## Linguistics 001 Lecture 1 Introduction to Language and Linguistics

## What is linguistics?

## home

Hold on a second.
How many courses in physics or chemistry or biology began by the teacher having to define the discipline? I bet, rather few. Yet, this is absolutely standard in linguistics. In part, this reflects the relative youthfulness of modern linguistic science. It also reflects two facts:
first, while nobody has homegrown opinions about laws of gravity, everyone who speaks has opinions about language, and second, 20th century went missing from the study of grammar.

As linguist Geoffrey Pullum writes,
schedule
homework

> Try to imagine biological education being in a state where students are taught that whales are fish because that is judged easier for them to grasp; where teachers disapprove of tomatoes and teach that they are poisonous (and evidence about their nutritional value is dismissed as irrelevant); where educated people accuse biologists of "lowering standards" if they don't go along with popular beliefs. This is a rough analog of where English grammar finds itself today. The state of relations between the subject as taught by the public and the subject as understood by specialists is nothing short of disastrous. The fact is that almost everything most educated Americans believe about English grammar is wrong. In part this is because of misconceptions concerning the facts. In part it is because hopeless descriptive classifications and antiquated theoretical assumptions doom all discussion to failure. Amazingly, almost nothing has changed in over a hundred years. The 20th century came and went without affecting the presentation of grammar in popular books or the teaching (what little there is of it) that goes on in schools. Today's grammar books differ in content only trivially from early 19th-century books.

So, this lecture has two goals - the conceptual goal is to introduce you to the basic tenets and definitions of modern linguistics. The therapeutic goal is to disabuse you of a few popular misconceptions about language.

Here's a simple definition:
Linguistics is scientific study of language, concerned with the question:
What do we know when we know language?
Of course we will have to make clear what we mean by scientific study and human language, but even this simple definition reveals a good bit about what Linguistics is that might not be obvious.

First, linguistics is a rigorous discipline with established methods which strives to follow the scientific method. Our success at being "scientific" is variable and to a large extent a matter for debate, but it is important that competing theories and approaches can be compared, at least in principle, on the basis of how well they satisfy criteria of scientific rigor.

Second, the primary object of linguistic study is human language, not language in other extended senses to be discussed below.

Third, it is the study of language not languages. While we are concerned with the structure and properties of specific languages, our ultimate goal is to understand the properties of language in general. For example, we are less concerned with the quirks of English nouns or Greek verbs work than with how these compare to things in other languages and what they can tell us about nouns and verbs universally. A lot of the time it is only possible to understand why a specific language does some apparently odd thing by considering general properties of language that can only be observed in other specific languages.

## Language as a human instinct

The fundamental point of the text for this class, Steven Pinker's The Language Instinct, is that human linguistic ability is a kind of instinct (though far more complex than the phenomena this word often evokes).

In chapter 2, he gives several kinds of evidence for this position which we'll look at below.

1. All human societies have full-fledged complex language. There are no known exceptions to this, nor is there historical record of exceptions in the past
2. Language is spontaneously created in the form of Creoles where it would otherwise be lacking.
3. Children use language productively in ways they couldn't be simply repeating.
4. Damage to specific parts of the brain leads to consistent language deficits.

## Universality and equality

We have no record of a human culture that lacked language. Furthermore, all languages that we have been able to examine seem to be of roughly the same complexity and to have roughly the same expressive power. This is quite different from familiar aspects of culture.

There are cultures which are objectively primitive technologically. Material innovations are constantly undertaken and passed from one culture to another and have been as far back as we can go, from the use of specific metals for making tools, to the adoption of sedentary agricultural methods, to the use of computers. This is not to say that certain cultures are better than others or to make any sort of value judgment, it is rather the objective observation that culture A has some specific skill or knowledge wich culture B does not. Culture A may be more advanced in certain areas while culture B is more advanced in others.

But there are no primitive languages.
Different languages do have different amounts of complexity in different areas, but things balance out overall. There is no correlation between the complexity or "logic" of a language and the material sophistication of the people who speak it.

For example, the familiar languages of Europe have a single word corresponding to English we which means "me and at least one other person", but many languages, spoken by people from considerably more primitive material cultures have several words which allow their speakers to be more clear on who else is included with "me". For example, Mohawk, a Native American language, has the following prefix forms:
you and $I$ : teni
he/she and I: iakeni
you (all) and I: tewa
they and I: iakwa

## Creolization

In certain situations of language contact, a pidgin may arise to serve as a lingua franca or means of communication among people who don't share a common language. A pidgin is not a real language: it has no native speakers, and its grammar is quite simple.

An example is an earlier form of Tok Pisin ("talk pidgin") which arose in Papua New Guinea: a simplified form of English influenced by native languages of the island. This quote is from the 19th century.

## Boatswain gammon me.

"The boatswain lied to me."
Sometimes a pidgin can come to serve as the first language of children born into the contact situation. What happens in this case is creolization: the pidgin develops rapidly from the simple pidgin to a much more complex creole, a true language. As Pinker discusses, it seems that the children are imposing the innate linguistic ability on the impoverished input and coming up with a language worthy of their lingustic abilities.

