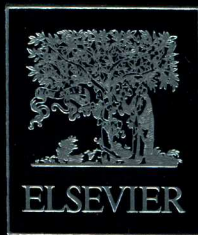


VOLUME TWO



ENCYCLOPEDIA OF LANGUAGE & LINGUISTICS

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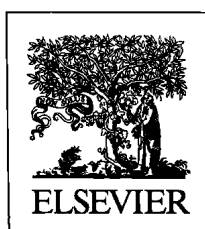
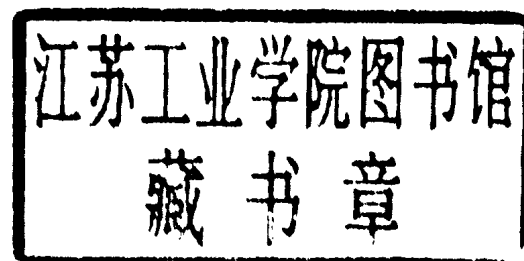
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GUIDE TO USE OF THE ENCYCLOPEDIA

Structure of the Encyclopedia

The material in the Encyclopedia is arranged as a series of articles in alphabetical order. To help you realize the full potential of the material in the Encyclopedia we have provided several features to help you find the topic of your choice: an Alphabetical list of Articles, a Subject Classification, Cross-References and a Subject Index.

1. Alphabetical List of Articles

Your first point of reference will probably be the alphabetical list of articles. It provides a full alphabetical listing of all articles in the order they appear within the work. This list appears at the front of each volume, and will provide you with both the volume number and the page number of the article.

Alternatively, you may choose to browse through the work using the alphabetical order of the articles as your guide. To assist you in identifying your location within the Encyclopedia, a running head line indicates the current article.

You will also find 'dummy entries' for certain languages for which alternative language names exist within the alphabetical list of articles and body text.

For example, if you were attempting to locate material on the *Apalachee* language via the contents list, you would find the following:

Apalachee *See* Muskogean Languages.

The dummy entry directs you to the *Muskogean Languages* article.

If you were trying to locate the material by browsing through the text and you looked up *Apalachee*, you would find the following information provided in the dummy entry:

Apalachee <i>See:</i> Muskogean Languages.

2. Subject Classification

The subject classification is intended for use as a thematic guide to the contents of the Encyclopedia. It is divided by subject areas into 36 sections; most sections are further subdivided where appropriate. The sections and subdivisions appear alphabetically, as do the articles within each section. For quick reference, a list of the section headings and subheadings is provided at the start of the subject classification.

Every article in the encyclopedia is listed under at least one section, and a large number are also listed under one or more additional relevant sections. Biographical entries are an exception to this policy; they are listed only under biographies. Except for a very few cases, repeat entries have been avoided within sections, and a given

article will appear only in the most appropriate subdivisions. Again, biographical entries are the main exception, with many linguists appearing in several subdivisions within biographies.

As explained in the introduction to the Encyclopedia, practical considerations necessitate that, of living linguists, only the older generation receive biographical entries. Those for members of the Encyclopedia's Honorary Editorial Advisory Board and Executive Editorial Board appear separately in Volume 1 and are not listed in the classified list of entries.

3. Cross-References

All of the articles in the Encyclopedia have been extensively cross-referenced. The cross-references, which appear at the end of each article, serve three different functions. For example, at the end of *Norwegian* article, cross-references are used:

1. to indicate if a topic is discussed in greater detail elsewhere

Norwegian

See also: Aasen, Ivar Andreas (1813–1896); Danish; Inflection and Derivation; Language/Dialect Contact; Language and Dialect: Linguistic Varieties; Morphological Typology; Norway: Language Situation; Norse and Icelandic; Scandinavian Lexicography; Subjects and the Extended Projection Principle; Swedish.

2. to draw the reader's attention to parallel discussions in other articles

Norwegian

See also: Aasen, Ivar Andreas (1813–1896); Danish; Inflection and Derivation; Language/Dialect Contact; Language and Dialect: Linguistic Varieties; Morphological Typology, Norway: Language Situation; Norse and Icelandic; Scandinavian Lexicography; Subjects and the Extended Projection Principle; Swedish.

