Linguistics: Sub-Disciplines

Linguistic structures
Linguistic structures are pairings of meaning and form. Any particular pairing of meaning and form is a Saussurean sign. For instance, the meaning “cat” is represented worldwide with a wide variety of different sound patterns (in oral languages), movements of the hands and face (in sign languages), and written symbols (in written languages).

Linguists focusing on structure attempt to understand the rules regarding language use that native speakers know (not always consciously). All linguistic structures can be broken down into component parts that are combined according to (sub)conscious rules, over multiple levels of analysis. For instance, consider the structure of the word “tenth” on two different levels of analysis. On the level of internal word structure (known as morphology), the word “tenth” is made up of one linguistic form indicating a number and another form indicating ordinality. The rule governing the combination of these forms ensures that the ordinality marker “th” follows the number “ten.” On the level of sound structure (known as phonology), structural analysis shows that the “n” sound in “tenth” is made differently from the “n” sound in “ten” spoken alone. Although most speakers of English are consciously aware of the rules governing internal structure of the word pieces of “tenth”, they are less often aware of the role governing its sound structure. Linguists focused on structure find and analyze rules such as these, which govern how native speakers use language.

Linguistics has many sub-fields concerned with particular aspects of linguistic structure. These sub-fields range from those focused primarily on form to those focused primarily on meaning. They also run the gamut of level of analysis of language, from individual sounds, to words, to phrases, up to discourse.

Sub-fields that focus on a structure-focused study of language:

- **Phonetics**, the study of the physical properties of speech (or signed) production and perception.
- **Phonology**, the study of sounds (or signs) as discrete, abstract elements in the speaker's mind that distinguish meaning (phonemes).
- **Morphology**, the study of morphemes, or the internal structures of words and how they can be modified.
- **Syntax**, the study of how words combine to form grammatical sentences.
- **Semantics**, the study of the meaning of words (lexical semantics) and fixed word combinations (phraseology), and how these combine to form the meanings of sentences.
- **Pragmatics**, the study of how utterances are used in communicative acts, and the role played by context and non-linguistic knowledge in the transmission of meaning.
- **Discourse analysis**, the analysis of language use in texts (spoken, written, or signed).
- **Stylistics**, the study of linguistic factors (rhetoric, diction, stress) that place a discourse in context.
- **Semiotics**, the study of signs and sign processes (semiosis), indication, designation, likeness, analogy, metaphor, symbolism, signification, and communication.

Many linguists would agree that these divisions overlap considerably, and the independent significance of each of these areas is not universally acknowledged. Regardless of any particular linguist’s position, each area has core concepts that foster significant scholarly inquiry and research.

Inter-disciplinary factors
Alongside the structurally motivated domains of study, are other fields within the domain of linguistics. These fields are often distinguished by external factors that influence the study of language.

- **Applied linguistics**, the study of language-related issues applied in everyday life, notably language policies, planning, and education.
- **Biolinguistics**, the study of natural as well as human-taught communication systems in animals, compared to human language.
- **Clinical linguistics**, the application of linguistic theory to the field of Speech-Language Pathology.
- **Computational linguistics**, the study of linguistic issues in a way that is 'computationally responsible', i.e., taking careful note of computational consideration of algorithmic specification and computational complexity, so that the linguistic theories devised can be shown to exhibit certain desirable computational properties implementations.
- **Developmental linguistics**, the study of the development of linguistic ability in individuals, particularly the acquisition of language in childhood.
- **Evolutionary linguistics**, the study of the origin and subsequent development of language by the human species.
- **Historical linguistics** or diachronic linguistics, the study of language change over time.
- **Language geography**, the study of the geographical distribution of languages and linguistic features.
- **Linguistic typology**, the study of the common properties of diverse unrelated languages, properties that may, given sufficient attestation, be assumed to be innate to human language capacity.
- **Neurolinguistics**, the study of the structures in the human brain that underlie grammar and communication.
- **Psycholinguistics**, the study of the cognitive processes and representations underlying language use.
- **Sociolinguistics**, the study of variation in language and its relationship with social factors.
- **Semiotics**, a larger discipline that investigates the relationship between signs and what they signify more broadly. From the perspective of semiotics, language can be seen as a sign or symbol, with the world as its representation.