This process can be observed in the development of Tok Pisin. In the course of the 20th century, the language has developed far greater complexity in a number of ways. One is that verbs take a subject marking element $\mathbf{i}$ (from English "he") even in the presence of a full noun phrase. This is unlike English, but very much like many other languages, including Spanish, German and Choctaw.

Wanpela man ino kam.
"One person didn't come."
Similarly, verbs take a suffix im when they are transitive (i.e. have a direct object). It's historically from English him , but it serves a very different function now, being there in addition to the object:

Mi no wok-im wanpela samting.
"I didn't do anything."
It's much more like transitivizing suffixes found for example in a number of native American languages like Nahuatl (the language of the Aztec empire).

The essential point is that this grammar has developed independently of the English on which it is largely based. Scholars debate the degree to which the new grammar derives from neighboring languages or from innate human grammar, but either way it shows the effect of the instinct for grammatical language.

## Children's linguistic creativity

Contrary to popular belief, children do not seem to learn language the way they learn to tie their shoes or draw pictures. They're way too good at it. They deduce a complicated grammatical system on the basis of a very small amount of noisy data, in a way that looks suspiciously like they already know certain things basic properties of human language from the
beginning.
It's not difficult to find examples of children creating new words that they've surely never heard before, yet based on the principles of the language around them. Overgeneralizing rules for word formation is a common example:

```
bringed
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goed
foots
mouses
This ability can actually be tested experimentally. A child can be presented with a task requiring the creation of a new form of a word never heard before -- the classic example involves showing children a small bird-like creature with the made-up name "wug", leading to the term wug test.

## This is a wug.

## Now there are two of them. There are two <br> $\qquad$ .



People with Specific Language Impairment (SLI) - a disorder characterized by a drastic disruption of linguistic ability without corresponding disruption of general cognitive functions - have great difficulty with this seemingly simple task.

## Language localization

There is evidence from language disorders that language is consistently located in specific parts of the brain, and perhaps in some sense these areas are designated for language. That is, damage to specific physical areas in the brain correlates with specific impairments in linguistic ability.

One syndrome called Wernicke's aphasia typically results in fluent but nonsensical speech. Affected individuals often sound superficially to be speaking normally, but upon examination what they produce, while frequently containing strings that conform to the grammatical rules of the language, has no coherent meaning, and typically includes made-up words. They also have trouble understanding the normal speech of others.

Examiner. What kind of work have you done?
-- We, the kids, all of us, and I, we were working for a long time in the... You know... it's the kind of space, I mean place rear to the spedawn...

Examiner. Excuse me, but I wanted to know what kind of work you have been doing.
-- If you had said that, we had said that, poomer, near the fortunate, porpunate, tamppoo, all around the fourth of martz. Oh, I get all confused.

This aphasia is the result of damage to a region of the brain called Wernicke's area, near the primary auditory cortex that controls hearing.


The fact that damage to this area leads to similar deficits in different people, speaking whatever their native language might be, already suggests that a specific area of the brain may have evolved to deal with language processing.

For example, the comprehension of spoken signals might naturally have developed out of resources in the brain already devoted to perception of sounds.

Quite interestingly, however, the linguistic function of this area does not seem to be tied to sound in the modern brain, as shown by the evidence of deaf aphasics.

For users of sign language, damage to Wernicke's area leads to fluent but nonsensical signing, as in the following translated example.

And there's one (way down at the end). The man walked over to see the (disconnected), an extension of the (earth) room. It's there for the man (can live) a roof and light with shades to (keep pulling down).

By contrast, a signer with damage to Broca's area has trouble articulating signs and cannot communicate fluently -- just as in spoken language it leads to stilted, labored speech (Pinker, pp. 34-35).

Cases such as this provide striking evidence that linguistic abilities are part of the brain's basic endowment, which when functioning correctly enables people to manipulate symbols in a structured way to convey meaning. It doesn't actually matter whether the language is spoken or signed. They also provide evidence that sign language is, in some important sense, the same as spoken language, a point which we will discuss in some detail in a later lecture.

## Grammar: prescriptive vs. descriptive

Linguists talk a lot about "grammar", and this class will be no exception, so in order to explain what linguistics and language is, I want to say something about what linguists mean by this term and, more importantly, what they don't mean.

When you hear the word grammar it may conjure up bad memories of English class where you had to memorize a series of weird rules to make sure that you didn't make any mistakes while writing papers. This is what we call prescriptive grammar, because it's a matter of someone telling you what (and what not) to do.

This is not what linguists do.
Instead, we're concerned with what we call descriptive grammar

- Our goal is to find out how people actually speak, to describe adequately the system that underlies what they say and to figure out how that system gets into their heads.

Prescriptive grammar: Rules of proper usage that distinguish "good" grammar from "bad" grammar. An example according to this perspective:

1. "Good":

- He doesn't know.

2. "Bad":

- He don't know.

The perceived problem with \#2, of course, is that verbs in standard English generally require the agreement suffix -(e)s