3. to indicate material that broadens the discussion

Norwegian

See also: Aasen, Ivar Andreas (1813–1896); Danish; Inflection and Derivation; Language/Dialect Contact; Language and Dialect: Linguistic Varieties; Morphological Typology; Norway: Language Situation; Norse and Icelandic; Scandinavian Lexicography; Subjects and the Extended Projection Principle; Swedish.

4. Subject Index

The index provides you with the page number where the material is located, and the index entries differentiate between material that is an entire article, part of an article, or data presented in a figure or table. Detailed notes are provided on the opening page of the index.

Other End Matter

In addition to the articles that form the main body of the Encyclopedia, there are 176 Ethnologue maps; a full list of contributors with contributor names, affiliations, and article titles; a List of Languages, and a Glossary. All of these appear in the last volume of the Encyclopedia.

ALPHABETICAL LIST OF ARTICLES VOLUME 2

Note: Readers are urged to use the comprehensive name and subject indexes and the Classified List of Entries extensively, since the contents presented here represent only the broad framework of the *Encyclopedia*.

- Bilingualism
Bilingualism and Aphasia
Bilingualism and Second Language Learning
Binbinka *See* Wambaya
Binding Theory
Biosemiotics
Birdsong: a Key Model in Animal Communication
Bislama
Black Islam
Blaming and Denying: Pragmatics
Bleek, Wilhelm Heinrich Immanuel (1827–1875),
and Family
Blend
Blessings
Bloch, Bernard (1907–1965)
Bloch, Jules (1880–1953)
Bloomfield, Leonard (1887–1949)
Blumer, Herbert (1900–1987)
Boas, Franz (1858–1942)
Body Language
Boeckh, August (1785–1867)
Boethius of Dacia (fl. 1275)
Böhtlingk, Otto Nikolaus (1815–1904)
Bolivia: Language Situation
Boole and Algebraic Semantics
Boole, George (1815–1864)
Bopp, Franz (1791–1867)
Borgstrøm, Carl Hjalmar (1909–1986)
Bosnia and Herzegovina: Language Situation
Bosnian *See* Serbian–Croatian–Bosnian Linguistic
Complex
Botswana: Language Situation
Bouvet Island: Language Situation
Bovelles, Charles de (1479–1567)
Boxhorn, Marcus Zuerius (1602/12–1653)
Brahui
Braille, Louis (1809–1852)
Brands and Logos
Braune, Wilhelm (1850–1926)
Brazil: Language Situation
Bréal, Michel Jules Alfred (1832–1915)
Bredsdorff, Jakob Hornemann (1790–1841)
Breton
British Indian Ocean Territory: Language Situation
Brockelmann, Carl (1868–1956)
Brøndal, Rasmus Viggo (1887–1942)
Brosses, Charles de (1709–1777)
Brown, Gillian
Brown, Roger William (1925–1997)
Brücke, Ernst (1819–1891)
Brugmann, Karl (1849–1919)
Bruneau, Charles (1883–1969)
Brunei Darussalam: Language Situation
Bruner, Jerome Seymour (b. 1915)
Brunot, Ferdinand (1860–1938)
Buck, Carl Darling (1866–1955)
Buddhism, Japanese
Buddhism, Tibetan
Bühler, Karl (1879–1963)
Bulgaria: Language Situation
Bulgarian
Bulgarian Lexicography
Bullokar, William (c. 1531–1609)
Burji *See* Highland East Cushitic Languages
Burkina Faso: Language Situation
Burma: Language Situation

