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## BILINGUALISM

Bilingualism as a term has been applied to individuals as well as to groups and institutions. When used to describe individuals, the issues raised by scholars have been primarily psycholinguistic and social psychological in nature. Bilingualism at the group level has raised sociolinguistic, educational, and political considerations. In popular usage and debate about the merits of bilingualism, there is considerable confusion caused by unclear specification over whether one is referring to individuals or to social categories.

## DEFINITIONS

A bilingual individual is someone who controls two or more languages. Beyond this simple definition, there is considerable fuzziness arising from the difficulty of defining what it means to control a language. Using a loose criterion such as the ability to utter or comprehend some minimal range of sentences, the majority of the world's population would be considered bilingual. A strict criterion of native-like control would severely limit this number. The definitional problem is further complicated by the fact that control of language can vary as a function of the domain of language use, and that within any domain, skill in the language can undergo development or attrition. Although there is disagreement on criteria, scholars agree on the existence of these variabilities.

Various typologies of bilingual individuals have been proposed. The best known is Uriel Weinreich's distinction between compound and coordinate bilingualism, referring to the lexical organization of the two languages with respect to the concepts they represent. This is determined by the extent to which the languages are segregated in contexts of acquisition and usage. A compound bilingual organization integrates both languages under the same concept, whereas coordinate organization maintains separate concepts. Other distinctions refer to the age at which bilingualism is attained. Simultaneous vs. sequential bilingualism distinguishes whether the two languages are learned at the same time or whether the second language is acquired after the primary language has been established (starting at about age 3). Early vs. late bilingualism has been also used to refer to this distinction, but has also been used to distinguish between sequential bilinguals who attained their second language at later ages.

Bilingualism at the group level is more complex because it can refer to a wide range of entities, including speech communities, schools, and governments. An important dimension here is the degree and nature of functional separation granted the two languages within these groups.

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Charles Ferguson's notion of DIGLOSSIA has been usefully applied to describe many settings of stable bilingualism. Many sociolinguists believe that in the absence of diglossia, bilingualism will result in language shift. An important distinction that incorporates the notion of majority and minority languages is that between additive and subtractive bilingualism, a notion that has also been referred to as elite vs. folk bilingualism. In additive bilingualism, such as in the case of Anglophones in Canada learning French, the majority group learns the minority language without fear of loss of the native language. Subtractive bilingualism appropriately describes the situation of language minority groups in the United States, where the second language replaces the native language.

## DEVELOPMENIAL PROCESSES

The development of simultaneous bilingualism has been described in a number of case studies, most prominently a study by Werner Leopold of his daughter raised in German and English. Functional separation of the two linguistic systems appears early in development, although not without some crossover between languages. Some observers report delays in vocabulary development at the early stages but with few long-tenm effects, although neither observation has been substantiated against normative data. For optimal development, a one-parent one-language method is commonly prescribed in which each parent uses one language consistently, but problems with practical feasibility are also acknowledged in this method. Long-term studies suggest no harmful effects of bilingualism on overall linguistic or cognitive development, and possibly beneficial effects.

Sequential bilingualism has been studied most intensively from the perspectives of phonological, morphological and syntactic development. The driving question has been the extent to which the native language (II) characteristics predict outcomes in second language (I2) acquisition, a movement that has been associated with contrastive analysis. Phonological development can be described (though by no means wholly) in terms of in influences, particularly among adults. Morphological and syntactic aspects of I2 acquisition evidence far less effects of 11 , particularly with respect to the types of errors in production. Second language acquisition is thus governed primarily by the properties of the target language, although in continues to provide a source of hypotheses to the learner about I2. Statements about discourse factors are limited due to the theoretical status of contrastive studies in this area. The theoretical approaches to 12 acquisition have tended to mimic the trends in $L l$ acquisition research, with recent interests sprouting in universal grammar and learnability theory.

## CONSTRAINTS ON DEVETOPMENT

Unlike Ll acquisition, L2 acquisition is characterized by differential success, with often imperfect approximations to the target language. Selinker has introcduced the term FOSSILIZATION that has been widely accepted referring to the arrest along the developmental continuum. A variety of factors supposedly modulate the occurrence of fossilization, ranging from biological to situational variables. Many theorists have used age of the

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learner as a global variable, and generally have assumed this to be equivalent to biological maturation. The picture is considerably more complex, because cognitive, social, and emotional factors also covary with age, not all of which have wholly biological bases.

Studies have tested the truth of folk observations that with respect to I2 acquisition, "the younger the better". Such observations are supported to a limited extent, particularly with respect to prommciation, by studies of I2 learners with extended (more than five yearis) opportunity to learn the L2. However, the exact shape of the declining function with age is unclear. For example, we do not know whether it is linear, nonlinear, or discontimuous. Puberty is frequently claimed to be an important breaking point, particularly by supporters of a critical period for L2 acquisition, but evidence on this point is sparse. An advantage for older learners has also been found with respect to the rate of acquisition when exposure levels are limited.