when the subject is third person singular, i.e. does rather than do.

Not all verbs do this, however: Even in standard English, so-called modal verbs such as can, will, should, etc. never take this agreement suffix. So clearly subject-verb agreement is not necessary for the language to function! Many languages, such as Swedish and Chinese, dispense with it entirely.

Descriptive grammar: What native speakers know about their language in order to make use of it. A similar example according to this perspective:

1. Grammatical (depending on dialect, style, etc.):

- He doesn't know.
- He don't know.

2. Ungrammatical (regardless of dialect or style):

- *He not know.
- *He known't.

。 *Not know he.
(The asterisk means "ungrammatical" in the linguistic sense, i.e. inconsistent with the native speaker's knowledge and use of the language.)
For a linguist, the sentences in \#1 both illustrate a fundamental property of Modern English, called do-support: when most verbs take the negative word not, they require addition of the verb do because the main verb is not permitted to bear the negation itself.

The same thing happens in questions (in modern English; it used to be different):
Do you know them?
*Know you them?
Compared to this rather odd and interesting restriction -- it's unknown in most languages -- the question of whether or not the agreement suffix $-(e) s$ is present seems quite boring. From a scientific view of language, it's much more interesting to explore exactly how do-support works.

It's often said that nonstandard dialects are inferior to the standard dialect (usually called "language" in this context) because they are less logical, or simplified versions of the standard.

In fact, the rules by which nonstandard dialects work are often more logical or more complex than those of standard dialects.

## An example of greater logic:

The nonstandard reflexive pronouns hisself, theirselves use the possessive pronoun just like myself, yourself, ourselves do.

| myself | my hat |
| :--- | :--- |
| yourself | your hat |
| hisself | his hat |
| herself | her hat |
| ourselves | our hats |
| yourselves | your hats |
| theirselves | their hats |

Standard himself, themselves irregularly use the object pronoun form. (We might also classify herself this way, so that all third-persons are the same, but it's ambiguous because her is used as a possessive and as an object.)

| myself | $\underline{\text { my }}$ hat | see me |
| :--- | :--- | :--- |
| yourself | $\underline{\text { vour hat }}$ | see you |
| himself | his hat | see $\underline{\text { him }}$ |
| herself | $\underline{\text { her hat }}$ | see her |
| ourselves | $\underline{\text { our hats }}$ | see us |
| yourselves | your hats | see you |
| themselves | their hats | see them |

Thus while hisself is not a prestigious word, it follows the same principle as prestigious myself, and forms part of a more consistent and logical system.

An example of greater complexity:
A nonstandard double negative (I don't see nothing) is actually a kind of agreement with the negative marker not that modifies the entire clause.

When the subject of the sentence needs to take this copied negation, the order is reversed, since the not has to occur to the left of the agreeing word.

Can't nobody hold me down.
*Nobody can't hold me down.

* Nobody can hold me down. (ungrammatical in this dialect)

If necessary, ain't is added as a kind of negative support (similar to standard do-support) -- an extra step that the standard dialect doesn't take.

Ain't nobody told me.
*- Nobody told me. (ungrammatical in this dialect)
By the way, many "standard" languages use double negatives all the time, including French, Spanish, and Russian.

I don't see nothing.
Je ne vois rien.
No veo nada.
Nichevo ne vizhu.

## - Me and him

One more favorite subject for prescriptivist is the "proper" use of pronoun forms. E.g., we're "supposed" to say
He and I went to the game.
not
Him and me went to the game.
This is because he and $I$ are supposedly "nominative" or subject forms, while him and me are "accusative" or object forms.
But this is not entirely accurate.
At earlier stages in the history of English this was true, but it is also true that there used to be three forms for pronouns, e.g. he, him and hine, and even the nouns used to show distinctions depending on whether they were subject or object.

The language has changed, and the pronominal forms are no longer distributed the way they once were. Actually, the way they are used now corresponds more or less exactly to the distribution in the standard versions of several other languages that are like English in the relevant respects, like French and the Scandinavian languages.

The things that English teachers get mad about, or that mark certain dialects as "substandard" are usually quite arbitrary. In fact, the constructions they find bad are usually found in very similar form in other languages, where they don't raise an eyebrow. The reasons why some linguistic feature is looked on as "improper" or associated with low prestige typically have quite a bit to do with historical accident or whim, and rarely have anything to do with real linguistic issues.

The determination of what is grammatical or ungrammatical, on the other hand, is based strictly on scientific observation.

## Classifying "correctness"

There are genuine differences of opinion about language policy. Linguistic analysis lets us state the issues clearly -- when this is done, people sometimes disagree less than they thought they did about "correctness" in English.

In particular, we can distinguish several types of "correctness":

1. Established criteria of educated written language
a. third-person singular /s/: she goes, not she go.
b. no double negatives: he didn't see anybody, not he didn't see nobody.
c. complete sentences
2. Issues on which educated people differ (and which may be different in written and spoken forms):
a. who/whom did you see
b. you should speak likelas your teacher does
c. the data is/are unreliable
d. I disapprove of him/his doing it
e. get it done as quick/quickly as possible
f. hopefully, she'll be there on time
3. Changes in the spoken language that some people resist:
a. between you and I
b. me and Harry went downtown
c. was for said
4. Pure inventions of self-appointed grammarians with no basis in historical usage:
a. prohibition of split infinitives
b. prohibition of prepositions at the end of a sentence
c. I shall vs. you will
d. It is I

