Alright ... so ... there has been discussion about enrollment etc. A reminder .... in this department ... we are no longer allowed to give out permission numbers. Especially if the class is closed. We used to go beyond the cap .... we were able to give numbers before. So this class is still closed. So if you are enrolled here .... there is nothing I can do if you are trying to add.

So ... today we will talk about the class more and the syllabus. Did you download the syllabus? Did any of you get the book? Have you tried?

Student: 2 days
Professor: The cost?
Student: $85

Professor: So that is the price for everyone. Tell them you are a student and are getting the student discount. So let's walk through .... do you need my homepage address? No?
Ok then. I said to you last time this is an intro class. We are talking about the fundamentals of linguistics ... phonology... the sound of languages and it rules. Language is modular .... different layers. And each module has its own devices .... and it comes together as a system. It could be complex and children have access to those systems. We will deal with the IPA ... you will learn to write in IPA much like writing in musical fashion.

I did some speech therapy .... and we worked with class instructors ... and expected people to know about phonics and phonology ... and what might be some problems for children. That is lecture one. This section will last a few weeks. So when you look at the syllabus .... you see the schedule. So phonology first and you have the pages marked there. There will be handouts ... but we will look at the IPA ... and basic ideas ...how we hear sounds ... but we hear what we internalize. We have a sound image of a sound. So we don't hear a physical sound ... but we hear a mental representation of a sound. Speech is special.
Then we will have the first exam.

We will discuss child language acquisition. We will learn to write in IPA and learn about assimilation ... and talk about Shakespeare and what can we say about phonology. What do we expect from children and what are their benchmarks? What will be the most common problems with speech therapy? So we will discuss child language phonological acquisition .... and then a blue book exam.

We will do phonology first... and the readings are supplemental ... lecture first and the exams are based on lecture. There is nothing that is not straight forward.

The exam will take up a week ... TTH. They are essay questions ... and you are responding ... no scantrons or multiple choice ... there will be prompts ... general
questions ... like what is the nature of phonology ... and that is to get you started and then I will give you prompts ... and in each prompt there is lecture material ... so you have to remember the lectures ... responding to the general questions but reading the prompts there is material you can draw on. I am looking for you to develop concepts.

So it will be essay format. We are not going to do that yet but lecture one will start in a week. I want to do an intro next week ... the first 3 chapters. Read them now. But the first thing we do is to introduce a debate as a way to frame discussion. We will have a debate and we will start it on Tuesday ... Skinner vs. Chomsky. The way to think about the material. This debate will play a role in how we understand the brain. Different parts are involved in language. So we have to think about what part of the brain might be activated when we do something. We will talk about things like Aspbergers, etc. Because it does speak to how the brain partitions language.

Lecture one ... then the first exam will be 2 weeks before the midterm.

Then you have the readings... start with the first 3 chapters.

Then we move up to word... and what is it? It is not clear what it is. In this arena we talk about meaning and sound. What does that mean? Chomsky will say that many words have no meaning but are in languages .... like "the".... you find it .... on many pages but what does it mean? It does not have substantive meaning like the word "book." You could draw "book"... but how do you draw "the." One word seems empty of meaning and the other not. So what are word classes. You have heard the word symantics .... and morphology processes

I will take you through the readings ... but they are supplemental. This book is used for both my 301 and 302 classes .... so you will have to navigate through this.

Finally we will talk about child acquisition .... the one word and two word stages. We will get into the hard core in the 400 level classes. But when you do you will have been introduced. So we will discuss child language acquisition.

Then another test ... a general question with prompts .... and you respond. You will find .... many respond ... and say to me the exams are straight forward and come from the lecture material. So you need to show up for class. If you come and take notes .... do the readings also ..... you will do well.

Student: Both days for exams?
Professor: Yes. If you finish early you can leave
Student: 2 essay questions?
Professor: Yes
Student: How much do you require us to write?
Professor: Bring a large blue book and you will use most of it. It will come out of your head ..... you might be surprised ... you probably did not think you could write that much. You are telling a story .... language has a story ... very interesting and what separates us
from the animal kingdom. The lectures will be interesting and there is a rhythm ... so when you see the prompts and look at the material it will flow naturally.

The flip side is ... if you don't come and try to fake your way through .... in this class it will be obvious that you can't fake your way through .... writing exams you have to have an idea of what is going on.

I don't take attendance ... but it is crucial you come so you can prepare for the exams

Exam 2 will be the morphology. People that look at words are morphologists .... they word with the word and word building
Student: After the midterm?
Professor: Yes. The first exam .... might be loaded because of the intro but think of this class in thirds. This is a straight forward class and the material is interesting

You then have the 3rd exam .... from lecture 3. We will focus on the sentence level. We have to the word level and that process and then putting them together. In 302 we do grammar but we will do some things about syntax ... and we introduce you to tree diagraming. It is fun. The way I teach it is fun. They are technical but you will draw them and like it. It will make sense to you. So we will talk about syntax and what are sentences .... this prepares you for 302.

In my 417 class we talk about the differences between children and adults with tree diagrams. They are tools we use to represent the brain. Language is specie specific. Animals communicate ...but what is the difference between language Language and communication. You will find some discussion in that ... but that is what makes us special. So there is brain maturation discussion and the tree expands.

When the brain has a problem ... you have language impairment. So we are finding a lot ... differences between boys and girls... not huge differences ... but there are structural differences that show up in language. Girls are more verbally expressive ... than boys. Boys are more conceptual. Girls are better with vocabulary and writing .... more expressive. What is interesting ... today we are sensitive to this in teaching .... I dislike the idea of comparing the two.

I have done speech therapy ... and you have all kinds of faculty there with there parents ... and we hold up a little boys work.... they are not drawing within the line and then you see a little girls work ... drawing neatly. Girls are 6 months ahead of boys .... they are more advance cognitively and linguistically than boys. We are finding sensitivity.
Student: So do you support separate boys and girls schools?
Professor: I would not want to see.... I had friends say ... they were going to hold their son back and not let him to go kindergarten until he was six. I think they catch up ... do the normal stuff. My advice is to do normal stuff with kids .... like GATE programs .... don't think your child is a genius ... boys getting "C's" when they are little .... is fine. I do recommend music ... and sports but they get extreme sometimes.
This is the thing I have seen ... brilliant kids that burn out early. You don't want that. Life is a marathon not a sprint. Boys catch up by the 6th grade. If kids are disruptive you can try to calm them down but the material presented to little boys ... goes against them because it is expressive ... and boys are more analytical.... so textbooks were written by women... and taught by women .... so in the last 5 years ... there has been discussion about that.

Boys will be more slow in language than girls .... girls talk early ... and boys are a little slow. If a boy is first born .... slow language development ... but don't worry they will catch up.

So lecture 3 is finished with syntax in children and will we have a note about language disorder ... "fragile X".... Tourette's ... Williams.... Aspbergers. UCLA has a language clinic ... so I will give you current theories.

So 3 exams based on lectures and ... you can see what is required on the syllabus .... and one thing about the objectives  We know a lot about English but the knowledge we have is implicit. We don't know about it.... for example ... we know the word "cat"... but plural has 's' added and the sound for 's'. But for dogs is sounds like a 'z'... you have knowledge of this .....it is automatic knowledge. So we are trying to make your knowledge explicit.

If you find a child writing boyz .... you can say there is a phonological reason ... and the child is sounding it out. You all do that automatically.

If I make up a word like wug ... but if you make it plural you add an 's' but when you say it it sounds like a 'z'. If you are aware of this it will show up in pedagogy and understand.

Aspberger syndrome children memorize everything ... and know to add 's' for plurals ... so if you give them a word like wug... and to make it plural they say it with an 's' sound. So you see that ... and can catch it. They don't have all the rules in place and memorize everything. You can see little effects of that and we will talk about that.

So let's make this material you have ... explicit. There will be some terminology. There is not a test on it but it comes in your writing. There will be one paper. A small research paper. It is not really research but a summary paper. It will be a literature review paper

Why are boys affected by "Fragile X"?

Let's look at chromosomes. We have 23 ... XX is a girl. A boy is XY. So we know that if we get one X ... and one from the father you get a girl. If you get the X from the mother and Y from the father you get a boy.

We start as XX ..... that is the model... somewhere around 3 or 4 weeks.... the Y kicks in
and tweaks the DNA and genetic info.

But with "fragile X" you have chromosomes ... when you look at it under the microscope you find your genes inside ... and when you go smaller you are talking about proteins and smaller is amino acids and enzymes ... so one amino acid tells you to cut a protein strain .... so genetics is about replications. But something happens in the gene of X .... too many amino acids ... or the protein is not structured correctly ... the X is distorted. It is not right ... it is a mutation.

For the girl... the bad X is recessive .... and the good X functions. So the girl is fine. She has a spare X. She could be a carrier ... so her offspring might be affected.

But if you are the boy ... you don't have a spare X .... so you get a mutation ... it is called "Fragile X." Autism affects boys more ... there is a biological basis. So for language ... it seems that they are hemophiliacs ... and their blood does not clot properly. But in language ... there is an autistic ... symptoms attached. Their IQ is not on par with other boys their age ... it is a border autism. You can have mutation that does not affect you .... something duplicates and it might not affect you .... so this can be a summary paper if you are interested in this topic.

You can do Asperbergers, Tourettes... etc. I am interested in it with regards to language

Student: You said boys catch up in the 6th grade?
Professor: I think they are finding ... most autisms ... you can spot things age 3 or 4 ... when you come to school .... we are dealing with the academics. Things we have to taught ... but speaking and listening ... you should know how to do that. Williams Syndrome ... have low IQ ... they are mentally retarded ... but they are talkers.... they are called chatterboxes. Their school work is not good but their verbal skills are above the norm. And Williams is not spotted until children are in the 3rd or 4th grade. They do a performance thing ... they talk but can't summarize what they said. They use bizarre vocabulary.

Student: So when are the papers are due?
Professor: At the end of the semester .... and you have to have 3 sources. Go to the library ... we have a great one. I like to touch books. You can a one online source. No more than 3000 words. Single spaced. 3 - 4 pages.

Student: You said literature
Professor: Tell me what has been said .... give me an introduction .... and tell me what has been going on and what has been said about it .... keep it more like a literature review. There will be a variety of topics .... we will talk about Jeannie ..... and language impairment .... bilingualism ...ebonics... many hot topics

Student: Do you have a specific format? MLA? APA?
Professor: No. On Tuesday ... read the first 3 chapters.... we will focus on the intro ... and we will discuss the Skinner vs. Chomsky debate. See you next week .... stay cool it is supposed to be 100 degrees. Stay cool.
Hello. Ok.

We do have one seat that has opened up. I have gotten emails.... is there anyone that wants to add? One of you? See me after class.

Student: Only one? My friend is trying to add

Professor: If there is competition .... we will do a review process. Oh ... 2 of you. The review process is that you are a graduating senior.

Student: I am an exchange student

Professor: When are you graduating?

Student: I am an exchange student .... so ...

Professor: Both of you see me after class.

Ok so let's begin the lecture. Did anyone get the book? I gave you a grace period ... so you should have the book by next week.

I begin many of my classes with a debate .... this will give us a head start with framing the material we will discuss. We will look at phonology ... sound... morphology and then syntax. It is not fair to treat each section ... linearly. There is a lot of different interpretations about how children acquire phonology ... and how phonics plays a role in reading ... open court is one approach and there are people against that strategy and the notion of sounding things out to bolster reading.

So there is a debate from the whole language people .... and that can be a topic of a paper. The phonics people vs. the whole language people. So we can think about language in 2 different ways

So we will begin with the concept of the debate and we will use the dicotomy so there will be many aspects we will peg on the debate

We are beginning with language. [Drawing on board]

I want to begin with two names. They are two individuals .... one has died and one is still alive. Both have schools of thoughts. One person is BF Skinner. You might have heard of him in psychology classes ... the other name is Chomsky ... and he is alive and in his 70's. He is at MIT. And is the leading forefather of modern linguistics which is considered a biological science.

We used to classify language ... that was 19th C ideas .... trying to come up with an explanation historically
Chomsky says there is a different aspect... that has not been touched on... that language is biological. So we see what it going on in the brain now... it is a mirror to the brain. Just like behavior is to psychologists... and that hormones... things that are abstract... impact how we behave. So there was a shift in the second part of the 20th C from comparative to looking at language as a biological activity.

So these guys... the debate... and you could do a paper on this debate... Chomsky took on Skinner trying to explain learning.

So to outline this... Skinner comes down on the school of thought of associationism... and that is a one to one association and it is iconic between a stimuli and some kind of effect. That is SR..... stimulus/response It is very powerful... over 100 years there were experiments that defined learning and learning language... based on a one to one association... input/output. It is like building muscles... exercise you get more muscles. We study input... and then examine output and create a link.

So the school of thought is called behaviorism. This is Skinner's school of thought. It is known as an imperical tradition. It started with Aristotle... in the 17th C... and with John Locke and Mill continues this but then Skinner is the one that most people associate with this

All our knowledge comes from our sense through the environment. There is a nature vs. nurture debate. Like if you get cancer... it is either in your genes that you are predispositioned to this or that you get it from your environment. So something in the genes trigger things.

This same is true with gender/sex... homosexuality. But people say we need both. Your innate factor pushes you one way... people say... but it seems... if it were a boxing match... the genetic people are winning. We seem to favor the idea that... a lot of stuff is predetermined genetically. There are environmental factors but there might be a predisposition.

Is language who you hang around with? Or is it innate from birth? So Aristotle and John Locke... have the one to one association... with input/output. They say learning is tethered to meaning.

So behaviorism... an example is... Pavlov... 1910's... scientist... Russian... he was interested in the digestive system... why do we salivate? He was interested in that... so you know the story about the dog. Pavlov knew that a dog would salivate when exposed to food. That is a chemical reaction... and we know there is an olfactory gland that is determined to trigger glands and other hormones that make the dog salivate. You can measure it... input/output mechanism.

So using this... Pavlov gave the dog food and ring a bell. The dog would salivate and eat the food. So it was not just one time... but over and over again. There was a frequency effect. It was the same bell... practice makes permanence... so there was a
frequency effect ...SR stimulus/response.

So one day they do the experiment ... they go to the dog and do not present food ... but just ring the bell. The dog salivates ... that is a trick... nothing chemical that the bell should start the salivation process but the dog has learned that when the bell rings ... food will come ... through association. In his mind he associated bell with food ... but when you remove the food and just have the bell the dog does the same thing.

So Pavlov says this is a simple example that shows that we can learn ... some kind of behavior based on frequency. Associating bell with food.

So extending that .... you get the mouse in the maze ... going to the left and touching the lever it gets food but also a shock .... but to the right gets food and no shock ... so the mouse learns to go to the right. Sometimes it is switched and they associated the shock with colored switches ... but it all points to the same thing ... learning is an active activity in which a one to one association is established between input/output. It is environmentally associated and there is a meaning connected to it.

The bell can mean anything you want it to be.

When I get home .... the garage door goes up ... and the cat runs in to get the food ... another cat from the area would not know about the garage door ... but my cat knows ... so that is based on this model

So when Skinner engaged in the debate with Chomsky on language .... they asked about how children learned language. ... and Skinner said ... we know how learning works.... it is a mechanism ... so having children listening to the environment and after a threshold is met ... but when enough input is received children can spit it back out. They mimic. So children repeat, echo... like a tape recorder. What goes in comes out. And we will talk about the problems later. They did not care what happened in the brain but thought it was like a tape recorder.

In 1958 we had just started with CAT SCANS. These guys designed experiments of inputs/outputs working with animals.

So let's draw ... Skinner's head. [Drawing on board] Here is Skinner and ... his head .... the tradition ... says we are born with a blank slate ... nothing in the brain at first. What ends up there is what we perceive in the environment. Everyone is born the same they say ... so if we draw the brain ... terms you find when discussing it ... is like "the bucket", "tabula rasa", etc.

It can't be entirely empty though .... you need memory. So at least you need a cognitive memory. So to symbolize that .... [Drawing on board] we are born with an ability to remember things. So we can store info ... and Skinner said it was cognitive. That is a tricky term .... but we should say there is a bottom up ... cognitive ability allows us to remember things ... and we are born with that.
So the one thing we can say about the brain is that there is a memory component and that it is cognitive.

So here is the brain ... and the school of thought is to look at the input ... and call it language X .... that is the environment and input so it goes in the brain, through the ears.... for normal language and a threshold ... a memory component ... the more you hear it .... then what comes out is language X.

For Skinner what is important is what goes in comes out. It is a direct exchange. And the process is not studied .... because we don't have access to the brain. But what does the brain tell us what its function is .... it is 3 pounds of floppy, folded tissue ... you can see gray matter, white matter, .... it is folded up ... but what does it tell you about its functionality. When Einstein died ... they wanted to slice up his brain ... and what were they looking for? They wanted to see the formula in is brain ... but the brain was not like that ... his brain was small and lopsided ... if you took out a heart .... a mechanic would say it is a pump and they could see how it works... and the lungs ... if you looked at that .... it looks like a sponge .... it holds air. So you can see how things work but not with the brain.

So Skinner did not talk about the brain ... he studied the inputs .... and monitor the outputs.

One thing about this school of thought ... these people wanted to demystify language. It is like the dog and bell.... nothing strange about it ... but they wanted to say it was learned ... and the literature says it is "bottom up." It is easily explained. And that means that differences is ... "bottom up" means .... are their linkages? So is there an account of the body from the bottom up? Yes? Of course. We look at a chimp it is similar to a human. So we can trace back.

You have the mammal ... and then have higher categories ... that is Darwin. He explained things bottom up.

What about the brain? Does it have a bottom up story? It does not tell us about its functionality? Think about the brain. Does it have a story that goes back in time? It looks like a chimp brain .... it looks like a 2 year olds brain. So we say not only the body but the brain has a Darwinistic explanation. Darwin is right about the bottom up story.

I suppose that that cognitive part has a story to tell ... as you go down memory is less. I don't know about fish ... if you watch Finding Nemo ... it looks like they have memory but as you go up the chain ... chimps that share a lot of our DNA have a strong component of memory. So that is a bottom up story.

Learning language is like playing badminton. But the split is .... top down. That means there is a mystery.
That is like religion .... something we can't explain .... there is not Darwinistic explanation .... there is no biological issue.... there is only the mind. When we talk about the mind ... we scratch our head.

First there are differences ... I can take out the brain but not the mind. We can't touch it ... it is much like a soul. The soul is tangible. People used to try and figure out where it was but ... what we know about that mind ... is that it gives us traits/characteristics ... the ability to abstract.

We have consciousness ... and free will... the notion of self... you know who you are ... something we call epiphenomenal. ... that means it is above phenomenal.

When I go to the store .... I walk there ... to buy some beer and I remember walking to the store. When I do I use my legs... and my muscles and there is balancing going on and there is physicality. But when I go to the store .... I remember "I" go to the store. So there is an awareness ... where we detach ourselves from our body. It is not connected. So the mind is in focus.

So Chomsky ... what is he interested in? First his antecedents are Plato .... Plato says we are bored with innate knowledge. We have info because we are born with it .... and he says we had previous lives and we carry info from past lives. The church would not appreciate that. It was taboo but he was cornered.

Decartes fought Locke.... who said we have to have innate knowledge to understand how to ask the question and recognize the answer. To ask you need to know the answer but how does that work? To identify something you have to have a model in place but where does that come from? He said, "I think, therefore, I am." So this association between brain and mind but then Chomsky comes along and his school of thought is rationalism. There is an innate knowledge. It does not come only from the environment.

There is a nurture side and a nature side. Chomsky says we have an innate nature ... "nativism." So the catch word is "innate knowledge", and Chomsky says we have the innate ability to abstract.

So we end up saying everything is counter parts ... meaning vs. abstract etc.

We have the ability to apply rules ... we play with variables ... such as .... I remember my first exposure to algebra .... something looked like this ... 4x +3y.... and I was a shy kid and I raised my hand and asked the teacher what x was .... I need to know what it is ... and the teacher said ... we don't know. I thought that was bizarre .... we were doing calculations without knowing what we were doing. She also said we don't know and we don't care.

As a 7th grader ... I was astounded ... she said it was a place holder .... It changes and it is a variable. The animal world does not have that kind of thinking. So Chomsky talks about the abstract.
So the debate ... which we will talk more about on Thursday ... but Chomsky says .... this is fine .... Skinner what you say but it is not the whole story. Language is not just repetition ... so problems with Skinner are classic .... what goes in comes out ... so what goes in must have been heard... but the problem ... is ... like kids say things they have not heard before. Something comes out that had not even gone in.

Chomsky is the most quoted and cited and is alive today and historically he is number 5 ... people ahead of him are men like Plato, Marx, Shakespeare, and the Bible. It does not mean people agree with him but he does rock the boat. But the problem with Skinner is ...

Language X ... input ... goes into the brain. Chomsky says we have memory ... like Skinner believes but goes one better .... we have memory but there is something else ... the ability to abstract [Drawing on board] to have computational system. So Chomsky says there is an intervening process. There is something going on in the brain so for the first time we are trying to find out about the brain/mind.

We don't have access to it without the MRI's .... and something goes on ... and the output is language XYZ.

Skinner says it is one to one .... memory index ... for Chomsky ... what goes in .... something else comes out ... something goes on inside the brain and we can create hypotheses of this.

If you have a factory without windows .... you can't see in .... you know there is a factory inside. Input ... is milk going in .... and out comes cheese. We can come up with hypotheses of what is happening ... we can look at the cheese and understand milk goes in and cheese comes out so you conclude that milk goes in and cheese comes out so cheese is made from milk. So in a sense Chomsky says we can't look into the brain but we can look at input/output and make some hypotheses.

Skinner was not interested in child language acquisition .... but his big problems was ... if children have something else coming out ... there is a mistake. Tape recorders don't make mistakes ... what goes in comes out. But if you have an input and a different output .... there is a mystery there. But that is what we find ... kids say things ... and notice that language output is disconnected from the input. So errors are studied carefully here.

Linguistics we are interested in errors.

There is a field that opens up ... Chomsky sees these kinds of errors. He says that language is creative. I can say something to you .... like yesterday I saw a pink and yellow elephant on the street. You have never heard that sentence before .... and if I mix up the order of the words you would be able to process that .... so we have the ability for creativity. Chomsky also says ... we can listen to words without real meaning ... like colorless green dreams sleep ... dreams don't sleep .... Chomsky uses that kind of thing to say we can process words devoid of meaning.
So errors in creativity ... are the first place where it weakens the theory of what goes in comes out.

So Chomsky says we are born to abstract and if you look at input/output you get something that comes out differently than what goes in.

So we need to try to show examples of this and prove this ... Chomsky does not have a lot of data ... he has ideas ... but Skinner has data ... from animals etc... experiments ... Pavlov with the dog ... but Chomsky is a new comer.... and has to come up with data. This is what we will discuss on Thursday

For Skinner language is mimicking .... behaviorism ... nurture ... associationism ... and there are linguists still today ... not me ... but behaviorists linguists that talk about frequency ... the more you hear something the more it is accepted

Chomsky people say ... like me there is more ... the true language is here ... and we have to show how it is spelled out.

So on Thursday we will discuss the debate more.

Questions?

You can start reading chapter 1 .... that is a good place to start. So what you can take away today ... is that the debate is interesting and that debate will impact the rest of the lectures ... like with phonology and how we process sounds... so this is our background to our discussion.

Read chapter 1. Were you able to download the syllabus? I will let you know about the furlough days when they come up.

Eng 301
Thursday, September 03, 2009
Captionist: K. Wong

One announcement. We have a captionist for this class.... who writes everything in this class.

I am posting all the captions online. I am trying to keep up with the lectures after class. I update the link. It might be a worthwhile study guide for this class. Go to my homepage and go to the bottom of the page and you will find English 301 lecture captioned. I also put up last years class 302 also. For the exam you might want to look at it.
I try to demarcate the dates only. It is straight through lectures. I just wanted you all to know about that.

What was the going price of the book?
Student: $85.
Professor: Fair enough ... some people said they couldn't get that price.
Student: Mine was $124 but I didn't know about the student discount.
Professor: If not it is more expensive. $85 sounds about right

Anyway .... we had a good intro ...
Student: You said the readings are supplementary and the tests are on the lecture material only... so do we have to buy the book?
Professor: Well... before the exam I take you through the readings that have exercises you can do .... and examples .... so this is a way to get additional info. I say the lectures are essential .... and the book is required. It will help you to get a full grasp of the material.

If you have difficulty purchasing the book I will try to work with you. I understand the cost ... but I don't know how we can work around this ... we might be able to rent books ... but there are some discussions right now about how to get books out.

Student: I got a copy on Amazon cheaper. Also there is a website CHEGG that rents books.... check it out
Professor: This book has a lot of material ... if you are interested in this field.... it is 2 books in one ... and if you take 302 .... we will use this book again. Maybe eventually we will have books online ... and dispense with hard copies.

There is nothing that replaces a text ... touching the page ... and reading it .... much like newspapers .... like a book you like to keep. You should have a personal library ... and some better books you should keep. You will end up with no books in your library .... if you always sell them all back. When I walk into a home if I don't see books ... I am a little scared and skeptic about that.

Ok.... so let's continue and sketch out what has been said ... we introduced the theory .... of Skinner ... and his school of thought. And Chomsky is on the other side. And if I wanted to be brief I would say Skinner believed in associationism.

It is powerful .... if I say ... Peter, Paul and ____
Student: Mary
Professor: You would have had to be exposed to it ... they were singers... folk songs.... so there is an association. It is powerful ... you can remember numbers ... phone numbers .... friend's names ... etc. But Chomsky says it is not the whole story ... it is not just memorization.

So we have association. But on Chomsky's side .... we say it is abstract computational.
But talking specifically ... Skinner says ... when we talk about word .... [Drawing on board]

We are dealing with what we know ... so maybe word .... is associative ... if I say book ... you have an image of a book. It is associative. But on the other side we can say .... "rules." There are rules. Words can fit and plug into rules but rules are not words. They are different.

So we have a "words" and "rules" theory. If you are interested you might want to look up Pinker ... he is now the most widely read linguist ... linguistics is now popular. He is the rock star of that field. He is very smart and has written a number of books and is at Harvard now. He wrote The Blank Slate. He talks about language and cognition.

He talks about the innateness of language and the language gene. He has a nice ... I think it is the language instinct.

So we have "words" and "rules" ... and this maps nicely on this dichotomy. Imagine if I gave you all the Spanish vocabulary .... a small dictionary of the lexicon ... and told you to memorize them. After a year you memorize the words .... is it enough to say you know the language? You know the words but something is missing. You would hear the words but you couldn't catch them. You would recognize the words but you would not be able to put them in a sequence. You would miss the grammar and syntax. So language is not just memorization. It is part of knowing the language ... you know the vocabulary ... and there is a memory component ... so we have a notion of words.

This debate is interesting. And we will frame our discussion .... on phonology, syntax, morphology from this.

There is a lot of research done ... but Chomsky did not have data. He did not have experimental data. This is in 1958 ... and so it is striking ... very little studies of child language acquisition. We want to know what children say early on. Skinner says language goes in and comes out. And for Chomsky ... language goes in but something that comes out is what comes in plus something else. So there is something else happening.

So how do you account for the additional info coming out? That is an example of what children say. Chomsky was interested in errors and creativity. So we have the revolution in language. That is theoretical construct ... there is no data for that. Chomsky realizes there is very little data .... we make mistakes ... in language ... a spoonerism .... things like he tasted the whole worm... instead of he wasted the whole term. The mistakes are not just child based. We will talk about slips of the tongue also.

We have this debate and around the same time a woman named Berko at Harvard... it took a woman to break this glass ceiling working with children. Men didn't want to work with small children .... mostly because there was a taboo about men working with children. Male teachers are suspect teaching small children.
So it took a woman .... Berko studied systematically the speech of children. They sat with children and listen to them and record them and video them. It had never been done. I can't imagine that they didn't think about that back then. So linguistics ... and Chomsky and his ideas are quite recent.

So Berko wanted to come up with a way to try and put some flesh on the debate. She came up with the WUGS test.

This is important .... it shows up on your CSCET ... it is part of the language part .... of the test. It is essential.

Berko draws a made up creature .... and she calls it a WUG. That is a non existing word... a nounce word. Children have not ever heard of this word before. Berko introduces the word..... and so she calls the creature a WUG. Written like this [wug]. So you see the picture and you establish the association. She repeated the picture and name and the children associated that.

Skinner is right at this juncture. There is an association. The child has learned something. Kids are open minded. Like Pavlov ... you ring the bell and the dog salivates ... but then Berko does this ... which earned her her PhD. She draws a second WUG.

[Example on board]

LX goes in ... but what comes out .... let's look at language XYZ. What the children say .... she shows them 2 ..... and says how many are there .... she does not say the word... so the children say there are 2 [[wug]s].

Not only does she earn her PhD ... there was a lot of data collected .... but this was the weakening of the associative model. Now the first generation of looking at child language acquisition. You might think this is straight forward ... the rules about noun and 's' = plural. But before Chomsky it was not clear how plurals worked mentally.

So let's look at this [on board] ... Skinner here and Chomsky here. This is in the text. We are talking about plural and grammar.

[Drawing on board]

So Skinner would say ... imagine the word "book." A child hears that word and builds an association ... they see one book and the child sees one item and builds a grammar with minus plural ... but for plural .... the child sees two or more items .... and that the sound of 's' is a plural .... so in singular it is one and plural it has 's'. But the problem is ... wug was provided in the input but was wugs? No. It was not part of input. Berko did not say wugs ... but the children produced the 's'. If it does not come from the input .... where does it come from? Chomsky says ... Skinner you are right ... book it lexical and memorize in a one to one way.

Book is a word ..... but when it is plural ... Chomsky says that the child does this [Drawing on board] they memorize the stem and they add a computation to that. It is not
memorized but there is a algorithm ... computation that is triggered and attaches and 's' to the stem and it is outside the box. So people look at that ... so look at the brackets.... and what Chomsky and Skinner say.

It sounds the same but the process is different. We need to understand that. If a first grader sings the alphabet ... my child is a first grader now ... and if you ask them to sing it they will .... it is cognitive for them. Watch them when they get to L-M-N-O... they slur it together. The process is different ... so we consider they memorize the sound as a chunk. Because of that ... I discovered they are changing the Sesame Street song because of that.

Because of the sounds and stress values .... and the songs ... LMNO... it got chunked together .... but now they are separating it. But that is a process distinction. Skinner everything was chunked ... but Chomsky says there is computation. So when you look at this ... you get a processing distinction. For Skinner the 's' was part of the input but for Chomsky no. [Drawing on board]

All we are saying is we have a noun and then perform an algorithm. It looks like this: [example on board].
Linguistics is like math for Chomsky. What do we mean a variable? If a noun .... you can stick anything there. And then you perform the rule.

You have not heard WUGS but you perform the computation. If I asked you to draw book on your paper you could ... it is substantive ... it is meaningful. But what would you do if I asked you to draw noun ... that is abstract ... so you have to perform an operation. It could be anything ... we could call an item anything .... and if you have two of them .... you do the computation of adding the 's'.

This same debate takes place in the brain ... when you say a word.... "book"... that part of the brain lights up and when you say "books" a different part of the brain lights up.

How do we learn irregular verbs? You just memorize it. We will talk about that more later.
Student: You have to be exposed to the singular before you know the plural?
Professor: There is a rule ... and the rule is from the input. All language has to come through input ... you are not born knowing a language ... but the distinction .... is that it was not realized before. You hear words and build analogies ... but that is different .... from what Skinner said. So there is a move from memorization only to .... this is when we started working with artificial intelligence ... move from behaviorism ... and when Berko drew her Wug ... many people from the Skinner side lost their grants and there was a philosophical shift.

Remember that Skinner is wrong .... it is just that his ideas were too powerful ... he said it worked for everything .... he said language is only memorization but Chomsky said there are other influences.
But how do you remember something you have not heard before? It becomes a rule.

But Berko is not done ... not only .... let's not forget Skinner .... we can talk about this [example on board]

On this side we can think about this [example on board]. Everything is one to one association.
Here there is recursiveness. This notion ... the ability .... [on board] .... separates us from the animal world. Animals are not able to work with computations but they can learn from the here and now and association.

The thing about abstraction ... how do we explain abstraction. This class introduces you to evolutionary linguistics.
Consider Roman numerals ..... if I start with I.... that is one... and associate one item with that ... so that is iconic.

