Linguistics

Linguistics is the scientific study of language. While the roots of modern linguistics lie in the grammatical traditions of ancient India, classical antiquity, and Arabic civilizations, modern linguistics as an academic discipline is typically traced to early 19th century Germany with the rise of the German university system. Linguistics is characteristically divided into the study of language from a diachronic perspective and the study of language from a synchronic perspective. Diachronic linguistics focuses on the historical processes that affect languages over time and on the classification of languages into families. Synchronic linguistics concentrates on the description and analysis of (mainly) spoken language as it is used by its speakers. In the 19th century, linguistics was centered on diachronic study. The major achievements of 19th century linguistics included the development of a methodology for establishing genetic relations among languages, the discovery of historical sound laws, and the reconstructing earlier stages of languages, the so-called proto-languages. Under the methodology that was developed (and still generally accepted), a genetic relationship among languages can be established if systematic sound correspondences are attested amongst them. While certain language families and their internal relationships have become well established such as that of the Indo-European language family, the relationship of other language families are less well established. One present day controversy concerns the relationship among the Indian languages of the Americas, that is, the issue of to what extent the Native American languages are related to one another. Whereas some scholars have posited over a hundred separate unrelated language families for the Americas, Joseph Greenberg (1987) has proposed that these families can be reduced to three super-families. Other controversial classifications include various attempts to relate the Indo-European language family to other large language families (such as the Altaic or Afro-Asiatic), but these attempts are far from being accepted and have been the subject of a fair degree of criticism.

An important early contributor to the development of synchronic language study was Wilhelm von Humboldt (1767-1835) who emphasized the importance of describing languages and doing typological comparison among languages. Humboldt is probably best known for popularizing the division of languages into isolating, agglutinative and inflectional, which describes languages by the degree and type of affixation. An isolating language has little, if any, affixation (e.g., prefixation and suffixation). An agglutinating language exhibits a great deal of affixation and may even incorporate a sentence into a single word. (Such languages are called polysynthetic or incorporating.) Inflectional languages indicate certain meanings and relationships by affixation (e.g., case endings on nouns that indicate whether the noun is the subject or object of the sentence) or by internal changes in the form of words (e.g., English sing/sang/sung). This classification should not be viewed as absolute since one language may exhibit more than one type. For example, the English possessive may be expressed inflectionally by the suffix "s" as in "Janet's hat", or in a more isolating manner as in "the hat of Janet" where no affix appears. Humboldt's focus on synchronic language study did not have widespread influence in his own day. The rise of synchronic linguistics in the 20th century can be traced to the work on non-Western languages undertaken by Franz Boas (1858-1942) and his students and colleagues at Columbia University. The key to the Boasian approach to linguistics was the insistence that each language be described in its own terms and not according to a preset Latin or Germanic model.

Synchronic linguistics as now conceived has a considerable number of subfields. A large body of work has been dedicated to the analysis of language structure. This includes the three primary areas of syntax (sentence structure), morphology (word structure) and phonology (sound structure). Since Noam Chomsky's *Syntactic Structures* (1957) initiated a new school of transformational generative grammar, a primary goal of syntactic research has been to account for the fact that all languages allow for an infinite number of sentences and to account for the similarities and differences found among languages with respect to the variety of sentence types.
As an example, there has been much research on the properties of reflexive sentences. In the sentence "John wanted the doctor to examine himself", the reflexive word "himself" can only refer to the doctor. However, in the Japanese rendition of the same sentence, the corresponding reflexive word is ambiguous as to whether it refers to the doctor or John. The identity of the referent of the English reflexive is thus bounded by the clause in which it is located while that of the Japanese reflexive is not. Research in morphology has revolved around issues of word-formation, specifically concerning the properties manifested by affixes when they attach to words to form new words (e.g., read/readable). Typically, a specific affix may only go on words of a certain part of speech and then there may be other restrictions on its combination. For example, the English superlative suffix -est only attaches to adjectives that are two syllables or less, as is evidenced by the comparison of smart-smartest with intelligent - most intelligent (not intelligentest). Phonology, which deals with the description and distribution of sounds (i.e., consonants and vowels), and, in some cases, tone and accent, has been a focus of synchronic linguistics for the past century. A large body of recent work on phonology centers on the role of the syllable in sound patterning and how this has an effect on the location of word stress. One finding is that in many languages a heavy syllable (i.e., a syllable ending in a consonant or possessing a long vowel) is more likely to be stressed than a light one (i.e., a syllable ending in a short vowel), as can be seen by the difference in the location of stress in the English words Canada and veranda where, in the latter word, stress is on the syllable that ends in a consonant. Other areas of research with respect to language structure include semantics (the study of meaning) and phonetics (the study of how sounds are made physiologically and their acoustic properties).

Within the different subfields of synchronic linguistics, research tends to either examine the details of specific languages or it tends to be typological. Typological work investigates a specific phenomenon in many languages with the aim of finding the attested variation with respect to that phenomenon and to find correlations between that phenomenon and other properties. In doing this, possible universal properties of languages can be postulated. As an example of syntactic typology, a major division among languages concerns whether the basic word order is Subject-Verb-Object [SVO] (as in English), Verb-Subject-Object [VSO] (as in Standard Arabic), or Subject-Object-Verb [SOV] (as in Japanese). Researchers have discovered that this distinction is correlated with other syntactic properties such as whether the preposition occurs before the noun phrase (as in English or Arabic), or after the noun phrase (as in Japanese).

Synchronic linguistics focuses heavily on issues of theoretical concern (e.g., developing theories that account for observations such as the relation between word stress and syllable weight or why there is a difference in reflexives as to whether they are clause-bound). However, many linguists continue to devote their energy to describing languages by writing grammars and dictionaries. Currently, there is a particular attention to languages that are endangered. Scholars have observed that a large number of the world's languages (approximately 6000) do not have many speakers and many of those languages are not being learned by younger people because of the influence of dominant languages with more speakers. An example of this would be the influence that English has had in North America and that Spanish and Portuguese have had in Latin America on the declining number of Native American languages that are still in daily use.

A major area of linguistic research that bridges diachronic and synchronic linguistics is the immense area of sociolinguistics that examines variation in language and language use according to such factors as gender, social class, age, ethnicity, level of formality, and geographical region. These factors may influence various aspects of language structure or language use. As an example, whether or not the sound "r" is pronounced at the end of syllables in the English of the northeast coast of the United States may be largely dependent on the social class of the individual and on the level of formality of the social interaction. The study of sociolinguistics is often important for diachronic studies because certain styles may preserve older forms of the language that are no longer in common use, or because they may be reflective
of a language change in progress.

Finally, because of the centrality of language for many disciplines, one finds that linguistics is constantly expanding to encompass other subfields. Examples include psycholinguistics, computational linguistics, forensic linguistics, (first) language acquisition, and second language learning.

Further Reading