The final category is especially the result of trying to make English more like Latin, often by means of school grammars that were intended to prepare English-speaking students to learn Latin. These pedagogical aids got way out of hand.

## Arbitrary correctness

For the most part, judgments about what type of language is "right" and what type is "wrong" is an accident of history. The following example illustrates how arbitrary it can be at times.

Richard Faust, in Columbia Magazine, 11/83, points out that there is a historical tendency for the -ed ending to drop in commonly used terms that start out as phrases of the form Verb-ed Noun:

| Newer (reduced) Form | Older (full) Form |
| :---: | :---: |
| skim milk | skimmed milk |
| ice cream | iced cream |
| popcorn | popped corn |
| roast beef | roasted beef |
| wax paper | waxed paper |
| ice tea | iced tea |
| whip cream | whipped cream |
| cream corn | creamed corn |

Many of these terms are now standard without the -ed, such as ice cream, and they sound odd in the older form. For example, Mr. Burns on "The Simpsons" is known for his old-fashioned way of talking, as illustrated by the use of -ed in places where it has generally been abandoned.
"I feel like such a free spirit, and I'm really enjoying this so-called ... iced cream."


Other phrases have not achieved this status yet, and sound distinctly informal without -ed, such as cream corn. But in linguistic structure, they are identical; the relative status depends not on "logic" or "grammatical correctness" in any meaningful sense, but rather on what has achieved social acceptability.

Here's a current example. CD's and DVD's are often sold in box sets rather than boxed sets, though both terms are common. Web searches on Google, over four years, finds a consistent (and increasing) preference for "box set".

|  | January 2001 |  | January 2002 |  | January 2004 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| "box set" | 144,000 hits | = 59\% | 333,000 hits | = $66 \%$ | 2,140,000 hits | = $68 \%$ |

"boxed set" $\quad 98,700$ hits $=\mathbf{4 1 \%} \quad 172,000$ hits $\quad=\mathbf{3 4 \%} \quad \mathbf{1 , 0 1 0 , 0 0 0}$ hits $=\mathbf{3 2 \%}$

It's instructive to think of attitudes toward language usage as a kind of fashion.


Some styles are hopelessly outdated.
Speaking today in Elizabethan English, such as asking your roommate Hast thou bought the detergent?, would be absurd.

Other styles are appropriate today, if not in every circumstance.
Whom did you see? is good, but formal, modern English.
It would be silly to ask your friend, Whom did you see at the frat party?


Still other styles are complete fantasy.
Similarly, some standards of usage have no basis in English grammar, such as the prohibition on split infinitives.
(This prohibition was based on the fact that a Latin infinitive is a single word, e.g. amare "to love". Since Latin was considered the "ideal" language, the silly conclusion was that English two-word infinitives such as to love should be treated as if they were one word as well!)

Importantly, however, particular styles are appropriate for some contexts but not for others -- depending on whether you're performing in a musical, riding a motorcycle, or selling a book.


Similarly, you have to adopt different speaking styles -- and different grammatical usages -- depending on the situation, audience, and purpose of communication. None of these is necessarily "better" than the others from a linguistic point of view, but one style will usually be the most appropriate in any given circumstance. In formal settings, the prestige dialect is the right choice, but that doesn't make it inherently better as a form of language.

## Changing fashions

Linguists like to poke fun at prescriptivists by citing some historical objections that are hard to understand today. This is a bit unfair, since of course the examples are selected from cases where complaint and ridicule failed to stem the tide of change. One might also cite a set of linguistic innovations that died out instead of taking over. On the other hand, people generally feel compelled to speak out against a particular usage just in case it is spreading.

In 1837, the Englishman Captain Frederick Marryat ridiculed the following American usages, which all seem perfectly reasonable today (though some, especially stoop, do retain a certain informal character).

| fix | instead of |
| :--- | :--- |
| strike | attack |
| great | splendid |
| right away | at once |
| stoop | porch |

In books like Words and Their Uses (1870) and Everyday English (1880), American Richard Grant White objected to
"words that are not words, ... a cause of great discomfort to all right thinking, straightforward people."
His examples of "non-words" included these (with dates of first written citation in English):
reliable (1850)
telegraph (1794)
donate (1845, U.S.)
jeopardize (1828, though once in 1646)
gubernatorial (1734 and 1809, both in U.S.)
These were relatively new creations at the time, and thus did not have the level of acceptance they do today -- since they're quite well established now.

In 1828, Noah Webster wrote the following about jeopardize:
"This is a modern word used by respectable writers in America, but synonymous with jeopard, and therefore useless."

Now it's the shorter word that's useless, or rather unused. In fact, while well attested from 1374-1654, jeopard was already marked obsolete in Samuel Johnson's dictionary of 1755. Vesey said this about jeopard in 1841:
"it is quite out of use," and its attempted revival "indicates rather a spirit of research than good taste."

White also objects to words that are really words, but are "constantly abused":

| Good | $\underline{\text { Bad }}$ | Comments |
| :--- | :--- | :--- |
| pitcher | jug |  |
| remainder | balance |  |
| overtake | catch |  |
| earth | dirt | "dirt means filth, and primarily filth of the most offensive kind." |
| leading article | editorial |  |
| wharf | dock |  |
| send | transmit |  |
| oversee | repudiate |  |
| condemn | residence |  |
| home | recuperate |  |
| recover | locate | "a perversion" |
| killed | persuade | "insufferable" |
| settle | splendid | "vulgar" |
| convince | jewelry | "coarse" |
| good | "of very low caste" |  |
| jewels | ice cream | "laughable and absurd" |
| ? | (remember Mr. Burns?) |  |
| iced cream |  |  |

Note that Marryat and White, only 33 years apart though on opposite sides of the Atlantic, have quite different views regarding the use of spendid. Also, both verbs convince and persuade are perfectly acceptable now, although prescriptivists require convince that but persuade to.