What about 2... II. I can map that and it is iconic

III. That is good. But ...
IV. If you think about it in iconic state .... I would suggest that it iconically it represents 3 really ... but what about 5 ... 2 wedges ... but if I put a line after it is 6 and before it is 4 .... and this [Drawing on board] ..... so you see ... we have moved away ... Roman numerology starts out iconic ... but then we have to agree on a convention.

That is a language but we agree on it. What is this? This? [example on board] so this is MMIX... 2009. So imagine I had to make single wedges. When I thought about this ... chimps can string 3 signs together ... we have taught them American Sign Language ... they can hold 2 - 3 words in a phrase and have up to 80 gestures ... but their sentences are simple.

Child language acquisition ... around 2 years of age ... have one word stage and then into 2 word stage .... so this is interesting ... so at the 2 year mark ... children get the ability ... and the memory explodes and you get syntax.

So there is a capacity to memorize ... chimps are in the here and now ... they have no abstract thought ... altruism .... but we can do one step better.

What happens with zero .... what does it mean?
Student: Empty
Professor: That is abstract ... but when we add a number to it the meaning changes.
Zero was a grammatical marker not for math originally.

We can talk about numbers with exponents ... all of this is different from the Roman numeral world. The ability we have to step back and criticize ... compared to animals .... and I think we should remember the differences.
Have we talked about the tool kit between chimps and humans? No? Chimps have tools... they find a stick and use it to dig out termites or a rock to dig ... they don't collect it and carry it with them.

But humans ... they have a tool... the chimps have tools that is an extension of their hand .... but humans have tools sent into outer space .... we get info from outer space. So the chimps and humans ... we share DNA ... but the 2% difference allows us to go from the simple to the more advanced.

Chomsky talks about the brain and mind.

Berko has the WUGS test ... questions? Do you see what we are doing? It is simplistic ... to add. So wugs is here for Skinner ... we call that the stem. And Chomsky talks about the affix ... adding the 's'. "Words" and "Rules."

Berko gets striking data. She observes children saying things like [example on board] 'goed'. They say, "I goed." That was the first time it was observed and written in the 1958's. But we didn't observe it and record it. It still happened before that.

We internally self correct. We are more sensitive to lying children than grammatically incorrect children. That was why we had to document the sounds.

'goed' ... this comes out language XYZ ... but it was never an input. What parent would say that to a child. So this was not input but we had an output. Chomsky talks about this .... so something must be going on in the brain. Something is intervening.

Children are doing this [example on board] past tense. They have collected this analogy ... because they know walk, walked... that is in the input ... but goed has not happened. But you have [example on board] as the stem and the child has performed a computation and it looks like that [example on board]

Skinner can't account for this ... but he would say that it was a performance glitch. That didn't explain anything. No .... Chomsky says we have to account for that.

There are things like fishies .... but this was the first collection to prove we can't explain everything ... based on a one to one association.

Questions?
Student: So unless the child has ...
Professor: If the child has not heard it ... where does it come from?
Student: It has to be said goed?
Professor: The associative model is what goes in and then comes out. Other than that ... they have to try and explain it but can't with Skinner model. There has to be a computation in the brain that gives this. This is based on understanding grammar.
Student: So aren't there people that support Skinner? How do they excuse this?
Professor: He is not wrong ... but how do they disregard Chomsky? But how do whole language people try to discredit phonics? Even during this time people want to show the emphases ..... people that support Skinner they have to know there is something to Chomsky.

Does phonics always work? For example ... my first grader .... he had a spelling test. The target word was 'been'. It is a complex word for a first grader. They also had little computers.... and they had to type out the words .... and he wrote this: 'bin'. And he got a sad face emoticon. We say to our kids ... sound it out ... and the teacher said been... and then my first grader wrote.bin .... we have people saying sound it out but that didn't work for him.

People against phonics will say ... don't worry about the sound .... the whole language people say to memorize it .... and associate it with how it look BEEN. You come up with an association. Bin is a phonology mistake.

Student: It is not incorrectly spelled
Professor: There is a debate ... depending on the textbook used... I learned there is not a black and white debate ... everything is a shady gray. Skinner was too strong .... egotistical. And Chomsky said it is not the whole story. We don't throw the baby out with the bath water. But there has to be something in addition to Skinner. Chomsky says there has to be an addition ... and that is the more interesting part of language.

Just memorization is not language .... even though some of it is important the more interesting part is the additions.

I don't want to start a new section today ... but let me say ... we are talking about stems plus affixes. [example on board]
There has been something reported recently called "U-shaped learning"

[Drawing on board]

Prior to Chomsky ... it is the Leopold study .... Leopold had a daughter ... and he wrote diaries about her language .... and there was an early report that the child would say 'went' at 18 months. And then at 24 months .... she was reported to say 'goed'. Then at 30 months back to 'went'.

Back in those days... there is a dip ... and then comes back ... how do you account for the dip .... the child might have had a growth spurt .... but it could not be explained. And then in 1992... we went back to think about this and we think ... it really is not a U.... but it is really progressive.

Is the first 'went' to the second 'went'? It is in the processing ... it might look and sound the same but not the same in the terms of processing. So generally we think there is a cut... with Skinner on one side and Chomsky on the other.
From 18 - 20 months it is Skinner ... and the first went is memorized .... it is irregular but no notion ... the child was not aware that go ---> went. The computation had not gone through the filter.

But then the child knows go... and adds 'ed'... and does an over regularization.

So later the child realizes 'goed' is wrong and changes it to 'went'.

[example on board]

We will show when we talk about phonology ... that children will go back and forth. U-shaped learning could be a topic for a paper.

When we come back ... on Tuesday .... Monday there is no school ... but I will give you my own experiment.

So read chapter 1 ... you will read a lot about this.

_____________________

Eng 301
Tuesday, September 08, 2009
Captionist: K. Wong

Hello.

So we will continue with the discussion and finish this week. In terms of readings.... Chapter 1 .... the biological basis of language. There is a dichotomy ... and we will refer back to that. The WUGS test you find there and the conceptual philosophy. And then we will jump to chapter 3 ... 3.2 ... the Sally experiment. This is all introductory and we will go back to the word section later.

So let's sketch this out. I will do it differently now .... so.... [Drawing on board]

We've said .... you know this split of Skinner vs. Chomsky. So let's extend this ... association .... is under Skinner. So if you want to suggest that association is behind language you are in the Skinner school of thought. And Chomsky is about abstraction and rules.

So we are saying we can break down language into linguistic dichotomy. Words on one side and rules on the other.

Steven Pinker promotes the duality. And on Thursday we will discuss the brain ... and how it maps onto this dichotomy.
So I want to say something first... what is under the words category. Think about this like boxing ... Skinner vs. Chomsky. Before the match begins Chomsky gives Skinner something .... Chomsky says ... Skinner you are right about this .... the following ... the associative model. I will give you all words. All vocabulary items. Skinner says, "what?"

You know Wiki is not an official word. So Chomsky brings dictionary to Skinner and says you get all the vocabulary. This amounts to nouns, verbs, adverbs, etc. Words that have substantive meanings... words you can conceptualize... words with meaning. And Skinner might have been surprised. But for Chomsky words alone are not language.

So we will talk about nouns, adverbs, prepositions .... etc.... later ...and I might have mentioned if you memorized a dictionary does not mean you know a language. So Skinner does not understand how you disassociate words from language. If I say BOOK.... you have an image of a book. Stimulus and response ... a connection ... but that is not a language. Chomsky says language is more narrow than that.

So we have .... this [Drawing on board] and Chomsky says ... before we start fighting ... I will give you the dictionary ... I will give you all irregulars ... the nouns, verbs, etc. So Skinner gets the words and the irregulars. Because irregulars ... think about them ... if someone asked you how to learn irregulars you would tell them to memorize. For example ... irregulars follow associative ... like go becomes went. There is no rhyme or reason for that .... [example on board] but it is different from "go" .... or "open" and "shut" .... or "open" and "closed." So what might happen... over time you might forget one of these words ... and we say "open" and "shut." [example on board]

What happened is we lost that ... the past tense of go and it became went. But all irregulars have to be memorized. But Chomsky gives Skinner the irregulars. Some irregulars follow a sound pattern .... [example on board] .... you have the "ing" ..... pattern. Something that is pattern based goes under Skinner too.

Some students will say "bring".... and then say "brung".... they are using a sound pattern ... based on memory. An analogy based on a sound pattern .... an example of Chomsky mistake is .... in Spanish you have .... "romper".... what is funny about this is ... there is a regular process where you add "ido"... past participle .... but this is irregular ... so the past participle is "ruto." But many people make the mistake of saying "rompido."

I mentioned in a Chicano studies class this mistake .... about irregulars ..... and a student said this does not happen in English .... but imagine the past tense of "hang"... is "hung" .... unless you use it like someone is being hanged... [example on board]

So you can say ... "dove" ... but what else can use say? "Dived." One is regular based and the other is irregular based. So we have many examples where the language .... there might have been a time when one was incorrect but to say this is exclusively a Spanish problem .... but the nature of the error can be traced back to this [example on board]
Student: I was curious to know if it was supposed to be just one or the other?
Professor: Yes ... irregulars are very old ... to early English so we had these different classification of verbs ... but I think hung was the original. So when you see a split like this [example on board] ... the irregular came first.

For example .... [example on board] what is the plural of mouse?? Mice. However .... we have another counterpart .... mouse for the computer ... people say it was an acronym for something but if you need to go to a computer store for a "mouse" .... you would say "mouses." So when something new happens the rule happens.

One more example ... in baseball... you can fly out ... but the past tense is flew ... but they don't say that ... they say, "he flew" out .... it is a nuance way ... jargon.

So when you think about this material .... one is not correct and the other is not ... there is just another process.
So Skinner is given all words .... and irregulars. But Chomsky says that is not language.

Vocabulary ... book and memorization does not mean you have language. It is part of the communication system but what is language. It is syntax. So [Drawing on board] we get a semantic ... vs. syntax.

Semantics means ... meaning. Like when Clinton said he did not have sexual relations with Monica ..... he was telling the truth. But he was playing with semantics. Because there was a definition of sexual relations .... in court. The court constiuted what was sexual relations. So Clinton used it in that term. He tricked people. Legally he was right ... so when you hear about semantics ....

There is syntax which is rule based .... let me share this poem with you ....
Colorless

You can't add colorless and green in the same phrase. Dream in color ... but dreams don't have color. When you sleep you dream but dreams don't sleep. But to sleep furiously ... it is supposed to be peaceful ... so all of this goes against the itself.

It is the syntax that hold everything. You know the poem Jabberwocky. If syntax is there our brain will go along with it.
For Chomsky it is not one to one association .... because then we could speak in any order.

So words and irregulars ... bring me to my experiment. There are two terms we are introduced to....
[Drawing on board]
Words/irregulars

Two terms ... this Skinner side you will find lexical .... that means word based. Meaning based. Your nouns, verbs ... etc. Lexicon ... that is a list of words. Lexen is the
meaning.

On the other side is functional. There will be words that are functional. They will be abstract words.

Student: Could you explain Pinker?
Professor: He is an author ... is at Harvard. He wrote the Language Instinct .... if you are interested in reading user friendly ... popular books on language he is the guy right now. He has long hair... and goes all over to lecture. You can go on his website. He is our rock star of linguistics.

Zeppelin ... that is another word for "blimp." No one says zeppelin any more. Sometimes grammar is in competition.

You have heard that Hussein was hung but grammatically correct he was hanged.

If you think about the WUGS test .... it is stem + affix.
[Drawing on board]
We have the notion of what is stem ... the one to one [ ].

And we have the [example on board] ... is an x plus something new. So when we talk about WUG... and the kids added an 's'.... it was a production of a rule.

Back in 1994 .... I was in England .... at a Chomskyian university. I am native Californian... but I noticed ... I was there during the summer ... looking for a flat. My mentor came to me and told me there were so many foreign students there .... he said to me to try and do the Berko WUGS type test. I heard people try and trick you ... but I did work in the laboratory ... and programed software. When I taught ESL I remembered a phenomenon and patterned an experiment. I call it the Sally experiment.

Here is the first sentence I created. "Sally wears strange socks." There were 60 sentences like that .... we were focusing on the 's'. This is what the students has to do ... they would push a button ... and speak into a microphone ... and the second time they would write the sentence.

All of them were able to pronounce the 's' sound. 50% of the students ... in a sub group .... half the time ... would delete the 's' from wears and socks but never from Sally, strange or sock. Half of the sub group half the time would delete the plural 's' and when they did it was in the speaking portion. It rarely showed up in the writing. Speaking is spontaneous .... and writing preserves the integrity of the language.

Then my co-worker said .... they are deleting final 's' .... it is not grammatical .... not positional. So I had to come up with different sentences. Like [example on board] ... Mrs. Sally likes to dance once a day. I put final 's'.... because if it is performance .... they should be swallowing the 's' here. It doesn't with dance .... or once but delete the 's' optionally.
Dance has a final 's' but does not get deleted. So going back to the original sentence it wasn't positional ... it is grammatical. Think about Sally ... that 's'... the whole word is memorized as a chunk ..... and it is meaningful. If it was deleted you would have no meaning. So we say that is a lexical 's'

The 's' in strange is part of the word that is memory based and lexical. The first 's' in socks is also lexical .... meaning based. So the ESL students did not delete lexical 's'. So we have examples of lexical 's' that is not deleted.

But the other 's' .... wear is a verb ... and the stem. But that 's' ... on the end ... if deleted we still have the meaning of the word ... if not meaningful why is it there?
It is 3rd person singular present tense .... so it is verb + singular ... and a subject verb agreement.
All that material is in the book ... it is a subject verb agreement. It is an example of grammar. So you can potentially delete without touching the meaning.

We will talk about creole and black vernacular later ... this speaks to this process.

The final 's' in socks is functional ... the 's' is outside of the box. If deleted you still get the meaning.

You have heard Spanish speakers saying something like: I have lived here 7 year. It is because one is processed in a certain part of the brain that is memory based and the other is in the abstract grammatical way. It is in the prone to interferences. So what we have in the Sally experiment .... is that it demonstrates the word level processing.

Think about "fish." If you have 7 fish .... it is irregular.

I have a 2 door car ... not a 2 doors car .... that is because you conceptualize the plurality. So we have .... a discussion of lexical vs. functional.

Later we will talk about children and their lexical stages..... later they formulate a functional stage. So children early on will delete these items. Not because they can't hear or say it ... but it is because of the processing element of the language.

Questions?
This is in section 3.2.

Student: Verb plus s .... is what?
Professor: 3rd person singular present tense. You can find in the grammar section of the text.
So I presented this to my ESL students .... they lived in the dorms there ... and used them in my experiment. Later we will discuss.... that they knew the rule ... just because you know something about the language ... declarative language does not mean it will come out.
That was 1994.

Fast forward ... to 1999 ... I have come back to the USA ... and in England we did not have access to Mexican restaurants .... so when I came back .... I said to my kids ... every Friday from now on is going to be Taco Night.  They loved the idea.  So what happens to me is that I am picking up my son on a Friday .... and I was still trying to adjust ... and I tell him ... [example on board] "What about Taco tonights?"  It was a slip of the tongue.  I put the plural 's' in the wrong place .... it should have gone on the tacos.

[example on board] historically it would have been a 'wh' word ... but it is not thought about that now.

So what we have here are interesting lexical words .... that were prepositions.

So all the lexical processing was flying by and ... when tired your lexical is robust ... the abstract is more fragile.  So I was tired.... and I was supposed to put the 's' on tacos and ended up at the end of the sentence.  You can't pluralize tonight .... it is not possible.  It speaks to a processing glitch.

For Skinner .... he says we process tacos like this [tacos].  If that is true ... can we delete the 's'?  No it is superglued together.  It is a chunk.  If I took the 's' out the whole word would end up at the end.

But Chomsky says [taco] is in the box and the 's' is rule based and it could be left out.  So the 's' is functional.  No one would expect ... imagine ... if we removed the 't' and put it at the end ... why can't we make that mistake?  Is that something you would ever find?  No.  Because the 't' in taco is part of the stem ... unlike the 's' that is detached

Questions?

We make these mistakes all the time.
Student:  Will we discuss when 's' is a 'z' sound?
Professor:  Yes.
Student:  It is a different processing for that sound
Professor:  That is a phonological rule.  And we will discuss that.

So this brings me to ..... when I discovered my mistake ... my son didn't hear my mistake ... but when I caught it .... I wondered if other linguists collected errors like this.  So I went to the internet and I found that there were a few linguists that had nothing better to do but record the slips of the tongue.

One man named Peter Gorden collected these interesting slips of the tongue.  He found the target sentence we want to say ... the intention is .... "The car was driving."  That is a possible sentence .... cars don't really drive .... but we say things like that ... the car was driving down the road.  But we end up saying .... and this has been recorded ... is .... The
drive was car-ing .... what we never find is .... if you see this symbol ... @ in science means unattested .... and that means it is not observed in the data .... if it is attested it means we have observable examples .... so what we never find is .... @ "the driving was car."

[example on board]

So let's go back ... when you think about car .... it is a noun and lexical. What about "driving"? "Drive" is the stem and then you have 'ing' ... so it is progressive. 

Be + verb + ing

So we have lexical and functional. What is the nature of the slip? The two lexical words are switched ... and the ing is dropping down.

[Drawing on board]

The ing .... cares only that there is another word sitting next to it. The noun falls into the slot and the ing drops on down. And you get the drive was car-ing. So the lexicals left the ing untouched.

Skinner would say driving is processed like this [example on board] .... we have all these memorize words ... so if drive switched ... the ing should have gone with it.

The brain computes something in the right slot ... so we end up talking about ... an interesting way of characterizing lexical vs. functional ... stems and affixes. It is possible things were broken up in the past.

Imagine the word "breakfast." It used to be break ... and fast. [Drawing on board] verb/noun. It was a compound. It now is "breakfast" in one box. It is a noun. You could try to make it into a verb ... would you like to breakfast with me? That sounds strange. But the phonology .... no one is thinking about breaking anything .... so what was compounded it is turned into one. It is not two parts but one.

So think about how it is being processed.

Student: What age do they catch their mistakes?
Professor: It was a functional mistake?
Student: It was past tense instead of present.
Professor: It is a good question ... and we will talk about chronological development.
Student: How is it explained .... about the dog was on the table and the table was on the dog.
Professor: That was what we are talking about. Competition of air time ... they are phonological blends. Spoonerisms. It is in the opening pages of the book. Spooner said ... it is processing.

So read 3.2 ... and chapter 1. On Thursday we will talk about the brain. If I am late for class ... you just have to wait 15 minutes ... and then you can leave. You don't have to call the office or my home ... I am usually never late but if that happens just wait and then
Hello everyone.

I have to keep a heads up on the furlough days.... I jotted them down ... I will probably show up on one of my furlough days.... but I need to make a habit to check my calendar ... I think we are ok for now. I see something coming. On the 14th ... Monday.... what does this mean for you? This is a TTH class so ... it does not affect you. So you are fine. Some days are non instructional days.... so my other class ... ok. I think we have something going on in Oct. I might have mentioned that ... prior to our midterms.

We are looking at the brain today ... and I want to finish the introduction. We will be looking at brain ... did I mention U-shaped learning?

Student: Yes.

Professor: For your readings ... other than the section on Sally..... Berko... the WUGS test, you should read chapter 10.... the dual mechanism model. So chapter 10 ... explanations etc. There is a nice summary.... and the dual model ... which is about the brain.... and Berko and Skinner. So chapter 10 ... the first part and then it goes into more detail.... and you can skip that.... and on the last page of the text you have a picture of the brain. You also have a picture of the vocal tract ... and that will be our next section of discussion.

So what I want to do now.... is discuss.... and make sense of the neurobiological basis of language. We will try to connect the theory and see if it is relevant to brain processing. I want you to think the debate between Skinner and Chomsky is something that is going on inside the brain. One side wants the processing time and the other wants to grab it away. As we get older parts of the brain diminishes and we start to lose our memory or syntax.... and there is a modular aspect. Linguists say it is like a Swiss army knife ... Independent tools in the knife ... but you have separate utensils for different tasks. The brain is modular ... but sometimes it is autonomous and sometimes it is independent.

I am going to draw you a picture of the brain. This is a nice way to discuss it and draw it. [Drawing on board]

I am not an artist..... that is not good ... but you get the idea.

So the brain is what is important so.... a funny way to think about it is that it is a dense bundle of nerves connected to the spinal cord. So if you talked about the brain with a child you will say it looks like a lollipop... it is the packed bundle of nerves.

In Darwinistic terms ... the brain from the bottom up.... we can compare brains of primates and find similarities.... how it is connected is different but you can see the
bottom up effect. And if you look at fish... they have this happening too.... highly packed bundle of nerves ... and fish have eyes.... so they have an optic nerve.... so what is going on .... there is nothing language based.... it is called the "reptilian brain." That is the brain stem. Everything is on auto pilot. It is your blood pressure... things that seem over time that are in automatic mode ... breathing, digestive systems ... it is the off line essential life ingredients. Nothing linguistic.

The optic nerve is connected the brain stem but nothing is going on.... and there is a bottom up thing happening here.

Hundreds of millions of years and the brain stem starts to grow out ... it is onion like ... it expands out ... new brain cells grow outward ... making a new layer. So we have something that looks like that [Drawing on board]

Right about here [on board] ... I will draw a space ... there ... which is above the ear ... the temporal lobe ...near the mid portion of the brain.... is the temporal lobe. It is not "reptilian" brain but the "animal" brain.

What does this brain do? Well.... if you think about it in Skinner/Chomsky terms.... so we can say what Skinner likes about in terms of language and learning can be traced back to this location .... it is formally called the limbic system.

So what does that system do? Non-linguistically.... it houses the aggression. They find hormones in this area which trigger automatic aggression. I was in Italy and had gone to a football game and the fans set fire to the stadium benches. The limbic system is responsible for the animal aggression. It is responsible for the adrenaline spike. A weak person can have a spike and do amazing things like lift a car off a person. Sexual behavior ... or abnormal sexual behavior ... mostly men ... addicted to pornography.... parts of the brain are overly active. It is not a bad term ... animal brain.... it is the notion of not being able to control the animal instincts. Over eating is involved with that part of the brain.

Certain syndromes package all these ... kleptomania.... is an adrenaline rush. Many people caught stealing have bags of ridiculous stuff ... they don't want the stuff but just like the rush.

Student: Can it be corrected with medication?

Professor: Yes.... Prozac ... is used to check your serotonin level ... and checks the animal behavior. But we now know there is a gratification area of the brain connected to the animal instincts ... sexual, overeating, aggression... etc. Tourettes syndrome ... this part of the brain is over active. [pointing to drawing on board] So you can see the non-linguistics parts.

Men ... for some reason ... the male brain often has more difficulty with these checking systems compared to women. Autism ... the male brain ... if on a spectrum ... the male brain falls closer to autism than the female brain.
When there has been a rape or any kind of aggression ... 8 times out of 10 it is a male behavior.

Linguistically ... this is what gives us memory ... everything that is memory based ... the temporal lobe. It is the "associative brain." [Labeling the picture on the board]

We know where the brain lights up when we do certain tasks. So we have a mapping of the brain.
I still say we are in the early stages of mapping the brain. We have a basic map but don't understand it yet. We know what parts light up but we don't know why or how and how it is connected. We are making progress ... but Alzheimer ... we understand the brain and we know where certain things happen but we don't know how things are connected.

If we read a word ... the optic nerve..... is going to trigger the back part of the brain. But just thinking about a word.... like book ... we know what part of the brain lights up. We have discovered certain substantive words that create an association ... the lexical part ... in fact if we talk about this as a dual mechanism model ... [Drawing on board] we are focusing on... if I mapped this ... I would put the temporal lobe here .... [Drawing on board] association ... don't be confused by the linear sequencing.... we have a Skinner based temporal lobe associative brain ... and this is lexical. All your words ... are going to be housed in this area of the brain ... the limbic system.

Associative based.... that is that part of the brain. [Pointing to the diagram on board]
So non-linguistic we have talked about.

There will be words that don't fall into this.... but we will discuss that in lecture 2.

So basically ... people like to say that this brain is the glass ceiling for all animals. Animals can go to this level.... the chimp might have a sophisticated limbic system ... there could be some learning ... so some will say the chimp might share 98% of our DNA.... and we can see this .... so you can imagine they are our closest relative ... but then we say the animal brain stops at the limbic system

But what about us? We have evolved. Remember "Lucy".... it is not clear if she were part of the homo line or not .... maybe there was a gap between ape and ... or she was an early model of homo-homo-sapiens.

Over time we can say there was another layer that developed in man ... [Drawing on board] now ... let me put it ... right about.... here [Drawing on board] so we are talking about the front left part of the brain. When we talk about language as syntax ... it is the front left hemisphere. There has been a move talking about the left or right brain ... and talking more about location ... where in the hemisphere ... the frontal lobe and temporal lobe are important now

This limbic mode.... linguistically ... has a term called "Wernke's." When we talk about aphasia it is this area where speech is scrambled. The person still knows words but say
things that don't make sense. Or a person can no longer retrieve a specific word. It is lexical based. This is completely lexical.

There is an area ... let me find it ... [looking in the text] page 66 I think ... no. There is no page 66. There is an example of how language looks ... page 247. In chapter 10 ... so here is an example of Werncke's aphasia. [Professor reading from the text]. That is how ... the aphasia is lexical based.

We create now ... sometimes there is a gap ... there are areas of the brain that have sacs ... and have cerebral fluid ... and they separate. Think about these areas as separate but work in tandem. But anyway ... we have the frontal lobe ... front left hemisphere ... FLH ... area 44 ... Broadman's area. 44 is the area of language ... of syntax. So you have FLH ... and this is Broca's area. We have a Broca's aphasia.

Over time another cortex ... has layered and what do we get? The most important thing ... non-linguistic ... is that it checks the limbic system. It is the frontal lobe that checks the limbic system. If it doesn't you get the serial killers ... and sometimes they are actually mentally ill. Typically they are male ... and they have a problem in the brain.

So we are not checking the limbic system ... the frontal lobe keeps the limbic system in check. A child with Tourettes ... is impulsive. I observed a class with Tourettes. They have extra abilities but I also observed once ... someone left their Walkman on the desk ... and another student grabbed it ... and I was watching this ... and I thought ... does the student know the other student will realize the kid is going to come back and find his Walkman gone? But they can't predict the results of their actions. That was a stupid crime ... because you know the student is not going to get away with that. But those with Tourettes only see the here and now. A life long criminal might not say that is risky and not pay off ... there is not enough space and time between the crime.

So the frontal lobe sequences events and has a theory of mind. That is being able to put yourself in another's place. But those with Tourettes don't have theory of mind.

Autism suffers from no theory of mind ... also chimps are in the here and now. "Jeanie" ... she too seemed to never have developed theory of mind. Imagine ... I am autistic ... and there is a teacher next to me ... and the teacher says we have this jar that you can't see into to ... and let's put M&M's in it. So you are watching me put the candy in the jar. So the candy is in the jar. Then the teacher takes me outside ... and says to me to dump out the candy and put pennies in the jar. I come back into the room and the teacher asks me to think what will the other students say is in the jar. I will say pennies ... but you should be thinking it is candy. So a normal person will say those kids will think it is candy ... it is not correct ... so if you don't have theory of mind you can't remove yourself from the here and now.

Student: But don't we try to teach them ... fix that?
Professor: Yes ... as I drive up to campus you see a billboard about an autistic school.
There are children that might be slightly autistic ... that are not truly what the doctor's say is true autism. 30 years ago they would not have been labeled autistic.... but now... if you don't like bright lights... you would be labeled autistic. There is a spectrum.... of kids that through diet it can be cleared up. They are not the hard core cases ... the true hard core cases.... like Down's syndrome ... therapy is not going to change the mutation ...but there are some high functioning Down's .... that can improve with therapy. But there are some with syndromes that can only go so far. The brain only allows so much. There is a lot we can do but ... now days women are given a check list to look for autistic traits.

Characteristics.... like ... does your child avoid eye contact, bright lights, not smile ... etc. So that is the reason the data statistics have gone up. We are not certain.... in ethnic communities.... we think the numbers are inflated. You see all these schools popping up ... but there is going to be hard core cases ... but we seem to have extended it out.

So we have Broca's area that checks the limbic system. This allows you to socialize ... the frontal lobe... the ability to not say something inappropriate.

You have to give it to Obama ... he is a great speech maker ... you heard that guy that heckled him... his limbic urge was not in check. Knowing how to manage yourself in society. And the most important linguistic aspect is ... this is where you get syntax. You have the frontal lobe ... the syntax and rules and functional. [Drawing on board] that allows us to abstract ... syntax and grammar. And when we think about a sentence that is what syntax is. When you listen to music ... it does not have to be classical.... but it has to be music that is sequential. The notion of following something in the brain. It can't just be random ... because you have to stimulate the brain. When you are praying or engaged in meditation.... listening to music or thinking privately ... you are using syntax ... and that part of the brain lights up.

When you put "book" into a sentence ... the frontal lobe lights up

Student: Does size matter?
Professor: Go to the Learning Lab at UCLA ... and they talk about the thickness and denseness of the brain ... and they measure ... there is a symmetry.... the normal density and what you find in people with syndromes. Think about it like this ... we have a nice forehead ... that is your protruding frontal lobe. If you look at a chimp they have less of a forehead. You see the brain still but the anatomical structure is different.

Go to the website at UCLA and you will find the language processing work that is being done.

Student: What is that?
Professor: The dual mechanism model. The brain processes language in two ways ... Broca vs. Wernke.

Having said that.... a couple of foot notes. Child language acquisition ... the primitive
area is going to activate first.... so they pass through a Skinner stage. They will move through the Skinner stage where they memorize without grammar and then go to a Broca stage ... they start with lexical and then go to functional.

What about some syndromes? If there is a problem with Wernkes and Brocas over compensate..... you get Williams syndrome. The chatterbox syndrome. They use their frontal lobe to memorize things ... it is like eating soup with a fork. They have a problem with the memory portion of their brain so they learn language in a bizarre way.

They memorize words not in frequency ... our vocabulary we reinforce as we use ... words we don't use we forget. But Williams it is not like that. It is based on the emotional connection to the word... or the way it sounds or an image... that allows them to think about that word.

A Williams child says something like this ... I can evacuate the glass of milk. It means to evacuate means to pours but you don't hear it used that way. Or if you asked a Williams child what their favorite animal is they will give you a weird list. Their frontal lobe takes input and uses it in a unique way.

Most children name animals they have been exposed to.... but Williams children have low IQ.... although they talk and talk. They elaborate and are descriptive but can't summarize what they just said. So they speak like a performance. It is language for language sake.

The flip side is ... if you have a problem here ... [pointing to the drawing on board] ... you get Aspergers. I worked with a child with Aspergers. These kids memorize everything. We know [example on board].... the phonological rules ... with Aspergers.... a child will say car... and plural is car[s]. Not the z sound.

[example on board] ... all the kids pronounced it with a z.... but we know the rule ... and make the z sound not s.

If you said bug ... the plural has a z sound. Aspergers is pegged to a different part of the brain. They don't socialize well.... their language is in a niche. They memorize obscure things like all the train schedules coming out of Grand Central.

The child that I worked with was 3 years old. I eventually told the parents that the child had Aspergers but he was playing with a baseball bat ... it is really a cricket stick ... and it was plastic ... and he was playing and other kids came along and eventually there was a tug o'war over the bat. The bat bends ... and the child........ starts to cry and says.... he broke my "I"....he starts chanting all words he know that begin with the letter 'i'. The words that came out ... at age 3 were striking ... like he said he can't say "index" anymore.

One day I took him to McDonald's and he saw the word sundae.... and he was upset because he thought it was spelled wrong. We would talk about spelling things and games and one time I started to read my newspaper ... and ignored him ... and he kept
going like nothing was wrong. He acted like he had to just get all his information out.
He had no social understanding.

If you have a problem and your brain starts to deteriorate.... [Drawing on board] the
activity between cells shrivel up ... and it is happening here ... you get Alzheimer’s.
Your cells are being moved away and not connecting ... and you lose your memory.

Student: [can't hear/can't understand]
Professor: We are years away from understanding the process. Don't let anyone tell you
we are close to a cure. If here you have Parkinson's. Michael J. Fox.... it is not just
involuntary movement ... you have to be able to coordinate.... if that part is disturbed you
can't is speak right. It is not just your body but you lose your language. Parkinson's is
syntax.

