This class is about American English **phonetics** – its sounds – and English **syntax** – its word order.

Phonetics concepts and terms. Reference: *A Practical Introduction to Phonetics*, by J. C. Catford.

Language is sound. That's what children learn. Writing is modern technology, and not everybody learns it. To learn more about how linguists think about sounds, check this episode of the *Lexicon Valley* podcast.

- ***Syllable*** – a chest pulse of air from the lungs. Consists of a beginning, a middle, and an end (*onset, nucleus,* and *coda*). The syllable nucleus is a ***vowel***; the onset and coda are composed of ***consonants***.
- ***Consonant*** – a speech sound produced by touching, stroking, vibrating, or otherwise moving one ***articulator*** (like the tongue) against another (like the teeth or lips).
- ***Vowel*** – a speech sound produced by pure voice tones resonating in the mouth. Vowels do not make noise by touching articulators.
- ***Voicing*** – vibration of the vocal cords (*larynx*, voicebox, Adam's apple) producing a carrier tone; the opposite of whispering. Speech sounds pronounced **with** voicing are said to be ***voiced*** sounds. English vowels are voiced, but English consonants may be either voiced or ***voiceless***. In English, only the sounds **p, t, tʃ, k, f, θ, s, ʃ**, and **h** are voiceless. These are all stops or fricatives (*obstruents*). All other speech sounds, including all vowels, semivowels, nasals, and resonants, are voiced.
- ***Stress*** – polysyllabic words, as well as common phrases, idioms, and clauses in English, have one syllable pronounced louder, and at a higher pitch, than the others. This is said to be the ***stressed syllable***. and every English sentence has its own ***stress pattern***. English is a ***stress-timed*** language – it takes about the same time to say whatever little words come between two stressed syllables in an utterrance, no matter how many syllables there are. This leads to many ***reduced unstressed*** syllables. The faster one speaks, the more syllables are reduced.
- Consonants are described by what the articulators are, and what kind of noise they make. The ***upper articulators*** are the upper lips (*labial*), upper incisors and gum ridge (*dental*), hard palate (*palatal*), and soft palate (*velar*). The ***lower articulators*** are the lower lips (*bilabial*, *labiodental*), the tongue tip (*apical*, *retroflex*), the tongue root (*palatal, velar*), and the side of the tongue (*lateral*). Articulator position produces columns from left (lips) to right (velar) in phonetic charts.
- Consonants can produce complete stoppage of airflow (***stops*** like **p, b, t, d, k, g**); partial stoppage, with friction (***fricatives*** like **f, v, ð, θ, s, z, ʃ, ʒ**, and **h**); combinations (***affricates*** like **tʃ** and **dʒ**); limiting the airflow to the nose (***nasals*** like **m**, **n**, and **ŋ**); sounds lying between consonant and vowel (***semivowels*** like **w** and **y**, and ***resonants*** like **r** and **l**). Consonant type produces rows in phonetic charts.
- Vowels are described by where in the mouth the highest part of the tongue is, and how far open the mouth is, while the vowel is being pronounced. If the mouth is ***open***, the tongue is said to be ***low***, so the vowels **æ** (as in *man*) and **a** (as in *father*) are ***open*** or ***low vowels***; if the mouth is almost **closed**, the tongue is **high**, so the vowels **i** (as in *machine*) and **u** (as in *June*) are ***closed*** or ***high vowels***.
- Vowels are also described by the front-to-back location of the highest part of the tongue. The vowel **i** is thus a ***high front vowel***, while **u** is a ***high back vowel***. Between high and low is ***mid***, and between front and back is ***central***. English has a ***mid central vowel***, **ə** (called 'schwa') that is its most common vowel. It's what usually happens to the vowel in a reduced unstressed syllable, like the last syllable of *gotta.*
- English has very complex high and mid vowels. They come in pairs: one vowel of each kind is ***tense*** (**i, e, o, u** as in *meet, raid, wrote, Luke*). They are made with the tongue root tightly bunched; the other vowel of each kind – very close together in the mouth – is ***lax*** (**ɪ, ɛ. ɔ, ʊ** as in *met, red, wrought, look*). These are made with the tongue root relaxed; you can feel the difference with your fingers.
- ***Rounding*** – pronouncing a sound with the lips rounded, like all mid and high back vowels (**o, ɔ, u, ʊ).** Front vowels (**i, ɪ, e, ɛ**) are not rounded in English. Rounding is unimportant for low vowels.
- ***Intonation*** – besides a stress pattern, an English utterance has a melody, a series of pitches called intonation, like the rise in pitch at the end of a *Yes/No* question. Think about how many different ways you can pronounce, and understand, a sentence like *He doesn't think so*. And that's a **simple** sentence.