Again, these perspectives are essentially arbitrary. You certainly have to pay attention to the prevailing standards in order to use language in a way that will be considered "standard" or prestigious, but the details themselves are a matter of fashion.

The prescriptive agenda almost always has an aspect of social gatekeeping. In this role, arbitrary features of language are used to block social advancement -- to put people in their place, or to keep them there.

Modern linguists insist that value judgments about language should be recognized as socially based, and should be examined in the light of the linguistic facts. As a result, some critics feel that linguists' attitudes stand in the way of the establishment and maintenance of language standards.

You can find a sample of the debate in Geoff Nunberg's classic article Decline of Grammar, and Mark Halpern's more recent response A War That Never Ends. Ask yourself: Does Halpern really respond to the central points that Nunberg makes?

## "Singular their"

More "grammatical" aspects of language use are particularly common in discussions of "good" and "bad" language.
In the debate about language standards, each of the several sides tends to get annoyed about various failures and stupidities of the others. One thing that gets linguists particularly annoyed is bad scholarship on the part of some language mavens, who pretend, without checking, that a principle they just thought up is hallowed by centuries of the best writers' usage, or is a necessary consequence of the fundamental laws of logic. This what we identified earlier as level 4 on the "correctness" scale: pseudo-correctness.

If it turns out that Shakespeare or The New York Times routinely violates the "rule" in question, the pretence is exposed. Linguists love this.

A particularly exuberant example of pedant-puncturing is provided by Henry Churchyard's anti-pedantry page, which systematically documents the use of "singular their" by Jane Austen, one of the greatest prose stylists ever to compose an English sentence, as well as other authors.

What is "singular their"? It's the use of they or their in connection with an indefinite third person antecedent. Here are two examples from Pride and Prejudice; you should notice that the overall style is quite formal.

In truth I must acknowledge that, with all the disadvantages of this humble parsonage, I should not think any one abiding in it an object of compassion while they are sharers of our intimacy at Rosings.

Of whom does Jane ever think ill? And who is there, whatever might be their former conduct, that she would believe capable of such an attempt, till it were proved against them?

Other authors of fine reputation commit the same "error."
God send every one their heart's desire!
-- William Shakespeare, Much Ado About Nothing, Act III Scene 4

Can any man or woman choose duties? No more than they can choose their birthplace, or their father or mother.
-- George Eliot

Let nothing be done through strife or vainglory; but in lowliness of mind let each esteem other better than themselves.
-- King James Bible, Philippians 2:3

Experience is the name everyone gives to their mistakes.
-- Oscar Wilde

Churchyard explains that this use of their dates back to the 14th century, when the pronominal system of modern English was first being formed.

The Oxford English Dictionary recognizes this use of "their" as a well established pattern:
Often used in relation to a singular noun or pronoun denoting a person, after each, every, either, neither, no one, every one, etc. Also so used instead of 'his or her', when the gender is inclusive or uncertain.

Here are some early examples from Middle English (i.e. before 1500) and Early Modern English, with modernized spelling.

Both were made, sun and moon, each with their own light.
-- Cursor M. 389, Fourteenth century

Each man in their degree.
-- Sir Amadace, c. 1420

Inheritments, of which any of the said persons was seized by themself, or jointly with other.
-- Rolls of Parliament, 1464

Each of them should make themself ready.
-- Caxton, Sonnes of Aymon, 1489

He never forsaketh any creature unless they before have forsaken themselves.
-- Fisher, Ways perf. Relig., 1535

A man or woman being long absent from their party.
-- Win\%et, Four Scoir Thre Quest, 1563
"Singular their" was first faulted (by a grammarian applying mistaken analogies from Latin) in 1795, many centuries after it was established in the language. It has continued to be used by many respected writers up to the present day.

Pinker discusses the logic behind this use of the pronoun. He suggests that those who fault "singular their" for violating the rules of grammatical agreement have wrongly analyzed the grammar of the situation, or at least have mixed up two things that need to be kept apart.

Some pronouns refer to determinate (if perhaps imaginary) things: Chris, Pat's house, the trees in the park, the residents of Atlantis. In this case, pronouns naturally reflect the number of their referent.

Chris loves his mother. (Christopher)
Chris loves her mother. (Christine)
No one who knows English would say *Chris hurt their hand, even if unsure whether Chris is male or female.
Other pronouns don't really refer to anything at all, but instead function like what logicians call "bound variables", place holders in phrases that express relationships among sets of things. For instance, when we say every girl loves her mother, the pronoun her doesn't refer to any particular girl, but instead helps to establish a certain relationship between girls and mothers, namely that every girl has just one.

Every girl loves her mother.
For every girl G, G loves G's mother.
Another, less formal way to think about is: if $X$ is a girl, then $X$ loves $X$ 's mother. Since all girls are reliably female, it's easy to use "her" in this sentence (though Every girl loves their mother is conceivable). But in other situations, "their" steps in to avoid the identification of a specific individual.

Every student printed their homework.
For every student $S, S$ printed S's homework.


Consider these everyday examples of "singular their" (or other forms of they). The sentences establish a relationship between one condition (asking about a job, or sitting in a particular seat) and a particular claim or consequence that holds for anyone who satisfies that condition.

They each nodded their head in agreement.