- Burmese
 Burnett, James, Monbodo, Lord (1714–1799)
 Burrow, Thomas (1909–1986)
 Burundi: Language Situation
 Burushaski
 Çabej, Eqrem (1908–1980)
 Cacaopera *See* Misumalpan
 Caddoan Languages
 Caldwell, Robert (1814–1891)
 Calligraphy, East Asian
 Calligraphy, Islamic
 Calligraphy, South Asian and Tibetan
 Calligraphy, Western, Modern
 Câmara Júnior, Joaquim Mattoso (1904–1970)
 Cambodia: Language Situation
 Cambodian *See* Khmer
 Cameron, Deborah (b. 1958)
 Cameroon: Language Situation
 Campanella, Thomas (1568–1639)
 Campe, Joachim Heinrich (1746–1818)
 Canada: Language Situation
 Canadian Lexicography
 Canary Islands: Language Situation
 Cantonese *See* Chinese
 Cape Verde Islands: Language Situation
 Cape Verdean Creole
 Cariban Languages
 Caribbean Lexicography
 Carnap, Rudolf (1891–1970)
 Cartography: Semiotics
 Case
 Case Grammar
 Castrén, Matthias Alexander (1813–1852)
 Causal Theories of Reference and Meaning
 Catalan
 Categorical Grammars: Deductive Approaches
 Categorical Perception in Animals
 Categorizing Percepts: Vantage Theory
 Category-Specific Knowledge
 Catford, John C. (b. 1917)
 Caucasian Languages
 Causatives: Semantics
 Caxton, William (ca. 1415–1491)
 Cayman Islands: Language Situation
 Cebuano
 Celtic
 Celtic Religion
 Central African Republic: Language Situation
 Central Solomon Languages
 Čeremisina, Maja Ivanovna (b. 1924)
 Cerron-Palomino, Rodolfo (b. 1940)
 Cerulli, Enrico (1898–1988)
 Chad: Language Situation
 Chadic Languages
 Chamberlain, Basil Hall (1850–1935)
 Champollion, Jean-François (1790–1832)
 Channel Islands: Language Situation
 Chao Yuen Ren (1892–1982)
 Character Sets
 Character versus Content
 Chart Parsing and Well-Formed Substring Tables
 Chatino *See* Zapotecan
 Chatterji, Suniti Kumar (1890–1977)
 Chavée, Honoré (1815–1877)
 Chibchan
 Chickasaw *See* Mobilian Jargon; Muskogean Languages
 CHILDES Database
 Children's Literature: Translation of
 Chile: Language Situation
 China: Language Situation
 China: Religions
 China: Scripts, Non-Chinese
 China: Writing System
 Chinantec: Phonology
 Chinese
 Chinese (Mandarin): Phonology
 Chinese as an Isolating Language
 Chinese Linguistic Tradition
 Chinese Lexicography
 Chino, Eiichi (1932–2002)
 Chi-Nyanja *See* Nyanja
 Chiri, Mashiho (1909–1961)
 Choco Languages
 Choctaw *See* Muskogean Languages
 Choctaw Trade Language *See* Mobilian Jargon
 Chomsky, Noam (b. 1928)
 Chorasmian
 Christianity and Language in the Middle Ages
 Christianity in Africa
 Christianity in Central Asia and the Near East
 Christianity In Latin America
 Christianity in South Asia
 Christianity in Southeast Asia
 Christianity in the Far East
 Christianity, Catholic
 Christianity, Protestant
 Christmas Island: Language Situation
 Chrysippos (ca. 282–208 B.C.)
 Chukotko-Kamchatkan Languages
 Church Slavonic
 Chuvash
 Circum-Baltic Area
 Cladistics
 Clark, Herbert H. (b. 1940)
 Class Language
 Classical Antiquity: Language Study
 Classical Tests for Speech and Language Disorders
 Classification of Languages