So we are learning a lot. There is an N400. ERP.... it is like an MRI.... when you say
something that is not meaningful.... that part of your brain lights up and then it shows up
in the semantics section. You get areas you see that correlates with ... if you have a
syntax that is wrong.... a P600.... and it is in the Broca's area.

We are still finding all kinds of new stuff with the brain

Rote memorization is here. [Pointing to drawing on board]..... if you learn a second
language ... you memorize phrases for traveling.... we know that is rote memorization....
if you have productive grammar you have true frontal lobe learning.

So the last thing ... not everyone is on board with this. The Skinner camp is still alive ...
they don't like the dual mechanism model. So if you see discussions on this.... it is still
the Chomsky vs. Skinner debate.

Chapter 10 you will get some of this. This is interesting.
Student: With Aspbergers.... do you find more of them as aggressive?
Professor: Yes. Ok. Have a nice weekend. Start reading the chapter on phonology ...
chapter 13.

Eng 301
Tuesday, September 15, 2009
Captionist: K. Wong

Good Morning.

It seems like we are crowded here.

Let me say that we are going to begin lecture one. The intro is behind us. We are going
to be dealing with phonology. The chapter is in the middle of the book... chapter 13.
There is a lot to be said about phonology. Chapter 13. We will focus in this .... until the
second week of Oct and that will be when the first exam will probably take place. We will have a review before that exam.

There will be aspects of the intro on that exam also. But we will look now at the bottom portion of language sound and move through that until Oct and then we will have the first exam. It could be around the 2nd or 3rd week of Oct. It is not a bad of idea to start preparing for that time so around the mid portion of the month. It seems that the first exam is longer than the rest.

So phonology chapter 13. One way to think about this class we will treat the material in a bottom up fashion. If we look at language we look at the basement of language and focus on sound. We are not just looking at how words are spelled. Linguistics means the tongue. So let's remember language is a natural acoustic phenomenon. We have to divorce from the writing convention we have been thinking that language is writing only but it isn't.

We are dealing with almost like a music class and come up with a notational theory. You will see the alphabet does not do its job it has problems for a notation system that tries to capture a sound but it breaks down.

So language the bottom up it begins with sound. If you don't speak and we have ASL students we have one of the largest deaf and hard of hearing students there is no sound so their basement is vision at Galludet you don't find auditory I would like to visit but you probably see it as a sight based institution. I would like to know about their technologies.

If you are sound based and screamed "help" someone would hear that so sound travels. Visual you have to be in front of someone but anthropologists they like to talk about what sound did and how it freed up our hands it travels so there is distance. And in terms of economy of effort it is easier to speak than sign. When people are signing they have to take breaks at the graduations ceremonies. It takes more effort to sign than speak so there is evolutionary reasons we have to come up with different systems like signing and gesturing but this is sound based.

There is a lot to be said what kind of notation can we use to illustrate the true sound. What kind of theories are there and we will talk about first language interference with learning a second language. Also we will discuss child language development.

So that is how we are going to discussing the next several weeks and we will also link it to Skinner vs. Chomsky

We have a big fight on our hands reading strategies reading is sounding out decoding and turning it into sound. If you read aloud you create an acoustic process. Do you use Chomsky You might know about "open court" that is phonics based and Chomsky
There is also a Skinner system ... using sight words and memorize words. We will discuss that more later. But the Skinner vs. Chomsky debate goes on.

First.... the alphabet ... it has been around a long time. One problem though with it is .... consider the letter "C." [C]. The way you say it ... sounds like an 's' sound. So the name of the letter is different from the sound. But there is a tug a war between the naming of the letter and the sound. You do get an 's' sound .... so the letter C represents an 's' sound like in the word "cent." If that was always .... that would be fine. But it doesn't and it also makes the 'k' sound.

So sometimes it is an 's' or a 'k'. My daughter in the first grade had to come up with a word ... she said 'kitten'... and so she had the problem with 'cat' 'kitten'.... the spelling vs. the sound. So she had a dilemma. So there was a semantic overlap and children try to figure those things out. We could also have the [C] make an 'sh' sound. [example on board]. So there is a 3 to 1 relationship. And we are still not done. Sometimes we get the 'ch' sound [example on board] so you can say "my son plays the cello"... and that example of [C] making a 'ch' sound

So we don't want the alphabet to be perfect but ... we could have this [example on board]. We have words with different spellings and different meanings. We want to keep this stuff because of the history of the words. [example on board]. You see this is originally Latin based .... [example on board]. So we might lose the fact that this was pronounced differently in the past. So we just deal with this and learn it. It does plague the system though.

So this is what linguists like to do. There are different spellings from the British spellings and the American spellings like theater and theatre or color or colour Most linguists today want to say ok let's remove ourselves from the spelling debate. Let's refocus on the sounds and come up with our own alphabet that caters to the linguistics.

So I am going to give you some terms. We are going to introduce you to the IPA. It is the INTERNATIONAL PHONETIC ALPHABET [you are going to have to know this for the exam]

We are going to focus on English. But we have a new notation of the IPA which is sound based.

I am going to introduce you to the chart in chapter 13 on page 277. I could be telling you to memorize this chart ... but I don't like that. I would like you and I to break things apart and see how it functions. That is how you understand things better ... and I like to give you an example of things so you can understand things better.

So let's focus on the English sound system and let's break it apart and understand it.

We are starting with consonances. We will introduce new terms for you.
So we are going to start with row 1. As I create the chart leave some room. I think it is printed in the book but I think as you write this down ... it will help you learn. Just looking at it will not involve you in the learning.

So ... the first 3 sounds is this [example on board]

1. b d g.

Divorce yourself from the idea of the letters ... we are talking about the IPA. You recognize the letters but you have to recognize it differently now.

The b might look like this: /b/ Those slashes indicate the IPA but I am not going to be writing all those slashes. Let's not call them letters ... but graphene. When you get an 'ene'.... it means meaningful. The stem is 'graph' and 'ene' means this is a meaningful graph and it is true. I can also say these graphenes have sounds. The b does not have a sound but a phonene. So these graphenes have phonenes.

Don't say b [sound bee]... but 'buh'. [example on board] There are rules ... Chomsky says they are distinctive features. And these features we are going to break up sounds.

If I take the 'buh' sound .... and if I were to throw it against the wall... and it opened up .... I can imagine like little letters are like little people and seeing what spills out. What kinds of atoms, electrons, etc.... almost like the periodic table ... like water is just water but H20... what is it made of? So what is the place and manner of articulation. We will focus on where you make the sound in the mouth and how and if they are +/- voice. But there is more to talk about but we are going to try and keep it minimal. So this is more rule based and Chomsky and brings back the phonic base of reading.

So let's look at 'buh'.... let's talk about voicing. Produce the 'buh' sound ... you can feel vibration in your throat when you make that sound. Let's label it ... like this. We are going to put a line... [example on board] we don't have that vibration in ASL. So with voicing you have a contrast. 'buh' voice. The d ... sounds like 'duh'. And g ... is the hard g .... you say it is voiced. So we have a good start. We have 3 graphenes with 3 phonenes and each has a voiced feature. You can feel it in your throat. Those are the sound/phonenes Now we are going to show you the sister sounds.

What goes with b? p Think about those letters .... it starts with an O for the icon of the mouth ... and you put a stem on it ... and so that is how the mouth looks going up and that is how the letter p came about. [example on board] some people study the evolution of the alphabet itself. So these are 'kissing cousins'. They are like identical twins ... one is a girl and one is a boy. They look the same but one is a boy and the other is a girl.

So what is the sound of p? Is there voicing? No. So put a straight line there. This ~ is the voiced sound and -- is the not voiced sound.

t has no sound .... and the k [example on board] .... is it voiced or voiceless? Voiceless.
So we have interesting things ... 6 graphenes and 6 phonenes.

Another term... when you have a distinction that creates another word we call it a "minimal pair"

Imagine 'bay' vs. 'pay'. 2 different words. But what is the difference? One is voiced and the other is voiceless. You have 2 different words based only on voicing/voiceless. So those are minimal pairs.

Student: So everything is spelled this same?

Professor: We are trying not to concentrate on the spelling but focus more on the sounds.

So we have the first row. But how and what brings these phonenes together? We have to ask the manner of articulation and have to ask the place.

So let's begin with the place. Why didn't we just put them all together?

Student: Because you use the place in the mouth.

Professor: Think about what your mouth is doing .... it is interesting how it looks ... it makes sense historically. Both lips come together. So what term does we give to 2 lips. If you study pre-med.... you know 2 means bi... and lips are labiel. So bi-labiel ... that is 2 lips together. So we have a features that identify the sound.

What about these sounds? What is the tongue doing? Feel your tongue... you have a hard pallet. If you go to the end of the book ... page 579 ... you have the inside of the mouth .... the ridge is the alveolar .... it is a bony area ... so you might get a blister there when you eat something hot. It is right when your teeth end. It is where your tongue follows the ridge ... before you release keep your tongue up there ... that is the [example on board] alveolar

So you get a difference between the b and d. 'buh' 'duh'.

Student: Alveolar?

Professor: Right. Notice how we go back in our mouth. This is the inside part of the mouth and now we are going back more ... this is more front to back [example on board]. We also have vertical and horizontal directions also.

So what is happening is that g makes the sound of 'guh'... that is way back .... in the mouth called the velar area. You can see it on page 579. You see the hard pallet .... and the soft pallet ... and then you have the velar area ... so now you have our place of articulation.

Finally ... you need to know this if you are going into teaching. They will give you the IPA. One year I did a stint working for LAUSD in 1991. I had two schools to work at. We already expected the teacher would know the IPA and understand it. It shows up in
a student's evaluation report.

So now we have place ... voicing and now we do the manner. What constitutes the 6 phonemes? How are they produced? They are all plosives ... exploding sounds. Plosives are an exploding puff of air. Some linguists like to say it is 'stop'. But what is important is that the 6 phonemes build up air and there is an explosion of air.

All of these are obstructive sounds and then a sudden release. Think about the b ... you build up air .... and then you have to release the lips. So now we have interesting terms that are linguistic terms. A lay person would say the b is just a b but linguists say b is ... what if you get and ESL student that has trouble with voiceless bilabial sounds. That is because Spanish speaking students have different sounds. [example on board]

So the p is no longer a p ... but here it is a voicing/voiceless, manner, stop

You have to know the terminology.

Row 2 is a big row. The best way to talk about it is to first write it out. If you speak Spanish ... you know there is a correlation between b and v.

[example on board] the Greeks are coming. We will talk about it.

Put these in brackets but drop them a bit. So this is a big row

So the v sounds like.... [example on board] the v. and f are minimal pairs. Very/fairy. They are the same except for the voicing feature. I could have said very/berry. They are both voiced ... one is bilabial. Here is an easy way to remember .... think about this like 'the' and this one as 'bath'. We are focusing on the 'th' sounds. All the demonstratives in English ... have the 'th' sound. [example on board] so you have voiceless with the word theology.

[Sound examples are difficult to write]

We come from different regions ... and we say things differently. We are going to describe what people say ... like tomato/tomahtoe.

If you read the opening pages you will read about prescriptive and descriptive grammar. So I am not going to say you are doing it wrong .... but there is only one way to do it with the IPA.

Here is an example of a minimal pair .... teeth/teethe. You have a voiceless and here is a voiced. So we would say ... we are highlighting the spelling but for now ... there is a distinction that gives us two different words. Teeth... is a noun ... plural for noun and you put an 'e' you have a verb. You will find this in phonology.

Sometimes you find it in plurality. Like loaf and loaves and leaf and leaves and wife and
wives. Or like bath and bathe. Life and live. So there is a distinction that shows minimal pairs.

This looks like an icon for a mouth and tongue. Only about 2% of all languages have this [example on board] the tongue coming out. You don't find it in many languages. In Greek you do ... and maybe Spanish. Think about the word "David." But in some languages the first d and the second d don't sound the same. Spanish speakers say it differently. It is not something they can create minimal pairs from.

So we have the voice and voiceless .... like in sip/zip.

Student: Do those go together?
Professor: No that does and these do ... zip/sip.... sip/tip... minimal pairs. There are so many words. There are so many things we can come up with.

Now these lower ones ... the z with the wedge on top. They are called the 'wedges' because of the graphenes. This sound .... is voiced. Think of the word measure, leisure, pleasure. And the voiceless counter part is voiceless ... like in shoe, English. We don't have many but we do. We could come up with assure or azure.

Now this one .... is voiced ... jump, jar, jam ... and this is voiceless ... chair. And the h is voiceless. So what we have going on is a list.
The nature of the place is .... lip.... tooth ... so labiel is dental .... does that make sense?
Student: No
Professor: It is labiel/dental. Which is which? The lower lip and upper tooth. But if you were working with a client ... speech therapy .... imagine a burn victim ... and their lower lip is not functional. But saying 'very' ... you can say it also with the upper lip.
So sounds are not just sounds.... we want to break them up and see what comes out.

Water is a composite ... H20... we bring out the features. So we have labiel/dental.... interdental. Only 2% of the world's languages have this. A Japanese student couldn't believe that she had to stick out her tongue when she had to make certain sounds. If I were to draw [Drawing on board] and it just the tip of the tongue that has to come out. My wife that speaks French has a hard time with that... instead of 'the' she says 'zee'.

These are alveolar ... that is because that is where the tongue is. If you call it alveolar dental..... all of these 4 .... are refereed to as palatal. That is the soft pallet. It is the fleshy area ... you get beautiful, lushious, sounds.

When you look at the French their mouth is rounded ... palatal sounds.

And this is glottal. [example on board]
So think of minimal pairs.... very/berry.... and teeth/teethe... zip/dip. Here would be jump/chump. Remember minimal pairs .... they are exercises to get you to think about the IPA.
All of these sounds make hissing sounds. It is a partial closure... the sound is hissing through. There is friction .... so they are called fricative.

So Maria has a problem with voiced, bilabial fricative. She will make a v sound ... and you need to know these terms. The chart will become second nature to you.

I think it is worthwhile for you to know this ... and for us to go over this.

There is a footnote .... most languages are plosive. You hear the exploding sound. But there are some that are implosive ... Thai, Vietnamese, Cambodian... they suck in the air.

I was observing and ESL class... and there was a Vietnamese student trying to say 'played' but couldn't say it. They don't have plosives. If you are bored on a Friday night ... call the DMV and you can hear all the languages. Listen to all the different languages. The explosives are more predominant.

So fricative ... plosive ... and when we come back on Thursday we will finish the chart.

Student: What about those on the bottom?
Professor: These are ... not fricative ... palatal but not fricative. They are short hissing sounds... the others are long hissing sounds. So we are going to call the bottom two ... affricates. They are between a stop and fricative. I put them together because they are wedges and palatal but they are affricates. Voiceless, palatal, affricates.

Student: Where is the friction?
Professor: It is not a stop ... [example on board]

Eng 301
Thursday, September 17, 2009
Captionist: K. Wong

Good Morning

[on board]

manner English sound system

Plosive/stop  1. bp    dt   gk

You want to be able to do this quickly on your own. I think that was where we left off. This is half the chart. Look it over. Questions?
[These charts are difficult to reproduce so I hope you are copying them down for yourself ]

These two are affricates. I have given you place and manner of articulation. I will give
you a heads up on how there could be interference ... how non Native English speaker would have difficulty in creating these sounds.

I have given you some terms. We talked about this being the IPA. International Phonic Alphabet. You will learn how to write and decode and translate .... and I want you to have a good handle on this. We discussed graphenes, phonemes, and phonological rules.... Chomsky rules. And we gave it a specific term ... distinctive features.

So the idea here is that we don't call water... water ... or drinkable liquid ... but we want to call is H2O.... it is a composite. We are dealing with ... the potential for rules and computations ... so that we can make one thing and then make something else with the same components.

So sounds were units.... objective ... something that could be recorded. There was not an understanding that sound had an internal understanding or sound image or speech perception. We may not hear what is out there ... like we may not see what is out there. People that are color blind don't see the same things as people who are not .... the object is processed differently.

So language in general .... moving from the external property to the internal and so we are going to talk about rules.

We talked about place and manner of articulation .... so that is one property that we play with ... like the periodic table. So you have elements that you can combine and get different products. So think about all these things ... as they have a relationship and we can break them apart. They are separate entities that we can copy and detach.

The last term we discussed was minimal pair. And example is bay/pay.... and we will do some exercises with that. Look at these ... are there issues with the sounds? Do you all understand how to make all the sounds?

Shhhh or [making sounds]
Student: What is the different between d and j.
Professor: Think about it in duration of mind. If you did the same sound short ... you get that. You get the same as voice but think of this as longer... and this is short. Just try it. Say this sound ... long sound .... [trying to make the sound] like the sound of an airplane. Now chop this one off. In Korean this is an interference issue.

We are getting closer to this. The tongue is too close to the upper ridge. We have to relax the tongue to the palatal area. You can practice that. An easy word for you to practice would be "measure."
Student: But if I look it up ...
Professor: They give graphs but it isn't IPA
Student: They are different ....
Professor: The sound is not the same but for you it might sound the same. One is a fricative and the other an affricate. Often ESL students .... while acquiring the language
they can't even hear the sound let alone try and match it. It sounds odd to say we don't hear what is out there in the environment. You can hear it when I grind the pencil sharpener but speech is special. It is language based..... so if you have never been exposed to a sound you might never hear it. So you can't match it. That is the problem for ESL students.

Student: What would people that speaks English .... not hear?
Professor: Often children don't hear these sounds all along ... and for example ... in the beginning children see the outer edges of the chart and not the inner sections.

Student: The vibrational ones?
Professor: Sometimes it is cognitive. To recognize the sound you have to pay attention subconsciously some internal ability to hear the distinctions and it might be brain maturation

If you are hard of hearing or deaf ... we now know that boys don't hear the same as girls .... but imagine a boy with an ear infection for the first 3 years of life ... it might delay ... the brain to map the sounds means they have to hear it. Have you heard deaf people try and speak? They don't have the target sound. We speak in bright colors ... everything is on the mark ... but if you are hard of hearing your target is broader. The sounds are more washed out ... typically with vowels ... but we have to hear ourselves speak to map it.

I can give you an example ... it is funny ... I am the godfather of my niece Jan .... I can't say her name .... in French there is something in French that I can't say ... it correctly. I hear Jan but it is Jen ...as it turns out .... I am fluent in French .... but in French there is an affricative ... it is in between. But for them you hear it differently. So I was thinking if there is something in between if I trick my wife with sound ... I start with the fricative. But end with the affricate. I need to add this ... I start here and cut it off ... instead of [making sounds that are difficult to reproduce]

I don't hear what I have done .... I have come up with a gimmick .... so the French j has the z sound ... they make the affricate palatal. But I don't hear the difference. I don't hear a separate sound but I came up with a coping strategy.

We don't hear what is out there all the time .... we can save this for a linguistics class .... like 417. And of course the vowels are horrible for ESL students.

An example of a rule .... let's stick with these .... let's do something like this .... [writing on board]. How is this used in a chart like this? Imagine we take a v sound .... starting with that ... and add something ... add minus voice .... that is a feature. Let's add minus voice ... and then we get .... an f sound. So that is a rule. It is simple ... if you take a v sound ... feel the vibration and deactivate the voice sound. You don't think like that ... but they are both from the same place. Same manner and articulation ... but a different voicing. x plus y equals z.

If a person can't produce the v sound you can't say they are not producing it but they can by making it minus voice.
So if a Spanish speaking student has a hard time making the v sound ... for example ...
like Victor .... instead they say Bictor.  But he has this sound and use it and manipulate it so they can make that sound.

We have strategies to use but for the moment let's complete the chart.

Row 3.
We are going to call it nasals.
Something funny happens as we go down the chart.  We start at the front and are moving to the back ... and now we are going toward the throat ... and as we go down ... we go from strong consonance sounds .... and as we move down the chart we tend to go minus consonance and almost vowel like.  These few phonenes are almost like bordering vowels and almost produced as vowels.

But this row ... nasals .... that is an n with a squiggly hook.  There is no counterpart ... no voiceless counterpart.  Say nnnnn if you plug your nose you can't make that sound.

Here is a complete closure ... try to say "boy"... without releasing air.  You can't.
If you are trying to make a voiceless m .... you can't ... air just comes out of your nose.
There are languages that make exotic sounds like click languages where the click is a word.

I don't know of any where there is a voiceless nasal sound ... where some words are snuffles.  So they are all voiced.  When you think about vowels ... they are all and only voiced.

So like you have voice and voiceless .... very macho consonances ... they are only voiced. Place of articulation ... two lips coming together so they are bilabial .... the only difference is manner of articulation.  So 2 of the 3 features are the same.  So that should mean that there is similarities in the sounds.  Let's see.  But start with an m ..... and go to b ... your mouth is ready for that.  Everything is there.  The difference is here you release and here you are not.

What about this ... where is your tongue ... in the alveolar ridge ... so this and that ... they are voiced ... it should be easy ... from n. to d.  The tongue is in the right is spot.  This is what you need to know when you do linguistic courses.  If you get into teaching ... this knowledge is invaluable.  You will use this in your classrooms.  It is not obvious.  You don't think about this unless you take a linguistic class.  We do this but on a subconscious level.  So what we do is to make this knowledge explicit so you are aware and can carry it through to your teaching.

To have knowledge and see where the mistakes are coming from ... this is the knowledge that will come in handy.
This is velar .... it is like the Spanish sound ... it gives the velar quality.  We start with n and combine with the g sound.  So the graphenes are important.

You can come up with minimal pairs ... mick.nick...
Student: Where is r
Professor: We have not done that yet. We are at the nasals. You notice no voiceless counterpart.

Row 4
These are called liquids. If you know other terms from other classes that is fine but go with the terms you see in the text. It is alveolar .... l's and r's seem to correlate. They are both voiced .... [making sounds of the l and are ]

How can the same sound sound differently? It is how it is internalized. The Japanese and Koreans .... the l collapses.
Student: We have an l but no r sound
Professor: So they come up with strategies ... like let's go see the race ... sounds like let's go see the lace. Japanese adults don't hear that sound. It is like the French sound that I can't hear.

So we have these alveolars ... we call them liquid because it starts in the back of the mouth and starts to move forward. The tongue touches the tip. It spreads across your mouth ... starting in the back to the tip of the tongue. It is fluid and like liquid like vowels. Sometimes l's and r's are treated like vowels.

Row 5
The glide
That is the manner of articulation. Here we have the w and it is voiced and the British have a voiceless counterpart. If you find an m on top of a w ... it will be voiceless w. That is like "what" with a more breathy quality. It is more silent. We don't have that in American English. You don't have to know that and most textbooks don't discuss it either.

Where are the lips? I am going to put it under the bilabial .... I think there is a continuity to put it there. It is voiced. And of course ... the y .... and it is voiced. It is under the palatal.
Student: Is it a glide?
Professor: Yes ... that is the IPA chart for the consonances .... I expect you to memorize this chart for me and reproduce it. So that is your IPA chart. There is no q or x. Think about x ... it is not a true phonene but a composite. x is ... [making a sound eh]. And the next sound is s sound.
So what is this word? EXIT. In IPA it is written like this: /eksit/ You might not know the meaning but you can sound it out. So there is your first word.

There is no q .... so a few things we don't get because they are composite sounds. We are not talking about narrow transcriptions .... but we are not going to deal with that. We are only going to do a broad based introduction. A t with a dental sound looks like this ...
[example on board]
Student: What about Xavier? Why do they spell it that way?
Professor: X is a funny thing. How do we say Mexico? We say it with an h ..... but for
Spanish speakers it is an h sound. There is evidence that x historically was palatalized. I had a student that went to Mexico and do some field work and went to cities with names that start with X. She came up with examples that sound like shhhh. So once upon a time you would have said Mehsheco.

Originally you had a possible s sound .... in Xavier and it sounding like savior. We will talk about this later. But remember just because you spell something one way does not mean there is a sound relationship. Spelling is different and how we move through convention and change phonology. It happens all the time.

Student: I notice in Spain they speak Spanish differently.
Professor: Yes.
Let's talk about the ESL perspectives .... Spanish have a hard time with this [pointing to board].... if you can't say "the" ... you might hear people say zuh. Spanish don't have that sound. If you start first grade ... and you get a note from the speech therapist ... that says Maria does not have a voiceless palatal fricative. They will not say it is the "sh" sounds. It will be in that order also. That is because in Spanish they don't have that sound.

Listen to this example ... [professor trying to speak English with a Spanish accent]

What is happening is that the closest thing to a fricative is an affricate and that is what they use. They hear things differently. I will give you ... more in our phonology discussion.

Know your chart.

Children have a problem making these sounds.
Speech therapists do this ... I have done this ... you have two things in your hand ... an IPA chart and stickers. We had a budget for stickers ... as a speech therapist.

I worked with a little boy that had problems with his r's. Instead of rabbit he said wabbit ... red was wed. So this little boy was having a problem with bilabials. He wants to produce an r but he is adding plus bilabial ... and you get a /w/

You have heard this before. So two approaches ... one would be to keep practicing the correct pronunciation ... but it often does not work. So the Chomsky approach is to look at the rules behind the sounds. You want to produce an r .... so you have to get the child to put their lips together or do plus smile ... if you are smiling you are spreading out the bilabial feature. So instead of wabbit.... if you get them to smile ... you get the r ... rabbit. It is obvious when you see it. It isn't much but speech therapists .... once you understand how it works there is no mystery.

There are little things you can do .... to help children. There is also a brain maturation we will discuss.
I like to give you developmental notes ... for all sections I will give you acquisition
footnotes.
Questions?
Student: Where is the d flap?
Professor: Just put it as a d. If this were a graduate class ... it would look like this [example on board]
Student: We practice capital D ....
Professor: There are different graphenes ... it is like a backward ... you get bizarre graphics sometimes. How do you say dog in Spanish?
Student: Pero
Professor: There is a different between but and dog ....
Student: One is pero and the other is puero.
Professor: Some people can't hear the difference. So here is the chart.

Let's do the vowels.
We did talk about rules.
If you take a w and add minus bilabial you get it here. With the d you get an f ... if you take a g and minus voice ... you get k.

Now the vowels.

[Drawing on board]
The chart looks like this. So let's fill it in.

We are talking about front to back and high to low.
So the front vowels. Unlike consonances ... vowels are not touching things ... so we have to say is it in the front or back ... but they are spread. It is a different point of articulation.

So we have the vowels ... [Drawing on board]
I will give you a device to remember and this is in the book.

. e is a high front vowel ... almost like you are smiling. If you would lower your jaw a little you go from e to the capital I. It is like the difference in sit. French have a hard time saying these .... so my wife instead of saying ..... sheet ... she says ... what sounds like shit. So instead of hearing angry ... the French say hungry... hungry .... so it is how the vowels are perceived.

eh ... like say that is the front mid vowel. You get the Greek epsilon .... sounds like 'said'.
Student: Is the eh a diphthong?
Professor: You are right some people say it is but many like to keep it a pure vowel and relegate the diphthongs to a different category.
This is just broad transcription.

This is called an 'ash' .... an a that shares the same stem with the e. There used to be a key for the ash. Do we have it anymore? They used to have it on old typewriters. You
would find it before. It is called the 'ash' and sound like cat. This is going from front to back. You keep dropping your jaw.

It is physics.

Now the back vowels.
[Drawing on board]
u - you
And it is a back.
e you are smiling ... so u is more in the back

The upside down omega .... [example on board] and it is this vowel ... like in book. It is my favorite vowel. It gets neglected. It is the sound in foot

O for go.

We seem to have a vowel missing here like gaps in the periodic table. It is an open O. It is a sound that New York people make ... sounds like caught and cot (Boston accent)

Put a little note about that one.

A ... the back low vowel ... sounds like father.
Those are the back vowels.

In the mid section of the chart we have the schwa ... it is upside down backward e. It sounds like uh ... unaccented and unstressed. It sounds like sofa. Stressed in the beginning and not in the end. When we accent the schwa ... it sounds like b^t. One is stressed and the other is stressed. Same sound different stress value.

Words like but and cut ... is a cvcv structure. The schwa works in 'the' .... and liquids like the r which we will talk about later.

Diphthongs.
oy as in toy. You go from the o to the e. That is a blend of two sounds.
Student: So you are going from back to front?
Professor: Yes.
Spanish has diphthongs.

The next diphthong is the sound like saying 'eye'.
Finally you have au .... and it sounds like cow.

As a way to practice ... why do you do this .... I will say something in English and I want you to transpose into IPA

Hello, my name is ___.
I was born in the month of ___
In the year of ____.

Write it out in IPA and there is a lot of good stuff to practice in IPA. Maybe we can have a few of you present this up front. There is no extra credit or anything .... or stickers but you want to be able to do ... is getting your hands dirty with the IPA. What is going to happen with most of you ... you will think about spelling ... but you have to divorce yourself from it.

Of ... is on-f.... but is there an f ... it is really written in IPA like this ^v. So we will practice this and go into minimal pairs. There is the chart ... and I will give you some examples next time and we can do some examples and see how we can write them out in IPA. Continue your readings and look at minimal pair section.

____________________________
Eng 301
Tuesday, September 22, 2009
Captionist: K. Wong

Good Morning.

[Speaking to a student about taking an exam elsewhere]

Why don't we take the first 5 minutes and see if you can generate the consonance part by memory. See how far you can go. As you go through the chart ... we will use it today and do minimal pairs. See how many you can get. We can start by saying English is a [making sound]. Those are voice plosvies ... and think ... what is the place of articulation. Because during the first exam... the first part will be generating the IPA chart. So start working on this ... there is some memorization. I want you to understand how the chart works ... so you can write some minimal pairs etc. for me. If you need to look at your notes or text go ahead. Then we will do some exercises and write some IPA.

[on board]
a) (The big fish wears a red hat)
b) (My English students speak French)

You should be reading chapter 13 for your homework. We will do 2 sentences today.

The minimal pair discussion is 13.2 and 13.3. This is what we are going to do today. Some examples of IPA ... we will do will be found on page 279. You have 2 sentences written in IPA there. So do the consonance chart.

[on board]
Plosive 1. bd dt gk
See how far you can get with your fricative row.

The bd might be phonological interference for our Spanish speakers. They might have a way to remember this ... la vaca might sound like a b.
If you know Arabic ... or Spanish you find that the p sounds like a buh ... so in Arabic the word police ... like in Egypt sounds like Bolise ... and in some Spanish dialects it sounds like this ... the name Paula goes to a b ... Baola.

For the American ear it sounds almost the same but in Spanish it is more bao sound .... there is a discussion of this in the text.

So the v collapses so there is something about the bilabial plosive .... with the bp problem. That might be a nice way to remember that part of the chart.

Then you have the Greeks... the wedges. [on board] ... you have the wedges ... they are different sounds ... [on board]. These are labial dental. These are medical terms. If you read an IEP report ... you will get these terms if a child has a problem with speech ... learning disorder. So you will get a note saying the child has voice labial dental fricatives for example.

[on board]. So review the terms. Make the chart into flash cards .... and give yourself examples. [example on board] on the back you put what it is ... voice labial plosive ... etc. I want you to be able to organize them in a chart.

Student: Is the h an affricate?
Professor: No .... so far so good that is something you can memorize for the test and you need to do that. Remember teeth/teethe. It would look like this [example on board] you want to line things up so you can segment. [example on board]. If you wanted to be subtle .... you could say it is CVC structure. Everything is identical except one feature ... this is minus voice and this is plus at the end ... and you can come up with different words ... they have the same base but one is a noun ... and the other is a verb. [example on board]

The baby teethered ... or was teething ... to make it progressive.

Let's finish the chart.

[example on board] row 3 is nasals.... line it up. Everything is voiced after this ... bilabial m .... mmmmbah. Here is alveolar. This is straightforward. [Making sounds].
Start with d and end with an n sound .... if you go this way ... n.... duh .... and this is ing sound. We talked about l and r. We make them smile... if they can't make the correct sound for a bilabial. If a child makes the w sound for rabbit ... tell them to smile and it takes them from the glide/w to this area [example on board]

If you take away the w ... you are forced to go someplace. You go into this space. Children locate in this area .... also the same with l's.
Anyway that is the IPA chart. And you should learn it. Our first exam is going to be by the end of this month. I think we said it might be the second week in October? Possibly the week of the 12th. So you can jot that down. I think that is a good bet that .... the week of Oct 12. If I need to push I to back I will.

