; Humor; Narrative Development; Parental Responsiveness and Scaffolding of Language Development; Perspective Taking in Communication; Phonological Awareness; Proto-Conversation and Song in Infant Communication; Social Foundations of Communicative Development; Social Shaping of Infant Vocalization; Vocal Imitation; Word-to-World Mapping.

**Further Readings**

**Pointing**
Pointing is one of the most basic forms of directing a person's attention to aspects in the world relevant to one's thinking. Although the sign itself does not carry any meaning, pointing enables meaningful communication between a sender and recipient, irrespective of a shared language. Pointing is a uniquely human, cross-culturally shared activity. It precedes the acquisition of language in a predictive manner and provides infants with a means to engage in preverbal referential exchanges with others. Aberrant development is rare and often both a symptom and source of pervasive developmental disorders. Pointing sits at the crossroads of communication, cognition, and language and represents one of the most significant milestones in infant development.