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Cross-Linguistic Comparative Approaches to Language Acquisition

D Slobin, University of California at Berkeley, Berkeley, CA, USA

An adequate theory of child language acquisition must work for all languages, spoken as well as signed. Such a theory must be compatible with language universals and with general processes of psychological learning and development. The adequate theory lies in the future, but it will require extensive documentation of the course of acquisition of a range of languages. Cross-linguistic studies of child language seek to compare the acquisition of comparable and contrasting languages in order to discover the mechanisms and processes that drive the course of development in general. The focus of this article is on monolingual first-language acquisition, leaving aside issues of early bi- and multilingualism (see Döpke, 2000; Bialystok, 2001). The diversity of languages provides a remarkable natural laboratory for the investigation of processes of learning. The starting assumption is that these processes are universal to the species, and that all languages are learnable in the first several years of life, as those processes are brought into play in the course of language acquisition. Several centuries of child language research confirm striking parallels in the rate and stages of development, independent of language type, modality (spoken or signed), and sociocultural setting. At the same time, details of variation across languages reveal subtle interplays in development between phonology, morphosyntax, semantics, and pragmatics. Documentation and understanding of these interplays is essential to psychology, in attempting to define learning mechanisms, and to linguistics, in the search for both universals and the limits of constrained variation (linguistic typology). The cross-linguistic comparative approach is important for biological theories of linguistic nativism, for historical theories of language evolution and change, and for psycholinguistic theories of the balance of competences that make human language possible.

Until the middle of the last century, cross-linguistic investigations were almost entirely limited to the dominant European languages, as linguists, philosophers, and psychologists studied the language development of their own children, and as educators studied child language for pedagogical purposes. Given the great typological similarity of the languages (Germanic, Romance, Slavic), common developmental patterns were readily observed (e.g., Gvozdev, 1928; Stern and Stern, 1907). The past half-century has seen a tremendous flowering of child language studies, both observational and experimental, around the world. Comparable reports of the acquisition of 28 different languages, representing 14 major groups, can be found in the five volumes of The crosslinguistic study of language acquisition (Slobin, 1985–1997). The collection includes the following, based on the classification of language families established by Ethnologue:

- Afro-Asiatic / Semitic / Hebrew
- Altaic / Turkic / Turkish
- Australian / Ngarga / Warlpiri
- Austronesian / Oceanic / Samoan
- Deaf Sign Language / American Sign Language (ASL)
- Eskimo-Aleut / Inuit / Greenlandic Eskimo (Greenlandic Inuktut)
- Indo-European / Germanic / Danish, English, German, Norwegian, Swedish
- Indo-European / Greek / Modern Greek (Greek)
- Indo-European / Romance / French, Italian, Portuguese, Romanian, Spanish
- Indo-European / Slavic / Polish
- Japanese / Japanese
- Language isolate / Korean
- Mayan / Quichean / K’iche’ (Quiche)
- Niger-Congo / Bantoid / Sotho (Southern Sotho)
- Sino-Tibetan / Chinese / Mandarin (Mandarin Chinese)
- South Caucasian / Georgian
- Trans-New Guinea / Bosavi / Kaluli
- Uralic / Finno-Ugric / Estonian, Finnish
- Uralic / Ugric / Hungarian

A major source of data is provided regularly by the Journal of Child Language. In the four volumes from 2000–2003 containing 3684 pages, studies of various sorts, using a range of methods, report on children’s development in the following languages: British Sign Language (BSL), Cantonese (Yue Chinese), Catalan (Catalan-Valencian-Balear), Dutch, English, Esperanto, Finnish, French, German, Greek, Hebrew, Italian, Japanese, Korean, Langue des Signes Québécoise (LSQ) (Quebec Sign Language), Mandarin (Mandarin Chinese), Navajo, Polish, Quechua, Sesotho (Southern Sotho), Spanish, Swedish, and Tamil. In addition, there are increasing numbers of monographs devoted to the acquisition of individual languages, often combining observational, experimental, and ethnographic data, as well as conference volumes dealing with specific issues across languages (e.g., Bowerman and Levinson, 2001). The database
is rich, and the field has not yet reached a stage of formulating and testing broad cross-linguistic hypotheses and models. The trained linguist will notice, in perusing the lists of languages above, that there are major gaps in coverage with regard to language typology. Much work is needed to fill in those gaps: child language research is exceptionally time consuming, and can only progress on the basis of detailed linguistic description of each language under investigation.

From the point of view of developmental psychology, general patterns hold up across languages. Children take off from a babbling period (experimenting either in the vocal or gestural domain), moving on to ‘first words’ around the beginning of the second year of life. The perceptual system, at first quite open, is rather quickly tuned to the phonological categories of the exposure language. The processing span is at first quite limited, whether counted in words or morphemes. An early period of two-word or two-morpheme utterances is widely attested. First words, and early grammatical constructions, are lexically and contextually specific. Gradually such constructions give way to generalization, and often overgeneralization, such as the familiar overregularizations of the English past tense (‘falled,’ ‘breaked,’ etc.). Although basic grammatical devices are in place in the fourth year of life, fine tuning of linguistic structures continues through childhood.