Any questions about memorizing the chart? I am not going to do the vowels ... that is something you need to do on your own.

We have these two sentences on the board. There are more complex examples in the book but let's start with this one on the board.

Let me speak this sentence to you also ... this is auditory processing. [Professor reading the sentences]

I was in Chicago .... visiting Loyola... and I was wandering on campus ... I saw a room that said ENGLISH on the board and did not recognize that word. It is a bizarre looking word. There are not many words like that. So how do you sound it out? [Making sounds to sound out the word]

It is the capital I... and you might wonder why it is not like this [example on board]. It sounds funny but there is something to it. We are tempted to think it is this [example on board] ... [making the sound for the symbols on the board].

Another problem ... how do you say it ... where is the accent? We don't care about nuances in this class.... our transcripts are going to be broad. But I want you to capture how you hear something. Take a few minutes and try to write this out in IPA. Use your notes/charts if you need to.

Did I give you that homework exercise? We will spend some time doing that as well. Don't think because you spell something one way ... is how it is .... you can sound out things.

In Spanish do we have this? It goes to the affricate. They say something like this .... [saying English sentence with Spanish accent ]

Remember sometimes the b and p's get mixed up in Spanish. The book becomes duh book ... or it might become zee actor not the actor.

Student: When you are trying to figure out bilabial ...

Professor: You don't have to talk about manner when you write in IPA you put it in forward slashes..... there is no capitalization unless the charts gives it to you and there is no punctuation. So don't worry about voicing and places ... just give me the phonemes.

Let's do the first sentence.

We know "the"... followed by schwa. You have to memorize that. [example on board] memorize that one. [Writing the first sentence in IPA]. [example on board] The big fish wears a red hat.

Isolate the sounds.
think about the word epsilon... which is Greek. This is called... theta... think about that sound. It is voiceless interdental fricative. It is like our alphabet... b sounds like buh... and d duh... so the letters help some times.

r... then you spell with an s but sounds like a z..... so you feel the vocalization. That is a phonological rule. It is not an s... here we said a here... and red......it is the same vowel..... wears and red... it is in a different location... follows a liquid here it follows a bilabial glide. So isolate the vowels... it is the same vowel.

Students get the phonemes but when you blend them... things get fuzzy and we lose our bearings about the actual sound. Isolate and think in segments.

Hat... and you have the forward slash.

So this means if I were a Chinese national and did not speak English but if I knew how to read IPA I could read say this sentence and speak it correctly. So that is what you want to be able to do

I will not have long sentences on the exam but we will have minimal pairs.

Student: Are the a and e connected?
Professor: Yes.
Student: So we should?
Professor: Yes that are connected. I don't ask you the names of the phonemes. If you are interested in this you can buy an IPA dictionary. There are all kinds of different dictionaries.... there are frequency dictionaries telling you what words that are most frequently used.

Questions?

Before we go on... let's talk about spontaneous speech. This is a nice CVC structure but in spontaneous speech might we delete the t in hat? When we say it do we hear the t? You hear it... it is an approximate sound... but your tongue does not touch the alveolar ridge. So with spontaneous speech we might delete the t and say ha... and that seems acceptable. So think about this... can we come up with a rule for deleted sounds?

In spontaneous speech you can delete final consonances.

Here is CVC... can we delete the d sound in red? No. It is not possible but the t is. So you ask yourself what do we know about this?
Student: One is voice and the other is voiceless

Professor: Here is a possible rule... you can delete the final consonant only when voiceless. But here [example on board] is a CVC word... it is not a CVCC... [fish]. You don't line things up with spelling... so fish is a voiceless consonant. So the rule is
the t's ... voiceless alveolars can be deleted because the mouth approximates ... gets close to that ridge ... it barely approximates it and in our mind we hear the t sound. You will never hear an Englishman drop the t.

It is like water ... [example on board] r's and l's .... all of these phonemes can become vowel like. So when an r or l are vowel like we call it slavic ... it takes on a syllable structure. When it is slavic you put a little line under it.

An example is ... [example on board] look at the word teacher. Let's do it in IPA. [example on board] there is nothing between the two consonants. Think about this slavically ... it is CVCC. You are only supposed to clap ... when there is a syllable stress indicated by a vowel. So one vowel one clap. For teacher you clap twice ... but now have a problem ... there is no vowel here [example on board] ... chur ..... and it is broken like this [example on board] ... there would be 2 parts. That r falls here on the chart [example on board] and they are voiced and could be vowel like in nature. And when they are we put a line under the r and the consonant that acts like a vowel you put a line under it.

So for teacher you clap twice. So r's are vowel like.

It is normal for children to have problems with r's. So for teacher put a line under the r

Student: I learned it differently.
Professor: That is another possibility. You can put a schwa.

The r sound ... intrinsically makes a [making sound].
This is subtle but I want you to hear them.

Look at this word .... little ... how would you do this in IPA? [example on board]
And this is a CVCC structure like teacher but how many times do you clap?
Student: Twice
Professor: So that l is slavic ... and so you could put a v on top. You clap twice .... they are vowelcalic [sp?] vocalic [sp?]

Chick comes from chicken ... so with chicken you have an un sound. There might be a schwa there.
Here is another way ... this is CVCC structure and you clap twice. Everything north is plus consonental sounds... and south are minus. We don't want to say they are vowels .... they don't show up on the vowel chart. But in some circumstances they take on vowel like quality.

Car looks like this in IPA. The slavic structure is CVC and you clap once. So the r is not vocalic ... it is a plain consonant. So you have slavic r's and non slavic r's.

Student: What about church?
Professor: Let's do that one. You have this [example on board] ... the next sound is er
... an there is no vowel ... [example on board]. That is what you would find but what do you do with the r? It is really CCC but there is no vowel. You could put a schwa there. There are different ways to notate it. Sometimes you find a schwa and a curly thing at the end. It is subtle. You should know about the schwa.

So you find ... we can come up for examples for the m and less for the w ... but the y shows up with our diphthongs.

Let's move on ... it is nice to think about syllables etc..... but let's do the next sentence.

You could do it like this or this [example on board]. And next is the [example on board] ... so the g sound ... [example on board] this is complex. It is like angel, angle... my English .... it looks like this [example on board] here is the problem ... the capital I ... so you get this or this ... [example on board] I have also seen this ... with the schwa there ... and another possibility is to delete the t. That is acceptable. It is the tomato/tomahtoe thing.

Student: I want this sound
Professor: That is an interference.

Speak is similar .... it looks like this ... [example on board] if you want to elongate the vowel ... put a colon after it. It stretches out the sound. And French ... you don't capitalize it ... there you have it. [example on board]

So this is exotic. It looks exotic

Student: You know the s and t run together in students ...
Professor: It is [example on board]
Student: So you go by what you see or hear?
Professor: It is what you hear. Isolate it ... do it in milliseconds. I think our spelling contaminates what we think we hear.

Let's do some minimal pairs.

An easy one .... this is the second thing you will have to do on the test.

Let's start with this [example on board] ... and then we have these words .... [example on board] and do it in IPA. Bay [example on board] you can elongate the vowel This is pay .... so you have the IPA and the next thing you do is segment and that is the minimal pair. But tell me how it is now.

Let's go through the distinctive features. We will use binary notations ... when the same it is plus.

The first row ... if it is the same it is plus and not it is minus.
Ok so ... starting with buh sound .... it is plosive .... the place is bilabial and the voice is voiced. So you get plus voice. So this is voiced, bilabial plosive

Contrast it with ... this column shows us the minimal pairs. And this explains the features and how they are involved.

So this is plus .... [example on board] and is it bilabial?
Student: Yes
Professor: They both are so you put plus +. We have identical sounds except this is voiceless. The distinctive feature .... is the voicing feature. So I might ask you about minimal pairs and discuss the features. We could have done the same with teeth/teethe... minus and plus voice.

Let's do this ... [example on board] game vs. shame. So we gloss in English and do the IPA. Game [example on board] you can elongate the vowel and this would be shame [example on board] so line things up. That is important. Phonologist are meticulous and precise.

So now you can segment and see how the notations work. Game/shame. That is the minimal pair column and now analyze it ... the manner is plosive the first you have to cite what it is and the place is velar ... and voiced.

The second row ... you put minus .... not the same .... I am telling you what it is not and if you want to be thorough .... if not plosive you can tell me what it is ... for this one it is fricative. But I want you to learn the binary opposition. Ok is it velar?
Student: No
Professor: It is minus... it is plus palatal. Is it voiced?
Student: No
Professor: Minus voice. So in this example there was only one distinctive feature .... with this example ... how many examples are different ... 3. They are both minimal pairs. It does not matter how many features that make it a minimal pair.

Let's make this ... voiceless ... [example on board] .... the word is came ... and it is plosive ... it is velar and voiceless. So how many distinctive features are in contrast? 2. Because the voicing is the same. I just wanted to show you that it does not matter how many distinctive features to make a minimal pair.

How about this? [example on board] try that one.
Ship/chip. [example on board] is that how you wrote it for the IPA? [example on board] there is the minimal pair.

The manner is fricative ... and the place is palatal .... and it is minus voice. So for chip it is minus fricative ... and palatal and voiceless. So the only difference is here [example on board]. There is only a manner distinction. In some languages they don't have certain sounds. In Spanish they have the sound for chicken ... shicken.
[example on board]
[Chicken written in IPA] and [how Spanish speakers would hear it]

[Telling you how a Spanish speaker says certain words]

Questions?

Let me leave you with this.
George Orwell talked about this.

How would you pronounce this ghot?
Don't you see it is fish? You should be able to see this ... gh is the f sound ... like in enough. And the o is like and /I/ like in women .... and you think that ti is [example on board] ... and Orwell wrote an essay on trying to change the spelling conventions. He said that ghoti is fish ... spelling does not give you the phonological representations.

So read chapter 13 ... and when we come back ... you can start looking at the phonological rules. Pay attention to the phonological rules on page 281. And then we will have a few of you write out in IPA your homework.

[on board]
Min pairs
[Manual Place ]

Eng 301
Thursday, September 24, 2009
Captionist: K. Wong

It was believed prior to the Chomskyan revolution that Sound was just an objective item out there in the environment and we caught the sound. And there was a memory index ... a target sound and we would spit it back out. It was treated in a more objective manner.... an item to record. And we didn't hear things all the same. There was an external explanation. The Chomskyan revolution had a hand in reshaping this and reworking Sound/Phonology as a more internal and mental processes. One such mental and internal process shows up with regards to phonological rules.

By manipulating the feature ... remember the example of "rabbit." It is becoming plus bilabial. The r is bialialized. If we start with an r and plus smile ... it is talking about the mouth. ... you will have minus bilabial feature. So instantly the child will go from producing a w to an r and say "red" instead of "wed." So there is a basic rule.

The mother of all rules of phonology is assimilation. You can read about it in the text
but it is a **rule based phonological process where by one phoneme wants to affect the sound of its neighboring phoneme.**

So they want to sound alike. But here is the caveat ... we don't mean lite/rally sound alike ... but what we mean is ... they want to sound alike based on distinctive features .... if something is bilabial .... its neighbor wants to be bilabial as well

Look at this word ... car ... we have the plural rule.... and we put an s ... and you understand the [ ] So we have this. In IPA ... we sound it out like this ... [example on board]

So it is a CVCC ... so we are interested in this .... [example on board]. Step back ... and this is not supposed to be a z .... it is supposed to be an s. So let's do that ... taking a step back. Why does the s change? If you look at the neighboring sound ... that consonant is voiced .... so that is voiceless ... put a line under it ... so you have as voice and voiceless ... phoneme next to each other. Assimilation takes hold and says these two sounds are next to each other .... but the feature is going to affect the sound and make it voiced. So now we have a rule ... we have an s ... coming from here [example on board] it shows up in the spelling and in this environment and is being preceeded by [example on board] ... so you get a z sound.

So that is why the s and z are together. They share in this rule based relationship. So this s has to be voiced. So it is no longer s and we get that [example on board] and children have that. We think that the brain .... the Broca area ... whether rules or theory of mind ... it is in the left hemisphere where ... it does not take place immediately ... but early as 2 or 3 years of age ... and Berko did the WUGS test ... pronounced this correctly.

Not that they knew about the assimilation rule ... but it is subconscious ... automatic rule ... innate passive knowledge of language.

A different stem... if you had book ... and added an s .... in IPA it has this ... [example on board] .... and there it is ... and the s remains because it is voiceless. It can also be a vowel that affects ... look at this word ... [example on board] you add an s ... and it looks like this [example on board] the s becomes a z because by definition ... all vowels are voiced.

[Sounding out]. So that feature contaminates that s. And you can find spelling mistakes ... but if you think about it linguistically ... they might be a product of assimilation. We tell kids to sound it out ... and this is the proper way to hear it. So how do we prevent these mistakes? We say spellings are conservative and sometimes you look at the language and read and write so the literary process re-shape the word. If you knew the grammar you would catch it. But if you don't read or write much .... practicing spelling ... what process will help you? Hearing.

And often at high school levels write the way they speak and spell things the way they hear it. So literary skills catch this ... it is not a bad mistake it is explained through
phonological ____

So let's look at this s .... [example on board] when you see these { }. We are talking about a morpheme. That is not a sound but a morpheme. This s is interesting ... it has the plural when showing up on a nominal item ..... on a noun. We have the plural s ....

We have the possessive s ... It too shows up on nominals.

And of course there is the verbal s ... third person singular tense ... She cooks.... it is on the verb. So this s is busy. As you will see often it gives the s sound ... so that is the phoneme ... also it gives you potentially this sound [example on board]. It extends ... it is not just the plural s but a phonological phenomenon.

This is a good practice for you ... [example on board]. Books shows up as an s.

How about bug .... [example on board] you spell it like that and in IPA ... it is CVCC structure.

What about possessives? [example on board] we don't care if it is plural or possessives. But what about this? [example on board]. Possessive s .... sounds like this ... because of the m ... it affects the possessive s.

What about verbal s? If you wanted to do something other than a k ... let's do fit .... the IPA looks like this ... [example on board] ... it fits ... or she fits .... third person singular ... what about this word [example on board]

I wear, you wear, she wears ... and do that ... [example on board] .... all 3 are voiced and it influences the neighboring sound. This is grammatical level ... we don't say the assimilation works only in certain places. But if you have a plus voiced consonant and the next consonant is an s .... this s turns into a z.
If the consonant is preceding it ... it is a z.

You find assimilation across all languages.

Questions? This is still basic. We were not aware of this but we all do it. So remember part of this class... and the reason you take this class is to make you more sensitive to language sounds. We have narrow perspectives of what we hear but trying to open to other sounds ... you can use it in teaching.

Student: When you did WUGS and BUGS ... they were different?
Professor: Sorry that was a mistake. [example on board] it should have been the same.

Let's move on ... continue with another example ... it is not just s ... but consider ... the ed. The past tense. Verb+ed is past tense.

As it turns out ... it is going to have 3 different sounds. [example on board] All with the same spelling. The e is kind of a silent ....
Do let's look at this sound ... consider the word ... [[play]ed]. In IPA it looks like this [example on board] it is not a short vowel ... it is a little elongated ... put two dots. And then you have the 'duh'. So this is CVCC structure  How many times do you clap out this word?  1.

So we have 'played'. And when you think about it ... it should be a d sound ... but it sits next to a voiced vowel ... so everyone is happy. Assimilation holds. But moving on ... t sound .... example ... [example on board] cook. Add ed. There is the spelling. But how do you pronounce it?  [example on board] that is CVCC structure .... if you wanted to stress the end ... it would be a [making a sound].... so what is happening?  We are supposed to have a d there. Why? Because that is the rule ... you added for past tense. So let's do it ... and play by the rules.  We have a problem with that though .... keeping voicing together facilitates pronunciation.

What is easier usually works.... so these rules ... you can write a paper about the survival of language ... but anyway this was voiceless and this would be voiced ... [example on board] [making the sound].  So this voiceless feature is going to take a d and make it minus voice and you end up with a t sound.  [example on board] does it affect spelling?  

Student:  No 
Professor:  But if you found a first grader spelling it like this [example on board] ... you won't because children memorize spelling.  Because they don't always rely on what they hear.  But if you found that mistake you could explain it. 

Moving on ... last one ... this is interesting.  Let's do [[want]ed]. It is CVCCVC.  You clap it out twice.  We are doing the layered approach.  So look at this word ... [example on board] why the vowel.  Let's erase the vowel ... so let's go back ... what is the rule ... add ...d.  What is wrong with this?  It goes against assimilation.  It is not economical.  So it dies out ... that is not going to work but it is similar to the voiceless consonant ... and now assimilation is ok.  It holds.  But there is another rule .... when you have a geminated sound ... same sound next to each other ... over time they merge.  So instead of saying [making sound]... for economics ... this t dies out and we lose the past tense marker.  So phonology has impacted grammar ... so we have a problem.  We can't do the d and the t because it is geminated ... so we are stuck putting back the d and save the derivation and stick in a vowel.  So now you have this ... a voiced vowel and now you have a voice consonant and you say 'wanted'

Think of the word "box."  In IPA it looks like this [example on board] ... the end of the stem ends in s .... if we want it to be plural ... you throw in the vowel and it turns into the z.  So if the end sound is what we are looking for grammatically ... what we have is an invention that says we want to save this ... but it does not go with assimilation ... and we go with the rule and throw in a vowel.  And children recognize subconsciously ... that this is called the default.  [example on board] it is default because when you compare the 3 it works in any environment. 

So children know this works in any environment.  You will hear examples of play-Ed.  Even irregular words are made into words like kick--ed.
Kids don't hear the input in the natural environment. So they don't get it from the adults around them but the overall input is more dominant. It is not just from the playground but a phonological rule and it is more powerful to say ... it is part of that Chomsky revolution ... and we did not think about it as internal and that is a big part of the shift.

Questions?

You see how it does not change spelling? So assimilation takes root at the phonological level and does not impact spelling. Can it shift the spelling?
Student: Yes
Professor: In this example ... there is historical notes we can make ... let's consider irregular verbs. 'sleep'. You will find children say 'sleep-ed'. Part of being an instructor is to observe and listen what is happening. So there is the verb sleep. You have the verb .... and we have a grammatical rule that goes back that says to add ed. So we should be saying this [example on board] and you get this [example on board].

What is wrong with this? CVCC... it goes against assimilation. So the d has to change to t. Now we have this word [example on board] but there is one more step ... around 1415 there was something called THE GREAT VOWEL SHIFT. They all went up one notch. So what was once an [example on board] and ended up there. So what happened is that you originally got this [example on board] so this word is [example on board] ... that was the original sound for the verb. [example on board] was an old English word ... we didn't have 'to' before .... so we had /slepIn/ That meant 'to sleep'.

So the irregulars ... those are the original sounds but then the vowels shifted upward but not in the irregular. So in the irregular they got frozen in time and well preserved.

There was a native Indian ... 3000 year old man ... perfectly frozen ... this phonology was frozen in time like that. When the rule applied .... it went to [example on board]. So how do you explain this? [example on board] well it does not look right to me ... so the past tense of sleep is slept .... but how do you explain it? It comes from sleep ... assimilation takes hold and it changes the spelling. Like weep/wept... dream/dreamt ... keep/kept.
Student: When did there happen?
Professor: Around 1415
Student: Middle English?
Professor: Yes.
Student: Because when you read old English and you have to sound it out to read it ... it makes sense.
Professor: So we have examples of how the spelling got distorted through the phonological process. How did they become irregular? It is through a regular phonological process of assimilation.

But why do these words remain correctly spelled and then changes. Some will say ... that historically people say ... words that have been in the language longer have more
opportunity to change. More recently acquired words are less likely to change. I gave you examples ... about words that were borrowed ... look at this word ... [example on board] chief ... the beginning is [making the sound]. However ... more recently you get this [example on board] chef. Same word ... they both come from French ... but you pronounce chef like this [making sound]. So ch is ch sound. But in French it is sh.

When the idea of French cooking comes in... more recently acquired you get the French pronunciation ... so you pronounce it like sheriff ... so depending on when the words are borrowed ... influences the sound. So some older words are irregularized.

What else can we say? Well... some examples look like this [example on board]... 'wife'... 'wives'. What is happening here? It changes ... at least you can say here [example on board] ... we have the stem .... and you get the stem ... but everything is still preserved. But here it shifts ... what was once this stem [example on board] now becomes a wv stem. So in IPA .... [example on board] CVC structure. The e is silent. But what happened ... when you make things plural in middle English you add an s ... there is nothing wrong with that ... why can't you say wifes.... it is voiceless .... we have examples ... but why not one wife ... two wifes .... but we don't say it like that ... the problem with the f is it turns into a z. It had stuff at the end of words that have been deleted ... like ... [example on board] who ... at the end you might add m ... whom.

Let's look at this first ... [example on board] subject vs. object.
Who is the subject ... but when object you add m whom

[example on board] [chart on board] [in IPA]
You can make an argument that if you have an i or some kind of a vowel for a subject and for the object you get [example on board] ... so we had a time when we had endings ... we have lost many of them ... but we no longer think of hi as him [in IPA].
Once upon a time these were endings

Let's go back to wife .... [example on board]
If this is voiced at the end of the word might it affect the end and turn it into a z? It is called retrogressive assimilation. So now you have the m that turns into a z and gets deleted but we are left with the z sound. But now we have this problem .... a spelling convention ... so the f becomes a v sound. Leaf becomes leaves ... loaf ... loaves ... wolf ... wolves ... they are Germanic words that have been in language for a long time.

Older words have ... people thought irregular words are more recently acquired but they are older. So it changes to this ... [example on board] it is unfair to say we memorize it ... like this and not this ... the interesting story and underlying current of phonology. Each unit of sound carries its extra luggage of interesting features. Sometimes there are constraints ... but these are interesting rule based... and from this we got phonics.

I have met students that learned memory based ... and you can do a paper on 'reading wars'. Phonics on one side vs. whole language.
Let me point you to what you should look at ... maybe we can have a time to have a few of you do that homework assignment. But for phonology ... I think ... there is a section on minimal pairs 13.2 ... page 281 ... and it goes on through. When we get into phonological change ... page 286 ... key/kept and the vowel shift ... page 280.

Let's look at some examples of vowel shift. The word ... wine ... page 280 ... if you think about it ... it is the e vowel ... it becomes a diphthong. This is fun ... mice ... how did you pronounce mice ... meese ... and it turned into mice. Same with geese ... and clean, brecken becomes break and this happened in English. [Making sounds]. House. Mouse. Name .... is raised to a ... and the vowel shift.

There are other examples in 13.2.

So keep up with your readings. Questions? Practice your IPA. Let's have a couple of you come up to the board and put "hello, my name is ___" etc. [homework assignment]

Any volunteers?

[Student volunteer writing on board]

Professor: Let's see ... remind yourself you need forward slashes ... and there is no capitalization.

[example on board] this is nice ... and you have the diphthong. The z for is ... is called assimilation.

What is complicated is the r. that shades the vowel. You could have put an n with a line under it.

November is perfect ... for 'the' you need a schwa.

Remember sofa ... look like this [example on board] and but ... [example on board] same sound but one is stressed.

Student: For a name would you spell it like nay...

Professor: You might get it like a diphthong.

On the exam ... I will not have you write out long stretches of things but I want to see you can write in IPA and so I will ask you construct minimal pairs. I then can get a sense you understand ... and talk about the manner and place. And that is the way I can see you understand.

If I use ship and see this [example on board] ... that is wrong .... [example on board] the consonant is wrong ... it should be this [example on board]. Little difference I will let it go ... but I want to see you have a basic working knowledge.

Next we will talk about constraints when we come back. Have a nice weekend.

Hello
Good morning.

So we are on track for our first exam. A reminder .... the 13th and 15th. So we will finish phonology and I want to introduce L-1 interference. When you hear that L.... it means language and 1 is first language. So I want to discuss interferences ... with regards to how we process phonology. So we will discuss processing ... and some of it is technical

I want to present you with a headline ... what might it say... and look at it briefly and then discuss development. So with each of the next lectures .... I would like to give you an acquisition footnote at the end of the lectures ... child phonology and then we will prepare for the exams. The test is in 2 parts. Bring 2 blue books.... one for each day. And we will review on the Thursday before the exam is scheduled.

So now let's look at headlines.... I might have mentioned this to you ... but we don't hear sounds that are out there. We don't hear the incoming speech stream like a baseball that is thrown and we catch it. We used to think of sound that way before.

So prior to Chomsky phonology was like an external phenomenon. But now it is seen as an internal process. Phonology is an internal mental process and we might not hear the same sounds the same. Two people hear a sound and hear it differently. How is that? It is not unlike being color blind. Imagine there is a red car .... and if you are color blind you see it differently than someone who is not. Color blind people see it in shades of grays ... so the color is different for different people. We talked about rules and phonological rules and constraints on phonology so there is an internalization.

Let's extend it to L1 and interference. What is it interfering with? L2. So what you have with L1 ... and dealing with interference ... it interferes with your L2. It is a transfer and you might not hear the L2 the same as a native speaker.

So in chapter 13 you have personal stories ... and I want to look at them in the context of phonology.

So we have stories from the past ... dealing with L1 interferences.
The first story is called "Victor." All of the stories will have people's names.

So let's see on our chart ... we have this thing going on [on board] ... and this ... and we will focus on this and this [on board].

Victor was an ESL student of mine and he was 18 years old. He had finished his high school education in Mexico. He wanted to come here ... and he wanted to take business classes. He came up to me one day and said he was having troubles with his interviews. He says he tells people his name and people don't understand his name ... and says he can't pronounce his name correctly. [on board]. In Spanish the v goes this way [on board] ... and that is a phonological rule in Spanish ... you get examples of this .... [making sounds]... like la vaca which means cow... but hear it more like a b sound but spelled with a v.

So in this Spanish dialect ... you get this interesting rule. A little footnote I had a graduate student that came up with a WUGS test ... she made up words..... like [on board] .... she came up with some made up words and went to some Spanish speaking people ... and wanted to know what they would say. She recorded their speech. These were words that had no similarities in Spanish ... so there was no priming effect ... they had to just sound out the words.... and they turned into a b sound. There was a pattern that emerged.

Some of the examples took on a v sound though .... but as it turns out in Spanish there are words that do pronounce a v sound... like [on board] ... most of the people that speak Spanish here pronounce the v .... it is the same structure so it reminded them of a sound image and they got the v from this .... [on board] and even people that say [pronouncing words]... but when there was no resemblance ... what happens the rule comes out.

When you don't have a memory going on the default is the rule. It kicks in automatically. So there is a good bet ... and this was a good study. I had some students that speak English and speak Spanish and ... [pronouncing words]. So Victor says his name with Bictor .... so he asked me to help him fix his pronunciation.

So what would Skinner say? Repeat it over and over and practice makes perfect ... so I tell him ... to practice making the sound .... in the beginning he could get it but then he couldn't. So what was going on? There was a psychological barrier. He might not be able to hear or produce the sound. He could bite down on his lip at first to make the sound but he would go back to the rule. So we didn't make any progress

Student: What would Chomsky say?
Professor: We do this [on board] and he would say we want this [on board] .... like [on board] ... [pronouncing words]. Often when you look at phonologies ... they are nonsense words. You make them eventually make sense though ... so if you take this [on board] and get it going you can get this ... he has place and manner of articulation ... so we have to come up with a rule ... [on board] so that is Chomsky. So how do you show that voicing?
You can focus on vocalization .... [making sounds] .... so the next thing you know ....... he can make that sound. So after practicing the rule he can say his name correctly. We tricked him. [on board] he finally got it. But then he says ... he knows what to do and then he said ... but I can't hear the difference. Even when he said his name correctly he said he could not hear the difference. That is very intriguing. The rule is so strong he still hears it this way [on board].

But he came up with a strategy and it helped him. It is almost like in French you have this [on board] .... and for the life of me I can't pronounce it correctly .... so I came up with a strategy ... [on board]. It is not like I created a new phoneme though

Student: I am a native French speaker ...
Professor: If you go get an IPA dictionary you get different types of sounds. So we have this [on board] ... but the French version is more fricative based. So I don't know what the actual grapheme is ... but I came up with this [on board] ... there are many IPA grapheme... but we are only learning the English ones. People pronounce the d sound differently .... so the word 'butter' differently.

Back in 1986 I met Victor.... I left it as that but later on I came back to my notes and think that is not the complete story. Because in Spanish there is a v sound ..... this is not the complete story because you do have /voy/ in Spanish. It is a frequent verb and I don't often here people say [speaking Spanish]. I am sure Victor would have been able to say his name right if I would have given him this example [on board]. So what happened with Victor ... he knew the word 'vela'.... which means candle in Spanish ... and he didn't make it a b sound. So if this is the rule it might be more idiomatic. So words with v sound show up early in the language .... and they have strong meanings .... high frequency words ... so I wonder if these words are memorized in chunks. On the surface it sounds the same .... so the fact that someone has the v sound ... may have to do with processing distinctions. Some of this might be idiomatic processing. And if this is the case we will see different imaging in the brain.

Broca deals with phonology but if something is rote memorization it might show up in a different part of the brain. So that is a possibility. So even though they say /voy/... with the v sound .... they might not hear it in segments ... like the first grader saying the alphabet lmno....it may be processed differently.

So what are the possibilities? Next time hear people pronounce words like El Salvador ... and say it more like El Salvator .... it might be the difference between a rule based or a memorization.

When you hear sound like the pencil sharpener going ... you know what it is ... there is a one to one association. Maybe though these sounds are like one to one associations.

Speech is special ... not just environmental sounds ... there are rules. It might be subtle. I like to present this to you.
So now to my next story. It gets a little better.
My same ESL class ... these are all Spanish speakers .... around the same age 18 - 20ish.

So one night ... I am watching television .... alone and I was watching a Spanish speaking television show ... with girls with short dresses ... the show is called "XUXA." You might know her. She was married to Pele. Beautiful woman. She kept her youth. She was about 30ish at the time and looked like she was 18. Anyway I was watching her show ... and I see the people in the audience screaming her name. I am listening to the phonology. We know in Spanish ... [sh] has a phonological rule. It is like this [on board] and sounds like this [pronouncing the word].

But on Monday .... do you know her? I came to class on Monday and I put this on the board [on board] .... and my students were amazed that I knew her. I asked them how to pronounce her name and they all did it correctly. So I told how they pronounce her name is the same sound you make when you say the words like "shower, shoes etc." So I would tell them to say ... Xuxa showers, Xuxa shops, Xuxa shoes... [saying the sentences]. So now they could say but then if I only said the word 'shower' they could not pronounce it correctly. If it is mindless sounds they can carry it over but if it is just the word they revert back to the rule.

So what happens is [on board] .... this sound is being idiomatic. That means they can hear it ... if you can't hear it how can you repeat it. It is how they hear it though. How is it being processed .... idiomatic ... they can't segment it. [example on board] so the sound is memorized.

What is an idiom? It typically is an expression of words that don't mean what they mean... like .... kick the bucket... it has nothing to do with a bucket .... but to kick the bucket means to die. So that is an idiom .... it is a one to one association.

[Saying good bye in Italian]. We think of that as one thing ... we memorize in a chunk. So Xuxa could be processed as a chunk. But phonologically that is the rule [on board].

So the word 'chicken'.... being pronounce like this [on board] .... this is chicken [on board] ... and this would be ... shicken.... that is a minimal pair for us .... but ask the speaker if it is the same or sounds different ... for us it is different but for them it is the same. They can't hear it.

But in their chart.... it could overlap. Sometimes it wanders and they could go this way [on board] ... it is the same zone. For Americans if it goes here ... it sounds like shhhhh.

I talked to a student last semester ... she said ... down south .... you have this [on board] ... but they say it like this [on board] .... it means little girl.
Is it a minimal pair for them? No ... they hear the same thing ... they don't have a voiceless fricative
Student: Some people have a different dialect. I have heard it before. People from
different regions say things differently. A lady from Spain ... I know ... no one speaks like her.

Professor: How do you say this .... word chicken'.
[Student saying it]
Student: Do you hear it as differently?
Student: No.
Professor: Anyway it looks like .... Xuxa is a good example of how people can end up with the sound but it can't be carried over linguistically. You could do your summary paper on speech being special. Sounds are internalized ... if your catcher's mitt is not designed to catch a certain pitch ... there is a catcher ... and he has a special glove ... so each glove is designed to catch a sound pitch. If you don't have the right glove you might not be able to catch those sounds. So even if someone speaks to you ... you might not be able to catch the differences. It is hard to lose the accents of your first language.