- Classification of Text, Automatic
 Classifiers and Noun Classes: Semantics
 Classroom Talk
 Clause Relations
 Clause Structure in Spoken Discourse
 Clefting in Spoken Discourse
 Clitics
 Clothing: Semiotics
 Coarticulation
 Cobbett, William (1763–1835)
 Cocos (Keeling) Islands: Language Situation
 Codes, Elaborated and Restricted (Bernstein)
 Code Switching
 Code Switching and Mixing
 Coelho, Francisco Adolpho (1847–1919)
 Coeurdoux, Gaston-Laurent (1691–1779)
 Cognitive Anthropology
 Cognitive Basis for Language Evolution in
 Nonhuman Primates
 Cognitive Grammar
 Cognitive Linguistics
 Cognitive Pragmatics
 Cognitive Science and Philosophy of Language
 Cognitive Science: Overview
 Cognitive Semantics
 Cognitive Technology
 Coherence: Psycholinguistic Approach
 Cohesion and Coherence: Linguistic Approaches
 Collitz, Hermann (1855–1935)
 Collocations
 Colombia: Language Situation
 Color Terms
 Combinatory Categorical Grammar
 Comenius, Johann(es) Amos (Jan Amos Komenský)
 (1562–1670)
 Comics: Pragmatics
 Comics: Semiotic Approaches
 Command Relations
 Communication in Grey Parrots
 Communication in Marine Mammals
 Communication, Understanding, and Interpretation:
 Philosophical Aspects
 Communication: Semiotic Approaches
 Communicative Competence
 Communicative Language Teaching
 Communicative Principle and Communication
 Communities of Practice
 Comoros: Language Situation
 Comparative Constructions
 Comparatives: Semantics
 Complement Clauses
 Complex Predicates
 Complex Segments
 Componential Analysis
 Compositionality: Philosophical Aspects
 Compositionality: Semantic Aspects
 Compound
 Computational Approaches to Language Acquisition
 Computational Language Systems: Architectures
 Computational Lexicons and Dictionaries
 Computational Linguistics: History
 Computational Stylistics
 Computer-Mediated Communication: Cognitive
 Science Approach
 Computers in Field Linguistics
 Computers in Lexicography
 Computers in the Linguistic Humanities:
 Overview
 Computer-Supported Writing
 Comrie, Bernard (b. 1947)
 Concepts
 Concessive Clauses

Bilingualism

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What Is Bilingualism?

Bilingualism is a product of extensive language contact (i.e., contacts between people who speak different languages). There are many reasons for speakers of different languages to get into contact with one another. Some do so out of their own choosing, whereas others are forced by circumstances. Among the frequently cited factors that contribute to language contact are education, modern technology, economy, religion and culture, political or military acts, and natural disasters. One does not have to move to a different place to be in contact with people speaking a different language. There are plenty of opportunities for language contact in the same country, the same community, the same neighborhood, or even the same family.

However, although language contact is a necessary condition for bilingualism at the societal level, it does not automatically lead to bilingualism at the individual level. For example, Belgium, Canada, Finland, India, Luxembourg, Paraguay, and Singapore, to name but a few countries, are bi- or multilingual, but the degree or extent of bilingualism among the residents of these countries varies significantly. There are large numbers of bilingual or multilingual individuals in Luxembourg, Paraguay, and Singapore, but considerably fewer in the other officially bi- or multilingual countries. Mackey (1962) claims that there are actually fewer bilingual people in bilingual countries than there are in the so-called 'unilingual' ones, because the main concerns of bi- or multilingual states are often the maintenance and use of two or more languages in the same nation, rather than the promotion of bilingualism among their citizens. It is therefore important to distinguish bilingualism as a social or societal phenomenon from bilingualism as an individual phenomenon.

Who Is Bilingual?

People who are brought up in a society in which monolingualism and uniculturalism are promoted as the normal way of life often think that bilingualism is only for a few, 'special' people. In fact, one in three of the world's population routinely uses two or more languages for work, family life, and leisure. There are even more people who make irregular use of languages other than their native one; for example,

many people have learned foreign languages at school and only occasionally use them for specific purposes. If we count these people as bilinguals, then monolingual speakers would be a tiny minority in the world today.