If someone asks about the "Help Wanted" sign while I'm out, have them fill out an application.
Anyone using the pool when the lifeguard is off duty does so at their own risk.
Did you see who was sitting at that table? They left their books behind.

If: present in Then: head nodded group
If: ask about Then: fill out sign
If: use pool

If: sit at this table
application
Then: responsible for risk
Then: left books

I don't know whose x-ray this is, but they're going to need root canal surgery.

If: subject of
x-ray

Then: will need
surgery

In some cases, the circumstance happens to be such that only one individual could possibly satisfy the condition -- only one person was sitting at the table, and only one person's mouth appears in the x-ray.


But the same point holds of this set of 1, and the formulation with "they" removes gender from the equation, since it's unknown and irrelevant.

As Pinker points out, there are times when using the prescriptively "correct" singular pronoun would be clumsy or confusing. Consider these sentences:

John talked to everyone who came in before they had even taken their coats off.
John talked to everyone who came in before he had even taken his coat off. (John's coat?)
John talked to everyone who came in before he or she had even taken his or her coat off.
Nevertheless, after two centuries of struggle, the anti-singular-their forces have won the hearts and minds of an influential fraction of the population. It's obviously false that "singular their" is an example of the decay of the English language, or that it is a violation of the laws of logic.

But as we've seen, prescriptive rules exist independent of linguistic motivation: members of the language community who accept this rule will make social judgments based on it. Writers of modern English prose simply must remain aware that this turn of speech is stigmatized by many people of power and influence, and should make choices appropriate to the situation. Remember that the basis for the choice is social, however, and not linguistic.

## Language change, standardization and preservation

A lot of what prescriptivists get uptight about, including the last example above, has to do with one of the central facts about language:

All living human languages are constantly changing.
In a later lecture we'll talk in detail about the how and why of language change, but for the time being, all that matters is that it is inevitable. Your children will not speak exactly like you do, and your ancestors in three hundred years or so, if they met you, would probably have a lot of trouble understanding you, even if your family stayed in the same place during that entire time.

In a number of cultures, people have gotten so concerned about the "decay" of their language that they've set up commitees or academies to counteract it.

- But the success of such efforts is fairly limited.
- No matter how indignantly the French Academy complains, young French people continue to use English slang
terms and drop the word ne and so forth.
So are we doomed to slide ever further down the slippery slope of language decay until we are reduced to an emotive jibber-jabber of grunts and squeals?


## No

In spite of the fears and dire predictions of generations of prescriptivists and even some early linguistics, language change is not decay.

Just as all languages are equal in complexity and sophistication, so are different historical incarnations of a single language.

- Complexity may well be lost in a particular system, but it will be compensated for by increasing complexity somewhere else.
- Thus English has lost complex morphology on nouns and verbs like that found in languages like Latin over the past 1200 years.
- But at the same time it has developed sophisticated systems of modal and aspectual auxiliary verbs well beyond anything known to Old English.
- Indeed it seems to be in process of developping a new set of inflections out of these auxiliaries. It will sound strange to most of you, but one now occasionally hears or sees things like:

Wouldn't've you done the same?
As far as we can tell, language is getting neither worse nor better, just different.
Now, good clear writing style and solid rhetorical skills are rather different matters. They are learned separately from language, although they use language, and they can very well get better or worse from generation to generation, and vary quite a bit from person to person.

But that is a story for a different course, most likely taught in a different department.

## More on what we mean by language

As noted above, in order to fully understand what linguistics is, we must be clear about what we mean when we say language, because the word has many meanings. It will also be helpful to look at how linguists think about language in ways that are different from most people, and to dispel some common misconceptions.

## Human language vs. other meanings of language

Like most other words, language has a number of meanings that are somehow related but turn out to refer to very different things. Note for example the range of meanings in this dictionary entry:

## [lan-guage]

1. a. Communication of thoughts and feelings through a system of arbitrary signals, such as voice sounds, gestures, or written symbols.
b. Such a system including its rules for combining its components, such as words.
c. Such a system as used by a nation, people, or other distinct community; often contrasted with dialect.
2. a. A system of signs, symbols, gestures, or rules used in communicating: the language of algebra.
b. Computer Science A system of symbols and rules used for communication with or between computers.
3. Body language; kinesics.
4. The special vocabulary and usages of a scientific, professional, or other group: "his total mastery of screen language -- camera placement, editing -- and his handling of actors" (Jack Kroll)
5. A characteristic style of speech or writing: Shakespearean language.
6. A particular manner of expression: profane language; persuasive language.
7. The manner or means of communication between living creatures other than humans: the language of dolphins.
8. Verbal communication as a subject of study.
9. The wording of a legal document or statute as distinct from the spirit.

American Heritage Dictionary, 4th ed.
For most linguists, language is the pattern of human speech, and -- what most distinguishes linguistics from the everyday use -- the (implicit) systems that speaking and listening rely on.