Now the third story. This is all in chapter 13. In my acquisition class I go into this more in depth. But we are not going to do that in this class. But this story ... anecdote is labeled Paula.

All these people were friends in my ESL class. But let's look at Paula. I am interested in this problem [on board]. We focused on these problems before [on board] ... where are my Spanish speakers? How would you say this? Listen to her say this .... [student saying Paula]

Thank you.

For American ears .... I used to hear the p and b the same. So how can two people hear the same sound differently. If there is an environmental aspect ... like a red car is a red car ... but what if our processing is different like color blind ... so it is a move from going external to internal processing.

Some one who is not a Spanish speaker say this [student saying Paula]

Some of this you find in the readings but what is going on is ... in Spanish .... you get this [on board]. It seems that the Spanish p allows for more voicing and because of that you get for the English you get that [on board] but for the Spanish you get that [on board]. So there is an interference.

Did we talk about aspiration? That is another example of assimilation. It is a puff of air. Consider this phoneme.... [on board]. Voiceless bilabial plosive. There are two allophones ... you hear this [on board] .... there is a little h that comes out. So it is plus aspirative. So consider this word [on board] ... this is pay. So a little puff of air comes out when you say this ... [demonstration with paper]. But if I do this word ... [on board] spay .... we like minimal pairs .... let's see what happens to the p .... we say pay .... and then spay ...... the paper does not move with spay. Why? What is the manner of articulation? It is plus fricative. And that plus fricative is sitting
next to a plosive. So assimilation you get manner of articulation assimilation. So you turn it into a fricative.

All the air builds up and then you get to the fricative and the air is released... a leak... and when you get to the next phoneme you get [on board].

[example on board]

In Korean you have this [on board] ... and it means 'grass' and you have this word [on board] .... say these for me.

I did this with another student and these two sounded alike ... now with her it sounds the same.

You hear them ... here is the thing .... you two may be doing the same ... hearing the sounds the same but for me I hear things differently. So this is about how we perceive sounds. If you two compare notes you hear it the same but the way I hear it ... is different even though it is the same language.

Did you all hear the difference?

[Having Korean speaking students say words]

So these are minimal pairs in Korean I have been told .... can you think about an aspiration example? But my story is in Spanish you get a little minus aspiration.

In Spanish you have extra voicing ... and minus aspiration and still be a p for you. With the American ear we hear it as a b.

So you find this in the readings ... I have a graph in chapter 13 on page ..... maybe it is not in chapter 13 ... if you go to chapter 10 .... you get the discussion on page 234.... we like to say in phonology ... our catcher's mitt looks like this [on board] .... anyway if you get a pitch that hits here you hear it as a p ... but on this side it is a b sound. It is based on voicing.

In Spanish boundary there might be an overlap. [example on board] so what happens if there is an overlap... if you get a pitch that is here [on board] ... how do you hear it? Student:  p
Professor:  But here ... how do you hear it? Student:  Closer to b
Professor:  Did I do this right? So in English ...
Student:  They are more sensitive to the b sound
Professor:  [Making corrections on his example on board]

So we all hear it like a b here but with here with English ear we hear it as a b but the Spanish hear it like a p so there is a crossover. So you find on page 234 there is an
overlap of phonological processing. So that sound sounds differently based on the boundaries. [on board] So how can two people hear the same sound differently? They catch it internally differently.

The same thing can apply to other L1 differences.

If the two Korean speakers want to do a paper for me on these [on board] .... I am curious .... we are talking about ...
Student: [Korean speaking student giving examples of word]

Student: The vowels are differently.
Professor: That is interesting. The last two for me ....
Student: To us the emphasis is on the vowels.
Professor: Is it p and b for you?
For you two Korean speakers that might be interesting summary paper for you.

In other languages they have the same dilemma.

In English this is pay [on board] they are the same. In Korean you might have these [on board]
Or what does the Korean IPA chart look like.
Student: It depends on where the p is in the word.

Professor: Anyway ... when we come back on Tuesday ... we will talk about the chapter 13.

Eng 301
Tuesday, October 06, 2009
Captionist: K. Wong

Good morning. What is this? [on board]. It looks like linguistics .... things we will be talking about. This might be an advanced class.... it might be a 301 class... but there is a lot of stuff here. [Refering to writing on board]

So this is what we are doing today ... reminder ... Thursday will be a review. We will come with our books open .... and I will go over the phonology chapter ... and we will discuss the IPA, minimal pairs.... anything that is on your minds. If you missed something ... or something you don't understand that is what we will do on Thursday. No new material that day. This is the last discussion on phonology and on Thursday we will review.

Then next week we will be testing on Tuesday with a large blue book and also on Thursday. Get the larger blue books please.

Children think that the world of adults is crazy. Blue book .... for the exams.
So today ... we are going to discuss phonological development and we want to discuss the findings. And on Thursday we will do the review of the readings. The readings are supplemental to the lectures. The lecture should be dynamic and reading reinforce the lectures. But on Thursday we will look at the text.

So next week will be the first test.

So what was the last thing we talked about? ESL perspectives. If this was a child language acquisition class.... we would talk more about ESL perspectives ... but remember I said ... we don't hear everything from the environment because of the Chomsky revolution. It was external .... and contrast it ... but I said the shift came when we thought about language as an internal organ ... much like viruses change and develop. So there was a shift in that respect.

So let's do the IPA chart... phonemic development so I have to regenerate the chart. So we are going to put up the phases and then we will talk about the syllabic development. And then if we want we can throw out errors. And maybe we can talk about U shape learning. I think I mentioned this ... and what happens with phonology.

So the theme is phonological development. You should be able to generate the chart ... you will have to do it for the exam. The first question on the exam will be to generate the charts. So you need to know the voicing, placing, etc. This might be the first time you have been introduced to this but just memorize this.

[Examples on board]

We get a good realization of that. So let's highlight this and make a map. Phase 1. We can say by the time a child is ... conservatively ..... a child is about 2 or 3 ... they have mastered that sound 95% accurately. So that is when we say they master the initial sounds .... and circle them.

Then by 3 - 5 we will make a square around those sounds.

Then there are bench marks ... children can delay mastery so you might find a child in speech therapy because they can't make certain sounds ... the delayed bench marks

Phase 3 ... between 5 - 7 years old .... and let's put a triangle around these sounds.

So let's get a picture of phase one ... circle these ... [example on board] so the plosives ... salient and observable. Children can hear and reproduce these sounds. Children smack .... make a smacking sound .... from birth. All this is bilabial. It is not coincidental .... that the first words of a child is bilabial in many languages. There are universals.

For example ... mamma is found in 90% of all languages.
Student: My son is autistic and he has a problem with bilabial words ... he says Papa when I ask him to say mamma.

Professor: He goes from the m ... it is voiceless. Try to get him to say words with the b sound ... the voicing. There might be a trick to get him to say that.

Kids do that sometimes. A parent is mamma .... it does not matter if it is dad or mom

My first born would go up to any man wearing jeans... and say Papa.

We will talk about overgeneralization of words later.

By the time a child is 2 ... we have these ... [example on board]

Sometimes the v is squared. I could ... circle these ... [example on board] the bilabial. NO is easily acquired. The w .... the child says wabbit instead of rabbit. So you can see why the w enters The h .... [circled]

So the internal map is problematic. And as we get into the palatals .... you can generalize this.

If a child does not have 2 front teeth ... there might some problems. So that is phase 1. It is straight forward.

Phase 2 ... square those sounds [example on board] So you can understand that the child ... in the first grade can't say rabbit well.... they can't produce the liquids .... so light becomes wite... in terms of conceptualization ... bilabial is more salient. So some features are easier to acquire because you can conceptualize easier. They can hear them but not know where to locate them.

The interdental ... if they don't have it ... it goes to this [example on board]. Knowing the alphabet tells you nothing about the language. Now that you know the sound system ... and try to think about what you thought about phonology before ... like the IPA ... it is your tool box to understand a lot of concepts.

So we have some squares... a few problems ... we used to have the syllaban snake ... sometimes kids could not pronounce certain sounds. So sometimes this is problematic.

So now the triangle sounds ... you know the interdentals. They only show up 2% of the time. It is rare.

All the palatals ... some are more problematic than others ... and that is about it.

So speech therapy is r and l and liquids... interdentals and palatals. There might be some affricates. 9 times out of 10 .... and the s ... that is what the child will need speech therapy for. So you know ... and they can not master some till they are older... until the 3rd or 4th grade
I had a child in the 4th grade that went to is speech therapy ... and she was not saying her sh sounds ... till one day I saw her playing with her friends. And I see her and she can say it .... and we had a discussion with the faculty ... that she had been faking just to get out of class. She knew the system to get out of class ... she would say sip for ship .... that was a true story. I observed the student during recess ... see how they play. If you interested in developmental stages of children you need to observe them outside of the classroom.

Often children show you clues to their problems. When you see them on the playground you see more.

Let's look at syllabic development ... pre-linguistic. From 0 - 18 months. This time is when .... it is called the word stage.
First thing is the vowel. The first thing a child develops is vowels. It is a plus voice. That is the default feature.

Next is the consonant vowel .... CV... a syllabic unit forming. [making word sounds]. You will find CV first. No language but then you get this CVCV... not quite linguistic yet .... all it is twice ..... we put i ... it is index. It is repeated twice ... almost always.

Student: Is the consonance changing?
Professor: What I need to say is ... a better notation is to put it in brackets and say this is the same ... both consonants and vowels are the same.

Look at body function words.... pee pee ... etc. And baba for bottle .... so it may be a one to one association but linguists say at about 18 months ... you get word spurts. And we will talk about that for the next exam but ... you get syllabic and CVC.

The first is geminated .... but this is CVC and there is more control over the syllabic structure. And if you examine the first 50 words produced by a child most are syllabic structures. Ball, house, etc. And this is universal. This is a proto word template. And when a child controls that ... words come.

After that is things like this [on board] .... and this is i ... and this is j and you have different things. It could be mommy or it could be .... different consonants ... and we get double consonants. This is at 18 months plus.

So at 18 .... here ... this comes on ... [example on board] so 18 - 24 months we use this ... [example on board] to give you an idea about development. What I want to say is there is a pecking order. By the time a child goes to preschool they have a lot of phonology worked out ... not mastered yet but they can say things like string.... and so they may have this structure.

I am interested in what happens here [example on board] ... there is where you get juicy development.
So let's talk about syllabic development here ... we have branches.
We have onset and rime

[Drawing on board]
Onset is the first and rime is what follows.

So this could be a consonant and this is a vowel
[Drawing on board] there is an internal construction built up ... internal mapping system.
So suppose this drawing is what the child holds internally.

So that is internal composition.

So what if the external is this ... 'cat'. A child can hear this .... can hear the word cat ... but when it wants to say it the child says .... [making word sounds] if the word was tack ... they would have deleted the last sound. So think of this like a coat rack ... with two prongs you can only hang 2 hats... and the third hat just falls off. In the lab a mother and child are playing and the linguist says to play normally with your child.... and speak normally ... but later repeat what the child says exactly how the child says it. The mother says look at the cat ... the child hears cat but says [example on board] the child can't say it correctly. We know that comprehension outpaces production. So we know children understand before they can say things.

Another example is ... 'bed'..... or 'fish'..... early development can be a CV structure and delete the last sound. So that is syllabic structure.

Now you can say something that looks like this ... the rime opens to a nucleus and a coda so we have this [Drawing on board]. Now the child can say the last sound for cat and fish .... so we have this [Drawing on board] .... and an example is this [example on board] so that is CVC structure ... a child will say ki ki.

But what happens with this word ... [example on board] we are working with a CVC structure ... the input is school and in IPA it is /skul/ something is going to have to delete. This is a CVCC structure. So there is competition ... we don't have a place for it ... so these two are going to compete for mouth time. Due to syllabic constraints ... there is no initial consonant clusters ... so out of the two the k is easier .... so they say, 'Daddy go kul '. So the s deletes. It is not because it is initial .... it depends on the other phonemes.

Typically you get the proto word template ... but then the onset opens up and this is the plan ... Chomsky say language is biological so when the brain grows it branches off ... so now a child can say 'school'. We have this [Drawing on board]. So that is a taste of syllabic development. The input is stable and does not change ... there has been a talk about "motherese"... you know the language mothers use with their infants. So it is the internal structures that are developing.

Questions?
So we have this syllabic development ... and we will go further to look at U shape learning. It nicely represents the U shape curve of child learning.

The target word was "pretty." And at 18 months ... the child could say it exactly. CCVC structure.
At 24 months the same child .... with the same target word ... says it differently. [example on board]
And at 36 months goes back to saying it perfect.

It was like the example of went-->goed-->went. It is not really U shaped .... but Skinner is here and Chomsky is here with phonological rules.

Children at 18 months go through the mimicking, parroting stage. So it is not accurate to call this CVCC ... it is really memorized as a chunk. A parrot can say Polly wants a cracker ...does the parrot really know it wants a cracker or does it just memorize a chunk.... so this is called idiomatic .... there might be a pre representational stage ... they don't hear the phonemes ... really and we know with children ... if you ask a first grader to tap out the word cat.... they might do this [example on board] so first graders tap out ... cat..... they would tap out 2 and it should be for phonemes .... 3 times. Children hear it syllabically. So children do syllabic organization first and then do phonemic representations. But there is an earlier stage ... and they would make it only one sound ... no segmentation.

Syllabic is bigger .... everything in Japanese it is a CV structure. Knowing the phoneme you piggy back a vowel. In Japanese you have to have a CVCV structure.
Student: [can't hear/can't understand] In Korean we have sounds
Professor: This is not truly phonemic.

We now have a CVCV structure ... what happens to the p ... they turn into a ....b and that is a default voicing. Voicing is easier to produce than voiceless. The b is easier to produce. The r is gone .... and is deleted. Why? Because there is no consonant cluster. The child is here ... [example on board] trying to say pretty ... can they say it? No. Something has to delete ... so the r deletes and the t turns into ... so that error is not just random ... it follows a linguistic rule.

There are deletes and later the child can master these structures ... with U shape learning ... these are the ages ... if you are interested it is in the Leopold Diaries. This was before Chomsky. So we can say Skinner is idiomatic and Chomsky ...the rules are not mastered yet ... and can suppress the default.

Do we say [making word sounds for water]. It is easier ... it is part of the default rule.

So U shaped learning is instructive. Skinner ... this is idiomatic ... mimicking... parroting ... aformulaic ... later you get rules.
Broca comes on line and people are trying to connect to rules and Broca. That is a critical period around age 2 ... and then is more syllabic sensitive to consonant structure.

Listen to children say things like ... skate ... or if they say a siblings name incorrectly.

Student: My sister ... we tried to make her say Missy but she kept saying Minnie ... so now we call her Minnie.

Professor: If you talk to your parents they can tell you about some of these anecdotal examples
My mom calls the cemetery a funny word .... I can't think of it now but I'll get back to you with it later.

So some interesting errors.
It is reported this word "because" was first found this way [example on board] ... so let's do this in IPA... this would have been .... [example on board] can you explain why? First .... it goes in the opposite direction.
Student: Is it because of the vowels?
Professor: This is voiceless ... so we have a CVCV structure ... where the voiceless affects that initial consonant. Maybe this is analyzed like this [example on board]. So this is sitting next to that ... two consonants ... [example on board] why is the z deleted? Because of the CVCV structure.
Student: Does it go backwards?

Professor: Yes. Let's look at this ... 'duck'. [example on board] simple CVC structure. But the error says duck is said like this [example on board] so the d is turning into a g .... it is not a voicing assimilation ... but the k ... think about it ... it is veler. So because of the k sound that is veler ... that features crosses over. So you get this [example on board] you keep everything plus voice. People couldn't understand why people made these mistakes but there is assimilation happening from the final consonants. So these are two examples.

The most written about error is about 'spaghetti'

Women are probably more in the linguistic field than men ... so women were feeding their kids and heard this mistake. Let's do it in IPA. [example on board] Americans say it in the default with a d sound instead of the t sound.

So CCVCVCV. That is complex for a child. What does a child do with this word? It goes into this [example on board]
And there are variations of this. But this is the most prevailing [example on board]. So this is CVCCVCV structure. So the most obvious is the initial consonant cluster is wiped out.

[example on board]
There is no cluster .... the child is not at this stage yet. So one is wiped out ... the initial.

Second ... the p goes to default voicing. It is easier to make things voiced. The vowel stays put.

Where do we get the z from? The s once deleted gets reinserts there ... [example on board] it is recycled. It is voiced and it becomes a z sound.
What is happening here... with the z? It is systematic ... let's pretend they delete it .... if the child would have left it out we would have a CVC and then we would have a DCV .....so there is an upbeat ... and children like downbeats. So a CVC is a proto word template. Children don't like VCV ... so a 2 year old recycles and preserves the CVC structure.... with downbeats. You preserve that [example on board] and the first time we talked about this ... children at age 2 ... knowledge comes from their predetermined stage and guides the child into learning sequences. So this is not learning you learn ... because children at this stage are not in school but it is innate .... like the WUGS. It is syllabic sensitivity. Children are still developing but there are guiding forces that are hard wired in.

Prior to Chomsky ... mistakes were thrown away and not recognized. No one wants to study mistakes ... but linguistics ... we look at mistakes to look into the brain and processing and child development. Psychologists also study behavior which is a window into the brain. So things that are human ... we are interested in and how the brain manifests. But that wasn't always the case.

Ok so we have phonemic and syllabic development ... and we talked about U shaped learning. Then rules kick in.

Between now and Thursday read the material .... review your lecture notes and on Thursday we will discuss how to match the lectures and the readings.

The first part is going to be the chart and minimal pairs and we will discuss the exam more on Thursday.

Eng 301
Thursday, October 08, 2009
Captionist: K. Wong

Hello. Good to see you all... bright and early.

I like these kind of meetings to review. It is more relaxing. We can assimilate .... we are going to do that today. Let's frame the material within ways we can access and discuss the finer details.

Before we look at the text I want to summarize and get specific later
This should be in your notes and then I will talk about the nature of the exam.

First we talked about the Skinner - Chomsky debate. It is more than the names .... it is two schools of thought.

These names represent schools of thought. So you can say ... there is a school of thought that is about language and saying it is memory based. What goes in goes out. So that is stimulus and thought behaviorism. And we say this Skinner mode is not the whole story. And we have what is rule based. So then we discussed what goes in ... but something else comes out.

Children do not exactly match things that come in ....so mistakes were looked at ... phonological mistakes and development. So for the first time we see that children don't just mimic what they hear ... there is an internal processing going on. So the Chomsky is a move or refocus on what goes on internally. So the debate can be an emphasis on the internalization of the process.

We drew the brain on the board ... and the memory is in the temporal lobe the Werncke area and the front is more Chomsky .... so this debate ... have areas in the brain they focus on. So there is a modular approach. It is a nice pedagogical debate.

This is introductory material ... it is part of our introduction. On the phonological level children assimilate ... the WUGS... and Berko ... children pronounce the z. But all this material with the brain and Skinner Chomsky, Sally experiment ... etc.... this comes out more in the next exams. This first exam is about phonology. This intro is more about phonology. If you want to talk about Skinner and Chomsky in the content of phonology .... don't talk about the Sally experiment on this exam ... but what you can say about Skinner Chomsky ... there is a prelinguistic stage for children where they mimic sounds. There is a stage where children do mimic ... and echo... they is Skinner ... what goes in comes out. And the U shaped curve ... that is an example of that.

At 18 months ... we think the Broca is not developed so Chomsky is not in the equation ... at the top of the U ... children say things they hear ... input..... what comes in ... comes out. Remember the example I told you ... "went" ... and the phonological example was "pretty." But later the child digresses and the pretty turns into pridi .... so there are two different modes of processing.

So there is a parroting stage .... what goes in comes out and memorization but later the rules kick in ... syllabic development ... and consonant clusters ... these are phonological rules. So be precise. When you talk about Skinner Chomsky do it in the phonological context.

We started the phonological lecture ... and we talked about the IPA charts. KNOW YOUR CHARTS. Know the place and manner of articulation. You will be giving me the chart ... first thing on the exam. Then I will ask you to put down some minimal pairs.
You will tell me the features involved in constructing minimal pairs ... manner distinction .... voice ... voiceless ... etc. You will come up with your own pairs and analyze them for me.

So we will start with charts.

Then in lecture we talked about assimilation. Here is a prompt ... and I will give you some prompts that you will select from for your essay question.

Inside each prompt there is lecture material .... that you will expand on. Here is a prompt: How is phonology rule based. Give examples. Here you can talk about assimilation ... and what it is ... give examples ... like "cars." Write it in IPA. And it is rule based. Explain why the s changes to a z sound. We also talked about 'aspiration'. It is place or manner based. And we talked about past tense 'ed'. So 'ed' might sound like a t. We talked about default for ed. Children say things like slept ... kick-Ed. They know that structure abides by assimilation. It does not matter if voice or voiceless ... they think the rule kicks in.

We talked about assimilation and how the word changes ... like sleep... and slept ... but the irregular process kicks in and sleep becomes slept. They are byproducts of a phonological rule. So history has changed the rules for these words ... and it is a by product of assimilation. So you can talk about this in your essay. How is Chomsky rule based and assimilation are things you can talk about in your essay

We talked about processes ... like ESL stories ... like Victor, Paula, XuXa .... if you don't understand this don't pick this prompt. But if you want to talk about processing you can say we might not hear what is being said in the environment. Or how is it two people hear the same sound differently ... it is about native language sounds ... and the fact that with XUXA ... certain languages don't have certain sounds but can produce idiomatic sounds like in shower ... we could have brain imaging devices and see what part of the brain lights up. There might be something like when the child chunks ... like LMNO... is one sound. That is different than when we as adults say L-M-N-O. The adults know they are different sounds ... but a child memorizes and make it one sound.

That pointing tells us about the process. So that is similar to dual aspect. Broca handles sounds but when you deal with environmental sounds ... sounds that we can imitate and are not part of phonological rules different processing kicks in.

We might be able to do both at the same time. And we might hear sounds differently ... and we can talk about internal processing ... how two people can hear the same sound differently.

A Spanish person might say chicken differently ... and I proposed that you say it the way a Spanish speaker will say it ... and how an Englishman will say it ... the American ear can hear the difference ... but in Spanish it is reduced to the same sound ... it is an important discussion. This leads to the Skinner Chomsky debate.
For Chomsky ... input is important but internally there is an internal process. So you can talk about how it is different in different languages ... and how different people hear things differently .... an American ear might hear Paula and Paola differently.

Finally we talked about acquisition. We talked about the phonemes and we circled, squared etc. We talked about syllabic development and what the syllable structure looked like ... like CV and cat. I was looking at data recently ... and one word that comes out is "down " At 20 months you get 'da'. And later you get 'dow'... and finally you get CVC structure. The final consonant gets deleted before.

I also talked about U shaped learning ... where children are like parrots. Complex sounds can come out in the early stages .... around 18 months but later things get dropped so there is a processing distinction. You can talk about U shaped learning in many ways. It is an example for development ... phonemic and syllabic ... U shaped is a way to get your essay going and if you want to talk about phonology ... and other issues you can use U shaped learning.

Student: What about the example of the mom and child and the child says key ... and the mom says kitty ...

Professor: When we talk about this we talk about the phonological. Comprehension is passive ... and there are experiments that show it but there is no clear understanding about it ... if meta linguistic or not. We thought chimps understood ASL ... but it turns out they don't use the actual sounds but see the facial gestures ... things the chimp took in ... for understanding. You can look at body language to help you understand.

So it seems that production is different from comprehension. It is hard to get at what children really do know.

So we have given you basic phonological lectures, charts, assimilation, processing, charts.... and it is sitting on the Skinner Chomsky debates.

Skinner/Chomsky debate itself is worth reading chapter 1 ... you do find the dual processing model on page 11. You get the WUGS test and Skinner vs. Chomsky. Chapter 1 has a lot of hidden structures .... but it talks about the brain ... look at chapter one but focus on the phonology part.

Go to chapter 13... page 277. There are the charts. I did talk about the vowel shift .... if you wanted to ... that is an example of rule based ... everything went up a notch. So it is not random. It was a systematic shift. You have vowels and consonants and then you get assimilation. 13.2 page 281. Please read all of this. Don't forget there are constraints on assimilations. Those constraints took us into the discussion about how children learn words. We talked about the sausage of sound. You will find that discussion 'word boundaries' on page 283.

Page 301 ... you can include this ... about how children segment words. Why don't we
say [repeating a sentence in the book]. You can be precise about ... and detailed about how children use rules ... understanding schwa ... and how you can't have CVC words. So this is a good discussion about phonological rules early on ... stress that children use for word learning. Phonological boot strapping. That is a good example on page 301.

Assimilation on page 281... examples and constraints. If you wanted to talk about vowel shift that is fine.

We talked about keep and kept ... and minimal pairs on page 289 you get examples ... and how they work.

Early child phonology on page 292. There are examples of consonant harmony ... children say early on .... if they wanted to say 'duck'.... they say kata. So because the last thing a child hears is part of the word formation ....so that is an example of assimilation. It is CVC and the final k sound duplicates.

Don't forget spaghetti... and talk about what is going on. And the anecdotes are on page 294 .... so all this is material that comes out in the lecture

KNOW syllabic and phonemic development.

Chapter 13. Read that.

Also one more section ... found on page 228- 234... there are grammar terms .... it is more about the debate... of Chomsky Skinner. Phonological parameters. It is about how things sound differently in different in different languages

The test is 2 parts. We only have hour and a half ... some of you will finish in an hour but you have the whole time. On Tuesday that test is the chart and minimal pairs. I will give narrow down the search for the minimal pairs. It is for me to test you on your IPA. Segment. What is the sound .... and so your charts, minimal pairs are the first part of the test. But I think the first part is charts, minimal pairs and some assimilation. Thursday will be more writing based.

I will give you prompts ... it could be about U shaped learning or you could focus on developments ... and you can use many things ... to explain. Be careful about the Sally experiment. One thing that Berko shows is that there is some assimilation. I will give you some clues ... you will use Sally more on the next exam.

So you will use your IPA ... and the second part is essay based.

Provide lots of examples and use the IPA as examples .... I hope you will show me the IPA when you talk about examples. You can tell me examples about spaghetti .... about how children don't hear all the proper sounds .... and talk about syllabic development. Don't give general examples ... be specific and why. Talk about the linguistic concepts
You will be surprised that many of you will still be writing furiously till the end. Scantron tests diminish our thinking ability ... you prepare for those kinds of tests by memorizing. But I want to see how you process. If you have been here you will know what is expected.

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I have furlough days coming up. So after your test next week .... I will not have class on the 20th and 22nd. So right after your exam there will be no class or a week and then you will come back on the 27th. Then we will begin the second part of the class. Questions?

Don't forget blue books. Two. Study well. Read your lecture notes ... study in groups. ...just study. And I think the material is straight forward.

Student: I looked online .... and am looking for the updates
Professor: I just did it. It is a nice way to study for the exam. Thank you. See you next time.

Eng 301
Thursday, October 08, 2009
Captionist: K. Wong

Hello. Good to see you all... bright and early.

I like these kind of meetings to review. It is more relaxing. We can assimilate .... we are going to do that today. Let's frame the material within ways we can access and discuss the finer details.

Before we look at the text I want to summarize and get specific later

This should be in your notes and then I will talk about the nature of the exam.

First we talked about the Skinner - Chomsky debate. It is more than the names .... it is two schools of thought.

These names represent schools of thought.
So you can say ... there is a school of thought that is about language and saying it is memory based. What goes in goes out. So that is stimulus and thought behaviorism. And we say this Skinner mode is not the whole story. And we have what is rule based. So then we discussed what goes in ... but something else comes out.

Children do not exactly match things that come in ....so mistakes were looked at ... phonological mistakes and development. So for the first time we see that children don't just mimic what they hear ... there is an internal processing going on. So the Chomsky is a move or refocus on what goes on internally. So the debate can be an emphasis on the internalization of the process

We drew the brain on the board ... and the memory is in the temporal lobe the Werncke area and the front is more Chomsky .... so this debate ... have areas in the brain they focus on. So there is a modular approach. It is a nice pedagogical debate.

This is introductory material ... it is part of our introduction. On the phonological level children assimilate ... the WUGS... and Berko ... children pronounce the z. But all this material with the brain and Skinner Chomsky, Sally experiment ... etc.... this comes out more in the next exams. This first exam is about phonology. This intro is more about phonology. If you want to talk about Skinner and Chomsky in the content of phonology .... don't talk about the Sally experiment on this exam ... but what you can say about Skinner Chomsky ... there is a prelinguistic stage for children where they mimic sounds. There is a stage where children do mimic ... and echo... they is Skinner ... what goes in comes out. And the U shaped curve ... that is an example of that.

At 18 months ... we think the Broca is not developed so Chomsky is not in the equation ... at the top of the U ... children say things they hear ... input..... what comes in ... comes out. Remember the example I told you ... "went" ... and the phonological example was "pretty." But later the child digresses and the pretty turns into pridi .... so there are two different modes of processing.

So there is a parroting stage .... what goes in comes out and memorization but later the rules kick in ... syllabic development ... and consonant clusters ... these are phonological rules. So be precise. When you talk about Skinner Chomsky do it in the phonological context.

We started the phonological lecture ... and we talked about the IPA charts. KNOW YOUR CHARTS. Know the place and manner of articulation. You will be giving me the chart ... first thing on the exam. Then I will ask you to put down some minimal pairs. You will tell me the features involved in constructing minimal pairs ... manner distinction .... voice ... voiceless ... etc. You will come up with your own pairs and analyze them for me.

So we will start with charts.

Then in lecture we talked about assimilation. Here is a prompt ... and I will give you
some prompts that you will select from for your essay question.

Inside each prompt there is lecture material .... that you will expand on. Here is a
prompt:  How is phonology rule based.  Give examples.  Here you can talk about
assimilation ... and what it is ... give examples ... like "cars."  Write it in IPA.  And it is
rule based.  Explain why the s changes to a z sound.  We also talked about 'aspiration'.
It is place or manner based.  And we talked about past tense 'ed'.  So 'ed' might sound
like a t.  We talked about default for ed.

Children say things like sleeped ... kick-Ed.  They know that structure abides by
assimilation.  It does not matter if voice or voiceless ... they think the rule kicks in.

We talked about assimilation and how the word changes ... like sleep... and sleeped ... but
the irregular process kicks in and sleep becomes slept.  They are byproducts of a
phonological rule.  So history has changed the rules for these words ... and it is a by
product of assimilation.  So you can talk about this in your essay.  How is Chomsky rule
based and assimilation are things you can talk about in your essay.

We talked about processes ... like ESL stories ... like Victor, Paula, XuXa .... if you don't
understand this don't pick this prompt.  But if you want to talk about processing you can
say we might not hear what is being said in the environment.  Or how is it two people
hear the same sound differently ... it is about native language sounds ... and the fact that
with XUXA ... certain languages don't have certain sounds but can produce idiomatic
sounds like in shower ... we could have brain imaging devices and see what part of the
brain lights up.  There might be something like when the child chunks ... like LMNO... is
one sound.  That is different than when we as adults say L-M-N-O.  The adults know
they are different sounds ... but a child memorizes and make it one sound.

That pointing tells us about the process.  So that is similar to dual aspect.  Broca handles
sounds but when you deal with environmental sounds ... sounds that we can imitate and
are not part of phonological rules different processing kicks in.

We might be able to do both at the same time.  And we might hear sounds differently ...
and we can talk about internal processing ... how two people can hear the same sound
differently.

A Spanish person might say chicken differently ... and I proposed that you say it the way
a Spanish speaker will say it ... and how an Englishman will say it ... the American ear
can hear the difference ... but in Spanish it is reduced to the same sound ... it is an
important discussion.  This leads to the Skinner Chomsky debate.

For Chomsky ... input is important but internally there is an internal process.  So you can
talk about how it is different in different languages ... and how different people hear
things differently .... an American ear might hear Paula and Paola differently.

Finally we talked about acquisition.  We talked about the phonemes and we circled,
squared etc.  We talked about syllabic development and what the syllable structure
looked like ... like CV and cat. I was looking at data recently ... and one word that comes out is "down". At 20 months you get 'da'. And later you get 'dow'... and finally you get CVC structure. The final consonant gets deleted before.