Yet the question of who is and who is not a bilingual is more difficult to answer than it first appears. Baker and Prys Jones (1998: 2) suggest that in defining a bilingual person, we may wish to consider the following questions:

- Should bilingualism be measured by how fluent people are in two languages?
- Should bilinguals be only those people who have equal competence in both languages?
- Is language proficiency the only criterion for assessing bilingualism, or should the use of two languages also be considered?
- Most people would define a bilingual as a person who can speak two languages. What about a person who can understand a second language perfectly but cannot speak it? What about a person who can speak a language but is not literate in it? What about an individual who cannot speak or understand speech in a second language but can read and write it? Should these categories of people be considered bilingual?
- Should self-perception and self-categorization be considered in defining who is bilingual?
- Are there different degrees of bilingualism that can vary over time and with circumstances? For instance, a person may learn a minority language as a child at home and then later acquire another, majority language in the community or at school. Over time, the second language may become the stronger or dominant language. If that person moves away from the neighborhood or area in which the minority language is spoken or loses contact with those who speak it, he or she may lose fluency in the minority language. Should bilingualism therefore be a relative term?

The word 'bilingual' primarily describes someone with the possession of two languages. It can, however, also be taken to include the many people in the world who have varying degrees of proficiency in and interchangeably use three, four or even more languages. In many countries of Africa and Asia, several languages coexist and large sections of the population speak three or more languages. Individual multilingualism in these countries is a fact of life. Many people speak one or more local or ethnic languages, as well as another indigenous language which has become the medium of communication between different ethnic

groups or speech communities. Such individuals may also speak a foreign language – such as English, French or Spanish – which has been introduced into the community during the process of colonization. This latter language is often the language of education, bureaucracy and privilege.

Multilingualism can also be the possession of individuals who do not live within a multilingual country or speech community. Families can be trilingual when the husband and wife each speak a different language as well as the common language of the place of residence. People with sufficient social and educational advantages can learn a second, third, or fourth language at school or university; at work; or in their leisure time. In many continental European countries, children learn two languages at school – such as English, German, or French – as well as being fluent in their home language – such as Danish, Dutch, or Luxembourgish.

It is important to recognize that a multilingual speaker uses different languages for different purposes and does not typically possess the same level or type of proficiency in each language. In Morocco, for instance, a native speaker of Berber may also be fluent in colloquial Moroccan Arabic but not literate in either of these languages. This Berber speaker will be educated in Modern Standard Arabic and use that language for writing and formal purposes. Classical Arabic is the language of the mosque, used for prayers and reading the Qur'an. Many Moroccans also have some knowledge of French, the former colonial language.

Theoretical Issues in Bilingualism Research

Chomsky (1986) defined three basic questions for modern linguistics:

- i. What constitutes knowledge of language?
- ii. How is knowledge of language acquired?
- iii. How is knowledge of language put to use?

For bilingualism research, these questions can be rephrased to take in knowledge of more than one language (see also Cook, 1993):

- i. What is the nature of language, or grammar, in the bilingual person's mind, and how do two systems of language knowledge coexist and interact?
- ii. How is more than one grammatical system acquired, either simultaneously or sequentially? In what aspects does bilingual language acquisition differ from unilingual language acquisition?

- iii. How is the knowledge of two or more languages used by the same speaker in bilingual speech production?

Taking the acquisition question first, earlier observers of bilingual children concentrated on documenting the stages of their language development. Volterra and Taeschner (1978), for example, proposed a three-stage model of early bilingual development. According to this model, the child initially possesses one lexical system composed of lexical items from both languages. In stage two, the child distinguishes two separate lexical codes but has one syntactic system at his or her disposal. Only when stage three is reached do the two linguistic codes become entirely separate. Volterra and Taeschner's model gave rise to what is now known as the 'unitary language system hypothesis.' In its strongest version, the hypothesis supposes that the bilingual child has one single language system that they use for processing both of their languages in the repertoire.

In the 1980s, the unitary language system hypothesis came under intense scrutiny; for instance, by Meisel (1989) and Genesee (1989). They argue that there is no conclusive evidence to support the existence of an initial undifferentiated language system, and they also point out certain methodological inconsistencies in the three-stage model. The phenomenon of language mixing, for instance, can be interpreted as a sign of two developing systems existing side by side, rather than as evidence of one fused system. Meisel's and Genesee's studies led to an alternative hypothesis, known as the 'separate development hypothesis' or 'independent development hypothesis.' More recently, researchers have investigated the possibility that different aspects of language (e.g., phonology, vocabulary, syntax, pragmatics) of the bilingual child's language systems may develop at different rates (e.g., Li and Zhu, 2001). Care needs to be taken in interpreting research evidence using children at different developmental stages.