Research that looks at individual differences in second language acquisition within specified age groups has turned up a number of interesting factors. In addition to the variable of language aptitude (which has been often equated with verbal intelligence), Wallace Lambert and his colleagues have shown the importance of motivational variables, such as positive attitudes towards speakers of the target language or instrumental goals to be attained through its acquisition. While language aptitude accounts for performance on primarily academic assessments of second language acquisition, motivational variables acoount for performance on listening comprehension and more communicatively driven tasks. Other researchers have pointed to personality variables such as fieldindependence, extraversion, and other learning styles as positively contributing to I2 acquisition. Another important consideration is the cultural orientation of the learner, particularly in classroom situations. This complex area suggests that there are probably inportant interaction effects between predispositions of learners and the nature of the learning situation.

## CONSEQUENCES OF BIIINGUAIISM

Early work conducted in the psychological tradition of mental measurement gave rise to the alarming conclusion that bilingualism could have harmful effects on mental and social development. This substantial literature is notable for its flaws in subject selection and failure to control background variables in comparisons. When background factors are controlled, a large number of studies have shown a positive correlation between bilingualism and performance on a wide variety of tests of cognitive flexibility. Several studies have suggested that the direction of causality is complex, but support the argument that bilingualism fosters cognitive skills, particularly in additive bilingual contexts. The studies in any event suggest no negative effects associated with bilingualism.

## COGNITIVE AND NEUROLOGICAL PROCESSES

The issue of whether compound and coordinate bilinguals show different information processing patterns has generated a sizeable but inconclusive literature. Others have avoided the problem of individual differences, and have instead focused energy on the organization of the mental lexicon in the two languages. Studies support the view that the two lexicons of most bilinguals are interdependent, and thus in memory experiments, they behave as though word equivalents in the two languages are repetitions in the same language. However, same experimental protocols continus to yield data for memory of the particular language of presentation, suggesting that under certain contexts, the form of the presentation is retained in memory.

Studies of the neurofunctional bases of language organization in bilinguals are intriguing, particularly those that suggest that the two languages might be localized differently. There is also preliminary evidence for considerable right hemisphere involvement in the early stages of second language acquisition.

## SOCIAL PROCESSES

Conversations among bilinguals typically involve code-switching. A useful distinction can be drawn between situational and conversational codeswitching. Situational switching refers to differential use of the languages depending on the situation, whereas conversational switching is the switching of languages within conversational episodes, often intrasententially. Bilinguals use code-switching for various expressive functions, including emphasis and marking group identity. Researchers emphasize that code-switching is not the result of inadequate competence in the two languages or confusion between them. Rather, they are situationbound.

Language as a group or ethnic identity marker is seen as important in marking in-group and out-group membership. Elaborate social psychological models have been developed, taking sociological factors such as the dominance relations between the in-group and out-group into account, that predict corvergence or divergence of linguistic markers in cases of intergroup contact. Empirical support for such models is still sketchy but promising.

## BILINGUALISM AND EDUCATION

Issues surrounding bilingual education programs for language majority students need to be distinguished from those surrounding programs for language minority students. In programs for majority students, the goal is additive bilingualism, where the I2 is an enrichment, and there is no threat to the status of the L . In minority language programs, the primary concern is the development of the majority language, with secondary concern to varying degrees on the maintenance of $L \mathcal{L}$.

Considerable research investment has been made in evaluating immersion education programs for majority students, particularly in canada. In such programs, the majority group students receive instruction exclusively in a second language from the early elementary grades, with later introduction of language arts in their native language. Inmersion programs are superior to traditional foreign language programs, and students maintain ageappropriate levels of performance in their native language.

Bilingual education for minority students can be distinguished in terms of their philosophy towards maintenance of the students' native language and culture. In some programs, the IL is used only to the extent necessary until students have sufficient control of I2, often within 2 to 5 years, to receive instruction exclusively through the majority language. In other programs that attempt maintenance, the goal is to enhance and maintain the native language even after the majority language has been acquired. Regardless of the program orientation, in many countries, such special programs for immigrant and guestworker children serve as a focal point for public attitudes towards issues regarding immigration and demographic change.

## POLITICS AND DEMOGRAPHICS

The degree to which bilingualism becomes a political issue is related to the activism and critical mass of the minority language groups. Bilingualism at the societal level is not the root cause of political difficulties such as in Quebec or in Belgium, but the symbolic politics of language can be powerful, and often linguistic unity is equated with political unity and nationalism. In many parts of countries in Western Europe as well as in North America, there has been a significant increase of linguistic minorities in the schools, to the point where minorities are about to become a majority. In the U.S., such demographic changes have been accompanied by attempts to legislate language through a constitutional declaration for an official language. Such movements attempt to restrict ethnic language usage among minorities. Attempts to impose language politically have not been very successful historically. Language shift, for example in the United States, is governed more by a choice among linguistic minorities to gain access to econamic and political power held by speakers of the majority language.

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