

## Adjectives (Acquisition of)

Adjectives are words that denote properties of objects, such as size (*big*), shape (*round*), color (*red*), texture (*rough*), material (*wooden*), state (*sleeping*), aesthetic qualities (*beautiful*), among many others. As a grammatical category in English, adjectives modify nouns, appearing in either prenominal position (before the noun, such as *What an adorable baby!*) or in predicative position, often after a copular verb (as in, *Your baby is adorable!*). Their surface-level distribution is linked to their position in the syntactic structure and their semantic representation, and therefore distinguishes them from quantificational terms such as *some* and *every* and number words such as *two*, which have a partially overlapping distribution. Adjectives are among the first words produced by young children. Moreover, a range of adjectives appears frequently in child-directed speech, providing children with information about semantic differences within the category of adjectives.

For example, gradable adjectives such as *big* are likely to appear in comparative constructions (*X is bigger than Y*) and are modified by adverbs such as *very*, indicating that size depends on a standard of comparison. Although number words and quantifiers also appear prenominally, neither can appear with the comparative morpheme *-er* or be preceded by the intensifier *very*. By contrast, these words can appear in partitive constructions (*X of the Y*), whereas adjectives cannot. Kristen Syrett and colleagues have shown that preschoolers are able recruit these distributional characteristics when learning new words. Even some gradable adjectives differ with respect to the adverbs allowed to modify them, as well as inferences based on their appearance in a comparative construction. Work by Kristen Syrett and Jeffrey Lidz shows that two-year-olds are aware of restrictions on adverbial modification and can recruit this information when classifying novel adjectives.

Gradable adjectives come in multiple varieties. Kristen Syrett, Christopher Kennedy, and Jeffrey Lidz have demonstrated that three- to five-year-olds (like adults) differentiate among these adjectives with respect to the role of the context in setting the standard of comparison. With adjectives like *big*, children readily shift the standard of comparison with the context, while they do not with *full* or *spotted*. Other work has shown that preschoolers take into account real-world knowledge, the range of comparison, and object kind when setting the standards. Susan Gelman and Karen Ebeling have also shown that preschoolers can move between different types of standards.

Preschoolers also appear to be aware that the syntactic position of an adjective and its prosodic prominence can carry implications about the speaker's intentions. For example, *the daxy one* is likely to be interpreted as a contrast between an object that is daxy and another object of the same kind that is not daxy, while *the one that is daxy* is likely to be interpreted as picking out an object that simply has the property of being 'daxy'. By five, children are not only aware of these contrasts, but treat gradable adjectives like *big* differently from color terms. A request for *a BIG dax* is more likely to launch a search for a within-kind contrast object than a request for *a YELLOW dax* or a *dax* that is *yellow/big*. This finding is consistent with the input children receive. Although color terms can be gradable, they are typically not treated as such in child-directed speech. Parents are likely to ask their children, "What color is this?" but, "Where/Which is the big one?" or "Which one is bigger?" Many children take years to master color terms, but in the interim seem to be aware of which adjectives refer to color, often supplying an incorrect color term in response to a question about color.

When children learn a new adjective, they need to know whether to extend the label and

corresponding property to a new referent. Taxonomic level – that is, what kind of conceptual category something belongs to – plays an important role. A series of experiments by Sandra Waxman and her colleagues has shown that when three-year-olds are shown a spotted green elephant labeled by a novel adjective such as *blickish* contrasted with another elephant that is solid green and described as ‘not blickish’, they are likely to interpret the adjective as ‘spotted’. They do not do so when shown a contrasting object from another basic-level category (such as spotted green rabbit), or when the adjective is not present. However, when shown objects from across basic-level categories that *share* the same property and that are labeled with a common adjective, three-year-olds willingly extend the property to yet another basic-level category. The adjective seems to serve as an invitation for the child to perform a comparison and notice commonalities among category members. Such comparisons are most effective when children are shown multiple exemplars, and when presented with familiar objects.