I also talked about U shaped learning ... where children are like parrots. Complex sounds can come out in the early stages ... around 18 months but later things get dropped so there is a processing distinction. You can talk about U shaped learning in many ways. It is an example for development ... phonemic and syllabic ... U shaped is a way to get your essay going and if you want to talk about phonology ... and other issues you can use U shaped learning.

Student: What about the example of the mom and child and the child says key ... and the mom says kitty ...
Professor: When we talk about this we talk about the phonological. Comprehension is passive ... and there are experiments that show it but there is no clear understanding about it ... if meta linguistic or not. We thought chimps understood ASL ... but it turns out they don't use the actual sounds but see the facial gestures ... things the chimp took in ... for understanding. You can look at body language to help you understand.

So it seems that production is different from comprehension. It is hard to get at what children really do know.

So we have given you basic phonological lectures, charts, assimilation, processing, charts.... and it is sitting on the Skinner Chomsky debates.

Skinner/Chomsky debate itself is worth reading chapter 1 ... you do find the dual processing model on page 11. You get the WUGS test and Skinner vs. Chomsky. Chapter 1 has a lot of hidden structures .... but it talks about the brain ... look at chapter one but focus on the phonology part.

Go to chapter 13... page 277. There are the charts. I did talk about the vowel shift .... if you wanted to ... that is an example of rule based ... everything went up a notch. So it is not random. It was a systematic shift. You have vowels and consonants and then you get assimilation. 13.2 page 281. Please read all of this. Don't forget there are constraints on assimilations. Those constraints took us into the discussion about how children learn words. We talked about the sausage of sound. You will find that discussion 'word boundaries' on page 283.

Page 301 ... you can include this ... about how children segment words. Why don't we say [repeating a sentence in the book]. You can be precise about ... and detailed about how children use rules ... understanding schwa ... and how you can't have CVC words. So this is a good discussion about phonological rules early on ... stress that children use for word learning. Phonological boot strapping. That is a good example on page 301.

Assimilation on page 281... examples and constraints. If you wanted to talk about vowel shift that is fine.
We talked about keep and kept ... and minimal pairs on page 289 you get examples ... and how they work.

Early child phonology on page 292. There are examples of consonant harmony ... children say early on .... if they wanted to say 'duck'... they say kata. So because the last thing a child hears is part of the word formation ....so that is an example of assimilation. It is CVC and the final k sound duplicates.

Don't forget spaghetti... and talk about what is going on. And the anecdotes are on page 294 .... so all this is material that comes out in the lecture

KNOW syllabic and phonemic development.

Chapter 13. Read that.

Also one more section ... found on page 228- 234... there are grammar terms .... it is more about the debate... of Chomsky Skinner. Phonological parameters. It is about how things sound differently in different in different languages

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Questions?

Don't forget blue books. Two. Study well. Read your lecture notes ... study in groups. ...just study. And I think the material is straight forward.

Student: I looked online.... and am looking for the updates
Professor: I just did it. It is a nice way to study for the exam. Thank you. See you next time.

Hello. No one was injured in .... I'm on the 105.

I graded your exams .... but not processed yet .... I was on furlough. I have to just put them in the grade book. I was pleased with your exams. I will have them for you on Thursday. You will get them back on Thursday. They are graded but I have not put them in my grade book yet though.

So we are beginning a new section of the class. Some of the intro ... Skinner/Chomsky spills over to this part ..... the first lecture was large .... so the next lectures are going to be smaller. We will not spend as much time as we did. We had sound, word, sentence but because of the intro .... because phonology is important .... anyone will tell you that we are talking about phonology. We spend more time on that. So I see us spending a few weeks on this section and that will take us to the second exam. If I needed to tell you when it will be .... I would suppose that it will be around .... the final is around the 17th of Dec ... so that gives us .... we have the Thanksgiving holiday ... so let's pencil in the next exam for around ..... 3 weeks and then 3 weeks to the final .... so let's pencil in .... Nov 17 and 19 for the next exam on word.

I'm going to put this in my calendar as well.
We are going to talk about chapter 3 .... derivational morphology. So focus on that.

Ok .... so I think that is going to bring home that section. So let's stay with chapter 3 and I will give you sections to read if there is material outside of chapter 3 ... read 2.1 also .... we are not doing tree analysis yet .... but it is a nice intro for 302 ... if you have to take the grammar portion ... you will find the tree diagrams. But you will focus on that in the other class.

But for you chapter 2 and 3 ... and I will tell you about specific sections while I lecture. I will give you back your exams on Thursday.

So let's begin by saying .... [on board] .... phonology is out of the way. Your test ... most of you did well and I will talk about the grades more on Thursday. So phonology is sound .... but what was missing in the first section was meaning. There was no meaning discussed. The closest we said was .... shhhhh..... voiceless palliative fricative ..... what did that mean? Quiet. But there is no meaning .... about that sound means that .... or that the sound 'ch' is the beginning sound for chair. So we will discover that what makes meaning is arbitrary .... there is nothing intrinsic about the sound that means quiet ... shhhhh but might have come from part of hush.

You could also say the affricate means be quiet. My grandmother used to do this ..... tssss... [making a sound]. Also she used to use it when she was satisfied about something. But we are going to leave phonology behind ... and go to the next level ... morphology.

This level .... phonology is embedded in morphology but this level we talk about meaning. We begin to talk about the concept of semantics.

You have heard this before .... semantics ... it means ... meaning. You have heard people say they are playing with semantics ... like Bill Clinton said he did not have sexual relations with that woman.... And did you know that he was telling the truth ... he was playing with semantics .... he did not lie because the court ordered definition ... there was a court hearing and sexual relations was defined by the court. So when he said he did not have sexual relations with that woman he was not lying. Most people thought it was the broad definition. When we heard Clinton say he did not have sexual relations .... we thought that was the broad semantics but he was working on the narrow definition. Clinton was playing with meaning

Is an unlockable lock ... lockable? Is it one you can lock or unlock? If you have a toy car crusher... is it a toy car .... crusher to a real car crusher.... so we will talk about structure and semantics is ambiguous.

But at this level we talk about meaning. Remember the word ... meaning ... Skinner comes to mind. Remember Pavlov ... and the dog ... when it heard the bell it associated it with food. So you will find Skinner in this because we are talking about meaning.
We get the notion of word now ... word carries meaning. It has sound going with it but the sound conveys a meaning.

So we have to define 'word'. It is Skinner based. So let's define word.... it is a one to one association. You should be thinking Skinner. It is one to one association between sound, phonology and meaning, morphology. So we are dealing with both aspects.

Let's create a symbiotic relationship ... let's draw it .... [Drawing on board] ... this is phonology ... and this is morphology. Word is not there by itself .... it is in between ... it is an intersect .... [Drawing on board] the word is created when you merge sound with meaning and create a one to one association. The association itself is arbitrary. If I wanted to call this .... something else [using an Arabic word].... like the WUGS test. There is nothing intrinsic that it means book but the association is made up and a convention.

Languages are games... sometimes young children think that is how it is for everyone. I thought every house had a piano because we all did in our families. And the first time I was at a friend's house without a piano I thought it was strange. Abstract does not hit children till later. But the fact that there is a one to one association ... however arbitrary is necessary. You have to have a one to one association. You can have homophones but ... you can't have the word meaning one thing one day and something else the next. So there is arbitrary but necessary.

So how do we come up with a sound .... [Drawing on board] .... the IPA ... [example on board] what happens on the semantics side ... we conjure up a mental image. So we say .... 'tree' .... and if you know the language .... you conjure up an association image. One to one association ... much like Pavlov. So we have a substantive image ....so we are go to talk about the substantive words ... noun .... it has form and can touch it ... but it is not just that you can draw it but can you perceive it. If you can conceptualize it ... it is substantive... and that gives it meaning.

Another example ... [Drawing on board] book ... something we can conceive and perceptual .... you can't draw a verb ... like 'dance'.... can you conceptualize dance?? Yes ... so verbs too.... sleep, study, eat... it is a substantive category as well.

What about adjectives? Cold? Hot? Can you perceive it? Yes ... it is substantive also. .... along with adverbs. This can be extended to propositions also. They are more dubious but you can conceptualize things like 'on'.... 'off' ... make them opposites ... so they can fall into this category as well.

So you have the 5 parts of speech that fall in substantive categories. So the one to one .... for all the parts of speech ... and we can conceptualize them ... but here is a word..... 'the' ... it is a word. I know it is because .... [writing on board].... The children must wash their faces .... 'the' is a word but ... the problem is .... it falls on phonological realm... and it is followed by a schwa but what does it trigger? What do you see? You can't
draw anything but you can't draw dance but you can conceive it .... I had a student say they can conceptualize the word 'the'..... she said she saw the letters ... but that is not substantive.

So Skinner is pleased it says one to one ....but it breaks down ... because words like 'the' does not carry semantics... no meaning. So there is a problem. So we are going to have to talk about breaking word into two parts. It used to be one to one and works for the other things .... but now it breaks down with that word.... and words like should, can, do.... etc. If I say you should your jacket today ... there is no meaning .... there is a word but no meaning.

Student: What about concrete noun?
Professor: Ask yourself if you can conceptualize it ... like what sadness is ... it comes from the adjective sad .... and the opposite is happy ... so there is a meaning. It is not meaningful it is more Chomsky. So we have to split this into two parts. This is a nice exercise ... to split this into two but bring it back the dichotomy. So we say Skinner is right but have to split word.

So we go back to the intro to understand this section. I suppose we can say Skinner is semantic. Meaning.
But for Chomsky we have to remember syntac ... semantic based words .... words you can spin. Like with the health care topic of the government option .... we have to ... the Congress has to come up with language to spin it .... the states can opt out if they don't like it .... it is interesting how language makes you think a certain way. Like if someone asks you if you want to raise your taxes you will say no but if someone says do you want to improve education ..... it depends on who frames the question ... to think in a different way.

So syntac is more abstract .... so we have two terms ... one is lexical .... they are nouns and its modifier and the verb and its modifier and the proposition and that is in the lexical category. These are parts of language that carry meaning and substantive.

But you get functional on the other side. They are the following ... the first is the determiner .... they work in tandem with nouns. The determiners used to be called 'articles'. They are the demonstrators .... to show. When we talk about the demonstratives ... what are we talking about? [This, these, those etc.]
There is no meaning .... in these, those.

There are possessives .... it gives quality of ownership. You will find these words .... determiners introduce a noun. There is a grammar ... like a road signal ... saying there is a turn ahead ... etc.

So the word 'the'.... after it is a noun. So let's play with this idea ... let's put a verb there .... like dance. The Dance .... it turns into a noun. How do we know? Because you can pluralize it. If you can pluralize it .... it is a noun. There were two dances ... at the ball. So you know it is a noun. But what about an adjective? The Blues ... you pluralize it ....
so now it is a noun. It has to do with the grammatical relationship. So what works with a verb? The auxiliary. You know auxiliary by this name... 'helping verb'. It does not say what it is helping... but they are working with a verb. [Diagram on board]

There are only 3 auxiliary verbs... DO, BE, HAVE. When they serve in this capacity... as auxiliary... they have no meaning. I will show you that maybe next time. However when they are serving as a verb... when DO is a true verb it is Skinner based. So these verbs can either be Chomsky or Skinner based.

Student: So if helping there is a main verb?
Professor: Yes. If by themselves... they are main verbs. I will explain this more next time but when working with a verb they carry no meaning but are functional. We have modals such as can, could, should, will... they used to be past tense markers with the 'ed'. May, might, would, if you look at Shakespeare you will find these kinds of sentences... HE CAN THE HORSE. Or SHE CANS THE HORSE.... but they have gone from here to here and have no meaning now. They have a grammatical purpose.

So let's stay here in this category and go back to the exercise... with The children...... there is something funny that happens when it gets no meaning.

And in language something happens... if you were to say The even numbered words... your brain is fine.... if you remove 50% of the sentence... a certain percent... so let's say Children wash face... it is not grammatical but you get meaning and the brain accepts that. The brain is fine with it... you can almost visualize it... like on 'Little House on the Prairie'... where the mother calls and says children wash face.... but if we say the odd numbered words... there is no meaning... there are still 3 words... but if you say the must their... you get something called an N400. If you did a Google search on this you would discover that in brain scans... when you hear 'the must there' 400 milliseconds you get something that looks like this [example on board]... a negative spike on your MRI. It is located in the temporal lobe... remember that part is Skinner and the temporal lobe and Chomsky is in the Broca area. Look at the pictures in the back of the book.

So it takes 400 milliseconds before the brain says it can't deal with that. When you take away these words... the meaning part... is preserved and you get P600.... and although it may sound ungrammatical.... you still get the meaning. So you get a P600 and it shows up in the frontal lobe. Because taking away grammar that is Broca... so we found... the N400 and P600 have specific parts of the brain.

We will talk about phrases and sentences later... but we know [example on board]... and if I delete functional we still get meaning... if a child says Daddy car.... they delete functional words... you still get the meaning. So the meaning is in lexical words

Here is the modal [example on board]... and it introduces the verb.

Let's try a noun... I can the dog.... so what shows up?
Student: N400
Professor: Because there is no meaning. So the meaning part of the brain protests. So you need is verb .... so there is something grammatical that the brain needs meaning. And the determiner introduces the noun .... and here is the dichotomy. If you go on to 302 you will see these are phrases with tree diagrams. This is a determiner phrase.

[example on board] and if you delete these Chomsky words it is ok .... and I guess what I should say is ... there are many languages .... in the world that have no function categories .... like in Japanese there is no equivalent for 'the'. Or in Chinese the verb is the same and there is no tense.

In pidgin languages ... listen .... ask yourself if you get the meaning. Imagine you are in downtown LA ... and you come across this .... Hello, me sell you 4 pound tomato $2. Me no come tomorrow but me friend come but his price too high. You buy tomato? There is so much missing and wrong but ask yourself did you understand? That is pidgin.

What is missing is the auxillary .... you ask why they are reduced? Because they have no meaningful purpose. So to just learn the language they focus on substantive words. In school you learn the other aspects of the language but in an environment where you need to learn language quickly .... you will acquire the substantive words first and the rest bounces off.

So we have a very nice Skinner/Chomsky debate here. I will have to fill this diagram later ... and let me give you an example ... of. DO.

DO is schizo.... let me give you an example .... How do you do? I had a Chinese student in England when I was teaching there and she wanted to know .... she asked what the grammar rule is ....about repeating a word twice. In English you repeat the same word twice .... like that that or had had .... so in the how do you do .... like that she said ... why and what is the rule?

But it depends on ... we seem to be saying the same word.... you say do .... and do. So it is the same sound .... same phonology ... same IPA. But the question is ... is it the same at morphological level. We are not talking about meaning .... do... do ... I do do it. But how can we get ... this example is from our discussion .... in my office with that student. I said assume it is a lexical do .... a main verb. But how can do have meaning. It is a general verb. Don't put it with a helping verb .... so do can have meaning. In Spanish you say asser... it has meaning.

But assume it is lexical .... but if it is ... this slot is a lexical slot. You will find this in the readings. If this slot is lexical ... only lexical words form an open class so you can create new words here. Like Wiki.... it was just accepted in the English language. Or Google..... that is a new word.
In England we didn't vacuum we say we Hoover .... it is a name of a company ... but we say can I have a Kleenex ... not tissue ... or you say Xerox .... that is a name of a company so we create new nouns and verbs. We borrow from other languages .... you say el taco.... we don't borrow the el .... but the taco and say the taco. So borrowing creating .... can we stick any verb in this slot? [example on board] you can make a list. It is open ended and there is meaning connected. So that is a lexical do.

There is another test I want you to know about .... let's delete it .... put a zero. If this is a lexical do and it has meaning ... remember N400.... so deleting meaning .... someone can do a summary paper on this topic if you want.

So let's see if we delete this .... how do you ............ how do you? ... you might say what? You might feel something going on in your brain. One person told me they tasted something when that happened. It happened to me once. You can't delete that. You will get an N400. So that is a meaningful do. It is lexical meaningful Skinner based.

Do the same thing here .... let's try it. Didn't that student say she is repeating the same word? Let's see if it is open ended ... no ... you discover the category is closed. So you get the term closed class. So it is fixed and uncreated, not changing. It is closed. When we borrow ... we don't borrow this ... [example on board] so this does not seem to behave lexical. Maybe it is functional.

So let's see ..... listen if functional ... it is helping .... the second place .... of do. But why? We will discuss that later but if helping it has to be doing a syntactic .... let's delete it .... and go over it ... let's write this in IPA .... and delete this ... how do you ... now we say how do you. The brain has no N400 or P600 the brain hears it like it is there.

Most of us when we speak delete it ... so that 'do' is not meaningful. Linguistics is real in terms of science ... we see language in the brain. That is why we have Skinner/Chomsky.

So what is it doing there?
Student: [can't hear/can't understand]
Professor: It has to take care of tense a Chomsky feature. It has tense ... which is abstract and it is also a SV agreement. If it were Mary ... make you/Mary it turns into how does Mary sleep... 3rd person singular ... it also helps to form the question.

The last thing I want to say is .... The auxiliary do ..... have two specific syntactic jobs .... they form the question ... and there are 2 types of questions .... yes/no and the WH question ... do you like pizza? That is a yes/no. Can you say like you pizza? You have to say What do you like? It is a support. And grammar is Chomsky. In don't have that in Spanish.

I do not smoke ... You can't say I not smoke ... or I no smoke ... you get the meaning ....
and that is how you say it in Spanish ... there is no auxiliary do. So it forms question and negation.
All the auxiliary .... form question ... have you seen him? I haven't. We will discuss the others on Thursday. I think for now ... read the section about 'do' in chapter 3. Page 41. Section 3.3 page 41. You have this example ... and sometimes this is called form class word vs structure class major terms are lexical vs functional.

Eng 301
Thursday, October 29, 2009
Captionist: K. Wong

Hello... that should make a louder sound than that. I have your exams. I will pass them out toward the end of class. I will talk about the grading scale later. I want to make sure we are on track. I have no furloughs in this class..... I think we are fine till the end and I gave you the 17th and 19th as exam days.

But this approach is going to be for the exam ... define what a word is. And we said that a Skinner definition goes a long way. Word is one to one association. We talked about symantics of words ... there is a sound meaning association. And vocabulary building ..... is frequency in response, repetition ... and what the word means bottom up and use the word in context which is top down.

Sometimes we learn the word in both ways ... bottom up looking at the meaning... like looking at a dictionary. That is the bottom up. That is in isolation .... without any other approaches. But there is another mode.... learn the definition by learning the word around the word. You have asked someone how a word is used in a sentence and you understand what the word means. So there is a bottom up approach ... with vocabulary tests..... but we will talk about meaning more later.

But if we broke up the word... Skinner takes up a long way. There are words without meaning.

If this was a Darwin example .... a word dies out if not used but why do we have words that have no meaning. And if we delete them .... in language/phonology ... if we don't need these words ... where is the origin of the words ... and pressure ... where does it come from.

The Chomsky people in the early 20th C says to revisit the evolutionary of language ... all languages have nouns, verbs, etc and that is striking. All have lexical categories. What we find in variables ... some languages have them and some don't. And that is a language specific character. So we are interested in looking at language as a biological system. It does not fit perfectly .... viruses fit and they survive .... we are trying to kill them off and its a war.

The H1N1 is a sister to the great Spanish flu. But language is odd. There are aspects that don't seem to fit. So keep that in mind. It is nice for us to be introduced to new
concepts about language.

Chomsky says that we could have gotten along nicely with a low level communication like animals ..., so where is the bottom up pressure. We have talked about what makes language special. This is interesting and something odd about human language and its capacity. And it fits with Skinner theory. It is functional and serves a purpose.

But Chomsky says it is variable and not universal and abstract. It is that mode of language and we all agree that the abstract allows us to be here in this room ... with a hand stretched out to Mars.... I just saw the space shuttle land last night.... it landed at Edwards last night. I was on the freeway and didn't think I would hear the boom ... it is the pressure in your ears and I looked up and I saw it coming down. It was innocently flying small and fast ... like a glider. And I thought our closest relative could not see it ... they don't have the cognitive ability to find it and track it let alone build it. They would not be able to see it flying and it is amazing to me .... and I am not a creationist... I am a Darwinist ... but when you look at the two species 98% of all our genes are the same.

I was in traffic watching the space shuttle ... I caught it and it was gone. So our mind .... there is something special and mysterious. So remember how special language is. It comes out of our mouth ... but it is special.

So words .... we talked about "do." In Spanish we talked about it .... but it is an abstract word in English. How does the mind without pressure start to create language that serves the grammatical vs. the meaning.

So we have lexical and functional ... and I gave you [Drawing on board] .... nouns .... and verbs they are primitive concepts. But remember chimps learn nouns and verbs. They sign ... the one to one association ... gesture and meaning and they can learn modifications which are universal. So there is a Darwin pressure with that. And we could have stopped there and survive as a species. And that is what Darwin said. He did not care that we are on Mars and on space shuttles. That is not Darwinistic and help us evolve .... this is like the icing on the top of the cake. It is superfluous .... and those kinds of things die.

We had Darwin month before and I try to tell people to go to those lectures ... but it is nice to revisit the distinction.

So we have the determiner system which has no meaning but there to provide a grammatical relationship. Without it ... nothing happens to the language like in Japanese. Or a child says, Daddy car... you get the meaning and it shows up the in Broca area of the brain.

If you want to do a paper on this ... the Fox P2 gene ..... it is a hot topic about how we understand how Broca affects language. This is a big discussion. There is a gene that allows us to hold info in our mind and coordinate and have an analogy and spin off into language.
If I say, John caught a fish with a net and Mary caught a bird with a box and asked who caught what and how. You have to hold the info and use a working memory and you would respond fish with net and bird with box. Young children can't do it .... and that is a gene we are looking at. Children can't form passives.

If you ask a 2nd of 3rd grader a question like Mary was kissed by John .... they can't discern the differences.
Who is doing the kissing and who is being kissed ... although subtle shows up in Broca area and young children can't discern that at that age.

It is not a language gene but also involves other things but there is an implication to language

Student: Are there other languages that use passive more?
Professor: That is interesting. In languages where the norm is passive ... what happens is that is the norm and default and the active is rare. So if you ask a child to turn that sentence into an active sentence they have a difficult time.

The more practice you do ..... it goes from the front of the brain and gets tucked away. It is inside the temporal lobe .... and you get the insular cortex and knowledge that is done over and over moves to the automatic portion of the brain. Do all languages have movement? No. Functional we will talk about movement. Things move in language and we have questions ... auxillary questions .... do you like pizza... I do like pizza.

We need axillary for questions and negation. So Do you? [example on board] She does like pizza. It is SVO.... now we know there is a movement application. You make a question it inverts here... [example on board] it moves and deletes ...now it moves here [example on board] does she like pizza? There is a movement analogy. Sometimes we do it with intonation .... it might carry a question. Negation as well... we need the DO.

In English we say She does not .... smoke and we say ... in Spanish you say .....she no smokes and you still get the same communication. So why do these words come from that are not universal and robust. They are interesting and make languages different.

Looking only at the lexical languages are the same but it is interesting that all children go through the universal stage of only speaking nouns and verbs. They know they are going through first and it might have been what a proto language looked like.

I have seen that homo erectus had a proto language ... to create fire is an abstract thing ... so something about fire and we discovered some skeletal remains that had decorative markings on the burial sites ... so dyes were used in those ritual which is abstract .... or decorating with jewelry ... going back 6 thousand years ago.

Chimps don't have jewelry ... it is interesting ... and a good topic if you want to look at.
We talked about determiners ... [example on board] words like my, each, all, every, and these are words that present functionality of grammar.

The auxiliary which was do, be, and have ... those are helping verbs are working with the verb and don't forget about modals which have no meaning .... you should your jacket ... there is no meaning .... can, could, shall, should... these words seem to be words that should die out because they have no communicative value and are not universal .... so how do you say do you smoke cigarettes in Spanish? Do English speaking people have an advantage by having this? Language is strange.

That is why Chomsky says that language .... Language .... language with syntax .... does not seem to have biological pressure. Some say Chomsky was a crypto creationist. But he says we can't explain it in a Darwin way. What ever the case syntax ... is the ability to have embedded clauses. You can add another word to the sentence ... a recursivness.

If I say this is a house boat ... it is a boat .... it has a house but basically a house. And the boat house is on the land .... is a house ... and we have the ability to think about the structure. There is a difference between a top hat rack and a hat top rack ... or a lockable lock or a lock that is unlockable.

Think about "black bird." In IPA we know this is an adjective and this a noun. [example on board] these are isolated words. [example on board] -black CCVC structure and [example on board] -bird. It is slavic .... CVC. And you clap it out ... both have a stress .... so what we say is you have 2 different words with different stresses. But if you make it a compound [example on board] .... in phonology there is no space in writing but 'blackbird' ... in IPA [example on board] you get one initial stress. You can't clap out the second part. The second part has a weak stress.

So phonology helps us determine when two words are made into one word. So that is this area ... [example on board] talking about phonological stress.

Blackbird can be Black Bird .... [example on board] it is broken into two different ... if I did it like this .... [example on board] what you can say is this is a compound. But if I did this [example on board] one word and two words here ... look at the structure. There is a difference in procession.

So we sketched this out ... and we talked about the auxillary 'do'... we can delete the functional 'do'.

You can look at ERP with language and fmri. We talked about N400 and P600 and Fox P2 gene. Language is becoming a science.

We are studying Williams syndrome .... and it is a language impairment. We are starting to make headway.

So how is 'be' and 'how' an auxillary? [example on board]
Here is something:
Mary is a teacher .... so we are talking about 'is'. The IPA is this .... conjugated 'be'. But how about this [example on board] You might think phonologically is ... is ... on the surface it looks the same ... Mary is .... a teacher... Mary is ... smoking. So the 'is' looks the same ... but morphologically it is not the same.

The first 'is' .... is acquired early on ... there is universal logic to it. In the first it is a linking verb. So this 'is' has meaning. [example on board]. There is an association. It links the subject to the object. That is why it is a lexical linking verb. It has semantics.

The second is in the same position .... but can we say X = Y? They are not the same. It is not linking anything.... it bridges the subject and object ... it is a coplier ... it is a functional auxillary verb ... and progressive. It is part of an abstract rule ... BE + VERB +ING. Most languages don't have progressive.
This is present progressive .... [example on board] so BE+VERB+ING is progressive and abstract.

Mary smokes vs. Mary is smoking ... there is no meaningful difference but there is an abstract grammatical difference. It is an abstract continuing. In English we don't use the present much in English like I watch television ..... it sounds like a second language speaker speaking. But that is the present tense. Tense will show up here [example on board] ... do all languages have tense? NO. They don't all have determiners or tense either

We have a future tense but it is arbitrary and abstract. We can say The President will speak this afternoon. But do we have to use 'will'. We can say in present tense The president speaks tonight. We don't even use present tense or future too much.

Linguists are perplexed ... So it is interesting. So we have an auxillary verb that instigates abstract grammar that shows motion and you can potentially delete it ... especially in pidgin languages ... and child acquisition language. ESL students have a hard time with auxillary. These things show up in different parts of the brain with different qualities. We know there is a movement possibility.

'is' is special .... we can say Is Mary a teacher..... or Mary is not a teacher.... even when lexical they can be used for question and negation.

Let's look at 'have'.
Is and A show up here ... it is a meaningful verb.

But let's do 'have'.
An example of 'have' .... how about this? [example on board]
I have my keys. Vs. I have spoken.
Let's look at this.
I have my keys. This 'have' means possession. It has meaning. So X = Y as long as I have the keys in my possession.

I have spoken ... both of the 'have' are in the same place .... in the sentence .... but that 'have' is funny. One is lexical and one is functional.

So what is going on here? [example on board] This is called the perfect grammar. Know the grammars. Past participle here is 'en' and 'ed'. I have spoken. [example on board] Another example is I have visited. What tense? It is present tense. But we think it is past. We are talking about the present about something from the past. You have change the 'have' to 'had' for past tense.

In English we have double reference system. If I draw a circle on my hand and one on the desk. The verb I am going to use is 'to take'.

The chalk is in the first circle .... it is present tense .... with one reference .... we have ... I took the chalk. It is gone. But for some reason you have to do something else .... so let's try another reference .... we use 'take' still. There is the past .... but now that is present because inside this circle. So you have past and present together .... I have taken something in the past in present tense. Only the first verb is the tense.

But now ... [demonstrating]. I had taken ... double reference. That is mind blowing for ESL students.

Another example ... someone left the bag on the table .... so you have to say somebody has left the bag. It is in the present state. But later not in the present state ... you say somebody had left a bag on the table. That is abstract.

It is like going home and looking at an old photograph of yourself .... like when you were 6 ... you were different back then .... so you look at your old photos .... it is present tense but the old pictures are of the past. It is abstract. Most languages don't have that.

I have spoken ... talking about the past.
[example on board] He gone .... the auxillary is deleted.

Let's look at I've:
I've been ... I have been

Most high schoolers say ... I've been .... listen to the phonology ... it turns to this [example on board] I of. You will find this in high school... I of been fired. They have no idea what the word was originally. They have memorized it in a chunk. So you have this [example on board] ... or this [example on board]. Here is Darwin at work ... survival of the fittest. 've' does not look like a word so 'of' does. So let the vision take control ... what we see and hear most often is processed so you get this mistake ... I of.
You will never see a high schooler say Of my keys ..... but you have heard people contract have more .... but it is odd.
Child language acquisition and ESL students delete it. But children have an easier time with this 'have'.

In England we contract things more readily than in the US. So we have these two.
Questions?

Student: How do we get 'get'.
Professor: Get and got are present and past.
Student: No ... he got a piano... or he got upset
Professor: But got and git are funny .... so you use 'got' as have. Sometimes you use it like 'be'. For example you can say Mary got kissed. Get means have or be. It could be used....
Student: He got married...
Professor: We should ... it is strange. These are interesting. It is a strange verb ... old germanic word that has become Latinized.

What about 'get'.... get is present ... past is 'got ... and let's not forget ... He has got ... or he has gotten .... He got the exam or He has gotten ... gotten will probably die out. These are good summary paper topics.

So we have sketched this out at the word level. There are lexical words, noun, verbs, etc. These are universals ... full of semantics ... and this is variable here. [example on board] so this is a nice dichotomy.

ESL students ... know these things [example on board] .... to know when to use the word 'the' and how.

Did I tell you about when to say... I would like to visit The Pacific Ocean. You need the word 'the'. If we delete 'the'.... you say I would like to visit Pacific Ocean. But if you say I would like The Lake Michigan ... or I would like to visit Lake Michigan. So how do you explain it?
Student: Isn't like a modifier? The lake Michigan and the houseboat .... it takes the place of ...
Professor: You are on the right track. Lake Michigan is definite. Because it is named .... it is definite feature and 'the' is redundant. We use 'the' when we want to be precise. We use 'a' when we want to be generic.

And we will talk about 'the' ... later and it has some definiteness .... and Lake Michigan has been named so saying 'the' is redundant. We have an intuition when it sounds wrong. But we will discuss this more for our 3rd test.

We need to talk now about morphology. The morphological level ... still with word .... but one last word before I hand back the exams.
We have the term morpheme. And you should recognize this ending .... eme.... means
meaningful. morpheme is the smallest meaningful unit of language. So there are two types .... free... that stand alone. They are words ... like 'cat'. A single morpheme and a word. That is an example of free morphemes. But there are bound morphemes.... they have to attach... affixes. So we talk about stems and affixes. Some kind of a stem ... in a bracket like that and affixes with a bigger bracket ... and then we have [example on board]

If I were to say 'cars' we have 2 morphemes. 2 important unit of meanings. So we have a bound affix. And when we talk about affixes there are 2 there also. And that is where we again get into the Skinner/Chomsky debate again.

But a morpheme is the smallest meaningful unit.

Questions?

Teacher has how many morphemes? 2. Teach is the suffix

We are going to talk more about this and how it shows up in the brain and we will talk more about this on Tuesday.

[Handing back exams and discussing grading]

Here is the grading ... and most of you did well.

