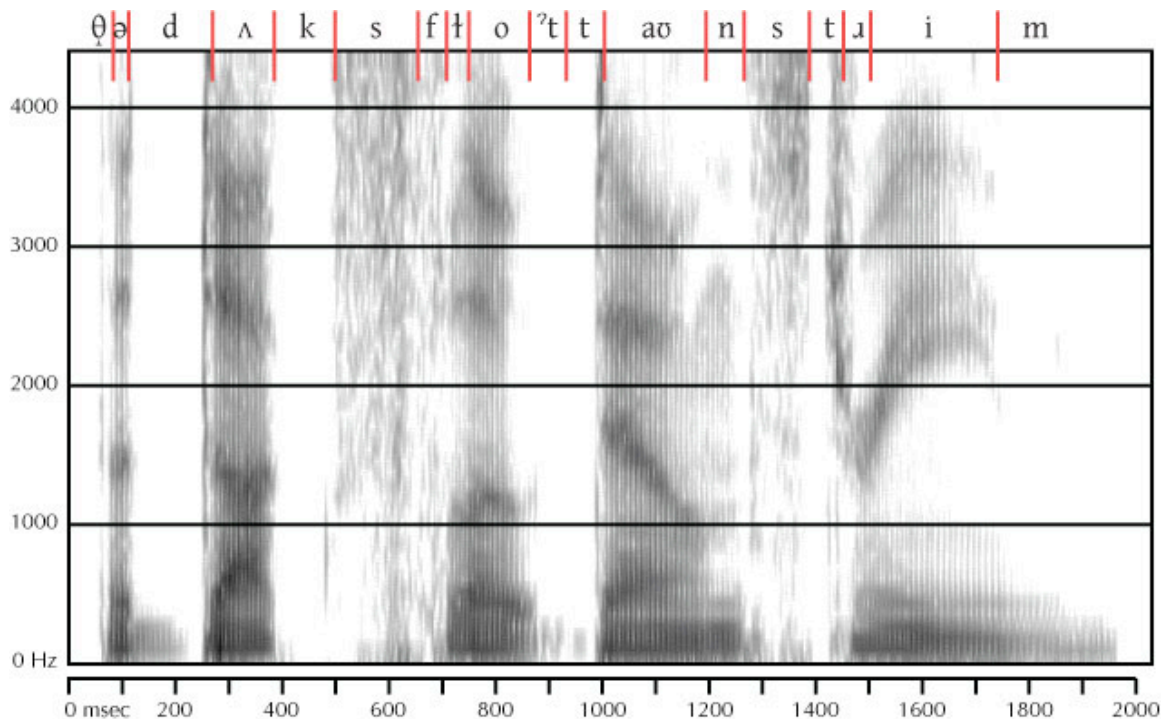*Review*

- Speakers of a language share a knowledge of the rules governing their language (you all agreed what the "want to" and "wanna" sentences could and couldn't mean), however this knowledge is unconscious and not available for introspection (we had to work to discover the pattern).
- This knowledge is not "taught" in a traditional way (by the age you got to school, you were pretty fluent in your native language), rather acquired in a natural way during childhood. (We'll talk about this more.)

Language as a discrete combinatorial system

While we are pretty good at memorizing things (think about the vast amount of words you know, as well as phrases, sentences, whole poems, etc), obviously that can't be all there is to your language ability. You can produce and understand an infinity of sentence that you have never encountered before, without having to be explained what they mean. In this class, we will focus on this aspect of language – language as a production system that allows you to take smaller independent units and combine them into larger units. We'll see what kinds of operations, rules and constraints are at work in this system.

The borders

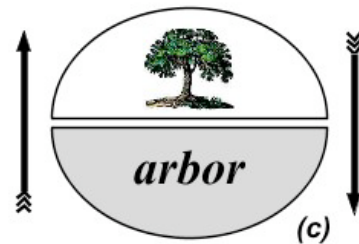(from Rob Hagiwara's Monthly Mystery Spectrogram page)

What you produce when you speak is a continuous stream of sound.[1] That's also all the person you address will need to hear to understand you.

The graphic above is a spectrogram. It represents intensity (dark vs. light coloring) of frequencies (vertical axis) over time (horizontal axis). Do you have any idea what the spectrogram above might represent? It looks like a mess. However, if you would hear this mess, you would have immediately recognized the sentence "The ducks float downstream." and understood what it means. Linguists want to investigate what happens from sound to meaning and back.

Saussurean signs

"Linguistics, then, operates along this margin where sound and thought meet."

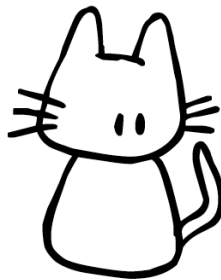   [Ferdinand de Saussure, Cours de Linguistique Générale]

For Saussure, a linguistic sign is a pairing of a sound and a meaning. Saussure also noted that at the smallest level, the pairing between sound and meaning is *arbitrary*. Nothing in the pronunciation of the word "cat" reveals what the word means.

Morphemes

A *morpheme* is the smallest unit that combines a sound sequence with a meaning. Look at the word "cat" for instance, it pairs a sound and a meaning, and it can't be broken down into smaller meaningful units. There's nothing in the sound "t" that tells us that something has for legs, neither does "a" mean animal, or mammal, or furry. In this case, the smallest unit to which we assign a meaning to is "cat". That this sound is associated with this meaning is something we have to memorize, since we can neither derive the sound from the meaning nor the other way around.

cat (English)   =
neko (Japanese)   =
Katze (German)   =
Koshka (Russian)   =
pusa (Tagalog)   =
gato (Spanish)   =
chat (French)   =
buthkian (?)   =

Why don't we talk about words? To see that, look at a word like "cats". "Cats" is a morphologically complex word. It consists of two morphemes, "cat" and the plural morpheme, here spelled out as "s".[2]

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[1] Almost everything we'll discuss in class holds for signed languages as well as spoken ones. (Most of the) specifics about the sound inventory are about the only exception.
[2] We'll have to revise our definition a bit here and allow for a morpheme to have several alternative sound realizations, called "Allomorphs".

Morphemes that can occur as words are called *free* morphemes, the ones that need to attach to other morphemes are called *bound* morphemes.

There are some morphological processes that string morphemes together. Those processes are called agglutinative. Turkish is a language with many agglutinative processes. Look at the word below.

Avrupalılaştırılamıyacaklardansınız

Avrupa	– lı	– laş	– tır	– ıl	– a	– mı	– yacak	– lar	– dan	– sın	– ız
Europe	– an	– ize	– CAUS	– PASS	– POT	– NEG	– FUT/PART	– PL	– ABL	– 2ND	– PL

`You (all) are amonge those who will not be able to be caused to become like Europeans.'
`You (all) are among those who will be un-Europeanizable.'

[example from Beard 1995 attributed to Jorge Hankamer]

Turkish morphology exercise

(Practice morpheme segmentation in an unfamiliar language.)