Within the grammatical category of adjectives, there are those that express stage-level properties (like *thirsty*) and those that express more ‘stable’ traits, or individual-level properties, (like *friendly* or *gentle*). Across experiments, children routinely confer a privileged status to the basic-level category (for example, ‘dog’) and subordinate level (‘beagle’), rather than to the superordinate-level category (‘animal’). For example, when shown an animal labeled with one of these adjectives, four-year-olds are willing to extend the property to another animal when the property is a stable trait and when the animal is a member of the same basic-level category.

There are a number of challenges facing the young word learner acquiring adjectives. Children must recruit real-world knowledge to know whether the adjective-noun combination yields a true statement. They must also learn the ordering between adjectives and nouns in their language. To become an efficient language processor, they need to recognize that it may not be necessary to hold off assigning interpretation until they hear the modified noun. They must learn that many adjectives are linked to a contrasting antonym in their polarity (*big/small*). Finally, they must learn that in languages such as Spanish or French, morphosyntax requires that the determiner, noun, and adjective all agree in gender (*une robe bleue*, ‘a blue dress’), that the noun may be ‘dropped’ (*el rojo*, ‘the red one’), and that different interpretations arise from the verb combining with the adjective (*estar* v. *ser alto*, to be ‘high up’ v. ‘tall’). Despite the fact that it may take children years to incorporate these linguistic constraints, many adult-like semantic features of adjectives appear to be in place by age five, perhaps even earlier.

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See Also: Child-Directed Speech (Features of); Color Cognition and Language Development; Early Word Learning; Grammatical Categories (Acquisition of); Pragmatic Development  
Semantic Development; Syntactic Development; Word Learning Strategies

#### Further Readings

Barner, D., & Snedeker, J. “Compositionality and statistics in adjective acquisition: 4-year-olds interpret *tall* and *short* based on the size distributions of novel noun referents.” *Child Development*, v. 79, 594-608, (2007).

Booth, A. E., & Waxman, S. R. “Mapping words to the world in infancy: Infants’ expectations for count nouns and adjectives.” *Journal of Cognition and Development*, v. 4, 357-381,

- (2003).
- Ebeling, K. S., & Gelman, S. A. "Children's use of context in interpreting *big* and *little*." *Child Development*, v. 65, 1178-1192, (1994).
- Graham, S., Cameron, C., & Welder, A. "Preschoolers' extension of familiar adjectives." *Journal of Experimental Child Psychology*, v. 91, 205-226, (2005).
- Nadig, A., Sedivy, J., Joshi, A., & Bortfeld, H. "The development of discourse constraints on the interpretation of adjectives". In B. Beachley, A. Brown, & F. Conlin (Eds.), *Proceedings of the 27<sup>th</sup> Annual Boston University Conference on Language Development* (pp. 568-79). Somerville, MA: Cascadilla Press (2003).
- Sandhofer, C. M., & Smith, L. B. "Learning color words involves learning a system of mappings." *Developmental Psychology*, v. 35, 668-679, (1999).
- Smith, L. B., Cooney, N., & McCord, C. "What is *high*? The development of reference points for *high* and *low*." *Child Development*, v. 57, 583-602, (1986).
- Syrett, K., Kennedy, C., & Lidz, J. "Meaning and context in children's understanding of gradable adjectives." *Journal of Semantics*, v. 27, 1-35, (2010).
- Syrett, K., & Lidz, J. "30-month-olds use the distribution and meaning of adverbs to interpret novel adjectives." *Language Learning and Development*, v. 6, 258-282, (2010).
- Syrett, K., Musolino, J., & Gelman, R. "How can syntax support number word acquisition?" *Language Learning and Development*, v. 8, 146-176, (2012).
- Waxman, S. R., & Klibanoff, R. S. "The role of comparison in the extension of novel adjectives." *Developmental Psychology*, v. 36, 571-581, (2000).
- Waxman, S. R., & Markow, D. "Object properties and object kinds: Twenty-one-month-old infants' extension of novel adjectives." *Child Development*, v. 69, 1313-1329, (1998).