5 = A
4 = A/B. - this could be a B depending ... I will be curving
3 = B/C
2 = C
-2 = C- or D

There are two exams one is inside the other. [Calling]

Student: Are there two grades?
Professor: Yes. See you next week

November 3, 2009
Eng 301
Kasey Benham/Jessica Salinas
CC: Professor Joseph Galasso

PROFESSOR: Derivational such as this little ER teach, teacher that's a derivational. We will put "it" under this side. This is Skinner and on this side of the fence, we will put inflectional morphology.
If I were to say there were 2 teachers now look what we have we
have that little "F." How many do we have with the teachers? We have teach which is your stem and the ER which is the derivational morphine and now we have this little S and look at the brackets. We have 3 morphines. 2 of which are bound affixes and we would put that S over here. Stem derivational inflectional they are both bound affixes and this is the stem by it is.

Now here is the interesting science. For a long time when you are adding something to a stem that will be abstract, you have the Skinner and the chunk and something that you add to it. X plus Y equals 0. That's a rule.

Anytime you have a here that left hemisphere will light up. It's a rule based. It's not memorized as a chunk.

1990-1992 when MRI scans were useful for linguistic theory. It was not thought of to be a useful language until recently. Let me give you a quick rundown on experiments that were being conducted at UCLA.

We had to learn how the brain treats language and we had to separate what we call background noise. For example, when we ask subjects to read a word on a printed page because we wanted to figure out what the language task is and we had to see if the optic nerve on the back of the brain.

Looking at something that's not linguistic, how do you separate that? When the subject speaks words you have to move your mouth and lips. Now that part of the brain that's controlling movement as to be activated. When you are not talking and you have to use your arms and legs that's another part of your brain that is activated.

How can we remove all of this luggage and get to the language?

People decided we will see what happens if we have students or subjects kind of memorize a short list of words. What happens when we just think about a word? No muscle control. No vision. You can close your eyes, it's like what you do when you pray or meditate or you daydream. What's going on up there or when you are trying to find a word. It's the tip of the tongue phenomenon. What is your brain doing? These types of experiments were being used at UCLA.

Let me give you a story on this. They would have subjects the ERP things on the scalp. And we started the subjects just to come up with thinking about simple lexical words like book, boy, colors like red. Verbs like dance, walk. And you notice that all of these basic words -- they wanted these words to be monosyllabic. All these are monosyllabic.
They are all being memorized as what, chunks. What goes in comes out the Skinner.

These are all what we call lexical. These are nouns and verbs and adverbs. You only clap out once for each word. What part of the brain lights up when the subjects think about these words? They had to go back and think about this category.

The temporal lobe lights up. Go back to your earlier notes of this class or go back to the end of the book that shows you the brain.

Temporal lobe lights up. You close your eyes and you think book. You don't say you think book that's the part of the brain that lights up.

What if it's bi-syllabic like the word brother? How do you segment brother? Is it 2 or 1? Which is correct (example on board...) pop quiz? Which is correct A or B? B.

It's called a C over here. Let's call this D up here. Which is correct between C and D? D. Even though they sound the same you clap out twice by syllabic. They look the same on a printed page they have that ER at the end.

Brother, teacher. They are identical in terms of structure. Teacher has had how many morphines? 2. A teacher is a person that teaches. That's what that little ER means. We will end up having to say if it's under Skinner if we put something under Skinners theoretical thinks it has to be associated to a meaning basis. Anybody know what ER means? It can't stand by itself.

STUDENT: Referring.

PROFESSOR: A teacher is a person or a thing when performs the act of whatever the verb is. A teacher is a person who teaches. A cook a cooker is a person that cooks. A driver is a person that drives.

What does a computer do? It computes. How many of you think about compute. We don't remember this verb. A computer computes. What does a refrigerator do? Refrigerates.

They look the same and sound the same but a brother is not a person broth. There is a stem here. Of course this is incorrect and of course that is incorrect. Brother is a chunk and teacher is broken up in 2.

Brother is dual.

They were introduced to the word brother. It's bi-syllabic. What happens when they think about this words? It's the same thing that happens to all the other words. It's not important for brain processes.

Brother is memorized as a chunk just like walk and dance and boy and
book. They are lexical units and the temporal lobe lights up. Brother is another noun. Like tree. It's the same thing. You don't invite your tree for lunch you invite your brother for lunch.

This is the beginning of the experiment. Teacher. Let's have these subjects think about the word teacher when they think about this word what's happening in the brain. Remember there should be 2 things going on here.

As it turns out this is the big surprise the temporal lobe lights up and nothing else. Now they have a big problem. And there is a lot of writing and papers produced because of this. Teacher is supposed to be that linguistically. Let me be specific about this. And then we have a big fight on our hands. Linguistically we have this going on. (example on board...)

That's linguistic theory. We have a stem and derivation morphine. How the brain deals with this -- the brain will do what it does.

There is a kind of discord right now, but the brain is telling us this -- the brain is telling us that we memorize this word "teacher as a chunk just like we memorized the word "brother" as a single segment. Linguistic, we think that a teacher is 1 that teaches.

It looks like the brain is telling us that we basically process teacher just like we process brother.

First, second and third graders we use to spend a lot of time in the grammar. We spend a lot of time with that ER. We use to break it up in terms of our lesson plans. Maybe if the brain for this child is to memorize teacher look at the word association look daddy car it's the brain processing.

The child is not thinking teach,er. That's what the brain is telling us. They are suggests in the curriculum like the dancer and driver they can be memorized at the teacher. If I ask you to draw teacher can you draw? It's like a now it's something that has an association.

We know it's lexical you are taking something that was once a verb and now it's a verb. And the fact that you seem to be memorizing it as a chunk also points to Skinner.

We thought it was X plus Y equal Z. A lot of papers were published based on this finding.

1 more step then we have the subject think about this word: There is a line in the sand that we draw here. Now we have this word "teachers." Like what we did here.

Maybe the brain is thinking this as a chunk. What about this S. We
know we have a stem. We know we have derivation morphology. There is that little inflection of S that triggers the left hemisphere that's called Broca. This is what we get temporal lobe for this stuff we can call that TL. It's the associated brain. It's our memory brain. When it comes to that little S at the end, it is this S here which is front left hemisphere or Broca. We also get TL and we get front left hemisphere which is triggered by that little S.

That seems to tie in to Sally and Broca and ESL. They say things like John work on Friday. Instead of works Friday or I have been living here from 7 year. Or you get that Creole language. It's all coming together now whether there is something funny about that S.

Why is the S different from the ER? For example, this little S -- we use those squiggly lines when we are talking about S. Because this ER is changing the word status for instance, from a noun -- from a verb to a noun because it's playing with lexical categories. We will put it under Skinner and now we have brain imaging support for that.

This little S doesn't change anything with the meaning teacher teachers it's still a S. It doesn't have any semantics its abstract it's CHONSKY.

How inflectional is more abstract. And it shows up in different parts of the brain. 1 other quick note. We never find ESL students deleting derivational.

Dancer we know it's processed like this and it's not processed like this. If that were truly processed at the edge that might be prone to deletion.

Children delete verbal S all the time. But they never delete an ER. We have not come up with an ESL that said she is a good dance instead of dancer. They don't delete those. If they are not ever deleting these little A fixes maybe they are super glued together. Remember that concept. They are chunks.

That's a nice little discussion there. Children don't delete these. The word teacher could be acquired just as the word brother is acquired at the early stage of the accusation. That little S is not going to be acquired early on. I will show you more of this when we do our third exam.

We have to introduce these concepts. Questions?

It fits very nicely on this template here.

Questions?
Let's do another 1 and see if you can figure it out.

Sisters: How many morphines. 2.
Other examples of derivational:
Maybe: ISH ... don't be so boyish like a boy. ISH has a meaning connected to that. It will be memorized as a chunk. Others might be hood. My childhood.
Maybe SHP or friendship.
You will never find anything even approaching that with these inflections. The only very recently we started to appreciate their distinctions.

STUDENT: They can have different definitions. Like childhood is duration of time or like neighborhood is a space.

PROFESSOR: They have meanings but they have different meanings but they are not abstract.
Like the LY. Quick first becomes quickly you are taking an adjective and turning it into an adverb.
Does it have meaning? Is it changing the word status is it changing the lexical word status.

Bear with me. I will give you 1 more taste of this. This is a cleverer experiment. Thinking about words and how the brain processes these.
Quickly. I think you will appreciate this. This little ING. We all know this.
Where does it fall on your graph here? We know it has to be a fix. It can't be a word by itself. Is it derivational or inflectional or abstract? It could be both.

For example:
A: A shopping cart.
The shopping cart is broken.
We have this little ING. Shopping ... what kind of a word is that?
It's an adjective. We know that's a noun. We have what was once shop. And shop is what? Verb. And we are turning what was once a verb turning it into an adjective plus this ING is an adjective now. Is it inflectional or derivational? Derivational. Taking what was a verb and turning it into an adjective. Here we have shopping as an adjective. This ING is making it into an adjective.
The B: The shopping was fun.
Now what kind of word is shopping? It's a noun, the shopping. If you
can substitute something with a T it’s a noun. Determiner, noun.
Now you are turning shop into what a noun. What kind of ING is that? Derivational.
In both cases probably our theory will tell us that will be processed as a chunk. Just like if I said the red cart. It’s a black cart it’s a red cart. It’s a grocery cart.

STUDENT: Would it be anything that described the card.
PROFESSOR: Yes. It will be memory based. Anything that modifies the noun -- it’s all this chapter 3.
The shopping like it was fun it’s a noun. Don’t be thinking that these ING is separated from the stem shop they are memory based. UCLA tells us that with the brainstem.

1 more. Mary was shopping.

Now the shopping there we have an ING. Shop is what, a verb. Shopping, it’s a verb. Mary was shopping for socks. We are not changing lexical category. It’s still a verb. Guess what we have here we have a grammar to talk about. B plus the verb plus the ING and it is called progressive.

We have a verb plus an ING and this will give us progressive grammar. This is X plus Y equal Z. This is a true rule.

I am memorizing shopping cart like its black cart. I am memorizing shopping as if the party was fun. This is broken up this way, shop verb plus an ING and it’s broken up this way. Verb plus an ING and you can stick anything in an ING.

Let’s make up that verb wug. John was wugging and productive. B plus verb plus ING. You are not changing the meaning, that’s inflectional.

Let me give you a quick rundown.
Examples of inflectional.
The plural S. That’s inflection. When child language delete that S. When specific language impairment problems that you would find in third or fourth graders, they will delete that. They will not delete these things. They delete this. ESL students will delete that S. It’s because of the front hemisphere.

Broca is very subtle and abstract and it’s prone to change and air and to imagination.
The plural S. She works on Friday. Mary works on Friday. You will get Ebonics or Creole that you find in certain parts of the south.
When I was in New Orleans, they would say, on inside. She make
They delete that verbal S. Past tense ED. That Tom car instead of Toms.

That mommy car. That daddy car. They delete the possessive S. All your tense your ED. The ING. When it’s part of the progressive grammar -- when it’s B plus verb plus ING that’s your inflection.

These are the main 1s. I want to introduce you. If we don’t have time we can finish this on Friday. I want to introduce you to case. Before we do that -- I want to pause here and make sure that you understand what we hear doing here. Sally experiment. Broca’s test is the plural test.

The car was driving. We make a mistake sometimes and we make slips of the tongue. We end up saying the drive was car-ing.

We never get this. The driving was car.

Put it into this discussion and there’s the ING. We have the noun is the car and drive is the verb. These are 2 lexical categories. They switch. It’s called the slip of the tongue.

Drive goes there and car goes here. What happens to the ING. Does it get switched with drive? It stays put. It proves this processing.

It proves that the ING is distinct from the stem it’s processed separately. When we do this that’s what that is telling us. This is Skinner. Look at the brackets.

People have written Ph.D. dissertations just on that. It’s about 6 years worth of work. Skinner and there is chunky. Teacher goes in that box. Teacher with that plural S goes in that box.

This ING is on the outside. We have the ING that comes outside that looks like that and that’s lexical and that’s functional. This is a stem and this is inflectional rule base. What get switches just the stems and the INGs stay put.

If Skinner were correct. Look at the opening 2 weeks of this class for this second exam. If Skinner were writing and driver were memorized as a chunk you would get that mistake.

We never make that mistake. The next time you make a mistake listen to your mistake and think about the underlying linguistic processes.

That goes to the heart of this ING. However the ING was processed derivational. It would be memory based as a chunk.

This is a very nice scheme. Word level is functional. Now we have this morphological level derivation. I want to talk about case on Thursday.

And then on Thursday I want to introduce you to the rack eater. It
was on page 438. Look at the rat eater. We will do this on Thursday. This will be the headline for Thursday.

Children seem to know that there is a kind of intrinsic order that derivations come first. We don't find mistake produced by kids. Such as this: For example, (example on board...) this would be the stem and that would be derivational.

Kids make load his and loads of mistakes. This never shows up. These 2 never seem to get mixed up. That's an interesting observation. It makes more sense if this ER can't mixed up because it's super glued to what, painter.

We will show you some experiments that will try to convince you the order to this proposing. And we will introduce you to case.

This is the last thing that I want to say right now. In terms of universals all languages seem to go down here. All languages have noun his and verbs. They have a morphological processing that changes the word status.

When you get language variation or differences in language -- some languages have determiners like "the."

Some languages have plurals and some do not. Some have tense and other languages do not. Chileese has no tense. They still get along. Today I go to the park. Yesterday I go to the park. Tomorrow I go to the park. There is no grammatical abstract for it.

2 things the rat eater experiment and case. And then coming on the heels of that next week I will briefly introduce you to some semantics. I want to talk a little about this and then we can review for the examine. 17th and the 19th for the exam. Specifically, everything that we talked about with regards to "word."

Chapter 3 for now.

End of class.
a $30 million deficit next semester. There is going to still be furloughs next semester. She is nervous. I have had colleagues that have spoken to her and she is usually calm but she is nervous this time.

If you get a chance to sign a petition .... about ... and there are student organizations called Cost..... do you know that? Cost student or something like that ... but sign Ab656..... it is an assembly bill that mandates oil companies that extract minerals from California to pay some kind of tax .... that they don't pay right now .... they extract minerals from our state but don't pay for it .... so this new bill will bring billions of dollars and many states that oil companies that operate in their states pay for the extraction of oil from their state. They have them pay money toward education. So if you get a chance to find out about the bill... Ab656 ... it will not cure all our woes but it might be a small windfall.... and help us. I am just talking about this because my colleagues have been talking about this. There are students that can't graduate because they can't get classes. It is impacting everyone. Stay alert..... you don't have to be an activist but be informed. Try to form an opinion.

So today we are going to review. I promised a footnote. It is not a bad thing to look at chapter 11. That is about acquisition. It is a nice read for you. You might not understand everything especially about the tree diagrams but ... in a nut shell I want to give you a feeling about what we have been talking about.

Then I will talk about the test So let's talk about this .... language. Let's break it into lexical and functional. And there has been a lot said about this. We know the Skinner philosophy covers this and Chomsky this .... [Drawing on board] we have talked about noun and verbs.... modifiers ..... and also about derivational and determiners that introduce a noun.

So when we talk about phrases .... a determiner that introduces a noun is a determiner phrase that looks like that [Drawing on board] Auxillary .... will introduce a verb. So there is a rule .... that looks like this [Drawing on board]
I think we want to say .... I can do something ... a skeleton of a tree to illustrate something.

A determiner phrase.... it looks like this [example on board] a tree diagram. You won't have to do this right now but the next test we will. But this is an example of this .... [example on board] if I said "two books." It is not a sentence but ... people say it is a noun phrase but it is a determiner phrase. But any inflection .... like a plural 's' ... which is here [example on board] .... a plus plural feature triggers a little 's'. Is it free or bound? Bound. And inflectional. And it triggered by Broca. It has to end up on the noun. So there is a movement analogy. It starts in determiner as an abstract feature.... but then moves to the noun as an affix. So that is interesting.

Remember Skinner wanted us to think like this [example on board] books..... was a chunk ... but Chomsky says it is dual processing ... so you get this ... [example on board] it is a
dual processing mechanism. We will talk more about this later. But likewise we can say the same about a verb phrase.

A verb phrase gives a main verb phrase and this is how it is going to look ... [example on board] She sleeps. That is a sentence. We know the verb is sleep. Skinner gives us that ... but there is a third person minus plural ... [example on board]

We could draw [example on board] .... and she is the pronoun under the noun slot. There is not determiner but this is 3rd person ... person feature.... it is singular because it is only one person ... minus plural ... it correlates to the verb... subject verb agreement. These features make up the third test but .... I am saying this now so you know what happens in child language acquisition. But this example is what? The rule is .... ?

Noun plus 's' is plural. We know this ... verb plus 's' is 3rd person singular present tense. So what happens? You add 's'. It is a singular 's'. It is not plural unless on noun. But this comes from a singular subject. If the subject were he and she... the 's' drops. So this is 3rd person singular plural and you get inflectional morphology.

I have given you basic examples of inflectional morphology will look like next time. But all I want to is say about this ... is ... that children start with lexical stage 1. This is child language. It is the lexical stage ... around 18 - 24 months. For me that is too cramped .... parents start to worry ... and if there are two languages going on .... like mine ... first born boy bilingual .... boys are slower ... what is more interesting is that we can see the Broca area of the brain is not developed at that stage. There are other things going on but the front left hemisphere .... not so much. The density increases after 2 years of age .... if you deal with lexical categories ... in derivational it is memory based and this is ... and meaning based so children have lexical stage 1. You can do a paper on that We have a nice library here. Google is great but not a good substitute for books. Many people are worried now that there is no randomness.

All inventions started out as mistakes or accidents. So it is nice to go and get lost in the library or any place even when you travel. I found my wife that way.

So you will find that they don't produce determiners or nouns. They might have the word two... but they will not have grammatical features. So children will do this ... double noun. The 's' deletes. So children can say two ... but it does not have a grammatical feature. So at stage one there are no grammatical features or inflectional features. No case or past tense ... no number feature or plural.

Here ... at stage 1 if there is no auxiliary ....what is the default of her? She. There is no determiner so there is nothing like this going on ... so the 's' deletes ... her sleeps. Instead of saying ... [example on board] What is the man doing? You have auxiliary and determiner here and 'ing'. As it turns out children do produce the 'ing'. [example on board] watch and watching .... we have frequency dictionaries .... and it turns out .... watching is 4:1.
Imagine if I watch television .... my brother gets in the way .... I watch television .... we don't hear that or produce it. There is nothing wrong with it .... but we say I'm watching .... we use the progressive tense. So children ... what goes in goes out. Stage 1 ... language XY goes in and XY goes out. But Chomsky says XY goes in ... language X comes out ... deleting Y ... and sometimes we get something more... XYZ. Extra stuff coming out that did not go in. You get omissions and commissions. They either delete or add something in. So there are a lot of 'ing' verbs being produced.

You say What's the man doing? Stage 1 .... the 'is' is gone .... and 'the' is gone and we are left with What man doing?  [example on board]
The man is doing what? Because English is SVO .... but we move things ... and have auxiliary inversion ... so we move 'is' in front ....and have WH movement ... so you get this [example on board] What is the man doing? Sometimes we leave it on the end for emphasis. We know the auxiliary comes after the subject.

But sometimes the children get the auxiliary but fail to move things. So the child will say What the man is doing? Movement is Broca. You can try this ... find a small child and say ... Mary was kissed by John... who is doing the kissing ... they will say Mary .... because they don't do the movement thing. So we want to say there is a non inflectional stage ... so there is no number, no tense. Yesterday me go school... that is what a child will say. They will say things like two book....and they know there is a number. You have heard a child say 'me do it'. That is the default. And children pick that up. So no inflection ... and no determiner and auxiliary.

When they do get this they still make mistakes.... like my daughter says 'what did he saw'. So we say there is lexical stage 1 and functional stage 2 ... and Broca comes on line at 30 months. They point.... and gesture. So you need to think about stage 1 structures and what they look like. You will get things like this versus stage 2.  [example on board]

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Me do it</td>
<td>I do it</td>
</tr>
<tr>
<td>Him do it</td>
<td>He does it</td>
</tr>
<tr>
<td>What that?</td>
<td>What's that</td>
</tr>
<tr>
<td>What man doing</td>
<td>What is the man doing</td>
</tr>
</tbody>
</table>

[examples on board]

So those are things we will be looking at .... no determiners. Because again a determiner phrase ... all inflectional features ... will look like that [example on board]

Same with the verb phrase [example on board] all features look like that [example on board].
So if you delete this .... and that ... you are stuck with nouns and verbs. So you need to know inflectional morphology. So you will get a sense of the early stages of acquisition. Chapter 11. Look at this material as a way to understand what we have been talking about.
Student: It is U shaped?
Professor: Yes connected to U shaped learning ... it is Skinner and then apply rules and Chomsky .... stage 1 is memory based.
Student: [can't hear/can't understand]
Professor: This is 'went' 'goed'..., that was an example of U shaped. All this is .... a word memorized without understanding the past tense .... went is go past tense. Later they work with rules... they know a verb +ed..... children say 'wented'... rules are applied... but over applied. Then it gets corrected. Irregulars are exceptions to the rule. But before that you have to have a rule. U shape is no rule but you over do it ... over applied and then the exceptions get corrected. So U shaped learning applies.

So if you find children at the one word stage nothing is going on ... it is noun and verbs but when they put words together .... you see that there is a lot missing in language. If I said 'me want cookie'. You understand it ... but what is missing is the abstract functional grammar.

In my other classes this is a whole section that I lecture on ... but this is stage 1 ... and you can get an idea of what I looks like. **Read chapter 11.**

I hope you will take other linguistic classes. But you need this class before you can. This class prepares you for it. We will do some tree diagraming ... like English 302 ... we will do that. How many have taken English 405? That is optional for you but is interesting. We expand on creole and historical changes in language. But now let's go back. Let me tell you what I am thinking and how to prepare for the test. I have made out the test already.

First ... go back to the early lectures when we talked about Berko, Sally and the **processing distinction.** What is the relevance of Berko. Berko shows up on the CSAT test. What is the relevance of WUGS Child language acquisition ... they add things they have not heard before. It is production. They never heard WUG but they can produce it ... something comes in and they add a rule.

Sally was an ESL experiment and deletion. XY comes in ... and when you add something that is not there ... that is BERKO... XY goes in and X comes out .... they delete. You have heard a Spanish speaker say I live here 7 year. They can say the 's'.... but when inflectional ... it is a processing problem.

We talked about .... [example on board] lexical words switched ... and you have these morphemes ... and it moves. [example on board]
The affixes are different ... we don't find 'the driving was car' ... and I mentioned this .... on page 1 of the text in the last paragraph

Word.... we did Berko and Sally and then we got into phonology ... but skip that because
we tested on that. But look at the definition of 'word'. One to one association between sound and meaning and Skinner based. But then we saw the definition broke down. Remember the drew sentence about children washing faces ... look at your notes. Lexical stage 1 ... and functional words and Skinner Chomsky debate.

Then we looked at how we applied the dichotomy ... the functional and lexical 'do'. Remember How do you do? Which do you delete? The functional one. N400. It is a simple way to think about that process.

I also talked about auxillary verbs...**you should know about determiners, auxillary.**

**Know the 3 auxillary verbs.**
What is the rule? Be+verb+ing. Look at that rule... it is progressive.
This is functional ..... because auxillary ... this is lexical because verb and this is affix ... inflectional affix ..... so you can get a sense of how they map on the Skinner Chomsky debate. You can come up with the example of Mary is cooking. That is where this is happening ... [example on board] .... where is the 'be'. Was. It is the past tense. So be+verb+ing.... it is detached. It not glued together. You memorize things .... but Chomsky says there is a root and you apply endings.

So then we talked about inflection and derivational. If I asked how is derivational more like Skinner and inflectional is more like Chomsky.
You take a verb and turn it into a noun and that is lexical. That is Skinner. There is no abstract.
How many morphemes are there in words? How are they processed?

When a child says brother .... it is the temporal lobe.... so when we give them teacher.... it is stem+affix? No... it is in the temporal lobe... but not till it was teachers.... did it look like this ... the UCLA experiment ... [example on board] the 'er' is derivational ... and not till we get 's' .... does Broca get triggered.

So derivational is more like lexical word formation. Inflectional is more like compound. And more substantive.

Children at stage 1 ... should they be able to learn teacher? yes but don't have the inflectional 's'.

**Remember the rat eater experiment .... there is a prompt for that ... explain that Peter Gordon experiment.**
This was working with children ... what is a person that eat rats? Rat eater... they delete the inflectional morpheme.
The rat eater experiment says there is an order.... and the processing is derivational and at the end there is inflectional.

[example on board] do children do this? No. Kids make lots of mistakes but it has never been recorded that this has been said. We even look at ESL students and they don't do this [example on board]... inflectional and derivational at the end.
I love to analyze mistakes. I like to look at what never happens .... it is interesting. But it happens like this [example on board]
You can do a summary paper on Peter Gordon.

I also told you about my slip of the tongue..... taco tonights .... it shows what? This lecture looks at words... and processes and how do you tie it into the debate.

U shaped learning .... Sally, Berko, child acquisition, compounding. You will be allowed to choose a prompt .... there will be on the Tuesday test 3 prompts and you select one and also the same on Thursday. A good exam is through and cohesive and with good examples and explanations.

No charts or IPA ... that is done.
Student:  [can't hear/can't understand]
Professor:  I talked about parameters ... English is not inflectional but Spanish is. Also it can be connected to pro drop. A strong inflectional language ... there is a section on that .... around page 236- 238. So you see inflectional morphology. You can delete subjects, pronouns in highly inflicted languages. Connected to pronoun ... pro drops... page 236 ... and 237.... this speaks to inflectional morphology.

If this were a spectrum ... English is in the middle ... it is inflectional but not heavily like Latin. Latin is richly inflicted. Chinese is the extreme left ....alot of it is discourse based. Turkish .... is long words.... some languages you say taxi driver ... but in others it is man who drives people around in cars.

So some languages are isolated and some are glued. Spectrums of different language

This is not a hard test if you study. There are some students that write neatly.... but say nothing. It is hard to fake the material. But if you have been here and read... look at chapter 3 on word.... some of chapter 2 .... Sally experiment .... child language acquisition .... compounding ... page 442... and parameters page 236 - 238.

Ok ... see you on Tuesday with a blue book.
Professor: Sound of life. How is everyone?
Student: Better since we get the tests back.
Professor: You know my grading scheme.... I was pleased with the exams. Most of you did well on the exam ... like you did on the first one. It is the nature of the student. If you read and understand the material it showed. There was improvement from those that were weak on the first .... we sometimes get mixed results. But I will give these to you at the end.

My daughter loves to file .... a freshman in high school... she filed these together for me. She tells me it is faster as she goes through it .... I told her it is like life .... as you move through life it gets easier.

So good ... I am happy to return these to you. Secondly ... I have student evaluations ...... so I will tell you about what we will be talking about for the 3rd test .... and then give back the exams ... so you are in a good mood and say good things about me and do the evaluations. There is no class on Thursday but the following Tuesday we will resume.

For lecture 3 ...... I want to tell you about about another course ... English 302 ... the grammar class. Some of you might have taken already but 302 ..... I want to tell you about the introduction of tree diagrams. You understand what the model represents but I will present it on the board today and break it apart.

So we had sounds ... phonology ... the smallest unit of language. Then we did word .... and talked about morphology .... and lexicals and parameters ... and now we are going to discuss sentence. With sentence we will talk about phrases and tree diagrams and features ..... and you can take this into into other classes. And I think the major aspects of this lecture will be about
understanding what a sentence is .... defining sentence ... what is a phrase ..... and its structure ... and I will include feature theory .... so we will break down these components and what do you get when you break up a determiners.

If I had the word "the" in my hand and I throw it across the room and it breaks open ..... on the phonological level ..... [On board.] We know we get this [example on board] .... consonant structure and stressless .... and morphologically .... we would say it is a functional word which means ... it is plus abstract and minus semantics and serves grammar.

At the syntactic level .... it is morpho-syntaxes ..... what spills out is the same as number .... and plurality and abstract .... remember we said why do we say "I would like to visit the Pacific Ocean" vs. "I would like to visit Lake Michigan" .... but breaking this down .... it is like breaking open water .... and H2O spills out ... and this is important when we talk about syntax.

We will look at tree diagrams and phrase structures .... and features ... number ... definiteness .... things you don't see in language. Sometimes things are silent and impact language. I want to talk about parameters and finally I will talk about child acquisition language and talk about syndromes .... fragile X ... Aspergers .... etc.... and creoles .... that is interesting. It is a pidgin language. Tree diagrams talk about how a language is structured.

Student: What about the paper?
Professor: First we are going to talk about tree diagrams ... understanding phrases and features... parameters and child languages. And we can incorporate language impairments and creolizations. And for readings ... chapter 4 for sentences ....
there is the first tree diagram ... chapter 5 is phrases and 6 is the auxiliary structures  Don't worry if it look technical we will break it all down.

Chapter 11 is the child language acquisition. Parameters is chapter 10 .... but let's say that start reading chapter 4, 5, 6... and then we will discuss the remaining  So those are the chapters.

Now the paper .... this is a junior level class .... and you can write this paper ... I am asking you to do a literature review ... not even a research paper ... you summarize what is being said about a given topic. It is not research .... more about what is said about a given topic with 3 sources ... I don't care about style.

In the English department it is more MLA but it can be APA. Something from the Internet .... and access something from the library ... find a journal .... or a book. And I am flexible on topics .... anything that is interesting for or to you. If it has linguistic content ... it is fine.

Student: Can I write about Jeanie?
Professor: Yes ..... I always get Jeanie ..... we want to have Suzie Kurtz come out and speak some time. She is at UCLA. I spoke to her and we have been trying to plan to have her come and that is a perfect topic. You can to language on the radio, television or newspaper ..... I had someone do a topic about present tense about things in the past. For example .... Clinton ... visits Baghdad.... visits is present tense but we are reporting on something that happened in the past. It is headline-lese... why do newspapers present things in that way.... Ebonics.... code switching .... starting a sentence in Spanish and ending in English ... or child language acquisition .... this is an exercise to think about a topic that is linguistic.
You might be working with students with disabilities ... like Down syndrome ... how does it affect language. ASL.... there is a big deaf community here ..... is it a language? Yes it is. What kind of a language is it? It is like Spanish a pro drop ... what is the word order.

Student: You said William's syndrome.
Professor: You can do that. That is a good topic and it is due on the final exam day. Not more than 3000 words. Don't think you are writing a dissertation and it will boost your grade sooooo much. It will not swing your grade up too much it is 10% of your grade .... it is a nominal paper.

Some students get a lot out of it. It is worth about a half a grade but it might be rewarding for you.

Student: When is exam 3?
Professor: I didn't bring my calendar .... I don't set the date for that .... does anyone know when it is going to be?
Student: It is Tuesday Dec. 15 at 8 am.
Professor: That is your exam day. Your final exam is 2 hours .... one exam on the Tuesday, Dec 15 at 8 am. It is an early start up ... so adjust your schedule accordingly.

Questions?

Remember 3000 words ... 4 pages for the paper ... single spaced. I like single spaced. I don't like double spaced papers .... there will be no corrections on your paper so I don't need double spaced.

So now let's start off by saying something .... and we might end
early. So let's start off by .... saying sentence.

Let's begin that it is made up of .... [On board.] And this is a nice way to start ... defining sentence. We know and have for a long time that sentences require a subject .... it may or not show up in phonology. When I say "open the window" ... is there a subject there? I was looking at someone ..... is there a subject? But it is not phonological .... it is implicit .... so there must be a subject. And they will get plus nominative case.

Whether it is overt or covert is phonological .... and sometimes it is called the 'topic'.

And of course you have a predicate .... and these will have a subject whether covert or overt it must have a subject. We should go this way ... but the predicate gives information about the subject. And embedded is a verb .... the verb gives the information. Nouns are for labeling. They don't provide information.

So predicates are like the informant that refers to the subject. And the verb must have tense.

You have a sentence when you have a subject .... and a verb that gives tense .... it is plus finite meaning it gives tense. And that is the condition of a sentence ... a complete thought.

If I say "John" ..... I need to say something about the subject ..... "John sleeps." That is a complete sentence.

While I was driving home last night the man who was president of the university .... and stop there ... that is not a sentence .... John
sleeps is a sentence. Just because a sentence is longer does not make it a sentence.

The response "no" ... is a sentence .... to a question of "do you want to go to the party" One word can be a complete thought .... even body gestures .... or the slamming of a door can mean something .... so this is the idea of a sentence. A subject and predicate with a verb that gives tense.