Although the 'one-versus-two-systems' debate (i.e., whether bilingual children have an initially differentiated or undifferentiated linguistic system) continues to attract new empirical studies, a more interesting question has emerged regarding the nature of bilingual development. More specifically, is bilingual acquisition the same as monolingual acquisition? Theoretically, separate development is possible without there being any similarity with monolingual acquisition. Most researchers argue that bilingual children's language development is, by and large, the same as that of monolingual children. In very general terms, both bilingual and monolingual children go through an initial babbling stage, followed by the

one-word stage, the two-word stage, the multiword stage, and the multiclausal stage. At the morphosyntactic level, a number of studies have reported similarities rather than differences between bilingual and monolingual acquisition. Garcia (1983), for example, compared the use of English morpheme categories by English monolingual children and bilingual children acquiring English and Spanish simultaneously and found no systematic difference at all. Pfaff and Savas (1988) found that their 4-year-old Turkish/German subject made the same errors in Turkish case marking as reported in the literature on monolingual Turkish children. Muller's (1990) study of two French/German children indicates that their use of subject-verb agreement and finite verb placement in both languages is virtually identical to that of comparable monolingual children. De Houwer (1990) found that her Dutch/English bilingual subject, Kate, used exactly the same word orders in Dutch as monolingual Dutch-speaking children, both in terms of types and in proportional use. Furthermore, De Houwer found in Kate parallels to monolingual children for both Dutch and English in a range of structures, such as nonfinite verb placement, preposed elements in affirmative sentences, clause types, sentence types, conjunctions, and question inversion.

Nevertheless, one needs to be careful in the kinds of conclusions one draws from such evidence. Similarities between bilingual and monolingual acquisition do not mean that the two languages a bilingual child is acquiring develops in the same way or at the same speed, or that the two languages a bilingual child is acquiring do not influence and interact with each other. Paradis and Genesee (1996), for example, found that although the 2-3-year-old French-English bilingual children they studied displayed patterns that characterize the performance of monolingual children acquiring these languages separately, and they acquired these patterns within the same age range as monolingual children, they used finite verb forms earlier in French than in English; used subject pronouns in French exclusively with finite verbs, but subject pronouns in English with both finite and nonfinite verbs, in accordance with the status of subject pronouns in French as clitics (or agreement markers) but full NPs in English; and placed verbal negatives after lexical verbs in French (e.g., 'n'aime pas') but before lexical verbs in English ('do not like'). Further evidence of cross-linguistic influence has been reported by Dopke (1992), for example, in her study of German-English bilingual children in Australia. These children tended to overgeneralize the -VO word order of English to German, which instantiates both VO and OV word orders, depending on the clausal structure of the utterance. Dopke suggests

that children learning English and German simultaneously are prone to overgeneralize SVO word order in their German because the VO order is reinforced on the surface of both the German and the English input they hear.

Most of the studies that have examined cross-linguistic influences in bilingual acquisition focus on morphosyntactic features. One area that has hitherto been underexplored is the interface between phonetics and phonology in bilingual acquisition. Although most people seem to believe that the onset of speech by bilingual children is more or less the same as for monolingual children, there are indications that bilingual children seem to develop differently from monolingual children in the following three aspects: the overall rate of occurrence of developmental speech errors, the types of speech errors and the quality of sounds (Zhu and Dodd, 2005). For example, studies on Cantonese/English (Holm and Dodd), Putonghua/Cantonese (So and Leung), Welsh/English (Ball *et al.*), Spanish/English (Yavas and Goldstein), and Punjabi/English (Stow and Pert) (also in Zhu and Dodd, 2006) bilingual children seem to indicate that bilingual children tend to make not only more speech errors but also different types of speech errors compared with monolingual children of the same age. These speech errors would be considered atypical if they had occurred in the speech of monolingual children. Moreover, although bilingual children seem to be able to acquire monolingual-like competence at the phonemic level, there are qualitative differences at the phonetic level in terms of production. For example, using instrumental analysis, Khattab (also in Zhu and Dodd, 2006) finds that although Arabic-English bilingual children have similar patterns of production and use of VOT, /l/, and /r/ in some respects to those of monolinguals from each language, they also show differences that are intricately related to age, input, and language context. These studies and others are reported in Zhu and Dodd (2005).