Sub-fields

Historical linguistics
Historical linguists study the history of specific languages as well as general characteristics of language change. One aim of historical linguistics is to classify languages in language families descending from a common ancestor, an enterprise that relies primarily on the comparative method. This involves comparison of elements in different languages to detect possible cognates in order to be able to reconstruct how different languages have changed over time. Some historical linguists, along with non-linguists interested in language change, have also employed such tools as computational phylogenetics. The study of language change is also referred to as "diachronic linguistics", which can be distinguished from "synchronic linguistics", the study of a given language at a given moment in time without regard to its previous stages. Historical linguistics was among the first linguistic disciplines to emerge and was the most widely practised form of linguistics in the late 19th century. However, a shift in focus to the synchronic perspective began in the early twentieth century with Saussure and became predominant in western linguistics through the work of Noam Chomsky.

Semiotics
**Semiotics** is the study of sign processes (semiosis), or signification and communication, signs, and symbols, both individually and grouped into sign systems, including the study of how meaning is constructed and understood. Semioticians often do not restrict themselves to linguistic communication when studying the use of signs but extend the meaning of "sign" to cover all kinds of cultural symbols. Nonetheless, semiotic disciplines closely related to linguistics are literary studies, discourse analysis, text linguistics, and philosophy of language. Semiotics, within the linguistics paradigm, is the study of the relationship between language and culture. Historically, Edward Sapir and Ferdinand De Saussure’s structuralist theories influenced the study of signs extensively until the late part of the 20th century, but later, post-modern and post-structural thought, through language philosophers including Jacques Derrida, Mikhail Bakhtin, Michel Foucault, and others, have also been a considerable influence on the discipline in the late part of the 20th century and early 21st century. These theories emphasise the role of language variation, and the idea of subjective usage, depending on external elements like social and cultural factors, rather than merely on the interplay of formal elements.
Language documentation
Since the inception of the discipline of linguistics, linguists have been concerned with describing and analysing previously undocumented languages. Starting with Franz Boas in the early 1900s, this became the main focus of American linguistics until the rise of formal structural linguistics in the mid-20th century. This focus on language documentation was partly motivated by a concern to document the rapidly disappearing languages of indigenous peoples. The ethnographic dimension of the Boasian approach to language description played a role in the development of disciplines such as sociolinguistics, anthropological linguistics, and linguistic anthropology, which investigate the relations between language, culture, and society. The emphasis on linguistic description and documentation has also gained prominence outside North America, with the documentation of rapidly dying indigenous languages becoming a primary focus in many university programs in linguistics. Language description is a work-intensive endeavour, usually requiring years of field work in the language concerned, so as to equip the linguist to write a sufficiently accurate reference grammar. Further, the task of documentation requires the linguist to collect a substantial corpus in the language in question, consisting of texts and recordings, both sound and video, which can be stored in an accessible format within open repositories, and used for further research. [24]

Applied linguistics
Linguists are largely concerned with finding and describing the generalities and varieties within particular languages and among all languages. Applied linguistics takes the results of those findings and "applies" them to other areas. Linguistic research is commonly applied to areas such as language education, lexicography, and translation. "Applied linguistics" has been argued to be something of a misnomer, since applied linguists focus on making sense of and engineering solutions for real-world linguistic problems, not simply "applying" existing technical knowledge from linguistics; moreover, they commonly apply technical knowledge from multiple sources, such as sociology (e.g., conversation analysis) and anthropology. Today, computers are widely used in many areas of applied linguistics. Speech synthesis and speech recognition use phonetic and phonemic knowledge to provide voice interfaces to computers. Applications of computational linguistics in machine translation, computer-assisted translation, and natural language processing are areas of applied linguistics that have come to the forefront. Their influence has had an effect on theories of syntax and semantics, as well as theories of linguistic usages over others, often favouring a particular dialect or language. This may have the aim of establishing a linguistic standard, which can aid communication over large geographical areas. It may also, however, be an attempt by speakers of one language to exert influence over speakers of other languages or dialects (see Linguistic imperialism). An extreme version of prescriptivism can be found among censors, who attempt to eradicate words and structures that they consider to be destructive to society.

Speech and writing
Most contemporary linguists work under the assumption that spoken language is more fundamental than written language. This is because:

- Speech appears to be universal to all human beings capable of producing and hearing it, while there have been many cultures and speech communities that lack written communication
- Speech evolved before human beings invented writing
- People learn to speak and process spoken language more easily and much earlier than writing.

Nonetheless, linguists agree that the study of written language can be worthwhile and valuable. For research that relies on corpus linguistics and computational linguistics, written language is often much more convenient for processing large amounts of linguistic data. Large corpora of spoken language are difficult to create and hard to find, and are typically transcribed and written. In addition, linguists have turned to text-based discourse occurring in various formats of computer-mediated communication as a viable site for linguistic inquiry. The study of writing systems themselves is, in any case, considered a branch of linguistics.

References