Other phenomena come to be called "language" because of more or less close connections or analogies to this central case: writing, sign languages, computer languages, the language of dolphins or bees. The ordinary-language meaning of the word reflects this process of extension from a speech-related core.

Linguistics is concerned with language in the latter sense only to the extent that things like computer languages can help us to understand language in its core sense of normal human speech. An exception to this is sign language which, aside from being realized in the form of visual gestures instead of auditory gestures, are in every respect full-fledged human languages, and thus are a central, rather than peripheral, object of linguistic study.

## The Primacy of spoken language

The central role of spoken language, as seen by the first definition in the dictionary entry, is also reflected by the source of the equivalent word in various languages. One common strategy is simply to use the word tongue to express the concept "language": it's one of that organ's most obvious functions in modern humans.

- French langue (same root as English language )
- Greek glossa
- Russian jazyk
- Irish teanga
- Hebrew lâshôn
- Hausa (a Chadic language of Nigeria and Niger ) harshèe
- and of course English tongue!

The core of the field of linguistics has always been the analysis of spoken linguistic structure, that is, we are more interested in language as it is normally spoken than in language as it is written or is "supposed" to be written, on which more below.

## Language vs. dialect

In common usage, people usually use "dialect" to mean a nonstandard variety of a language. This can be seen in the first definition below, which uses "language" for the standard variety. (Cf. definition 1c for "language" above.)

## [di•a•lect]

1. a. A regional or social variety of a language distinguished by pronunciation, grammar, or vocabulary, especially a variety of speech differing from the standard literary language or speech pattern of the culture in which it exists: Cockney is a dialect of English.
b. A variety of language that with other varieties constitutes a single language of which no single variety is standard: the dialects of Ancient Greek.
2. The language peculiar to the members of a group, especially in an occupation; jargon: the dialect of science.
3. The manner or style of expressing oneself in language or the arts.
4. A language considered as part of a larger family of languages or a linguistic branch. Not in scientific use: Spanish and French are Romance dialects.

American Heritage Dictionary, 4th ed.
So non-linguists often make this distinction:
Language as "the prestige dialect of some language" (whether the user of the term acknowledges this or not).
Dialect as "a non-prestige dialect of some language" or even "an unwritten language."
For linguists, however, no one actually speaks an entire "language"; rather, every utterance occurs in some (social and geographical) dialect.

For convenience, we can define a language as a group of mutually intelligible dialects. That is, while the dialects differ in detail, the speakers can all understand each other. But this is only a convenient abstraction, not a technical concept to which linguists attach any special importance, because when we sit down and actually try to draw lines between languages we run into serious problems:

- For example, speakers of Danish can understand Norwegian and Swedish fairly well, but speakers of Norwegian and Swedish have a hard time understanding Danish.
- Also, intelligibility is not transitive. If you walked from Bern, Switzerland through Germany and up to Amsterdam, at each stage of the journey, the people in one town would understand the people in the next, but the people at the start and finish would not be able to understand each other in the slightest. We say that there is a language called German and a language called Dutch, but in fact each is a collection of dialects blending one into the other.

In fact, the classification of dialects into languages that we are all familiar with is based at least as much on political
criteria as on linguistic ones. The most famous formulation of this is due to Max Weinreich:
A language is a dialect with an army and a navy.
The crucial point for us is that, as far as linguists are concerned, all dialects are equal. Nonstandard dialects may lack prestige, but not logic or communicative function.

The central thesis of Pinker's book is that language is a type of instinctual behavior, not an acquired skill. The forms of language spoken by all humans (setting aside brain traumas and the like) are of equal status as examples of the innate ability to learn and use language.

This includes standard and non-standard dialects of a language, as well as languages with a long written history and those which have never been written down.

Remember, for linguists the term "dialect" refers to a specific variety of language so everyone speaks a dialect, whether it's considered a prestigious one or not.

When you really get down to it, everyone actually speaks an idiolect: the specific form of speech of one individual. "Dialect" is a lower-level abstraction over similar idiolects, and "language" is a higher-level abstraction.

Fortunately, though, since language has to be usable for communication, the idiolects of people within a given community are close enough to each other that, for many purposes, we can treat them as the same. But at times it will be important to remember the differences.

## Some more linguistic therapy: myths and facts

There are plenty of valid controversies about language.
Some questions are entirely political: should governments try to accommodate speakers of minority languages? how important is it to maintain rigorous standards of usage? is it bad to borrow words from another languages rather than inventing native ones?

Other questions are factual, though they have immediate practical consequences: does bilingual education work? what are the consequences of oral education for deaf children? to what extent can ordinary citizens understand legal contracts? how well do computer speech recognition systems work?

A third set of questions are mainly interesting to those who care about language itself:
are Korean and Japanese derived from the same historical source? how much of linguistic structure is innate, and how much emerges from the experience of communication? why will most English speakers delete "that" in "this is the book [that] Kim told me about," but not in "this is the book [that] impressed Kim so much"?