There is one area in which bilingual children clearly differ from monolingual children; namely, code-mixing. Studies show that bilingual children mix elements from both languages in the same utterance as soon as they can produce two-word utterances. Researchers generally agree that bilingual children's mixing is highly structured and grammatically constrained, although there is no consensus on the nature of the specific constraints that organize their mixing. Vihman (1985), who studied her own son Raivo, who acquired English and Estonian simultaneously, argued, for example, that the language mixing by bilingual children is qualitatively different from that of more mature bilinguals. She invoked as evidence for this claim the fact that young bilingual children

indicate a propensity to mix function words over contentives (e.g., nouns, verbs, adjectives) – a type of mixing that is rare in older bilingual mixing. However, Lanza's (1997) study, although finding similar patterns in the mixing produced by her two Norwegian–English bilingual subjects, argued that children's mixing is qualitatively the same as that of adults; their relatively greater degree of mixing of function words is evidence of what Lanza called 'dominance' of one language over another rather than of a substantial difference from bilingual adults' mixing. Both Vihman and Lanza, as well as other studies of children's mixing, show that bilingual children mix their languages in accordance with constraints that operate on adult mixing. The operation of constraints based on surface features of grammar, such as word order, is evident from the two-word/two-morpheme stage onward, and the operation of constraints based on abstract notions of grammatical knowledge is most evident in bilingual children once they demonstrate such knowledge overtly (e.g., verb tense and agreement markings), usually around two years and 6 months of age and older. As Genesee (2002) points out, these findings indicate that in addition to the linguistic competence needed to formulate correct monolingual strings, bilingual children have the added capacity to coordinate their two languages in accordance with the grammatical constraints of both languages during mixing. Although these studies provide further evidence for the separate development, or two-systems, argument, they also indicate that there are both quantitative and qualitative differences between bilingual acquisition and monolingual acquisition.

Another area of interest in acquisitional studies of bilingual children is the role of input and social context in the rate and order of language acquisition. Earlier assumptions were that the bilingual child would have half, or less, of the normal input in each of their two languages, compared with the monolingual child. More careful examinations of bilingual children show considerable variations in the quantity and quality of input, interactional styles of the parents, and environmental policies and attitudes toward bilingualism. On the basis of Harding and Riley's work (1986), Romaine (1995) distinguished six types of early-childhood bilingualism according to the native language of the parents, the language of the community at large, and the parents' strategy in speaking to the child.

Type 1: One person, one language.

- Parents: The parents have different native languages, with each having some degree of competence in the other's language.

- Community: The language of one of the parents is the dominant language of the community.
- Strategy: The parents each speak their own language to the child from birth.

Type 2: Nondominant Home Language/One Language, One Environment

- Parents: The parents have different native languages.
- Community: The language of one of the parents is the dominant language of the community.
- Strategy: Both parents speak the nondominant language to the child, who is fully exposed to the dominant language only when outside the home, and in particular in nursery school.

Type 3: Nondominant Home Language without Community Support

- Parents: The parents share the same native languages.
- Community: The dominant language is not that of the parents.
- Strategy: The parents speak their own language to the child.

Type 4: Double Nondominant Home Language without Community Support

- Parents: The parents have different native languages.
- Community: The dominant language is different from either of the parents.
- Strategy: The parents each speak their own language to the child from birth.

Type 5: Nonnative Parents

- Parents: The parents share the same native language.
- Community: The dominant language is the same as that of the parents.
- Strategy: One of the parents always addresses the child in a language that is not his or her native language.

Type 6: Mixed Languages

- Parents: The parents are bilingual.
- Community: Sectors of community may also be bilingual.
- Strategy: Parents code-switch and mix languages.