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Syntactic concepts and terms.

Reference: *The Syntactic Phenomena of English*, by J. D. McCawley.

English doesn't have inflections any more; it uses syntax instead. To learn more about how linguists think about syntax, check out my answers to grammar questions at the English Language Stack Exchange.

- ***Constituent*** – a coherent part of a larger syntactic whole, like word to phrase, or phrase to clause, or clause to sentence. In *Bill was standing there when he saw her*, constituents include the strings *Bill, he saw her, when he saw her*, and *was standing there*. Non-constituents, however, include the strings *Bill was, there when, standing there when,* and *he saw*. Identifying constituents is important because syntactic rules apply only to constituents.
- ***Clause, Phrase*** – a clause is the basic form of a sentence; simple sentences are just one clause. Most sentences contain several clauses, but one is the ***main clause***, and others are ***subordinate*** to it. Phrases are constituents of clauses, and may contain other phrases and clauses themselves. Every English clause contains some verb form, which has a subject, though it might not be present in the clause; thus the normal clause consists of a ***noun phrase*** (or ***NP***: the subject) and a ***verb phrase*** (***VP***: the predicate).
- ***Syntactic rule*** – (aka *transformation* or *alternation*) an algorithm producing a sentence variation, like the rule of Dative Movement relates *I gave the book to her* ↔ *I gave her the book,* or the rule of *Yes/No* Question Formation relates *He was on time* ↔ *Was he on time?*
- ***Constraint*** – syntactic rules apply only to specific constituents in specific contexts. If such a constraint is violated, an ungrammatical sentence results. These sentences are marked with asterisks to show that they're negative data. Thus, the rule of Passive can't apply to the clause *Bill ran 17 miles*, because it's intransitive; trying to apply it anyway produces the ungrammatical sentence **17 miles were run by Bill.*
- ***Obligatory, Optional*** – Some rules may be obligatory in some contexts, and optional in others. The rule of Extraposition optionally relates *That he left early is a shame* ↔ *It's a shame that he left early*, leaving a dummy *it* behind in subject position, and moving the heavy subject to the end. But it's obligatory with the ungrammatical **That he left early seems*, producing the grammatical *It seems that he left early*.
- ***Cyclic*** – A clause may be modified by another, which in turn may be modified by a third, ad infinitum; there is no limit to the number of stacked clauses in a sentence. *I said that she said that Bill thinks that Mike wants to know if I said ...* is grammatical, though endless. The rules involved are ***cyclic*** rules (they may be repeated in any clause, wherever they're applicable, and they're governed lexically)..
- ***Derivation*** – Any sentence may have a number of rules applied; in fact, that's normal. A sequence of sentence variations based on syntactic rules is called a ***derivation*** for the sentence. Here's a derivation: *He gave a book to her* ↔ *He gave her a book* ↔ *She was given a book* ↔ *Was she given a book?*
- ***Movement, Deletion, Insertion*** – Rules like Question Formation ***move*** constituents around; Extraposition does that, and also ***inserts*** a word; Conjunction Reduction ***deletes*** repeated constituents in conjoined clauses: *Bill washed the dishes and Bill dried the dishes* ↔ *Bill washed and dried the dishes.* These are the three things that syntactic rules can do: move, delete, and insert words and constituents.
- English is a ***right-branching*** language – direct objects come after the verb, relative clauses follow their antecedent, heavy clauses go to the end, Gapping works to the right: *John ordered chicken and Bill fish*. In a left-branching language like Japanese, you'd have to say *John chicken and Bill fish ordered.*
- ***Syntactic Categories*** (aka *Parts of Speech*) – Include Noun, Verb, Adjective, Adverb, Preposition, but also Article (*the, a*), Quantifier (*most, both*), Determiner (*these, my*), Complementizer (*that* in *that*-clauses, *to* in infinitives), and others. There are more than eight.
- Syntax is mindless; rules of grammar don't care what you mean, only what words you use. And they're not supposed to "make sense" or "be logical"; grammar, like most language, is arbitrary.
- Syntactic structures are idealized; in real life, most people don't speak in complete sentences most of the time. Utterrances like *Ever been there?* or *Never gonna do that again* show that many predictable syntax markers can get deleted and need to be supplied by listeners (who rarely notice they're doing it).