Reasonable and informed people can and do disagree about these and innumerable other linguistic issues. Particular arguments may be illogical, or particular claims may be false, as in any debate, but our state of knowledge leaves room for a range of opinions.

On the other hand, there are some disagreements about language where one side is just wrong, as wrong as those who believe that the earth is flat or that it was created out of nothing in 4004 BC .

In some cases, the "flat earth" position is only held by exceptionally ignorant people, and gives rise to jokes with punch lines like "if English was good enough for Jesus, it's good enough for me." However, there are plenty of misconceptions about language among otherwise reasonable people, not to mention French literary theorists or popular pundits. These are worth calling myths.

Here are some examples of linguistic myths which you can check out at the sci.lang FAO:

- "The Eskimos have hundreds of words for snow."
- "There's a town in Appalachia that speaks pure Elizabethan English."
- "Chinese characters directly represent ideas, not spoken words."
- "German lost out to English as the US's official language by 1 vote."
- "Sign language isn't really a language."

A couple of others we've already touched on above but deserve to be repeated:
Myth: speech and writing are parallel forms of linguistic expression, different but equally fundamental types of text.
Fact: Speech is primary, writing is secondary and is always derivative of speech.
Myth: non-standard dialects are degraded and errorful versions of standard languages.
Fact: standard languages are either an arbitrary choice among a range of geographical and social dialects, or an artificial construct combining aspects of several dialect sources. Ways of speaking that happen not to be "standardized" in this way have their own history, at least equally valid even if lacking in prestige.

Myth: Primitive cultures have primitive languages, at a lower level of development and less well able to express a wide range of ideas.
Fact: There are no primitive languages; there are no demonstrated differences in fundamental communicative efficacy among languages.

## Subfields of linguistics

# As is implied by the vague formulation of the definition, linguistics is an extremely broad discipline with an array of subfields. A good way to get an idea of what linguistics really is is to take a look at what these subfields are and how they fit together. 

## Subfields concerned with some part of the linguistic system

One way that linguistic subfields can be defined is by reference to one of the pieces that the system of language is composed of. In this way we can come up with lists like the following:

Phonetics: the physical nature of speech
The first sound in English tall and the first sound in Spanish $t u$ 'you' are similar in several respects, but they differ in that the English sound can be described as alveolar (being pronounced at the ridge behind the teeth) and aspirated (being accompanied by a puff of breath which you can feel if you hold your hand in front of your mouth when you pronounce it), while the Spanish sound is dental (being pronounced at the teeth) and unaspirated (without the puff of breath).

Phonology: the sound structure of language
In English, the sounds we represent as /p,t,k/ are aspirated (with the puff of breath) at the beginning of a word, as in pill, tall, kill, but not when they come after an /s/, as in spill, stall, skill. You can test this by pronouncing the pairs with your hand in front of your mouth. The difference in pronunciation is a phonetic fact, but the rule describing it is a phonological rule that describes the English sound system. There are plenty of languages that do not have this rule.

Morphology: the structure of words
There are two meanings for the word unlockable depending on its structure:

1. un + lockable: there's no latch on the door, so you can't lock it
2. unlock + able: we've got the key now, so we can unlock it

Syntax: the structure of sentences

- You can omit "that" in This is the book (that) I bought.
- But not in This is the book that was too expensive.

Semantics: the meaning of words and sentences
Note that the following sentence is actually ambiguous, depending on how we interpret the relationship between ten and didn't :

Ten delegates didn't attend the session.

1. There were ten specific delegates who missed the session.
2. In order for a session to be official, a quorum of two thirds of the total delegates must be present. However, six delegates out of a total of 15 had the flu, thus the quorum of ten was not met, and the meeting did not count.

Pragmatics: how speakers use language to do things in given contexts
These sentences can all express the same request, but often indirectly.
Please shut the window.
It's cold in here.
I wonder if we should shut the window.

Can you shut the window?

## Subfields concerned with the relation of linguistics to some external object or topic

Alternatively, we can define subfields by their connection to topics outside of linguistics. Some examples of this type are:
Historical linguistics: language and history

- How did Latin develop into the various romance languages French, Italian, Spanish, Rumanian, Portuguese, Romansch, Catalan, Occitan, Sardinian etc.?
- What did the parent of the various Germanic languages German, English, Dutch, Norwegian, Icelandic, Swedish, Danish, Icelandic, Frisian, Faeroese, Gothic etc. sound like, of which we have no written records, but which must have been spoken at around the same time as Classical Latin?

Sociolinguistics: language and social factors

- What distinguishes the dialect of Philadelphia from that of New York?
- What are the effects of mass media and personal mobility on dialect differences?

Psycholinguistics: language and the mind

- Why do people sometimes make errors like I have a stick neff?
- How do children learn the complexities of a language without formal instruction?

Computational linguistics: language and computers/computation

- Can we learn anything about human language using tools and formalisms that were developed to describe and interpret formal computer languages?
- How can we teach computers to use human language?

In the lectures to come, we will look at many subfields in linguistics, and become acquainted with the questions they address and some of the tools and methods they use to look for answers to those questions.
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