The three headings Romaine used to classify the six types of childhood bilingualism – the languages of the parents, the sociolinguistic situation of the community, and the discourse strategies of the parents and other immediate carers – are critical factors not only in the process of bilingual acquisition but also in

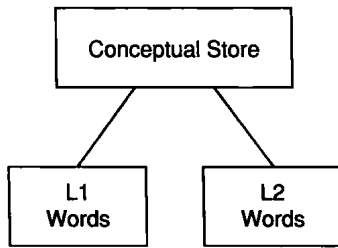


Figure 1 Lexical association model.

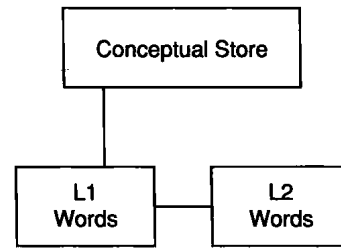


Figure 2 Dual-store model.

the final product of that process (i.e., the type of bilingual speaker it produces). Arguably, the six types of bilingual children would grow up as different types of bilinguals with different mental representations of the languages and different patterns of language behavior.

Research on the cognitive organization and representation of bilingual knowledge is inspired and influenced by the work of Weinreich. Focussing on the relationship between the linguistic sign (or signifier) and the semantic content (signified), Weinreich (1953) distinguished three types of bilinguals. In type A, the individual combines a signifier from each language with a separate unit of the signified. Weinreich called them 'coordinative' (later often called 'coordinate') bilinguals. In type B, the individual identifies two signifiers but regards them as a single compound, or composite, unit of signified; hence 'compound' bilinguals. Type C refers to people who learn a new language with the help of a previously acquired one. They are called 'subordinative' (or 'subordinate') bilinguals. Weinreich's examples were from English and Russian:

(A) 'book' 'kniga'
 | |
 /buk/ /kn'iga/

(B) 'book' = 'kn'iga'

^
 /buk/ /kn'iga/

(C) 'book'
 |
 /buk/
 |
 /kn'iga/

Weinreich's distinctions are often misinterpreted in the literature as referring to differences in the degree of proficiency in the languages, but in fact the relationship between language proficiency and cognitive organization of the bilingual individual, as conceptualized in Weinreich's model, is far from clear. Some 'subordinate' bilinguals demonstrate a very high level of proficiency in processing both languages, as

evidenced in grammaticality and fluency of speech, and some 'coordinative' bilinguals show difficulties in processing two languages simultaneously (i.e., in code-switching or in 'foreign' word identification tasks). It must also be stressed that Weinreich's distinctions among bilingual individuals are distributed along a continuum from a subordinate or compound end to a coordinate end and can at the same time be more subordinate or compound for certain concepts and more coordinate for others, depending on, among other things, the age and context of acquisition.

Weinreich's work influenced much of the psycholinguistic modelling of the bilingual lexicon. Potter *et al.* (1984) presented a reformulation of the manner in which bilingual lexical knowledge could be represented in the mind in terms of two competing models: the Concept Mediation Model and the Word Association model. In the Concept Mediation Model, words of both L1 and L2 are linked to amodal conceptual representations. In the Lexical Association Model, in contrast, words in a second language are understood through L1 lexical representations. As can be seen in Figure 1, the models are structurally equivalent to Weinreich's distinction between coordinative and subordinative bilingualism. At the same time, several researchers (e.g., Kolers and Gonzalez [1980] and Hummel [1986]) presented evidence for the so-called dual-store model, as represented in Figure 2. This latter model has also generated considerable research on the existence of the putative 'bilingual language switch' postulated to account for the bilingual's ability to switch between languages on the basis of environmental demands (e.g., MacNamara, 1967; MacNamara and Kushnir, 1971).

Subsequent studies found conflicting evidence in favor of different models. Some of the conflicting evidence could be explained by the fact that different types of bilingual speakers were used in the experiments in terms of proficiency level, age, and context of acquisition. It is possible that lexical mediation is associated with low levels of proficiency, and concept mediation with higher levels, especially for those who have become bilingual in later childhood or adulthood. Some researchers called for a developmental dimension in the modelling of bilingual knowledge.