The phrase level ..... or structure rules ..... and you know this already. It is about phrase build sentences. So we know that determiner introduces a noun ..... and out of that you get a determiner phrase ... DP. We know that we can also say an adjective modifies a noun and you get an adjp. A verb introduces a noun ... a verb phrase.

We also say .... an auxillary will introduce a verb .... a main verb phrase MVP. And a preposition introduces DP ... so you get a prepositional phrase. So here are the rules.

Having said that ...... let's talk about phrase structure. [On board.]

Let's call is X .... and P is phrase. Phrases are binary and that is a big thing for Chomsky. So if [example on board] this is a the head with a complement .... and there is a head and what comes after is the complement ... and the head labels .... the phrase.

To make this more concrete .... let's make the head a determiner which introduce a noun ...and the complement is the noun .... [example on board] .... 'the book'. It is a DP. And there is a lot
to say ... this is a nice DP.

We can play with this .... what if the head were red .... an adjective .... with a noun ... red shoes ... this is an adjective phrase. So that is the head. [example on board]

Let's do this ... [On board.] ... a verb phrase .... like this [example on board]
Eat cake ..... there is no subject .... so it is not a sentence .... in Spanish you can say eat cake ... but now without a reference it is not a complete sentence.

One more ... let's make the head prepositional .... so the complement is a DP .... that is a phrase that breaks up this way ... recursiveness .... this has its own head and complement. Who can give me an example?

Student: After the meal
Professor: Perfect ... a prepositional phrase. We talk about parameters .... in English the head of phrases are in the initial position. You won't find this .... [example on board] with the head on this side ... in other languages maybe but not in English. So we will talk about trees and you will get interested in this for 302 .... more.

So let's draw a basic tree.... questions? This will be our last topic for the day.

The basic structure looks like this .... [example on board] DP the subject ... a verb phrase with a main verb phrase ... and then auxillary ..... [example on board] you have the Skinner vs. Chomsky. Let's do a prepositional phrase here ... so that is a basic structure.
Let's make this easy ... John slept after the meal. We are looking at features and phrases and use this to look at language typologies ... etc. We will go slowly ... there are a lot of things happening here .... and then have a notion of understanding the sentence.

So read chapter 4 .... and if it is still a mystery to you .... we will be focusing on the DP first .... and it will be made easy for you. So read chapter 4. Questions?

I think if you can get a good start on the tree diagrams it will help with 302. The make or break of the class are the tree diagrams. Have you had 302?
Student: I am doing it right now
Professor: It is easier as you get through it. So who knows where the English department is? [Reading the instructions]

You need a black pen for the evaluations.

Have a good Thanksgiving.

[Calling names .... returning exams]
understanding of these devices and what is happening in the brain. So we are doing the tree diagrams this week.

The chapters you need to be reading are in chapter 5 .... that is good for the final exam. And we will incorporate features .... and then next week this gives us incorporate typologies ... differences in languages and morphology differences but we will do it in the tree diagrams. Remember the English vs. Spanish discussion? And we will talk about impairments in language .... and chapter 11 is good for the child language acquisition.

There is not a lot left. Child language .... chapter 11 and chapter 5 ... and chapter 4 is good for what a sentence looks like. ... not a lot left. But I want you to understand syntax and tree structures so when you go to 302 .... you will understand this.

The final is Tuesday, Dec 15 @ 8am - 10 am
Student: You are lecturing on the 10th?
Professor: Is there class that day?
Student: No ..... 
Professor: Is that the official day to start exams?
Student: Yes.
Student: On the 10th.
Professor: So that means we will finish on the 8th with a review. So no class on the 10th and the final is on the 15th. Get here on time ... it might be tricky for some of you .... think about traffic and what you need to do to get here on time ... me too. But the final is from 8 - 10 and are going to be on the chapters I said. I will give you the tree and then we will prune away the tree.... we know about Broca .... and prune away and get theory.
Student: When is the paper due?
Professor: On the 15th .... not more than 4 pages, single spaced .... I don't like double spaced ... 2500 words.... don't do more than 3000 words... about 4 pages single spaced on a topic related to class. If you think 4 pages is a lot don't think about graduate school. These are quick papers you can work up.

So let's begin. We started to talk about phrases. Did I tell you about some of these features? What is in your notes? Did I tell you about a number of students vs. the number of students?
Student: No
Professor: Remember Chomsky was about breaking down language ... to features. A lot like chemistry ... so you had the periodic table .... and the composite structures. So think about water .... in a linguistic way. Water as a drinkable liquid. That is semantic ..... a drinkable liquid .... that is semantic. The word itself is generic. Drinkable is semantic. But what is the syntax? Breaking it down .... water for Chomsky is H2O..... it is breaking it down. So let's see what happens when I break up words

Let's take the word "the." I hit it on the wall... what spills out? A couple of things phonologically spills out. If I take "the" ... we get this [example on board] but at the phonological level .... is this. But syntax .... we get subatomic particles. But semantically not much comes out .... if you hammered "the" ... it is just a functional word. So no
Consider this [On board.] .... we choose which is the correct verb. And we focus on this DP .... it introduces the noun ..... see that? [example on board] A is the determiner and number is the noun.

Now focus on this ... [example on board] .... we have the same noun but a different determiner .... they are both DP and same complement ... but determiner is different. So the number of students .... is/are dropping. If you are native English speakers you have an intuition which is correct. Which is correct?
Student: Are
Professor: So you know this is not correct and you go with 'are'. You know 'is' is wrong. Look at B.... is/are?
Student: Is
Professor: Right .... the selection process.... logic says it is the determiner. Number is the same .... the only difference is A vs. The. So this A triggers this verb.... [example on board] .... this determiner The triggers that verb [example on board] .... so look at the chemistry ... something about A ..... the determiner triggers a plus verb .... John and Mary are.... a plural verb. Something about A triggers plural ... but The triggers a singular verb. There is a an agreement about the subatomic particles.

Let's look at a DP.... consider this ... [example on board] can I say A book?
Student: Yes.
Professor: Book is minus plural. So there is plus agreement .... we talked about this .... there is agreement. But can I say 'a books'?
Student: No
Professor: Right because A is a singular determiner. For the complement it has to be singular as well. There is a feature clash. So there is an agreement that happens and we are talking about a number feature. What about The? Can I say The book or The books? The can be both plus and minus.

In terms of number we say A is singular and The is both ... singular and plural. This is an example of agreement in a phrase. It is plus AGR. We talked about this.

That is not what this is ... [example on board] this is a determiner noun agreement and this is a subject verb agreement. That means that feature ... is going to percolate and they will travel to the verb which is a long ways away. It looks like the determiner triggers plus plural verb. Why? We will talk about it. The vs. A ... the is specific ... it is definite. It looks like we say that ... with 'a' it is minus definite. Because of that it is not precise. It is vague. When you are vague and not precise you have generality. When you have plus definite you know the number.

When you say 5 is my favorite number .... it is definite and specific. It is singular. So there is a notion of definiteness. Minus definite triggers plus plural on the verb. When precise ... that precision plus definite triggers plus plural.
You might ask what do you mean? For example ... imagine I go to a kitchen ... and John is with me and there is no food. I don't see anything. So I say can I have the banana? John will say what banana? I have one in my mind that I have seen. That is a weird statement.

Same scenario ... I might say can I have a banana ... he will say let me find one. So 'the' is precise .... and it carries a feature specificity.

Let's talk about features .... the determiner feature. We will be drawing DP trees. Plus/minus definite.

This is the definite feature ..... so that means all nouns are plus or minus definite. Look at the implications. You got this right ... [example on board] .... this is the reason why we say I would like to visit The Pacific Ocean .... you have to say 'the'. But for Lake Michigan you have to say .... I would like to visit Lake Michigan ... you don't say 'the'. If you use 'the'... it is strange. It is these notions of features.

So plus or minus nominative ... this is case ... I vs. me. This is case. We need to know if plus or minus nominative. [example on board] You remember there right? [Review that for the exam] That is case .... this is the plus and this is the minus ... object case So review case.

P means person feature. You have person feature ... [example on board] ... those are the person features. If you have a noun you have to include a person feature.

We can have plus/minus plural ... and that is number. We could if more a syntax discussion ... in Spanish you have masculine vs. feminine.

Let's keep the DP up ... in Spanish you get this [example on board] ..... what does it mean? The girl. It is plus feminine so this is also because they have to agree. So there is an agreement among feature and gender. It is grammatical. But if I did this ... [example on board] that means masculine so minus fem. and we know have a feature crash. We don't say 'the nino'. There is no agreement. There is no problem with the phrase .... we can talk about the other features .... but the problem is gender feature. Those are the more general features.

So let's do the tree. [example on board]

Here is the structure. We talked about the head of the phrase and the complements. This is a DP .... so a simple example is ... The books are expensive. It is a subject DP. Ok so the determiner is 'the'. And the noun is 'book'. [example on board] we have an 's' ... and know this is a subject ... a DP subject ... we know English is an SVO type language. But remember we have SVO so this is the subject.

So the features are .... plus definite. When you see 'the' it is plus definite. It is specific. There are books that are not expensive. Books are expensive but the books are precise. So plus definite. If a subject it is plus nominative case. Objects are minus nominative.
You can use the pronoun substitution test .... case includes pronouns so you can use 'they' .... and that is under plus nominative. You can't say 'them are expensive' ... unless you are using Ebonics.... or some creole languages .... but in standard English you say 'they' ... they are expensive. It is 3P. If you are not talking about an 'it' ... it is 3P. They is 3rd person plural. 3rd person singular it would be 'it'.

Are animals 'hes' and 'shes'... my wife calls our cat a 'him'. Cars are 'her'.

It is 3rd person plural .... plus plural feature. And we have a rule ... morphological rule for plural that says noun plus 's' .... so the 's' you know .... it is functional because it comes from the determiner. It is Broca... syntax... abstract. It is a bound morpheme ... it has to attach. It is inflectional. It is Chomskian

It starts here ..... under this node [example on board] and then it moves and look at the bracketing ... [example on board] we said Skinner wanted us to think this ... [example on board] remember? Wugs? And Chomsky says it is processed like this [example on board] ... this was the big fight. Remember? We understand why 's' is detached ... because it comes from a different part of the phrase. Inflection is a movement operation .... compared to derivational which is fixed. The 'er' from teacher. But the 's' is moving.

There is research being done now at UCLA.... to try and show this movement in the brain ... we see when the 's' comes Broca lights up .... remember the difference between lexical and functional 's'? 

One of the big things now is to prove that this linguistic theory is real... not just notation and physiologically real.

So we have this sentence [example on board] .... and fine. Questions?

Student: So when you do that .... you have to go through the steps?
Professor: I want you to show me the features ... you have to show me the differences .... these features will help you understand subject/verb agreements. So give me a DP ... and in English the head is initial. I can't say books the ..... so this is the head... plus head initial. [example on board]

Let's do an example ... [example on board] we can't do the determiner at the end in English. An example .... in Italian ... [example on board] it is mother my ... the determiner is at the end. So this is head final... or minus head initial. There is a difference in word order. Some have it at the end ... like in Japanese ... head final. But in Italian you have it at the end also. In English ... one typology ... is that in all phrases it is head initial. So a verb phrase you will see the verb comes first .... you can't say car drive .... so you get the verb and then noun.

In adjective phrase you get head initial also. Red shoe.

Let's do this [example on board] ... focus on that ... DP ... nouns are DP ..... if it is a noun you
have to have a determiner to introduce it. It might not be there phonologically but abstract and syntactically it is.

The DP ... looks like this ... see the verb phrase? [example on board] You see head initial .... but how do we diagram 'children'? So now we have the noun 'children'. Do we have a determiner in the phonology? No. Just because it is not there in the phonology it is fine. If I say open the door ... you know it is about 'you'. It is directed to you .... but you delete. We delete in the imperative.

We use zero .... in fact .... the zero was invented .... it is a Hindi Sanskrit ... as a grammatical place holder before it was borrowed for numbers. It was in grammar first. If you want to do a paper on the invention of zero for your paper ... it is fabulous. It is a grammatical place holder ... zero with a line through it.

We have feature we can talk about. I love children ..... it means I love any children ... so it is minus definite. If I say I love these children ... it means a specific group ... but if I say I love children it is general .... minus definite.

It is an object so it is [example on board] DP-obj.... because English is SVO .... the action ... the agent of the action ... is SVO .... it is an object .... let’s do a substitution test .... because I am not so sure... so I love them .... it is minus nominative .... so you have to get the case right. It is 3rd person. Is it singular or plural.

Be careful .. because of the Skinner/Chomsky fight. This part of the brain says plus plural ... it gets the info from the noun category ... but we know we need a plus plural.

We saw a fire truck looking for a fire the other day ... it is like getting a fire alarm ... plural .... plural ..... but as it gets to the location ... it does not know where it is going ... so it starts to move to the location but as it approaches the location ... something clicks and there is a blocking mechanism .... it says this word is plural ... so I don’t need to put out this fire ... so there is a blocking so the ’s’ does not have to apply. So you put the plural feature in ... Skinner wins ... children is child plus plural .... isn’t that what it is? Children is that.

So grammar has been memorized within the word. Irregular means it is Skinner based. So memory kicks in .... Wernke’s area. But you have to use the rule ... there is a memory and exception ... but before that you need a rule so the rule is applied. What is nice is that for children .... who are not sure about exceptions ... children are not sure so they use the rule. So young children say .... [example on board] childrens .... and it is similar to what we found with Berko ... goed... remember that and wented ... remember that? The rule comes first.

No determiner but you have features. So this is not right ... so look at this bracketing ... it is memorized as a chunk.

If we use 'I' .... we have this [example on board] it is plus definite ... a specific person ... and plus nominative case. ... it is first person. It is singular ... minus plural. If I changed this
one feature ... let's play with this ... if I make it plural ... we have 'we'. Then this is 'we' with plural.

If minus nominative ... it is 'us'.

Let's extend the tree.
[example on board]
My red shoes are in the room.

We will compare this to Spanish.
In English .... Spanish is this
[example on board]

Sorry ... make it 'cars'.
[example on board]
Cars are in the shop.

So the DP is ... [example on board]
Adjective phrase. [example on board]
The head of adjective is here ... head initial ... plus head initial.
Same thing here [example on board]

So this is 'my' [example on board]
These are all lexical ... memorized as chunks

Go through the features.
My is plus .... not just any car but my
Cars is an object because we are talking about ..... when you do it backward ... when you substitute ... you use 'they' .... so plus definite and plus nominative case. It is 3rd person .... and it is plus plural and one last thing ... we say 'my' is possessive. So in addition you can talk about plus genitive .... that is a nice term to know. It is a genitive case marker. It means it is possessive.

That plus genitive gives you the 'my'.
It is plus plural so you add an 's' and it travels to the noun and that is inflection.

Zero inflection on the adjective.
Zero inflection. So the 3 words ... only 1 has to have the inflection marker. You don’t say reds car ... no inflection on the determiner.

So we say .... in English it is plus head initial .... but in terms of inflection it is minus inflection. And that means ... weak ... English is a weak inflectional system. There is not a lot of inflection. We talked about this in terms of other languages .... we did this in class .... Skinner vs. Chomsky.

We have the features ... plus nominative ... 3rd person plural ... this is a nice DP and the
adjective phrase is the complement. The determiner is introducing and adjective phrase.

If we said this ... where are my red cars? It is plus nominative case. Usually 'wh' words are objects and move to the front. So the word order is my red cars are where? And there are movement operations that are part of the Chomsky/Skinner discussion.

Mary was kissed by John .... there is a movement operation. There is movement here [example on board].

John bought my red cars. Or John bought them.

Student: I am confused about definite. How do we make it minus?
Professor: Take out 'the'. Demonstratives are plus definite. But without a determiner ... it is minus definite.

Student: When you don’t have determiner it is minus definite?
Professor: Yes. A mind is a terrible thing to waste.

[example on board]
Remember we talked about the Spanish vs. English? We have now .... [example on board] Stems ... stems ... stems .... this is a functional stem and these are lexical.

So the features are ... this is plus definite ... [example on board] 3rd person and plus plural. It is the same plural 's'. In Spanish we add 's' also .... also in German. But the 's' ..... here is comes ... goes to the noun. caro is car and rojo is red. Everything has the plural 's'. It is like saying mys reds ... children pluralize. [example on board] look at the inflections.

So people say ... look at the difference with same words ... English not a lot of inflection .... but in Spanish there is.
Spanish is high inflectional. If you have a plural noun ... everything has to be plural because it has to agree.

Is it head initial? In English yes ... but in Spanish ... it is head final. Like in Latin it has mixed word orders.
[example on board]

It is like in Italian ... with mamma mia.

All of this goes into a prepositional phrase. So let’s extend the noun stuff .... let me do the structure and you tell me what the words are.

So here we go .... a propositional phrase with a complement DP ... that has a nice adjective phrase .... look at that structure. You will say this a million times today. So give me an example of that structure?
Student: Under the red roof.
Professor: Good .... do we know if it is a subject or object? It has to be an object. When you have a preposition ... they will introduce DP minus nominative case. Remember in grammar classes in high school they told you not to end with a proposition? Propositions introduce DP objects.

So ... keep it between you and I or you and me? Between is a proposition so it introduces an object. We would not say I want to stand with they .... we wouldn’t say that we would say them.

So there is a feature relationship ... and there are others .... so by definition this is a DP object with minus nominative case.
I have given you these phrases .... no features are under the noun because of Skinner .... Skinner is word memorizations.

The proposition is minus nominative case. You have to make it agree with nominative case. We do say who do you want to go with ... though.

Questions?

This is in the phrase chapter. We will build trees. On Thursday we will build more trees. So on the final you will build trees ... and coming up with your own sentences and child language acquisition

Practice these things. For those of you that need practice you can go to my home page .... there is an interactive part to practice trees... and you will find lecture notes posted .... come back and we will finish our discussion.

If you need to pick up something come and see me. [Calling names to return papers]
Student: So are we meeting on the 10th?
Professor: No. That is when finals begin. You might be having lectures on the 9th and then have finals on the 11th. So we will meet on the 8th for review and the 15th for exam and don’t forget your final summary papers. Bring one green/blue book with you for the exam.

So chapter 4 and 5 are what you should be reading. Child grammar is chapter 11.

So we are talking about syntax and tree structures ... but first let’s look at verbs.

The structure for VP looks like this .... there are different notations .... for different classes. If you are a linguistic major I would give you a more detailed example but this shows a simple distinction.

[example on board] this is the main verb phrase that gets the tense. You can have an infinite verb ... to speak, to study, etc. And we have finite verbs.

So this example is finite. This is why I like this tree. [example on board]
When we talk about DP we had this relationship ... determiner introduces the noun. In this discussion we talked about Skinner and Chomsky and brain processes and locations so there was discussion about memory based vs. ruled based. So this allows us to represent this functional vs. ___

We lose this interesting relationship .... but the determiner .... does for the noun .... remembering this .... let’s talk about the auxiliary features.

What about auxiliary features?
They show up on the verb. What is nice about this is that if there are any features .... F. is for features ... if connected to functional categories ... they inflect on the this part
[example on board.] So when you did the last exam .... and examples ... now we saw they are instances of movement operations.

They move from one part of the brain to another. They are physiological also. The plural 's' is on the determiner. The 'ed' shows up on the verb .... so unlike derivational morphology which is glued ... like the 'er' for teacher and no movement .... children have the word teacher early in vocabulary .... but they have 's' missing and past tense markers so they have a hard time with movement.

Broca is not mature at that time so children lack movement. Kids ..... go to a second grade class and tell them Mary is kissed by John and then ask them who is doing the kissing... they will say Mary but really John is so kids can’t do that movement. John is the action .... and we know that children have problems with movement operations. We will talk about this children have a hard time with the morphology.

Children don’t have inflectional morphology.
So auxiliary features are:
1. Person - it shows up on the verb.

2. Number - if you ask if verbs get number? They will say nouns only but verbs get number 
   if singular noun you get singular number ... so those features are subject verb agreement 
   features. You have heard of that before. English classes talk about that all the time ... 
   AGR. Agreement is interesting .... movement we can say that movement operations that we 
   find in languages when we talk about .... it is about movement.

We did this last time with the. DP ..... in Spanish .... the plural 's' had to show up and agree 
with everything. So these are spin offs ... from the notion of movement.

Remember primates share a lot of our DNA ... and I have cousins that look a little like a 
primate. But you have to admit and we talked about this ... the bottom up stuff ..... 
primates have posable thumbs and can be upright .... we are reminded that we have a family 
tree but the one thing that people are starting to talk about is what separates us .... is this 
[example on board] .... this internal movement of features being able to move and be 
abstract. Also the notion of displacement and being able to say John knows that Sally 
knows that John smokes.... or following music. Syntax ..... that seems to be the one thing 
that separates us from the primates.

3. Tense. The plus/minus past. 
Some people say what about the future but in English we don’t have future tense. But in a 
grammar class it will be explained we don’t have future tense .... but we can say The 
president will speak tonight .... or John starts next week. In Spanish they do it but we 
don’t in English ... so English has a plus or minus past.

If you really wanted to be interested in this ... does English have a present tense? Listen ... 
John plays the guitar ... you think that is present tense .... does it mean he is playing right 
now in front of me? He knows how to play ... so in a sense we say English is plus minus past. 
We do use progressive for a lack of present tense.

I was watching television and if I said hey move I watch television ..... that is what an ESL 
person might say.

So we have the notion here so let’s add features. A simple structure. 
[example on board] 
John speaks French. There is some syntax here .... [example on board] 
The whole thing is a sentence. Some simple brackets clarify the syntax.

So let’s look at this ... is there a determiner in the phonology? No ..... so we put a zero. 
Is anyone doing a summary page on the zero? It is very interesting. It was grammatical 
and the Arabs borrowed it.

There is no auxiliary .... those words would be here [example on board] .... so there is a zero 
feature.
So focusing on the verb ... French would be the DP object and it would have a zero ..... so in the functional category there are zeros.
Some languages don’t have determiners.

The verb ... that is lexical ... Skinner gives us 'speak'... memorized as a chunk .... [example on board] and we have John here. So the problem is for us to know what kind of grammar we need to know what the agreement is ... so we need to know the subject. So the types of inflection we need to know the DP subjects.

So the subject verb agreement .... [example on board] .... let’s look at these [example on board] ... it is plus definite and plus nominative case. This is 3rd person. What number? It is singular. We worked out the potential subject verb agreement. So now what are the auxiliary features? There are none. We could put in 'does' .... we could say John does speak French ... or should or might .... so 3rd person ... this feature moves over to this structure ... [example on board] this agreement is a movement. So we cut and paste. You move things around. You have to cut and paste over here [example on board]

Sometimes these words are close together ... but not always. This sentence could be pulled apart ... John, that lives next to my neighbor, speaks French. So you can’t say there is adjacency .... it has to move farther ... we have to remember the feature and move it and hold it and .... this process we take for granted. But studies show the parts activated in the brain .... when we hold things over distance and copy it over in a different structure.

For number this is minus plural so there is your AGR. [example on board]
Now the tense ... what is it? It is minus past. So we have features ... they are silent ... under the water. If you break up water there are components that are hanging around under the surface but then they appear in the phonology.

So in the syntax you add 's' ... these things we don’t hear or see.... that is a manifestation of this [example on board.] The 's' is under the auxiliary ... this is functional Broca’s area of the brain. The first 's' is lexical and the second is functional. Children delete the lexical 's' and not the functional 's'.

I can’t keep the 's' there to the zero ...... because it is a bound morpheme and has to attach to a stem. I can’t say Johns speak French .... the 's' would love to go here [example on board] ... but because there is no word there ... it has to go to the closest stem which is this ... [example on board] over here [example on board.]

This is again movement ... inflectional morphology. There is a lot going on here that we take for granted.

We have this 's' [example on board] so now we have a basic understanding of present tense 's'.
If this were I ... it would be first person so this would be first person singular present tense without an 's' ... no inflection. [example on board]
Student: So if it was John does speak French ... how would you do a tree?
Professor: Let's do this ... [example on board] John is 3rd person ... you use the lexical stem ... [example on board] it looks for the nearest stem .... [example on board] so now it goes there ... [example on board]
Student: It is not memorized as a chunk
Professor: Right. There is a vowel change but you get this in many things ... consider .... I was doing this with my daughter who is in the first grade ... it was Do not .... is the same as don't .... so we had to cut and paste .... [example on board] ..... but think about ... and the question was .... phonology. What happens to it?

Here is the example ... [example on board] ... what happens to phonology ... wait ... no... I can't remember the example ...
Student: Didn't?
Student: Where I changes?
Professor: There was an example ...
Student: Were/were not?
Professor: Maybe I am confusing do and don't .... doesn't .... it is escaping me now .... I will come back to it.

So any way ... the do becomes what? Does. So there is irregular phonology ... where it comes from history. It is memorized and this 's' is inflectional morphology.

So moving one ... what about progressive structures. If I said John is speaking French. Now we have another auxillary. Here it would be ... the verb is be ... irregular structure ... so 3rd person singular minus past .... be becomes what?
Student: Is
Professor: That is irregular process ..... no similarity ... you don't add and 's' to bes .... you might get it in a creole
So you have 'is' ... but we have progressive grammar ... with this [example on board] and add 'ing'.

A quick question .... is it lexical or functional?
Functional. It is inflectional.

Remember this? [example on board] .... we talked about Skinner ... if driving is memorized this way .... [example on board] as a chunk ... Chomsky says this .... [example on board] this is a process .... a difference in brackets.

So here we have this [example on board] ... we know that driving is process this way. When your brain or you are tired ..... this box switches.... goes ... but outside of it stays... lexical functional ... and it shows us in the tree diagram [example on board] the 'ing' moves and you have inflectional morphology

We have AGR .... and the notion of 'is'.... [example on board] so you get your syntactic movement.
In French it is 3rd person minus ___

But how can you be more precise in French? John speaks Parisian French .... or the French spoken in the 19th C is different from the one spoken now.

Change one feature and it turns into 'was'. So the 'ing' is not a tense marker. It is here in this area [example on board.]

What about if this were John and Mary .... so it is plural ... they is the substitution. So it is plus plural plus past and it is 'were'... not 'was'. Were is the same as be.

Student: How do you show the difference between the 3rd person minus plural minus past and this is 'ing'. We noted them as minus past ... how do we show progressive.
Professor: When you have 'be' ... you have to watch out for ... helping verbs... and they instigate grammar ... the progressive. So if you have the verb be ... it is progressive grammar. So you could say it is prog.... so you can do this [example on board] ... otherwise if this were a main verb like this .... John ___ tired. Now it is not a helping verb but main verb.

But to make it a 3rd person you don't add an 's' .... so it would be John is tired .... if you wanted to say once upon a time there was an 's' but it is irregular.
Student: Is there a progressive feature?
Professor: We plug in prog. There is the passive .... also which is a different grammar. If we said Mary was kissed .... there is a be +verb+ past participle.

The sentence tells us the model ... we could model this sentence .... Mary was kissed ... we have 'be' here. So Skinner gives us kiss .... and this is [example on board] so you have to think ... you have a verb 'be' ... plus a past participle ... so this is passive ... pass-grammar and passive grammar has past participle ... 'ed'. There are two types ... 'en' and 'ed'. So here .... look... [example on board] it is not past tense marker but past participle marker.

It is inflection. Mary was kissed .... by John
Student: What is next to 'ed'??
Professor: Passive. If you are not clear about passive stay away from it.
Student: If plus past feature you use ....
Professor: No this shows up with it is passive. [example on board]
Go back and review your grammars.

This is 'be' plus verb plus past participle.

Tense only goes on the first.

Let's do one more ... talking about grammars. If I said ... what kind of grammar is this? Mary has visited France. This is a nice sentence. What tense?
Student: Present
Professor: Right

Let’s look at this ... here is the auxillary ... [example on board.] You will ask if there is a helping verb? Yes ... and is helping visit. So it has auxillary grammar ... has plus verb plus past participle .... so we have Mary .... 3rd person minus plural... verb is 'have' .... [example on board] ... and it is minus past.

Here is the AGR .... 'have' becomes has ...... and have and has is the same verb .... it is conjugated for subject verb agreement.

If have were alone ... it would not be helping but main. But it is helping visit ... so that means there is auxillary grammar going on. Progressive, passive or perfect is what you have to think about. So who is doing the visiting? Mary. When you see the 'by' phrases you have to think about who is doing the action.

So [example on board] .... the 'ed' is the past participle. You could also have had the 'en' version. There are large sections in grammar books about this material.

So you have 'ed' .... and it is bound inflectional morpheme. Skinner gives you this ... Chomsky this ... and this is perfect grammar. So you have the subject verb agreement and you have your tense ... people think it is past tense but because the first verb gets the tense it is not past.

So you make this .... past tense ... have becomes had. [example on board] Mary had visited France. So the complete tree looks like this [example on board]

S= sentence

You have a DP

[example on board]

Let’s add a prepositional phrase ..... [example on board] let’s extend this to an adjective phrase ... look at the syntax ..... who could fill in the present.

How many sentences could we imagine that would generate that structure?
Student: Infinite.
Professor: So language is an open system.

Give me a DP
Student: My son
Professor: Nice
Some one give me a main verb phrase
Student: Is running
Professor: Preposition
Student: Under
Professor: How about a DP with and Adjective phrase
Student: The green tree.
Professor: So you all participated in constructing the sentence. So let’s look at the features. Children love this ... they find out language is a game ... you can create opposites .... making things ironic or changing the meaning of things.

So 'my son' is plus definite and plus nominative .... the substitution would be 'he'. And it is plus genitive ... it means possessive ... it also happens to be that it is masculine gender .... so there is a gender feature. The plus masculine has to move ... so plus masculine. 3rd person minus plural. [example on board]
You will find this in the chapter about phrase.

No features are under the noun ... because this is Skinner.

3rd person minus plural minus past ... so the verb is 'be' which conjugates to 'is' .... and [example on board] we have a grammar here [example on board] .... it is progressive .... [example on board]

Student: Where do you look at 'the' .... so you go back?
Professor: It gives some things automatic ... plus definite ... because it is a definite determiner. Here you have to look for a subject or object noun.... if subject it is plus nominative.

If you are not sure about case make is plural and ask what the substitution is. They son is running around them .... plus nominative case.

1st person is I .... The introduces 3rd person.

The boy, the car, the book is 3rd person. Plus/minus plural depends.

Remember propositions introduce DP objects. You can’t say I want to stand with they? No ... it is them.

So on Tuesday ... you should be able to do a tree structure ... give me features ... syntax .... practice this .... and on my homepage there is an interactive section ... do the readings.
What will happen in the early part of child acquisition?
At stage 1 .... this is gone [example on board] ... auxillary and determiner is gone.

So early stages ... child language acquisition .. [example on board]
The boy plays on the bikes.

So let’s diagram this ... [example on board]
I will give you better examples next time.
[example on board]
We say theoretically we have 2 stages. Lexical stage 1 ... which we will talk about no inflection and no functional categories, no features. This is 18 - 30 months.

We know Broca area is not active yet. Infants are good at reflex things ... eating, sleeping, stimulus and response things.

Stage 2 is functional ... which you get inflection and features and functional categories. People like to say Skinner stage 1 and Chomsky comes on line

Student: So how does it play out?
Professor: Let me work backwards. What happens is ... that is gone [example on board] which means there are no Determiners ... and no definite ... so children point ... they gesture. Why do preschoolers point to everything? It eventually fades away ... because now it shows up in the language. If no determiner what happens to the 's'? It drops ... there is no plural feature. So early on ... children say ... this [example on board] ... they have the word 'two' ... but you get this structure ... two car ... and they drop the 's'. No plural 's' or inflection. So you are saying ..... stage one looks like this [example on board]

So they say The boy play on bike. So lexical words are fine ... they build vocabulary and lexical words with reduced syntax. They have correct word order. But many things are missing. It is the functional stuff ... features... and the inflections. Some scientists say it is because they don’t have movement. The ability to move things ... you know the out of sight out of mind theory with children. A young child ... you show them something they will grab at it ... but if you hide it they don’t look for it .... it is gone. If they can’t see it ... it is not there. But also the reverse is true. Playing with puppets ... showing a 2 year old something that appears out of no where .... you would think there is logic to movement ... something is not there and then there ... young children are not surprised. Older kids are surprised by it but young children don’t follow the logic of things. Remember primates ... everything for them is in the here and now they can’t displace themselves and we do all the time.

Look at the chapters ... 4, 5, 11. And we will practice more structures ... see you on Tuesday.