Children are quite able to zero in on the dominant morphosyntactic devices of the exposure language, and by age 2 or so are able to attend to word order patterns in a language such as English, as well as to various types of morphological constructions in languages such as Georgian, Turkish, K’iche’ Mayan (Quiche), or Greenlandic Eskimo (Greenlandic Inuktitut). Thus there is no ‘starting preference’ for one type of morphosyntax or another.

Several research strategies allow for sorting out of formal (phonological, morphosyntactic) and functional (semantic, pragmatic) dimensions in acquisition. Space only allows for a hint at these directions.

On the formal level, researchers can pick a formal device and compare its development across languages. Research of this sort is useful in revealing the mix of factors that influence acquisition. For example, Turkish and Russian indicate the case roles of nouns by means of suffixing. In Turkish, the suffixes are completely regular and predictable, whereas in Russian there are many sources of difficulty, due to intersecting factors of number, gender, and animacy, along with irregularities. Compare the nominative and accusative forms of ‘hand’ in the two languages: Turkish el / eli, Russian ruka / ruku. The Turkish form is agglutinative, adding a vowel; the Russian form replaces one vowel with another. Furthermore, there is only one type of accusative suffix in Turkish, while Russian has forms that add a vowel (syn / syna ‘son’) or do not change (dom / dom ‘house’). Before age 2, both Turkish and Russian children acquire the device of suffixing to indicate a noun’s role; but the task is complete for the Turks, while it takes the Russians several more years to sort out the system. Comparisons such as these reveal a general acquisition strategy: attention to variation in the ends of words to express role relations, as well as more specific strategies: formation of paradigms based on the intersection of several features (case, number, gender, animacy). Fine-grained comparisons of comparable systems reveal differential roles of perceptual salience of forms, frequency of occurrence, and contextual conditioning (see, for example, the comparison in Smoczynska, 1986 of the acquisition of Polish and Russian noun inflectional paradigms, isolating a critical factor of vowel reduction). Ann Peters has proposed a number of principles that guide children in the identification and segmentation of linguistic units, on the basis of definable phonological and prosodic properties of the exposure language (Peters, 1997).

Another type of research strategy selects a semantic domain and compares its acquisition in languages that differ in the organization of the domain. Research of this sort is important to psychological theories about universal, and possibly innate, bases of cognitive organization. Melissa Bowerman and Soonja Choi have pioneered in this type of research (Choi and Bowerman, 1991; Bowerman and Choi, 2001). For example, in the domain of locative placement, English orients to topological relations between figure and ground, singling out dimensions such as containment (‘put it in’) and support (‘put it on’). Korean, by contrast, orients to dynamic factors, such as tightness of fit. For example, the verb kkita ‘put into a relation of tight fit’, cuts across the English categories of containment and support; it is equally applicable to situations such as putting a videocassette onto a case and fitting one interlocking Lego block onto another. A program of experimental and observational study of infants and toddlers demonstrates that neither type of spatial organization is primary; well before age 2, English-learning babies distinguish containment from support, regardless of tightness of fit, whereas Korean-learning babies distinguish tightness of fit, regardless of containment or support. Here, child language research is part of a larger research program of recent decades, devoted toward reassessment of ‘linguistic relativity’ (Levinson, 2003). (Implications of linguistic relativity for child language and cognition are explored by Berman and Slobin, 1994, and in numerous chapters...
in Gentner and Goldin-Meadow, 2003. Eve Clark presents a thorough analysis of lexical acquisition, proposing principles that apply to children's learning of words, as well as coinage of new words, across a large collection of languages [Clark, 1993].

Cross-linguistic acquisition research in recent decades has posed challenges to both syntactic and semantic models. Findings that children easily acquire a range of forms and form-function mappings raise doubts about models based on a limited sample of languages or types of languages. Although linguists have striven, for centuries, to find an underlying uniformity across languages, it now seems that many of the most interesting universals are revealed in systematic patterns of constrained variation, rather than in variants of a single pattern. When universals are treated as emerging from a collection of dimensions or parameters, systematic typological analysis is possible. The role of child language research, in this regard, is to help specify the relevant dimensions and their interactions.

Finally, it must be stressed that cross-linguistic investigation is inevitably also cross-cultural. However, little of the current and recent research that focuses on acquisition of linguistic structures concerns itself with a comparable level of ethnographic detail. This point has been made most forcefully by anthropologically oriented child language researchers, such as Elinor Ochs (Ochs, 1988) and Bambi Schieffelin (Schieffelin, 1990). In their studies of child language in Samoa and New Guinea, they demonstrate that grammatical and lexical acquisition cannot be separated from the interplay of systems of values and interpersonal relations in the world around the child. It is also important to note that the comparative method is equally applicable to the study of individual differences between children learning a particular language. Elena Lieven has searched for individual differences in a cross-linguistic context, examining the few available records on variability in acquisition in different languages (Lieven, 1997).

See also: Infancy: Sensitivity to Linguistic Form; Language Development: Morphology; Language Development: Overview; Meaning: Development; Morphological Typology; Morphological Universals; Morphology and Language Processing.

Bibliography


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